



Please read this owner's manual carefully as it is designed to provide you with instructions for the safe use of your new spa.

OWNER'S MANUAL




iGnITE



C9-OR-65-DG
C9-OR-65-W

PRIME



C9-OR-99-DG
C9-OR-99-W

[Save these instructions](#)

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IMPORTANT SAFETY INSTRUCTIONS

THIS OWNER'S MANUAL CONTAINS IMPORTANT SAFETY INSTRUCTIONS. READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY AND KEEP THEM HANDY.

Most cities, counties, states/provinces and countries require permits for exterior construction and electrical circuits. In addition, some communities have safety codes requiring the property to be equipped with residential barriers such as fencing and/or self-closing gates to prevent unsupervised access by children to pools or hot tubs. Be sure to check with your local agencies for specific requirements.



WARNING

REDUCE THE RISK OF ELECTROCUTION

1. Never place an electric appliance within 5 feet or 1,54 metres of your spa.

REDUCE THE RISK OF CHILD DROWNING

1. Supervise children at all time.
2. Attach spa cover after each use.

REDUCE THE RISK OF OVERHEATING

1. Consult your physician before use if you are pregnant, diabetic, in poor health, or under medical care.
2. Exit immediately if uncomfortable, dizzy, or sleepy. Spa heat can cause hyperthermia and loss of consciousness.
3. Spa heat in conjunction with alcohol, drugs, or medication can cause loss of consciousness.

WHEN PREGNANT

1. Soaking in hot water during pregnancy may cause damage to the fetus. Consult your physician before use.
2. Do not enter spa if water is hotter than 100°F (38°C).
3. Do not stay in spa for longer than 10 minutes.

WARNING: PEOPLE WITH INFECTIOUS DISEASES SHOULD NOT USE A SPA OR HOT TUB.

This warning must be posted before the spa is used.
If you need an additional or replacement sign, contact Cloud 9 Spas at **1-800-383-6119**
or by email at customerservice@cloud9spas.com

THIS SPA IS FOR RESIDENTIAL USE ONLY!
Any commercial or rental use will void the manufacturer's warranty.

IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY.

1. When installing and using this equipment, basic safety precautions should always be followed.
2. **WARNING! DO NOT PERMIT CHILDREN TO USE THIS PRODUCT UNLESS THEY ARE CLOSELY SUPERVISED AT ALL TIMES.**
3. **IMPORTANT!** Initial installation of this 220 volt spa must be done by a certified electrician.
4. A wire connector is provided on this unit to connect a minimum 8 AWG (8,4mm²) solid copper conductor between this unit and any metal equipment, metal enclosures or electrical equipment, metal water pipe, or conduit within 5 feet (1,5m) of the unit.
5. **DANGER!** Risk of accidental drowning – Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this spa unless they are supervised at all times.
6. **DANGER!** Risk of serious injury or death – The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate spa if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.
7. **DANGER!** Risk of electric shock. Install at least 5 feet (1,5m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet (1,5m) of metal surfaces if each metal surface is permanently connected by a minimum 8 AWG (8,4mm²) solid copper conductor to the wire connector on the terminal box that is provided for this purpose. Check with your city, state/province or country for regulations and/or safety codes that apply to your situation. Be sure to check with your local agencies for specific requirements in your area.
8. **DANGER!** Risk of electric shock – Do not permit any electric appliance, such as light, telephone, radio, or television, within 5 feet (1,5m) of a spa. Never operate any electric appliance from within your spa or if your body is wet.
9. **WARNING!** To reduce the risk of injury:
 - a. The water in a spa should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
 - b. Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 100°F (38°C). It is recommended to consult your physician before using a spa.
 - c. Before entering a spa, the user should measure the water temperature since the tolerance of water temperature-regulating devices varies.
 - d. The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.
 - e. Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.
 - f. Persons using medication should consult a physician before using a spa since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
 - g. **Hyperthermia** – An extended stay in excessive water temperatures may induce hyperthermia. Hyperthermie occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature; i.e. 98,6°F (37°C). The symptoms of hyperthermia include: dizziness, lethargy, drowsiness and fainting. The effects of excessive hyperthermia include:
 1. Failure to perceive heat.
 2. Failure to recognize the need to exit the spa.
 3. Unawareness of impending hazard.
 4. Damage to the fetus in pregnant women.
 5. Physical inability to exit the spa.
 6. Unconsciousness and danger of drowning.

INSTALLATION AND QUICK START UP GUIDE

Follow these instructions for quick and easy start up of your new spa. If you have any questions concerning start up, contact Cloud 9 Spas directly for help at [1-800-383-6119](tel:1-800-383-6119) or by email at customerservice@cloud9spas.com.

OUTDOOR INSTALLATION

When installing your spa outdoors, select a solid, level surface to place it on. The bottom of your spa is totally protected and it will not rot. Special preparation, such as a concrete pad or wood deck, is not mandatory, although they make very suitable bases. If installing your spa on a wood deck, ensure that the deck is built to code and that it will withstand the filled weight of the spa. When full, your spa weighs approximately 90 lbs (41kg) per square foot. Ensure that you do not install your spa underneath overhead power lines.

INDOOR INSTALLATION

For indoor installation, ensure that your doorway is at least 36 inches (91 cm) wide. The location where you intend to place your spa should be equipped with adequate ventilation to remove chemical odors and added humidity, and adequate drainage to handle splashing and in case of a spa leak. It is not recommended to install your spa above a ground level floor.

INSTALLATION

- CONNECTING THE ELECTRICITY:** You must install a 220 volt minimum 40 amp GFCI breaker and disconnect box and connect your spa to this GFCI breaker and the electrical panel using a grounded 6 AWG/3 wire if the spa is more than 50 feet (15,25m) from the wall outlet, or using a grounded 8 AWG/3 wire if the spa is located within 50 feet (15,25m) from the wall outlet. It is recommended that you use a certified electrician to install your GFCI breaker and disconnect box and to connect your spa to your house electrical panel. **Ensure that the 220 volt breaker is disconnected until you have completed Step 4 and your spa is full of water.**
- SETTING THE SPA IN PLACE:** Move your new spa to the location where it will be installed. Leave a minimum of 36 inches (91 cm) of space at each end of the spa. This ensures that you will be able to remove the end panels and you'll be able to access your spa equipment. Leave enough room on the side(s) of the spa to be able to take your cover off and put it back on without obstruction.
- ATTACHING THE ACCESSORIES:** Open the accessories box and remove the waterfall assembly. Lubricate the rubber O-ring with a bit of water and insert it into its housing on the top of the spa. Remove the fork lift channel covers and the hardware kit. Following the instructions in the hardware kit, install the covers. **Do this before you fill the spa with water.** You may have to slightly lift the spa to position the covers in their proper place.
- CHECKING THE CONNECTIONS AND SETTINGS:** Remove the equipment access door to expose the pump and spa pack. To remove the door(s), remove the 4 screws located near the ground in each door. Check the unions to the pump and to the heater manifold to ensure that they are tight. Vibration during shipping may cause them to loosen. **Do not overtighten these unions with channel locks. You could crack or damage them.** It is recommended that you check these unions regularly. Pump vibration can cause them to loosen and this can cause a leak. Ensure that the two slice valves are in their open position and that they have shaft lock clips installed on the stems to prevent self-closing. Ensure that the shut off valve on the end of the drain hose assembly is closed. Remove the cover of the spa pack by loosening the two screws at the front. Near the bottom of the circuit board, you will see a small red panel with 10 white DIP switches. These switches should be factory set; however, you should ensure that they are properly set (see fig. 1.1). Replace the spa pack cover after checking the settings and tighten the screws.

MODEL	OPERATING UNDER 220V									
ON		X	X				X			
OFF	X			X	X	X		X	X	X
DIP #	1	2	3	4	5	6	7	8	9	10

FIGURE 1.1 SPA PACK DIP SWITCHES POSITIONS

INSTALLATION AND QUICK START UP GUIDE

5. **FILLING THE SPA:** To fill your spa, remove the filter cover and the filter cartridge by turning it counter clockwise. 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. **If your source water contains metals, such as iron, it is recommended that you attach a pre filter to your garden hose. This will help to remove any precipitated metals and to make start up easier.** Put your garden hose into the threaded hole where the filter cartridge is located and begin to fill your spa through this hole. This will purge air from the water lines and it will make priming the pump easier. Fill your spa approximately 6 inches (15 cm) from the top of the spa. The level that you keep your spa water at will be determined by your personal use and preferences.
6. **PRIMING THE PUMP:** When your spa is full of water, switch your 220 volt GFCI breaker to the on position. The top side panel display will go through specific sequences. These sequences are normal and display a variety of information regarding the configuration of the spa control.

On OR-C9-65 model: When you see the initials PR, press the jets button to start the pump. If there is air in the line and the pump sounds like it is straining, you may have to depress the jets button to off and on several times before the pump will start. Be aware that it may take a few minutes for the pump to prime and for water to start flowing. When your pump starts to flow, and the jets begin to operate, press either the temperature up or down arrow to exit priming mode.

On OR-C9-99 model: see page 10 for Priming Mode.

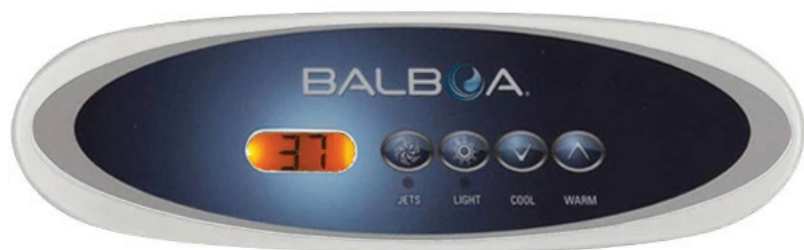
7. **SETTING THE TEMPERATURE:** The top side control will display dashes until the current water temperature is detected and displayed. This may take up to one minute. To set your desired temperature, press either the temperature up or down arrow. The set temperature will begin to flash. To change the set temperature, press either the up or down arrow until you reach your desired setting. When the temperature reading stops flashing, your desired temperature is set. C9-OR-99 model has more temperature settings available. See page 11 for Temperature and Temp Range.
8. **SETTING THE FILTER CYCLE:** Your spa should be factory programmed to circulate twice a day, 4 hours at a time. This setting should be sufficient for normal usage. Your first filter cycle begins 6 minutes after you connect power to your spa. The second cycle will begin 12 hours later. Your spa is capable of circulating for 1-8 hour intervals, twice a day.

On OR-C9-65 model: To ensure that the cycles are properly set or to change this setting, press either the temperature down or up arrow, then press the «Jets» icon. The top side control display should show F4. Press either the temperature up or down arrow to increase or decrease the filtration cycle time. Press the «Jets» icon to exit the filter cycle program.

On OR-C9-99 model: see page 16 for Adjusting Filtration.

9. **CONTROLLING THE TEMPERATURE:** If your spa is not operating in a filter cycle, but the water requires heating, the spa pump and the heater will turn on until the set water temperature has been reached. Both components will then shut off automatically. This prevents your water from cooling down. Your spa is also equipped with freeze protection. If the water temperature drops below 45°F (7°C), the pump will automatically turn on. It will turn itself off 4 minutes after the water temperature has risen back to 45°F (7°C). **IMPORTANT: Your spa automatically checks the water temperature for 1 minute, every 30 minutes, to increase the temperature if it has dropped. If your set temperature has dropped during usage, the heater may not come on automatically when you change your pump from high speed to low speed. To turn the heater back on, decrease your set temperature to one (1) degree below the current temperature and wait for the display to stop flashing. After stopping, raise the set temperature back to your original setting. This should reengage the heater within one (1) minute.**

C9-OR-65: VL260 CONTROL PANEL & SPA OPERATION



FIRST RUN

The control of the spa starts with the Priming Mode (**PR** on the display screen). This mode takes less than 5 minutes, then the spa begins to heat and keep the water temperature in Standard Mode (**ST**).

JETS - STARTING THE PUMP

Press **JETS** on the top side control panel to start the pump at low speed. Press **JETS** a second time, the pump operates at high speed. Press **JETS** a third time and it will shut the pump down. If the spa is in filter cycle or heat demand, it will continue to operate on low speed. The control program contains a safety shut-down function, which shuts the pump after 4 hours at low speed and after 15 minutes at high speed. The system starts the pump automatically every 30 minutes and operates for a minimum of 2 minutes. It is intended to check the water temperature and turn on the heater if needed (depending on the set operating mode). When the system turns on automatically at low speed, it cannot be turned off from the control panel, but the second gear can be turned on. Each jet is individually adjustable and the intensity can be increased or decreased for your desired comfort.

SETTING THE TEMPERATURE

AT FIRST START, THE DEFAULT TEMPERATURE IS 37C. THE LAST MEASURED TEMPERATURE IS CONTINUOUSLY DISPLAYED ON THE CONTROL PANEL. REMEMBER: THE CONTROL PANEL ONLY DISPLAYS THE CURRENT TEMPERATURE IF THE PUMP HAS BEEN OPERATING FOR AT LEAST 2 MINUTES.

