

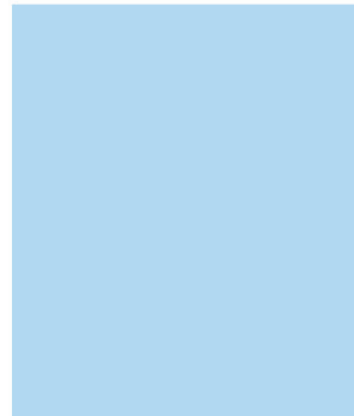


2009 OWNER'S MANUAL

United States and Canada

Genesis Portable Spas

Manufactured after January 2, 2009
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Cal Spas Home Resort™

www.calspas.com



Preparing for Your New Portable Spa

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LTR20091058, Rev. A
1/16/09

CONTACT INFORMATION

For customer service, please contact your authorized dealer immediately. If you need additional information and/or assistance, contact:

LMS Customer Service Department
1462 East Ninth Street
Pomona, CA 91766.

Toll Free: 1-800-CAL-SPAS
Fax: 1-909-629-3890

Important Safety Instructions

When installing and using this electrical equipment, always follow basic safety precautions. Following these instructions will help make your first spa session a pleasurable one.

READ AND FOLLOW ALL INSTRUCTIONS

NOTE: A licensed electrician may be required to upgrade your standard receptacle and/or circuit breaker.

DANGER -- RISK OF ACCIDENTAL DROWNING:

Do not allow children to be in or around a spa unless a responsible adult supervises them. Keep the spa cover on and locked when not in use. See instructions enclosed with your cover for locking procedures.

DANGER -- RISK OF INJURY: 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 the flow rates are compatible.

DANGER -- RISK OF INJURY: Never operate the spa if the suction fitting or filter baskets are broken or missing.

DANGER -- RISK OF INJURY: Never replace a suction fitting with one that is rated less than the flow rate marked on the original suction fitting.

DANGER -- RISK OF ELECTRIC SHOCK: Install the spa at least 5 feet (1.5 meters) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently bonded by a minimum #8 AWG solid copper conductor to the outside of the spa's control box.

DANGER -- RISK OF ELECTRIC SHOCK: Do not permit any external electrical appliances, such as lights, telephones, radios, televisions, and etc., within five feet (1.5 meters) of the spa. Never attempt to operate any electrical device from inside the spa.

WARNING -- RISK OF INJURY

The spa water 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.

High water temperatures have a high potential for causing fetal damage during pregnancy. Women who are pregnant, or who think they are pregnant, should always check with their physician prior to spa usage.

The use of alcohol, drugs or medication before or during spa use may lead to unconsciousness, with the possibility of drowning.

Persons suffering from obesity, a medical history of heart disease, low or high blood pressure, circulatory system problems or diabetes should consult a physician before using the spa.

Persons using medications should consult a physician before using the spa since some medications may induce drowsiness while others may affect heart rate, blood pressure and circulation.

Hyperthermia Danger

Prolonged exposure to hot air or water can induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level 3°F to 6°F above the normal body temperature of 98.6°F (or 2°C to 4°C above 37°C). While hyperthermia has many health benefits, it is important not to allow your body's core temperature to rise above 103°F (39.5°C). Symptoms of excessive hyperthermia include dizziness, lethargy, drowsiness and fainting. The effects of excessive hyperthermia may include:

- Failure to perceive heat
- Failure to recognize the need to exit spa or hot tub
- Unawareness of impending hazard
- Fetal damage in pregnant women
- Physical inability to exit the spa
- Unconsciousness

WARNING: The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia.

Preparing for Your New Portable Spa

Most cities and counties require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on property to prevent unsupervised access to the property by children. Your dealer can provide information on which permits may be required and how to obtain them prior to the delivery of your spa.

Planning the Best Location

Safety First

Do not place your spa within 10 feet (3 m) of overhead power lines.

Consider How You Will Use Your Spa

How you intend to use your spa will help you determine where you should position it. For example, will you use your spa for recreational or therapeutic purposes? If your spa is mainly used for family recreation, be sure to leave plenty of room around it for activity. If you will use it for relaxation and therapy, you will probably want to create a specific mood around it.

Plan for Your Environment

If you live in a region where it snows in the winter or rains frequently, place the spa near a house entry. By doing this, you will have a place to change clothes and not be uncomfortable.

Consider Your Privacy

In a cold-weather climate, bare trees won't provide much privacy. Think of your spa's surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors as well when you plan the location of your spa.

Provide a View with Your Spa

Think about the direction you will be facing when sitting in your spa. Do you have a special landscaped area in your yard that you find enjoyable? Perhaps there is an area that catches a soothing breeze during the day or a lovely sunset in the evening.

Keep Your Spa Clean

In planning your spa's location, consider a location where the path to and from the house can be kept clean and free of debris.

Prevent dirt and contaminants from being tracked into your spa by placing a foot mat at the spa's entrance where the bathers can clean their feet before entering your spa.

Allow for Service Access

Many people choose to install a decorative structure around their spa. If you are installing your spa with any type of structure on the outside, such as a gazebo, remember to allow access for service. It is always best to design special installations so that the spa can still be moved, or lifted off the ground.

Preparing a Good Foundation

Damage caused by inadequate or improper foundation support is not covered by the warranty.

It is the responsibility of the spa owner to provide a proper foundation for the spa.

We strongly recommended that you have a qualified, licensed contractor prepare the foundation for your spa.

Place the spa on a level foundation (preferably a concrete slab not less than 3" / 8 cm thick). If you are installing the spa indoors, pay close attention to the flooring beneath it. Choose flooring that will not be damaged or stained.

If you are installing your spa on an elevated wood deck or other structure, consult a structural engineer or a contractor to ensure the structure will support the weight of 150 pounds per square foot.

Electrical Installation

Always follow applicable local, state and federal codes and guidelines.

The spa is equipped with a 15 amp GFCI cord and plug kit.

Plug the spa into a dedicated electrical line with a 15 amp breaker.

Always use a weatherproof-covered receptacle. Receptacle shall be located not less than 5 feet (1.5 m) from and not exceeding 10 feet (3.0 m) from the inside wall of the spa (NEC 680.43(A)).

Do not use extension cords. Using an extension cord will void your warranty.

Do not bury the power cord. If your cord becomes damaged, replace it before next usage.

If you need to replace your cord, replace it with a 15 amp GFCI connection. The cord may not be longer than 15 feet (4.6 m).

Testing the GFCI

Test the GFCI plug prior to first use and periodically when the spa is powered. To test the GFCI plug version, follow these instructions. (Spa should already be plugged in and operational.)

1. Press the TEST button on the GFCI. The GFCI will trip and the spa will stop operating.
2. Press the RESET button on the GFCI. The GFCI will reset and the spa will turn back on.

The spa is now safe to use.

If the GFCI trips while the spa is in use, press the RESET button. If the GFCI does not reset, unplug the spa and call your local Cal Spas dealer for service. **DO NOT USE THE SPA!**

Filling and Powering Up Your Portable Spa



Never fill your spa with soft water.

Soft water makes it impossible to maintain the proper water chemistry and may cause the water to foam, which will