The default temperature can be reduced by pressing **COOL**, and increased by pressing **WARM**. In this case, the value of the temperature will flash on the display screen. When you have completed the setting, after 3 seconds the screen will continuously display the current temperature again.

LED LIGHTING

The "Light" button on the top side control panel controls the LED main light and the individual LED lights. You can set the lighting to several different colors and/or modes by slowly pressing **LIGHT** off and on until your desired setting is reached. The power lights turn off automatically after 4 hours.

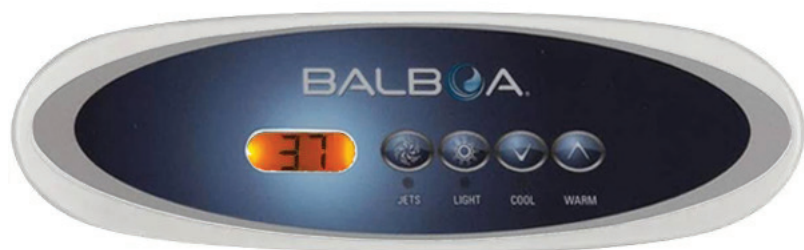
AIR CONTROL

The spa jets can be operated with water only or with a water/air mix. There is a valve located beside the top side control panel. By turning this valve counter clockwise, air will begin to enter the spa water through the jets. Closing the valve by turning it clockwise will stop the air. **NOTE: Leave this valve in its closed position when the spa is not in use. This will prevent ambient air from entering and cooling the water, it will make heating the spa water more efficient and it prevents the pump from running continuously. TO AVOID SEAL DAMAGE, DO NOT OVERTIGHTEN THIS VALVE.**

WATERFALL

Your spa is equipped with a cascading waterfall. It will operate when your pump is operating. The intensity of the water flow can be adjusted by turning the on/off valve. **NOTE: Do not try to remove the waterfall assembly by grabbing and pulling the black deflector. It will break. Grab each end of the clear fixture and wiggle it back and forth.**

C9-OR-65: VL260 CONTROL PANEL & SPA OPERATION



FILTER

The spa filter cartridge is located on the side of the spa under the filter cover. To remove the filter, simply remove the filter cover and turn the filter counter clockwise. To replace the filter, turn it clockwise to secure it in the spa. Your filter should be cleaned on a regular basis, depending on spa usage.

CHANGING THE FILTER CYCLE

There are a total of eight (8) filter cycles designated by codes F1 to F8. It is recommended to use mode F4, which means two (2) filtration of 4 hours twice a day.

TO SET THE FILTER CYCLE OF YOUR SPA

1. Press **COOL** then **JETS** to initiate programming;
2. Press **WARM** or **COOL** to change duration of cycle;
3. Press **JETS** to save and exit programming.

CHANGING WATER HEATING MODE

There are three (3) different heating modes available on your spa:

STANDARD MODE (indicated by **ST** on the control panel display): It maintains the set temperature. The ST code is displayed when this mode is activated.

ECONOMY MODE (indicated by **EC** on the control panel display): It heats the water to the preset temperature only during filter cycles. The EC code is displayed when the water temperature is not current, and alternates with the water temperature when the pump is running.

SLEEP MODE (indicated by **SL** on the control panel display): It heats the water to within 20°F (10°C) of the preset temperature only during filter cycles. The SL code is displayed when the water temperature is not current, and alternates with the water temperature when the pump is running.

TO CHANGE THE WATER HEATING MODE OF YOUR SPA

1. Press **COOL** then **LIGHT** to change mode;
2. If you wish to keep this mode, wait a few seconds. The temperature will be displayed and the mode saved;
3. If you wish to change the mode, press **COOL** again then **LIGHT**. The next mode will be displayed;
4. If you wish to keep this mode, wait a few seconds. To change it, press **COOL** again then **LIGHT** to display the next code.

OZONE

The ozone cleaning system is located in the equipment cavity. The system operates automatically and only when the spa pump is running on low speed. When it is on, the ozone cylinder will emit a bluish green light. It is recommended that you check for this light on a regular basis to ensure that the cleaning system is functioning properly.

C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

DISPLAY ICONS



- | | | |
|------------------------------------|--------------------------|---|
| A - Heat | F - Light | K - Auxiliary (Jets 3 or MicroSILK®) |
| B - Ready Mode | G - Cleanup Cycle | L - Temperature Range (High/Low) |
| C - Rest Mode | H - Jets 1 | M - Set (Programming) |
| D - bba™2 On | I - Jets 2 | N - Filter Cycle (1 or 2 or Both) |
| E - WiFi (Cloud Connection) | J - Blower | O - AM or PM (Time) |

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PRIME

NAVIGATION

Navigating the entire menu structure is done with two (2) or three (3) buttons on the control panel.

Some panels have separate **WARM** (Up) and **COOL** (Down) buttons, while others have a single **TEMPERATURE** button. In the Navigation diagrams, Temperature buttons are indicated by a single button icon. Panels that have two Temperature buttons (Warm and Cool), as is the case with the C9-OR-99, can use both of them to simplify navigation and programming where a single Temperature icon is shown.

The **MENU/SELECT** button is used to choose the various menus and navigate each section.

Typical use of the temperature buttons allows changing the Set Temperature while the numbers are flashing on the LCD screen. The menus can be exited with certain button presses. Simply waiting for a few seconds will return the panel operation to normal.

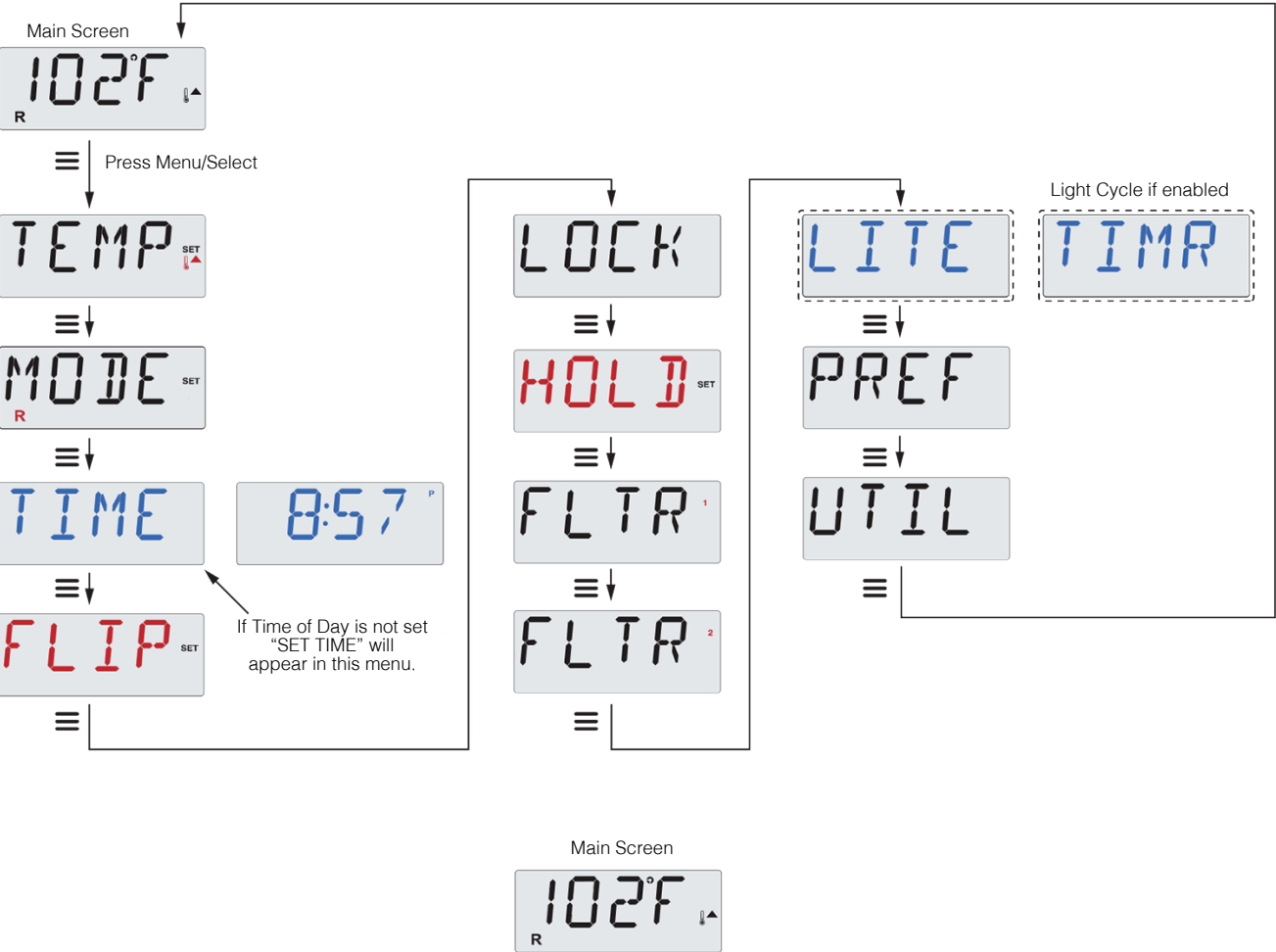
C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

Power-up Screens

Each time the system powers up, a series of numbers is displayed.
After the startup sequence of numbers, the system will enter Priming Mode (see page 10).

KEY

-  Indicates Flashing or Changing Segment
-  Indicates Alternating or Progressive Message - ever 0.5 second
-  A temperature button, used for "Action"
-  Menu/Select button
-  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.



Waiting a few seconds in the Main Menu will allow the display to revert to the Main Screen. Most changes are not saved unless Menu/Select is pressed. Refer to key above.

C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

PRIMING MODE - M019*

This mode will last 4-5 minutes or you can manually exit the priming mode after the pump(s) have primed.



Regardless of whether the priming mode ends automatically or you manually exit the priming mode, the system will automatically start normal heating and filtering at the end of the priming mode. 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 pushing the “Jets” or “Aux” buttons. If the spa has a circ pump, it can be activated by pressing the “Light” button during priming mode.

Priming the pumps

As soon as the above display appears on the top side panel, push the “Jets” button once to start Pump 1 in low-speed and then again to switch to high-speed. Also, push the “Jets 2” or “Aux” button, to turn on the second pump. The pumps will now 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, 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 five (5) times. If the pump(s) will not prime, shut off the power to the spa and call Cloud 9 Spas 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 overheat condition.

Exiting priming mode

You can manually exit priming mode by pressing the “Warm” or “Cool” button. 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 momentarily display the set temperature but the display will not show the water temperature yet, as shown below:



This is because the system requires approximately 1 minute of water flowing through the heater to determine the water temperature and display it.

* M019 is a Message Code. See page 32.

PUMPS

Press the “Jets” button once to turn Pump 1 on or off, and to shift between low and high speed if equipped. If left running, the pump will turn off after a time-out period. On non-circ systems, the low-speed of Pump 1 runs when the blower or any other pump is on. If the spa is in Ready Mode (See page 12), Pump 1 low-speed may also activate once in a while for at least 1 minute to detect the spa temperature and then to heat to the set temperature if needed. When the low-speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be started.

Filtration and Ozone

On non-circ systems, Pump 1 low-speed and the ozone generator will run during filtration. The system is factory-programmed with one (1) 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 (See page 15). A second filter cycle can be enabled as needed. At the start of each filter cycle, all water devices (other than the primary pump) will run briefly to purge the plumbing and maintain good water quality. The term “water devices” includes the blower, if applicable.

C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

Freeze Protection

If the temperature sensors within the 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 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. Contact Cloud 9 Spas at [1-800-383-6119](tel:1-800-383-6119) for details.

Clean-up Cycle (optional)

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 (See page 18).

TEMPERATURE & TEMP RANGE

When using a panel with Warm and Cool buttons, pressing Warm and Cool will cause the temperature to flash. Pressing a temperature button again will adjust the set temperature in the direction indicated on the button. When the LCD stops flashing, the spa will heat to the new set temperature when required.

Press-and-Hold

If a temperature button is pressed and held when the temperature is flashing, the temperature will continue to change until the button is released.

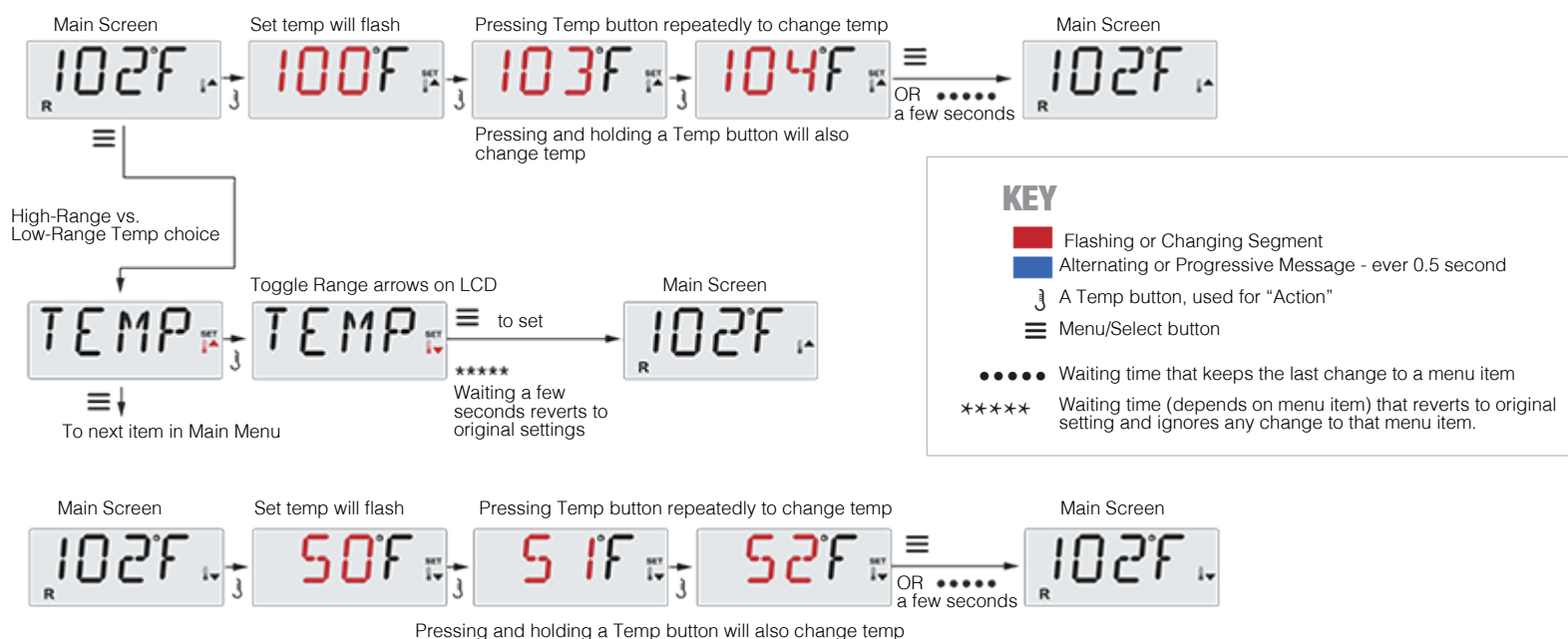
Dual Temperature Ranges

This system incorporates two (2) temperature range settings with independent set temperatures. The high range designated in the display by a thermometer and an “Up” arrow, and the low range designated in the display by a thermometer and a “down” arrow. These ranges can be used for various reasons, with a common use being a “ready to use” setting vs. a “vacation” setting. The ranges are chosen using the menu structure below. 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. Freeze protection is active in either range.

For example:

High Range might be set between 80°F (26.6°C) and 104°F (40°C).

Low Range might be set between 50°F (10°C) and 99°F (37.2°C).

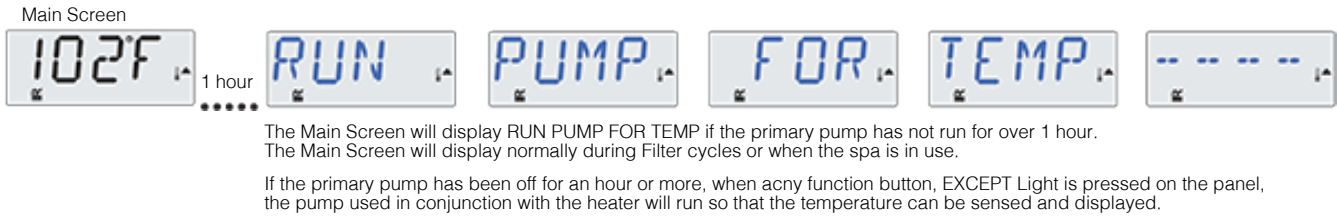
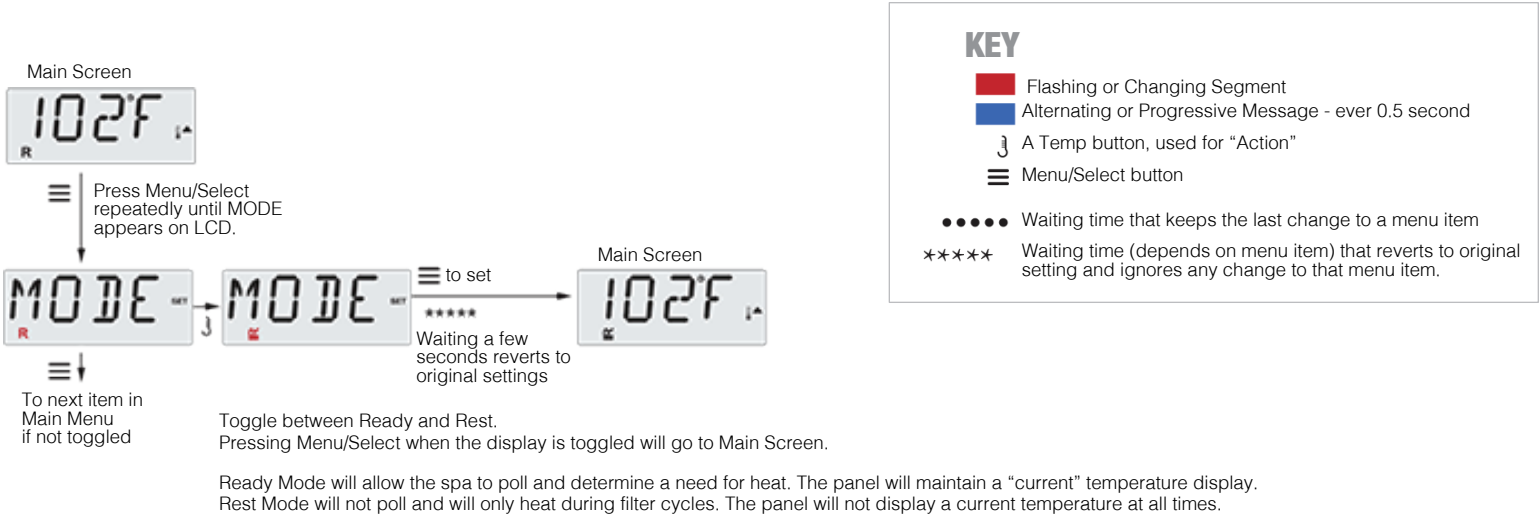


C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

READY AND REST MODE

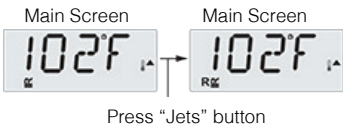
In order for the spa to heat, a pump needs to circulate water through the heater. The pump that performs this function is known as the “primary pump”. The primary pump can be either a 2-speed Pump 1 or a circ pump. If the primary pump is a 2-speed Pump 1, Ready Mode (indicated by **R**) will circulate water periodically, using Pump 1 low-speed, in order to maintain a constant water temperature, heat as needed, and refresh the temperature display. This is known as polling.

Rest Mode (indicated by **⏸**) will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the primary pump has been running for 1-2 minutes.



Ready-in-Rest Mode

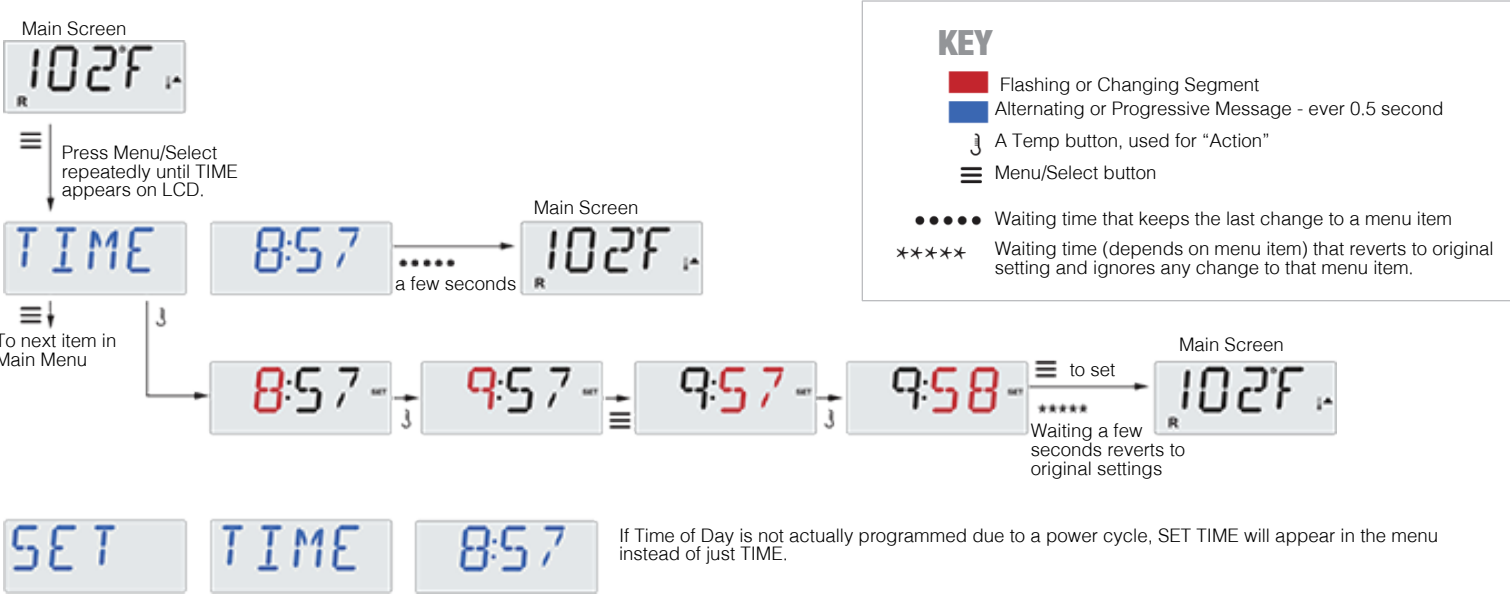
R ⏸ appears on the display if the spa is in Rest Mode and “Jets” is pressed. It is assumed that the spa is being used and will heat to set temperature. The primary pump will not run until set temperature is reached, or 1 hour has passed. After 1 hour, the system will revert to Rest Mode. This mode can also be reset by entering the Mode Menu and changing the mode.



C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

SETTING THE TIME OF DAY

Setting the time-of-day can be important for determining filtration times and other background features. When in the Time Menu, **SET TIME** will flash on the display if no time-of-day is set in the memory. 24-hour time display can be set under the Pref Menu (See page 17).

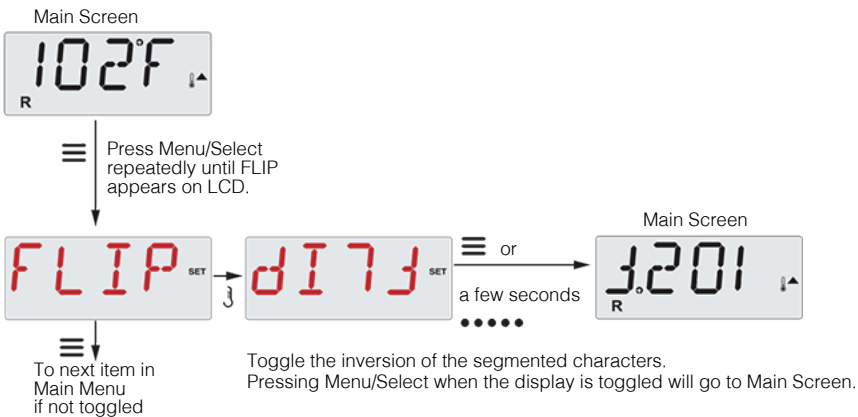


Note:
This note refers to systems that do not keep track of Time-of-Day when powered down.

If power is interrupted to such a system, 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.

When such a system starts up, it defaults to 12:00 Noon, so another way to get filter times back to normal is to start up the spa at noon on any given day. **SET TIME** will still flash in the Time Menu until the time is actually set , but since the spa started at noon, the filter cycles will run as programmed.

INVERT DISPLAY (Flip)

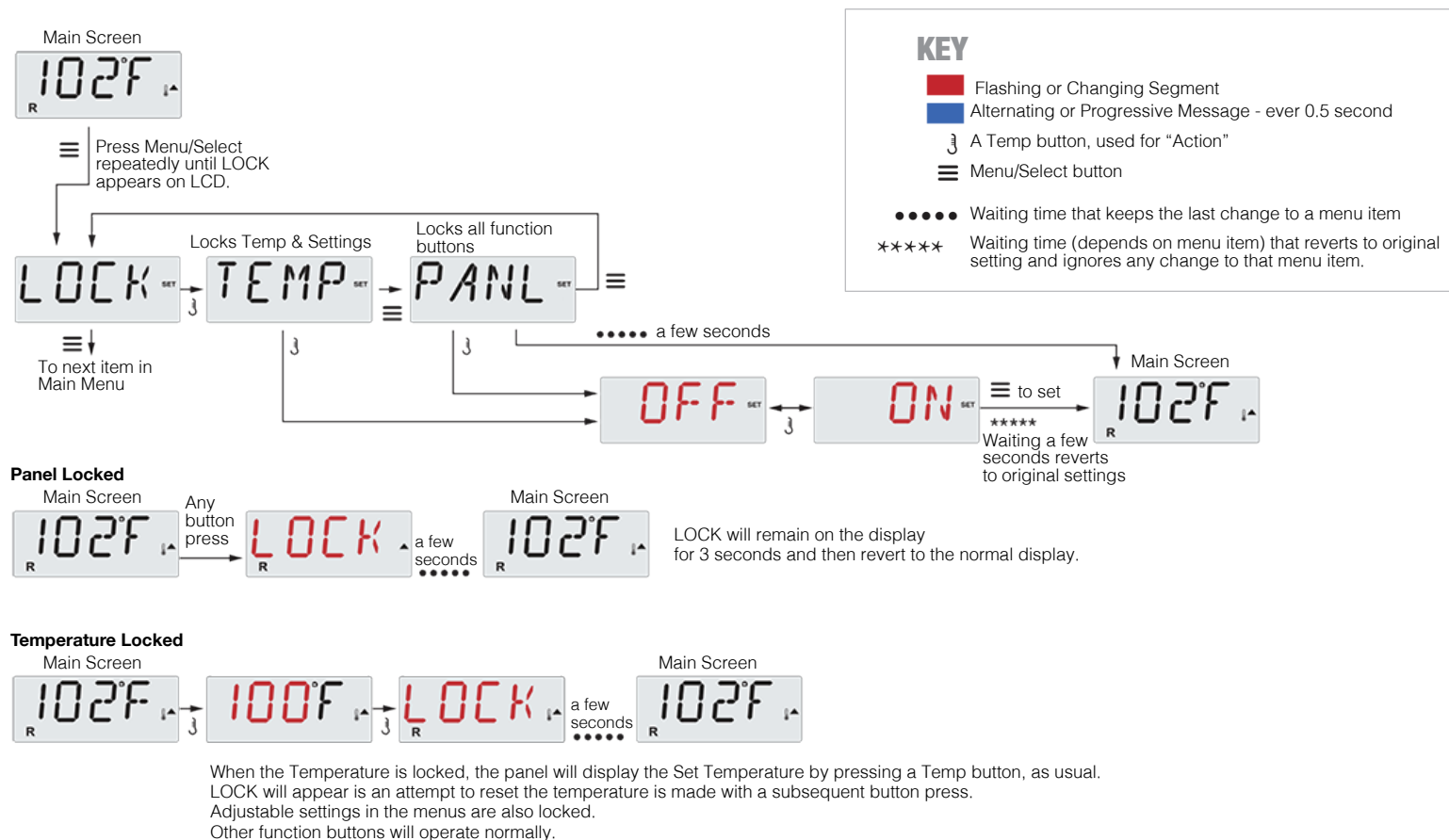


C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

RESTRICTING OPERATION

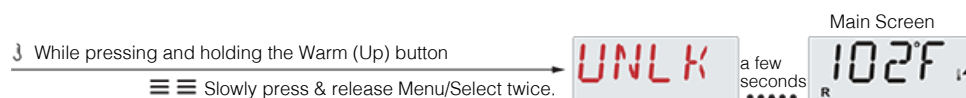
The top side panel can be restricted to prevent unwanted use or temperature adjustments. Locking the panel prevents the controller from being used, but all automatic functions are still active. Locking the temperature allows “Jets” and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

Temperature Lock allows access to a reduced selection of menu items. These include Set Temperature, FLIP, LOCK, UTIL, and FALT LOG.



UNLOCKING

This unlock sequence may be used from any screen that be displayed on a restricted panel. **NOTE: With panels that have both Warm and Cool button, the ONLY button that will work in the unlock sequence is the Warm (Up) button. The temperature will not unlock if the unlock sequence is done while the panel is displaying “LOCK”.**



HOLD MODE - M037*

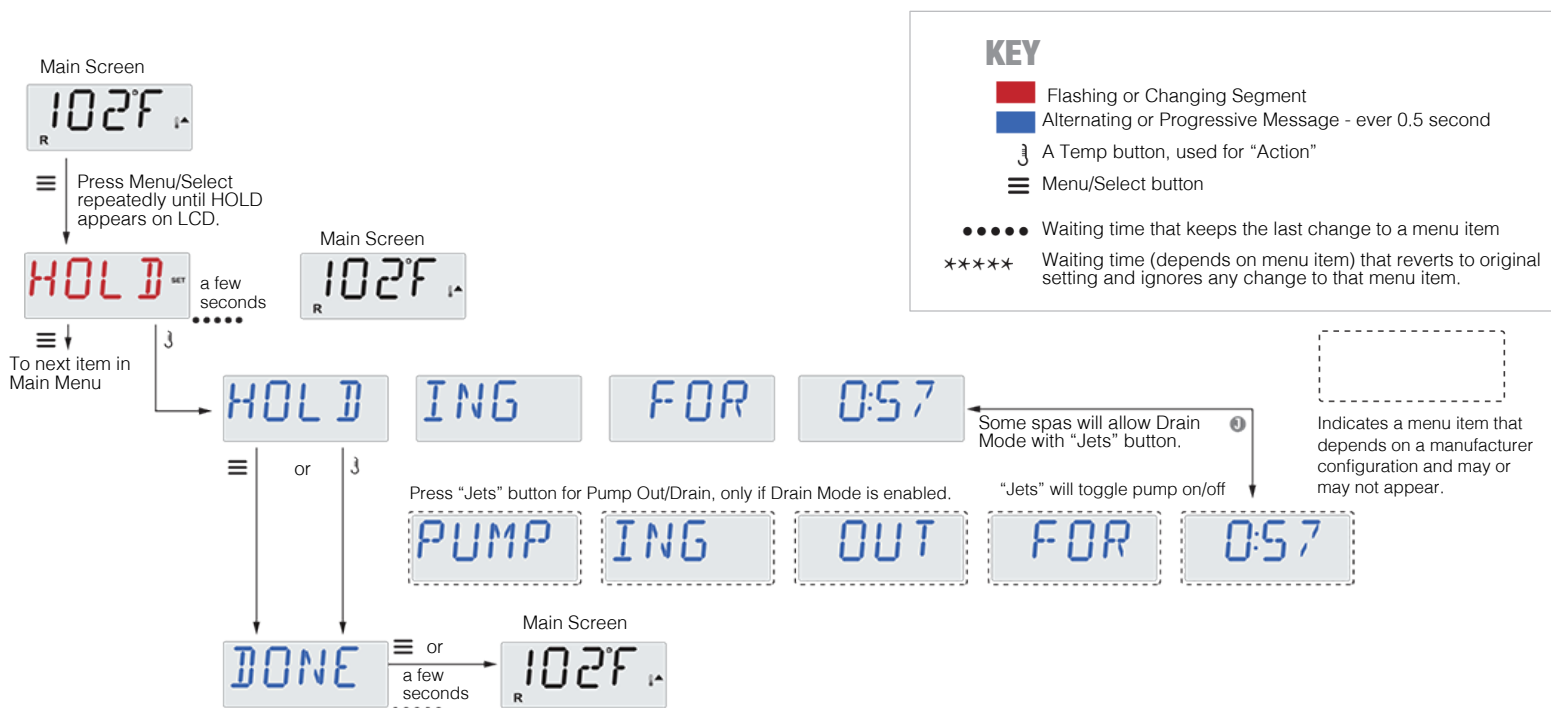
Hold Mode is used to disable the pumps during service functions like cleaning or replacing the filter. Hold Mode will last for 1 hour unless the mode is exited manually.

* M037 is a Message Code. See page 32.

C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

Drain Mode

Some spas have a special feature that allows a pump to be employed when draining the water. When available, this feature is a component of Hold Mode. Drain Mode will time out with Hold Mode.



ADJUSTING FILTRATION

Filter cycles are set using a start time and a duration. Start time is indicated by an **A** or **P** in the bottom right corner of the display (See navigation diagram on page 16). Duration has no **A** or **P** indication. Each setting can be adjusted in 15-minute increments. The panel calculates the end time and displays it automatically.

Filter Cycle 2 - Optional Filtration

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

Purge Cycles

In order to maintain sanitary conditions, secondary pumps and/or a blower will purge water from their respective plumbing by running briefly at the beginning of each filter cycle. If Filter Cycle 1 is set for 24 hours, enabling Filter Cycle 2 will initiate a purge when Filter Cycle 2 is programmed to begin.

Main Filtration

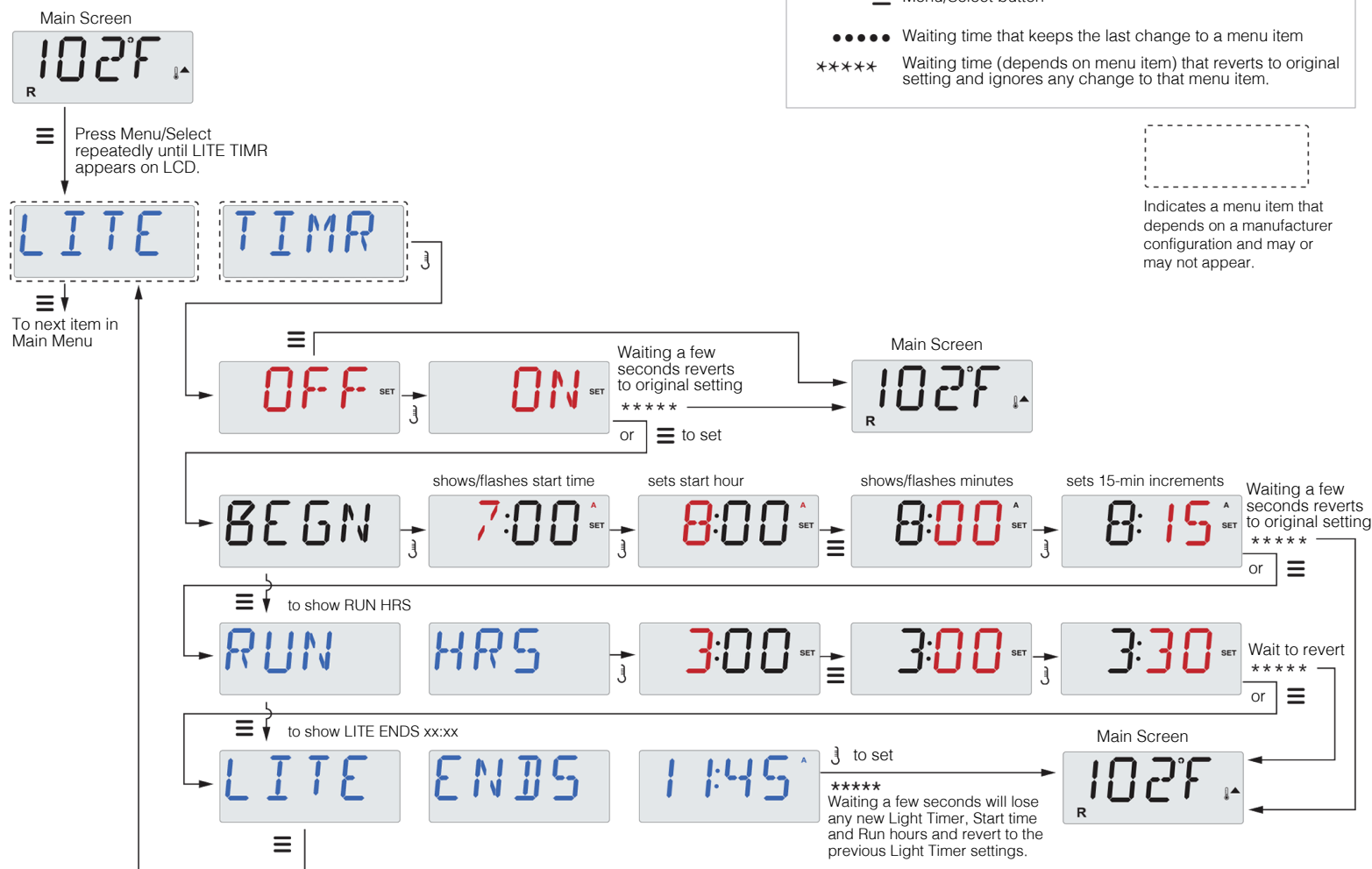


C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

LIGHT TIMER PROGRAMMING

If **LITE TIMR** does not appear in the Main Menu, the Light Timer feature is not enabled by the manufacturer.

When available, the Light Timer is OFF by default



PREFERENCES

F / C — Temp Display

Change the temperature between Farenheit and Celcius.

12 / 24 — Time Display

Change the clock between 12 hours and 24 hours display.

RE-MIN-DERS — Reminders

Turn the display of reminder messages (like "Clean Filter") On or Off. **Note: Reminders continue to run in the background even when not displayed. So turning the display of reminders on or off does not reset any Reminders count.**

C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

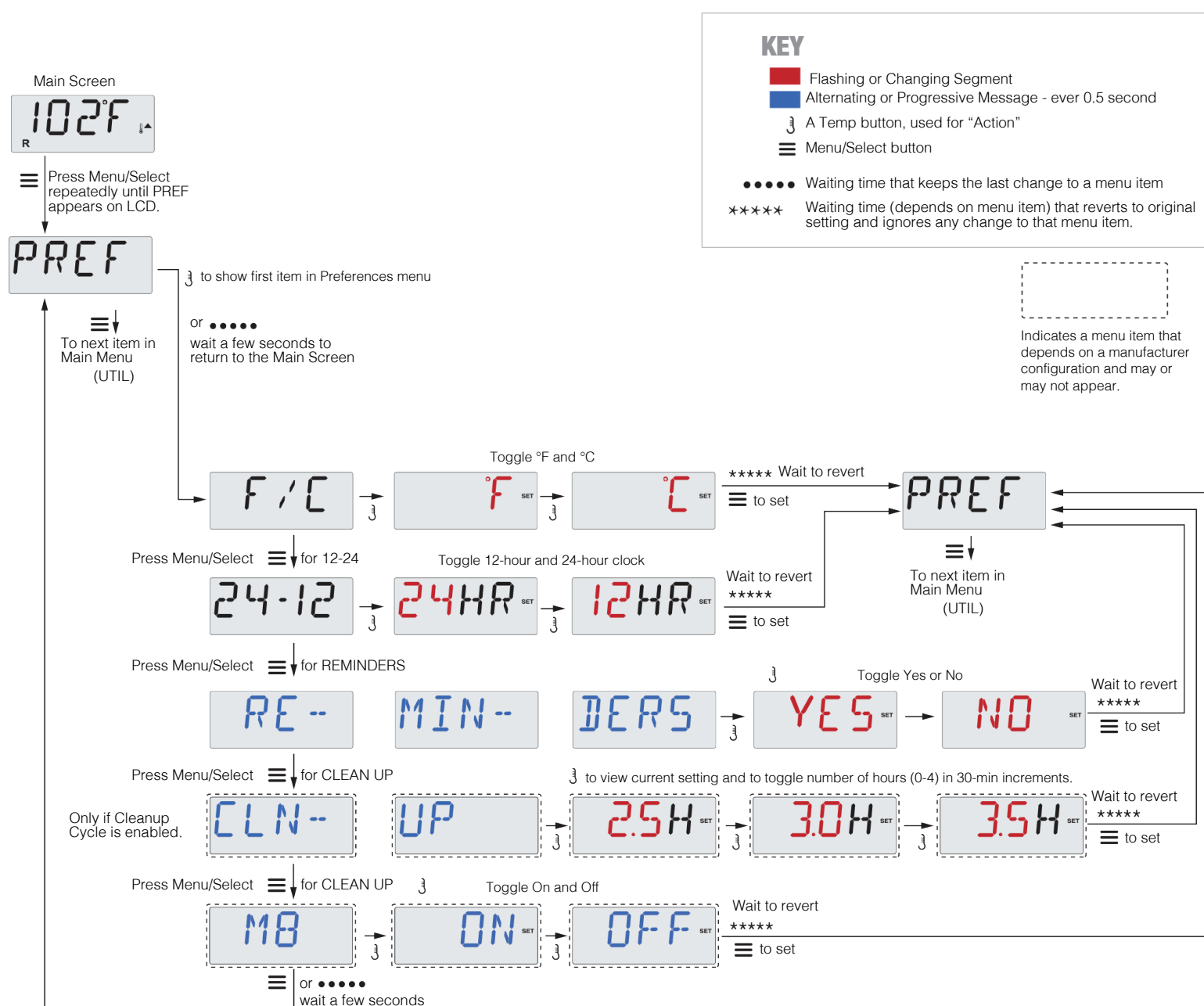
PREFERENCES (continued)

CLN-UP — Cleanup

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.

M8

(This message may not appear on all systems.) On systems that have M8, it is enabled by default. It can be disabled (or re-enabled) here. M8 reduces polling intervals when the water temperature in the spa is steady.



C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

(See navigation diagram on page 20).

UTILITIES AND INFORMATION

INFO — System Information sub-menu

The System Information Menu displays various settings and identification of the particular system.

SSID — Software ID

Displays the software ID number for the system.

MODL — System Model

Displays the Model Number of the system.

SETP — Current Setup

Displays the currently selected Configuration Setup Number.

Heater Voltage *(feature not used on CE rated systems)*

Displays the operating voltage configured for the heater.

Heater Wattage as Configured in Software *(CE systems only)*

Displays a heater kilowatt rating as programmed into the control system software (1-3 or 3-6).

H_ — Heater Type

Displays a heater type ID number.

SW_ — Dip Switch Settings

Displays a number that represents the DIP switch positions of S1 on the main circuit board.

PANL — Panel Version

Displays a number of the software in the top side control panel.

In addition to **INFO**, the Utilities Menu contains the following:

GFCI — GFCI Test *(feature not available on CE rated systems)*

GFCI Test is not always enabled, so it may not appear. This screen allows the GFCI to be tested manually from the panel and can be used to reset the automatic test feature. If the GFCI Test feature is reset, the device will trip within seven (7) days. *The C9-OR-99 being a 220 volt spa, this feature is not available.*

A / B — A/B Sensor Temperatures

When this is set to On, the temperature display will alternate to display temperature from Sensor A and Sensor B in the heater.

FALT LOG — Fault Log

The Fault Log is a record of the last twenty-four (24) faults that can be reviewed by a service tech.

DEMO — Demo Mode

Demo Mode is not always enabled, so it may not appear. This is designed to operate several devices in a sequence in order to demonstrate the various features of a particular spa.

C9-OR-99: TP500 CONTROL PANEL & SPA OPERATION

KEY

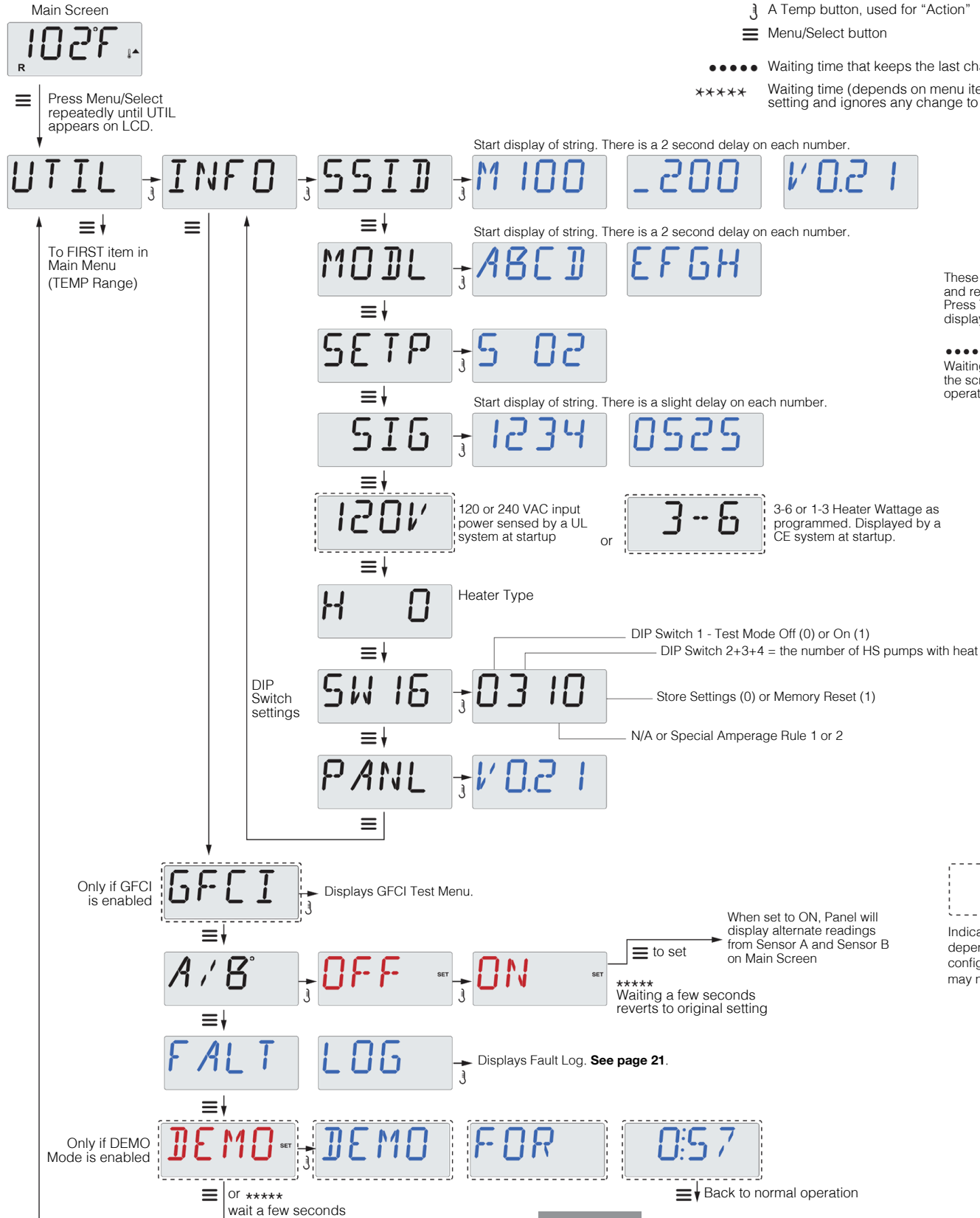
- Flashing or Changing Segment
- Alternating or Progressive Message - ever 0.5 second

 A Temp button, used for "Action"

 Menu/Select button

..... 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.



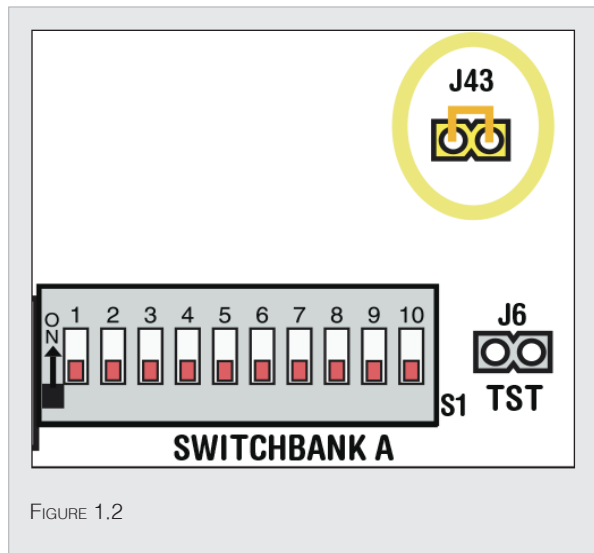
These strings will display once and return to the beginning. Press Temperature again to display the string again.

..... Waiting 10 seconds will allow the screen to return to normal operation.

Indicates a menu item that depends on a manufacturer configuration and may or may not appear.

PERSISTENT MEMORY RESET

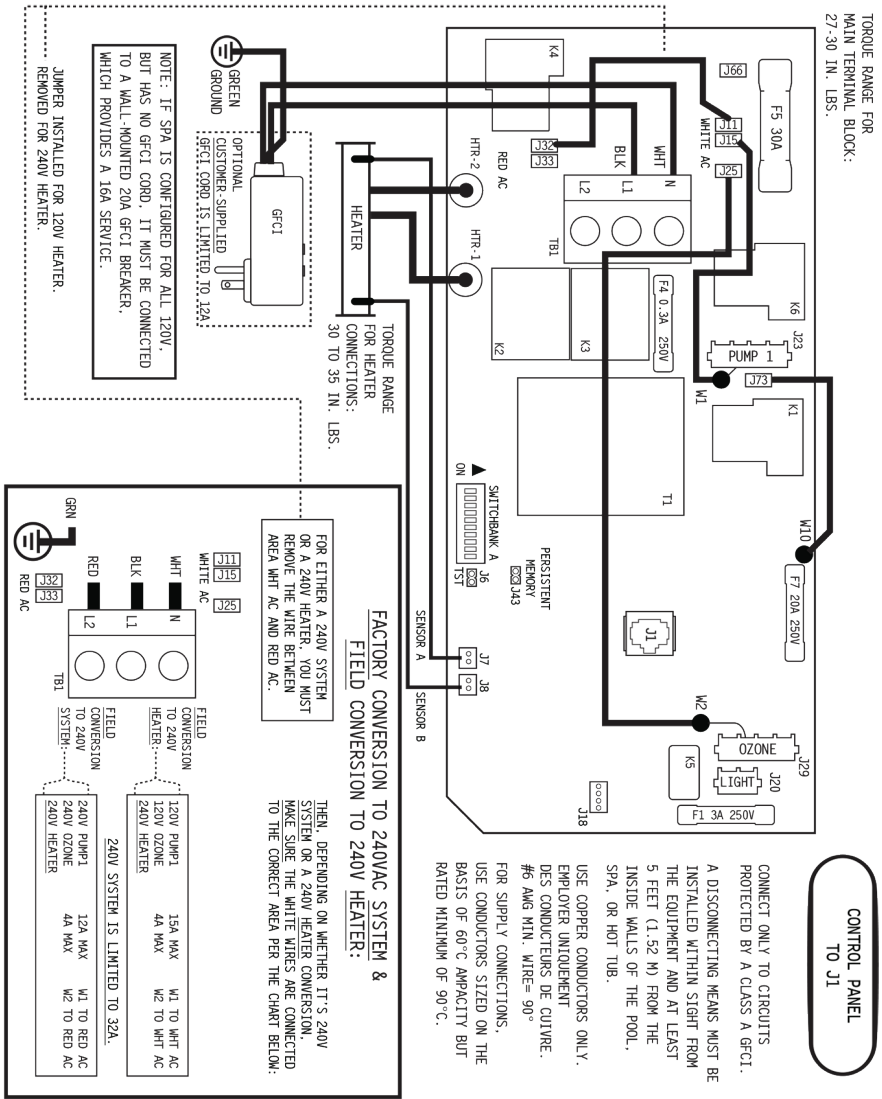
Any time you change a DIP switch, other than A1, you must reset persistent memory for your new DIP switch settings changes to take effect. If you do not reset Persistent Memory, your system may not function properly.



TO RESET PERSISTENT MEMORY

1. Disconnect power to the spa.
2. Remove and put the jumper across J43, covering both pins.
(see fig. 1.2)
3. Connect power to the spa.
4. Wait until "PR" is displayed on the panel.
5. Disconnect power from the spa, again.
6. Remove jumper from J43 and replace.
7. Reconnect power to the spa.

C9-OR-65: VS300 WIRING DIAGRAM



SWITCHBANK A OFF (DOWN)

TEST MODE OFF	A1	TEST MODE ON
UNUSED/JET/TEMP/LIGHT	A2	JET/LIGHT/TEMP DOWN/TEMP UP
LTDUP OR DTDUP PANEL	A3	MINI PANEL
MUST BE OFF	A4	MUST BE OFF
SEE PUMP 1 TIMEOUT TABLE	A5	SEE PUMP 1 TIMEOUT TABLE
60HZ	A6	50HZ
STD/ECN/SLEEP MODE	A7	STANDARD MODE ONLY
DEGREES F	A8	DEGREES C
SEE PUMP 1 TIMEOUT TABLE	A9	SEE PUMP 1 TIMEOUT TABLE
HIGH AMP MODE	A10	LOW AMP MODE

SWITCHBANK A ON (UP)

ALL UNUSED SWITCHES SHOULD BE OFF
A10 MUST BE "ON" WHEN 120V ONLY OR 240V PUMPS.
A10 CAN ONLY BE OFF WHEN 120V PUMP WITH 240V HEATER

PUMP 1 TIMEOUTS

LOW SPEED	HIGH SPEED	A5	A9
2 HOURS	15 MINUTES	OFF	OFF
2 HOURS	30 MINUTES	ON	OFF
15 MINUTES	15 MINUTES	OFF	ON
30 MINUTES	30 MINUTES	ON	ON

AS MANUFACTURED

LOCATION	DEVICE	VOLTS	MAX AMPS	FROM	TO
J23	2 SPD PUMP1	120V	14A MAX	W1	WHT AC
J29	OZONE	120V	1A	W2	WHT AC
J20	SPA LIGHT	12V	1A		
HTR-1 J100	HEATER	120V	1.0KA (4.0KA @ 240V)		
HTR-2 J101	HEATER	120V-ONLY JUMPER WIRE**		RED AC	WHT AC

**REMOVE THIS JUMPER WIRE WHEN 240V IS USED (IE. WHEN RED INPUT WIRE IS USED).

TOTAL OUTPUT AMP DRAW NOT TO EXCEED MAX INPUT RATING OF SPA

USE EARTH GROUND CONNECTIONS AS INDICATED INSIDE THE SYSTEM ENCLOSURE

BALBOA
A HELIOS TECHNOLOGIES COMPANY
56-31-24
VS300FL4
PN 56059-02

ROUTINE MAINTENANCE

Your spa will require periodic maintenance to ensure that you maintain clean and healthy water, a safe spa and a clean and healthy spa environment. By performing regular maintenance, your spa will provide you with many trouble-free years of therapy and enjoyment.

FILTER

Your spa contains a filter cartridge that was designed to trap and remove particles from the spa water. This ensures that your water will remain crystal clear and pleasant to bathe in. You should remove and clean the cartridge periodically (twice a month) to keep it working effectively. Follow the steps below:

1. **Turn the power to your spa off** and remove the filter cover.
2. Remove the cartridge by turning it counter clockwise.
3. Pre clean the cartridge by rinsing it with your garden hose to remove most of the solid debris.
4. Using a recommended filter cleaning agent, pour the proper dose into a pail. Place the cartridge into the pail and add water until the cartridge is completely submersed. Leave the cartridge sitting in the pail for 12 hours. This will dissolve oils and greases from the cartridge.
5. After 12 hours, remove the cartridge from the pail and rinse it with your garden hose.
6. Put the cartridge back in the spa. Put the filter cover back into place and turn the power to your spa on. For sanitary reasons, never use the spa without an installed filter cartridge.
7. If you wish to use the spa while cleaning the cartridge, it is recommended that you have two cartridges and use them alternately. Life expectancy of filter cartridges is about two years, depending on spa usage.

BOTTOM DRAIN (SUCTION FITTING)

Your spa has a bottom drain that feeds water to the pump. It is equipped with a VGB-compliant cover located in the foot well of your spa. This cover traps hair and other large debris to prevent these contaminants from being sucked into the spa pump. It is recommended that you remove the debris from the cover on a weekly basis. Failure to do so could result in damage to your pump. Never operate your spa if the bottom drain cover is damaged or removed.

WATER REPLACEMENT AND CLEANING YOUR SPA

Depending on usage, your spa water should be replaced regularly. Follow the steps below:

1. Turn the power to your spa off and remove the filter cartridge. Clean or replace the cartridge.
2. Remove the access door at the end of the spa where the equipment is located.
3. Remove the drain hose from the equipment enclosure and attach your garden hose to the shutoff valve.
4. Direct the hose to a suitable location for the evacuation of water and open the shutoff valve. To accelerate drainage, use a submersible pump instead of the drain hose.
5. There will be a small amount of water left in the spa once it has been drained. It is recommended that you remove this water using a shop vacuum.
6. Clean the inner and outer surfaces of your spa using a mild detergent, warm water and a soft brush or cloth. Thoroughly rinse the detergent from the spa before you refill it. Never use cleaners that contain harsh abrasives or rubbing and buffing compounds. They may permanently damage your spa surfaces.
7. Refill the spa according to the instructions located in the «Installation And Quick Start Up Guide» of this manual.

COVER MAINTENANCE AND WINTERIZING YOUR SPA

Clean the outer surface of the cover using mild detergent, warm water and a soft brush or cloth. Thoroughly rinse the cover after cleaning. Never use cleaners that contain harsh abrasives or rubbing and buffing compounds as they may permanently damage your cover's surface.

If your spa is equipped with a vinyl cover and is exposed to sunlight, it is recommended to regularly apply a vinyl protector to prevent the vinyl from cracking or discoloring under the sun's UV rays.

Always leave the spa cover on your spa when it is not being used to prevent heat loss and reduce energy costs. The cover will prevent airborne contaminants from entering your spa and will help to prevent unauthorized access to the spa. Use the lock-down tabs to prevent unauthorized access to the spa and to prevent the wind from lifting the cover off. (see fig. 1.3)

WARNING! Sitting or standing on the cover of your spa will break it. During winter, you also need to remove snow buildup from the cover for the same reason.

WARNING! Always lift the cover by the grip handles and never drag the cover over rough surfaces as it will scuff or tear the vinyl.

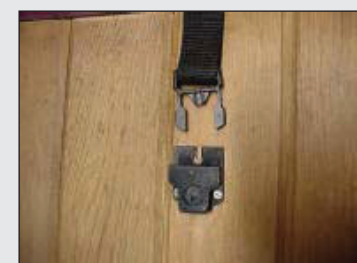
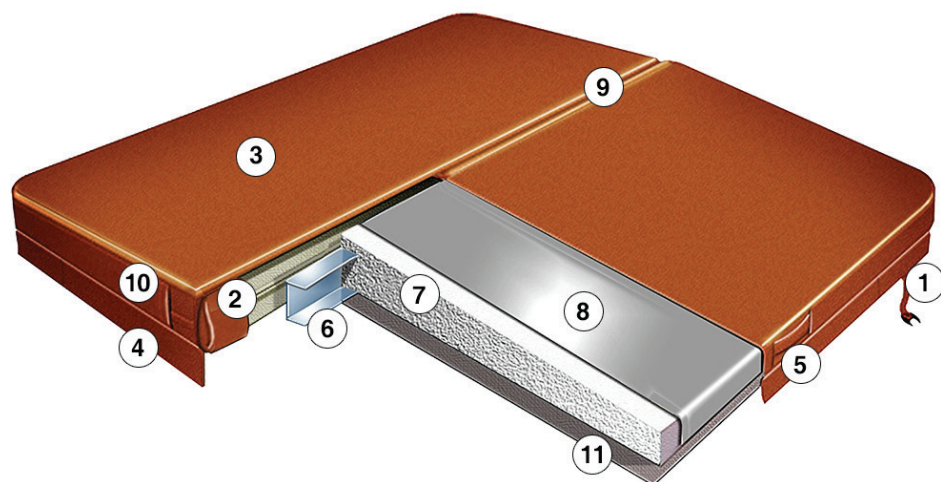


FIGURE 1.3

COVER CALLOUTS



1. Lock-down tab
2. Double-stitched seams
3. Marine-grade vinyl
4. Cover skirt
5. Grip handle
6. Aluminum support channel
7. 1.5 lb density polystyrene insert
8. 6 mil chemical-resistant vapor barrier
9. Full length vapor hinge
10. Reinforced edges
11. Breathable underside insert protection

WINTERIZING YOUR SPA

It is highly recommended to use a professional to close your spa to prevent any damage due to improper winterizing.

COVER MAINTENANCE AND WINTERIZING YOUR SPA

IMPORTANT! Damage caused by improper winterizing is not covered under the manufacturer's warranty.

The following is a guideline to help you winterize your spa. It is imperative that you remove as much water from the spa, the plumbing lines and the equipment as you can to help prevent freeze damage.

1. Flush the spa lines and the equipment, if needed. In some areas, the water has high calcium and sometimes it precipitates out of solution and sticks to the inside of the spa, the plumbing and the equipment. Using a line flush product, flush your spa following the manufacturer's recommended directions.
2. Disconnect the power to the spa.
3. Remove the panel(s) where the equipment is located. If you did not do step 1, remove the filter cartridge from the spa. Drain your spa using the drain valve installed in the spa or with a submersible pump.
4. Using a wet vac, begin to loosen the unions on the intake, or front, of the pump and on the discharge end of the heater manifold. An automobile oil filter wrench is ideal to do this. Suck the water into the wet vac from both unions until the flow stops. After the unions have been disconnected, stick the wet vac into the pump front and the heater manifold and suck out as much excess water as you can.
5. Drain your wet vac and reverse it into a blower. Stick the hose end into the filter hole and over every jet to blow as much water out of the lines as possible.
6. Turn your wet vac back into a water vacuum and suck all water out of the spa and the equipment cavity.
7. Reconnect the unions to the front of the pump and to the heater manifold.
8. Using a turkey baster and a gallon of swimming pool or RV antifreeze, squirt antifreeze into each jet. Remove the union on the top (discharge side) of the pump and pour half of the remaining antifreeze into the pump. Reconnect the union to the pump.
9. Pour the remaining antifreeze into the filter hole.
10. If you are in a region that does not receive a lot of snow or if your spa is sheltered, replace the cover onto your spa and secure it using the attached buckles and safety straps to prevent it from blowing off in high winds. If you want to protect the outside of your spa from the elements when it is not being used, wrap it with a properly secured tarp or you can purchase a spa winter cover from your local spa dealer.

REINFORCING YOUR COVER IN HEAVY SNOW REGIONS

1. If you are in a heavy snow region, cut 2 pieces of 2x4 that extend from one end of the spa to the other end, but not longer than the spa.
2. Wrap the ends with duct tape to prevent them from scratching the top of the spa ledge.
3. Set the 2x4s on top of the spa from one end to the other. Set them as close to the edge of the spa as possible, but not past it.
4. Secure each end of the 2x4s to the spa using a piece of duct tape.
5. Cut a piece of ¼" plywood to lay on top of the 2x4s. Do not go past the edges of the spa.
6. Set the plywood on top of the 2x4s.
7. Set your cover on top of the plywood.
8. Secure the cover to the spa using safety straps. (Safety straps are available from your spa dealer)
9. Wrap the spa with a properly secured tarp or you can purchase a spa winter cover from your local spa dealer.

UNDERSTANDING SPA CHEMICALS AND HOW THEY ARE USED

As a new spa owner, it is very important that you learn and understand how to keep your spa water clean and healthy. This short guide was designed to give you a basic explanation of the most common chemicals used in spas and when they are needed. It is recommended that you consult Cloud 9 Spas for more detailed information or if you need further assistance.

FILLING YOUR SPA

Although most spa makers have recommended filling instructions, some important things to remember are:

1. It is not recommended to use soft water to fill your spa. Soft water is aggressive and can attack metal fittings and heater elements.
2. If your water source contains metals such as iron and/or copper, it is recommended to use a pre-filter on the end of your garden hose to remove precipitated metals from the water before they have a chance to get into your spa.
3. You must remove the spa's filter cartridge and insert your garden hose directly into this opening. This will force air out of the water lines and make it easier for your pump to prime and start.

CHEMICAL CATEGORIES AND USAGE *

1. Water balance: These chemicals protect your spa and prevent damages caused by aggressive water.
2. Sanitizing: These chemicals protect bathers by destroying bacteria and viruses.
3. Specialty: These chemicals are used for preventive maintenance and water clarification.

* When using any chemicals, always refer to the manufacturer's recommendations for usage.

WATER BALANCE CHEMICALS

Upon filling your spa, it is strongly recommended to have your water tested by a specialist in order to properly adjust the basic settings. This will make maintaining and balancing your water easier afterwards.

Water balance chemicals are extremely important because they prevent your spa water from becoming acidic/corrosive or alkaline/scale forming. This, in turn, prevents costly damage to your spa and its equipment. There are four parameters that lend themselves to determining balanced water. They include alkalinity, pH, calcium hardness and temperature. In a spa application, temperature is generally constant and as long as it is initially in range, calcium hardness usually does not need further adjusting. The two most important water balance parameters are alkalinity and pH.

1. Alkalinity – Alkalinity is the foundation of water balance. When in its proper range, it will help to keep the water's pH in range and to prevent erratic changes in the pH. Alkalinity should be checked and adjusted, initially, and then tested, and adjusted if needed, on a weekly basis.
2. pH - pH is an extremely important water balance parameter. If pH is low, your water is acidic and can attack metal components and heater elements resulting in corrosion to these parts. If pH is high, your water is alkaline or scale forming. As pH rises, calcium becomes less soluble in water. pH should be checked and adjusted, initially, and then tested, and adjusted if needed, on a weekly basis.

SPECIALTY CHEMICALS

Specialty chemicals address occasional water problems and help to maintain clean, clear water when a spa is heavily used. Whether you will or should use these chemicals will be based on the quality of your source water and how frequently your spa is used. Following is a summary of the most common specialty chemicals and when they should be used.

1. **Metal removers and stain preventers** – Many people have a well as their source water and, quite often, this water contains dissolved metals such as iron and/or copper. If your water is in this category, you should use metal-treatment and stain-prevention chemicals in your spa. These chemicals will bind with the metals in your water, preventing them from precipitating from the water and causing stains.
2. **Enzymes** – Bathers introduce oils and greases into spa water; those normally originate from natural body oils, perspiration, artificial body oils such as moisturizers, cosmetics and other complex bather wastes. When excessive, they can cause scum lines and foul up filter cartridges. To help prevent build up of these oils and greases, you can add enzymes to your spa water. Enzymes help to break down oils and greases into smaller fragments so that they can be destroyed and removed through shock treatment with a non-chlorine oxidizer. If you experience visible oil and grease conditions on the water's surface and/or a continuous scum line, it is recommended to add enzymes on a regular basis.
3. **Clarifiers** – When a spa is heavily used, there can be a build up of microparticles in the water that are too tiny to get trapped by the filter. The water becomes cloudy. These negatively charged particles repel each other and as such they cannot bind together and be properly filtered. Clarifiers are positive ions that neutralize the negative charge of the microparticles which allows them to clump together into bigger particles that can be filtered out of the water. If your spa water is properly balanced and your spa filter is functioning properly, but you still have a cloudiness problem, you should add clarifier to your water.
4. **Defoamers** – Occasionally, foam may form on the surface of your spa water for various reasons: low calcium hardness, bather wastes, improperly rinsed filters, soap from bathing suits, etc. If persistent, check the water's calcium level and adjust if needed. Also, ensure that filters and bathing suits are well rinsed. A defoamer is a temporary fix and will not remove the source of the problem. Add 5 to 10 drops at a time.
5. **Biofilm control** – A spa environment is conducive to the formation of microorganisms and bacteria. It's a warm and wet environment where dead organic compounds can thrive. When microorganisms attach themselves to a spa surface, they can begin to colonize if they are not removed and destroyed. If allowed to colonize, they will secrete a substance known as biofilm. This biofilm protects them from destruction by normal spa chemicals. When there is a significant bacterial growth, a spa can begin to smell musty and swampy. The normal cure is to drain, clean and refill the spa. Using a biofilm cleaner on a regular basis is good preventive maintenance.

DISINFECTING AND SANITIZING CHEMICALS

There are many different systems available to disinfect and sanitize your spa. The system that you choose should be geared to the frequency of usage of your spa and who is using it. Following are five traditional systems that address different preferences and usage parameters. You should choose the system that is best suited for you.

BROMINE

Bromine is a sanitizer that is best suited for use in spas. Unlike chlorine, bromine's effectiveness is not sharply reduced as pH rises. Just as chlorine's byproduct is called chloramine, bromamine is bromine's byproduct. But unlike chloramine, bromamine is an effective disinfectant that does not produce unpleasant odors. There are two traditional brominating systems. The first uses bromine tablets, caplets, or granules that are generally placed in a floating feeder to dissolve and create a bromine residual in the water. The water will require regular shocking. The second system requires the addition of bromine salt to the water. An oxidizer is then added, after each use, to produce a bromine sanitizer. This will sanitize and oxydize the water after each use.

CHLORINE

When it comes to sanitizers, chlorine is probably the best known. A small amount should be added to your water after every use. This will both sanitize the water and oxidize contaminants from it. The two (2) most popular forms are granular sodium chlorine and granular lithium hypochlorite. Both are very effective. You should not over chlorinate your spa. Furthermore, you should always dissolve your chlorine in water before adding the solution to your spa to prevent chlorine deposits at the bottom of your spa. This could result in bleaching or staining of the polyethylene.

BIGUANIDE

Unlike bromine and chlorine, biguanide is a non-halogen sanitizing compound. It is effective for people who have allergic reactions to halogen sanitizers like chlorine and bromine. It is odorless and does not irritate skin. Biguanide is not compatible with chlorine or bromine. Contact with these chemicals will leave gummy residues on your spa's surfaces. Also, biguanide is not effective in spas with heavy bather loads.

MINERAL PURIFIERS

Copper and zinc are very effective in killing bacteria and viruses in water. Minerals do not work as quickly as other sanitizers and cannot remove organic waste from the water. Although most metal-producing systems have inline chambers that use electrolysis to produce metal ions and introduce them into the water, mineral purifying sticks have become very popular and work extremely well with ozone.

NON-CHLORINE SHOCK TREATMENT

One of the most important parts of a spa treatment is to shock the water after each use. When a spa is used, bathers will leave oils, greases and ammonia from their sweat, as well as many other contaminants from their body, in the water. Unless removed right away, these contaminants will become food source for other microorganisms in the water and they can cause odors and unhealthy water. Shocking after each use will remove these contaminants and help to make your spa much easier to maintain.

TROUBLESHOOTING

If you are experiencing an operating problem, it is recommended to contact Cloud 9 Spas or a qualified service technician to arrange servicing. Some problems can be diagnosed and rectified with a simple action or procedure. Below are some common problems, possible causes and simple actions that may help to solve them.

THE CIRCUIT BREAKER IMMEDIATELY TRIPS WHEN THE SPA IS STARTED

1. If your spa is wired for a 220V electrical supply with a minimum 40A GFCI breaker, ensure that the wiring from the house panel to the breaker and from the breaker to the spa is done correctly. Occasionally, the white common wire is improperly connected and the breaker trips immediately.
2. The problem could be a defective breaker, component or heater element. It is recommended that a qualified technician perform this troubleshooting.

NOTHING OPERATES WHEN YOU CONNECT ELECTRICITY TO THE SPA

1. Check the breaker to ensure it hasn't tripped. If it is tripped, reset it and try again.
2. Using a voltmeter, check to ensure that there is power to the spa pack. This is done by removing the cover of the spa pack. It is recommended that a qualified technician perform this troubleshooting.

THE PUMP LIGHT GOES ON, BUT THERE IS NO WATER FLOW TO THE JETS

1. Ensure that any gate valves located in the equipment enclosure are in the open position.
2. Ensure that the jets are in their open position.
3. Ensure that your filter is not dirty and causing a flow restriction.
4. The pump may not be properly primed. Push the «Jets» button several times. It may take several minutes for the pump to prime.

THE PUMP RUNS CONTINUOUSLY OR WILL NOT SHUT OFF WHEN THE «JETS» BUTTON IS DEPRESSED

1. The pump runs as long as there is a heat demand. Ensure that the air control valves are in their closed position when you are not using the spa. If they are open, they will allow cold, ambient air to enter your spa water, especially in cold weather, and the pump will continue to run to keep up with the heat demand.
2. Check the length of your filter cycle.
3. Even if you press the «Jets» button to turn it off, the pump will continue to operate on low speed if your spa requires heat or is in a filter cycle.

SPA WATER TEMPERATURE EXCEEDS SET TEMPERATURE AND WATER IS VERY HOT

1. **DO NOT ENTER THE SPA.** Remove the cover and allow the spa water to cool down.
2. In hot climates, spa water can overheat from high ambient air temperatures, direct sunlight on your spa or from heat transfer from the pump during filter cycles. Readjust your safety straps and place a small object between the cover and the spa to slightly wedge it open. This will help to keep the water cooler.

WATER LEVEL IN THE SPA IS DROPPING FASTER THAN NORMAL

1. If your spa has been used more than normal, it could be a result of more splashing and added evaporation.
2. Remove the access door to the equipment and inspect for water on the floor of the spa cavity. If there is water, check and ensure that your unions are properly tightened. Check your jets housings and plumbing to try to identify a plumbing leak.

It is recommended to contact Cloud 9 Spas or a qualified service technician for spa service.

TROUBLESHOOTING

MY WARRANTY HAS EXPIRED

Cloud 9 Spas will continue to provide service for your spa even after your warranty has expired via our customer care center at [1-800-383-6119](tel:1-800-383-6119) or by email at customerservice@cloud9spas.com. Our phone hours are Monday through Friday, 8:00 am - 5:00 pm CST.

DRAINAGE FREQUENCY

You should drain and refill your spa every one (1) to three (3) months depending on your usage. You should also replace the filter cartridge and wipe down the spa periodically. Consult Cloud 9 Spas for recommendations. The drain valve is located near the bottom corner of your spa (see fig. 1.4).

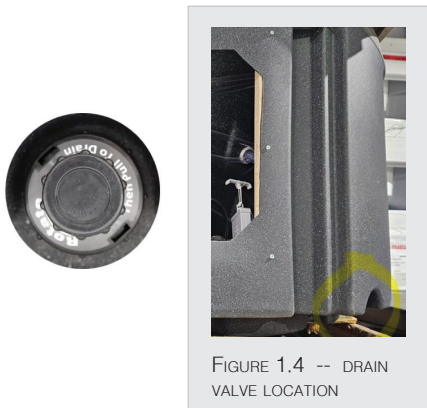


FIGURE 1.4 -- DRAIN
VALVE LOCATION

BLEEDING AIR FROM YOUR SPA

When draining and refilling your spa, air may enter the pump which will keep the water from flowing into it. Below are the steps to take to bleed an air-locked pump (see fig. 1.5a or fig. 1.5b):

1. Turn off the GFCI breaker
2. Open the access door to the equipment enclosure.
3. Loosen a heater or pump union until you hear the trapped air escape.
4. Once water drips out in a continuous stream, hand tighten the union until the water stops leaking.
5. Turn on the GFCI breaker.
6. Turn on all pumps to make sure that the pump starts and that there are no leaks.
7. Put the access door back on.



FIGURE 1.5A -- HEATER UNION; LOOSEN UP TO BLEED AIR

or

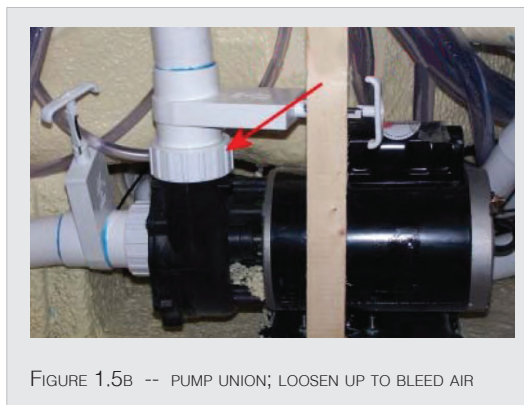


FIGURE 1.5B -- PUMP UNION; LOOSEN UP TO BLEED AIR



MESSAGE	MEANING	ACTION REQUIRED
	No message displayed. Power to the spa has been cut off.	The control panel will be disabled until power returns.
-- --	Temperature unknown	After the pump has been running for two minutes, the temperature will be displayed. Spa settings will be preserved until next start up.
HH	Overheat. The spa has shut down. One of the sensors has detected a 118°F (48°C) temperature at the heater.	Do not enter the water. Remove spa cover and allow water to cool. Once the heater has cooled, reset by pushing any button. If spa does not reset, shut off the power to the spa and call your spa dealer or a qualified service technician.
OH	Overheat. The spa has shut down. One of the sensors has detected that the spa water is 110°F (43°C).	Do not enter the water. Remove spa cover and allow water to cool. Once the heater has cooled, reset by pushing any button. If spa does not reset, shut off the power to the spa and call your spa dealer or a qualified service technician.
IC	Ice: Potential freeze condition detected.	No action required. The pump will automatically activate, regardless of spa status.
SA	Spa is shut down. The sensor that is plugged into the sensor "A" jack is not working.	If the problem persists, call your spa dealer or a qualified service technician. (May appear temporarily in an overheat situation and disappear when the heater cools.)
SB	Spa is shut down. The sensor that is plugged into the sensor "B" jack is not working.	If the problem persists, call your spa dealer or a qualified service technician. (May appear temporarily in an overheat situation and disappear when the heater cools.)
SN	Sensors are out of balance. If alternating with spa temperature, it may just be a temporary condition. If flashing by itself, spa is shut down.	If the problem persists, call your spa dealer or a qualified service technician.
HL	Significant difference between temperature sensors has been detected. This could indicate a flow problem.	Check water level in spa. Refill if necessary. If the water level is okay, ensure the pump has been primed. If the problem persists, call your spa dealer or a qualified service technician.
LF	Persistent flow problems. (Displays on the fifth occurrence of "HL" message within 24 hours.) Heater is shut down, but other spa functions continue to run normally.	Follow action required for "HL" message. Heating capability of the spa will not reset automatically. Press any button to reset.
DR	Possible inadequate water, poor flow or air detected in the heater. Spa is shut down for 15 minutes.	Check water level in spa. Refill if necessary. If the water level is okay, ensure the pump has been primed. Press any button to reset; the spa will restart after 15 minutes. If the problem persists, call your spa dealer or a qualified service technician.
DY	Inadequate water detected in heater. (Displays on third occurrence of "DR" message.) Spa is shut down.	Follow action required for "DR" message. Spa will not automatically reset. Press any button to reset.

WARNING! SHOCK HAZARD!

Do not attempt service of the control system. Contact your spa dealer or a qualified service technician 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.

C9-OR-99

MESSAGE CODES

RUN PMP5 PURG AIR

PRIME

Priming Mode - M019

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 circ pump, it will turn on with «Light» in Priming Mode. The circ pump will run by itself when Priming Mode is exited.**

-- -- °F -- -- °C

Water Temperature is unknown

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

42°F TOO COLD

Too Cold - Freeze Protection

A potential freeze condition has been detected, or the Aux Freeze Switch has closed, and all pumps and blower are activated, either one at a time, or all at once, depending on how your system was built. All pumps and blower are ON for at least 4 minutes after the potential freeze condition has ended, or when the Aux Freeze Switch opens. 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.

WATR TOO HOT

Water is too Hot (OHS) - M029

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

J29

J29 Warning - M044

J29 is typically used as a Heater Disable input. As such, it should not typically be shorted at power-up. This message appears if J29 is shorted at power-up.

HTR FLOW LOSS

Heater Flow is Reduced (HFL) - M016

There may not be enough water flow through the heater to carry the heat away from the heating element. Heater startup will begin again after about 1 minute. See “flow-related checks” on next page.



Heater Flow is Reduced (LF)* - 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, you must press any button to reset and begin heater startup.



Heater may be Dry (DR)* - M028

Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 minutes. Press any button to reset the heater startup. See “flow-related checks” below.



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 press any button to reset and restart the heater startup. See “flow-related checks” below.



Heater is too Hot (OHH)* - M030

One of the water temp sensors has detected spa water temp 118°F (47.8°C) in the heater and the spa is shut down. You must press any button to reset when water is below 108°F (42.2°C). See “flow-related checks” below.



A Reset Message may appear with other Messages.

Some errors may require power to be removed and restored.

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, some equipment may occasionally turn on to continue monitoring temperature or if Freeze Protection is enabled.

* This message can be reset from the top side panel with any button press.

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MESSAGE CODES



Sensor Balance is Poor - M015

The temperature sensor *may be* out of sync by 3°F (1.5°C). Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



Sensor Balance is Poor* - M026

The temperature sensors *are* out of sync. The Sensor Balance is Poor fault has been established for at least 1 hour. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



Sensor Failure (Sensor A) - M031 & Sensor Failure (Sensor B) - M032

A temperature sensor or sensor circuit has failed. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



No Communications

The control panel is not receiving communication from the system. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



Pre-Production Software

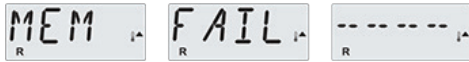
The Control System is operating with test software. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



°F or °C is replaced by °T

The Control System is in Test Mode. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).

* This message can be reset from the top side panel with any button press.



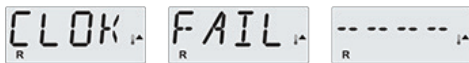
Memory Failure - Checksum Error* - M022

At power-up, the system has failed in the Program Checksum Test. This indicates a problem with the firmware (operation program) and requires a service call. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



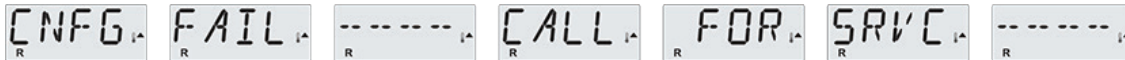
Memory Warning - Persistent Memory Reset* - M021

Appears after any system setup change. Call Cloud 9 Spas at [1-800-383-6119](tel:1-800-383-6119) if this message appears on more than one power-up, or if it appears after the system has been running normally for a period of time.



Memory Failure - Clock Error* - M020

Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



Configuration Error - Spa will not start up

Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



A pump appears to be stuck ON - M034

Water may be overheated. **POWER DOWN THE SPA. DO NOT ENTER THE WATER.** Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



A pump appears to have been stuck ON when spa was last powered - M035

POWER DOWN THE SPA. DO NOT ENTER THE WATER. Call Cloud 9 Spas for Service at [1-800-383-6119](tel:1-800-383-6119).



The water level is too low

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

* This message can be reset from the top side panel with any button press.

General maintenance helps.

The display of Reminder Messages can be suppressed by using the Pref Menu (See page 17).

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 (e.g. 7 days) can be specified by the manufacturer.

Press a Temperature button to reset a displayed Reminder Message.



Alternates with temperature or normal display.

Check pH - appears on a regular schedule (e.g. every 7 days).

Check pH with a test kit and adjust pH with the appropriate chemicals.



Alternates with temperature or normal display.

Check chemistry - appears on a regular schedule (e.g. every 7 days).

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



Alternates with temperature or normal display.

Clean filter - appears on a regular schedule (e.g. every 30 days).

Clean the filter media as instructed by the manufacturer. Refer to Hold Menu (See page 14).



Alternates with temperature or normal display.

Change water - appears on a regular schedule (e.g. every 90 days).

Change the water in the spa on a regular basis to maintain proper chemical balance and sanitary conditions.



Alternates with temperature or normal display.

Clean cover - appears on a regular schedule (e.g. every 180 days).

Vinyl covers should be cleaned and conditioned for maximum life.



Alternates with temperature or normal display.

Change filter - appears on a regular schedule (e.g. every 365 days).

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



Alternates with temperature or normal display.

Change cartridge - as needed.

Install a new mineral cartridge.



Alternates with temperature or normal display.

Check ozonator - appears on a regular schedule (e.g. every 365 days).

Check your ozone and/or UV generator per your spa manufacturer's instructions.



Alternates with temperature or normal display.

Service check - appears on a regular schedule (e.g. every 365 days).

Have a service technician do a check-up on your spa per your spa manufacturer's instructions.



Alternates with temperature or normal display.

Treat wood - appears on a regular schedule (e.g. every 180 days).

Wood skirting and furniture should be cleaned and conditioned per the manufacturer's instructions for maximum life. Not applicable for Cloud 9 Spas, unless to be used as a routine to clean the polyethylene skirt of your spa periodically.

LIMITED WARRANTY

This warranty is a limited warranty within the meaning of Title 1 of the Federal Trade Commissions Improvement Act. It begins on the date of purchase and extends to the original purchaser only. Obligation to this warranty is limited to the repair or replacement of defective parts that are returned to Cloud 9 Spas for repair solely. If your spa develops a defect within the warranty period and the defect is a warranty related issue, it will be repaired by Cloud 9 Spas or its authorized agent. If the defect is not warranty related, the spa owner is responsible for all charges related to the repair of the spa. This warranty does not cover any spa that has been subject to misuse, neglect, negligence, improper water balance and/or chemistry, accident, civil disturbance, acts of God, or that has been operated in any way contrary to the recommended operating instructions or that has not been installed as specified in Cloud 9 Spas' Owner's Manual. This warranty does not cover any spa that has been modified or altered except with parts or options that are authorized by Cloud 9 Spas and installed according to recommended installation instructions. It does not cover any damage incurred by moving the spa.

To obtain warranty service, contact Cloud 9 Spas at [1-800-383-6119](tel:1-800-383-6119) or by email at customerservice@cloud9spas.com. You will be asked to provide original proof of purchase documents. Cloud 9 Spas' responsibility with respect to warranty is limited to repairing or exchanging defective parts and Cloud 9 Spas reserves the right to use refurbished parts, at its discretion. Cloud 9 Spas neither assumes or authorizes anyone else to assume any other obligation under the terms of this warranty. All final decisions with respect to legitimacy of warranty will be made solely by Cloud 9 Spas and Cloud 9 Spas assumes no liability with respect to loss of use of a spa during warranty repair.

Cloud 9 Spas reserves the right to change or improve the design of its spas without obligation to modify any spa previously manufactured. Cloud 9 Spas reserves the right to use its own sub-contracted repair service with respect to labor warranty.

- **Shell/Surface : Five (5) year pro-rated warranty**

The shell (the water-holding portion of the spa) is warranted against loss of water through the shell due to defects in material or workmanship for a prorated** period of five (5) years. The costs of removing, reinstalling, and any shipping charges related to the structural repair of a spa are the responsibility of the spa owner. Cloud 9 Spas reserves the right to make repairs to the shell either at the spa location, or at its manufacturing plant. This warranty does not cover superficial damages, minor surface imperfections or discoloration, or damage caused by improper water balance and/or chemistry. In the event Cloud 9 Spas assesses that a spa replacement is warranted, the spa cover will not be included in that replacement.

** Pro-rata : Suggested retail price, divided by 60 months, multiplied by months of use, plus shipping and handling = replacement cost.

- **Parts : One (1) year warranty**

The heater, pump, spa pack, top side control and plumbing (excluding sealing gaskets) are warranted to be free of leaks and/or defects for a period of one (1) year.

- **Labor : Ninety (90) days limited warranty**

Labor charges related to repair or replacement of defective components, as listed in the Parts section of this warranty, will be free of charge for a period of ninety (90) days provided that defective components are returned to Cloud 9 Spas for repair. The spa owner may be subject to an authorized service trip charge which is not covered by this warranty. Labor reimbursement does not include routine maintenance such as lubricating O-rings, tightening jets, changing/cleaning filters, chemical checks/adjustments, or anything else that would be deemed routine maintenance. Any other terms and conditions related to labor warranty are an agreement between the original purchaser and Cloud 9 Spas. The original purchaser should consult Cloud 9 Spas for individual terms, conditions and procedures with respect to labor warranty.

- **Incidentals**

The ozone generator, waterfall assembly, rotational jets, pump seal and heater seal are warranted to be free of defects for a period of ninety (90) days for parts only. All alterable accessories (filter cartridges, cover straps, vinyl cover, cover lifters, waterfall housings, main light lens covers, standard light bulbs and LED lights, fuses, shut-off valve, jets inserts) are warranted to be free of defects at time of delivery. The spa cover is warranted to be free of defects at time of delivery. If that is not the case and there is a manufacturing defect with the spa cover, it will be exchanged. Any shipping charges related to the replacement of a spa cover are the responsibility of the spa owner.

- **Disclaimers**

The owner must ensure that access to the spa is available for any repair/inspection under warranty. Components that become defective due to corrosion or scale formation as a result of improper water balance and/or spa maintenance are disclaimed, in their entirety, under this warranty. Cloud 9 Spas assumes no liability or responsibility for incidental, consequential or other damage including, but not limited to, removal of a deck or other custom fixture(s), transportation or shipping charges, telephone charges, rental of a like product during the time warranty service is being performed, travel, loss or damage to personal property or person, and loss of revenue, use, time or convenience resulting from the loss of use of the spa covered by this warranty. Some states/provinces do not allow the exclusion or limitation of incidental or consequential damages. The above limitations and exclusions may not apply to you.

During the winter months, it is the spa owner's responsibility to ensure that the spa's plumbing and shell do not freeze. This warranty does not cover damages caused by frost.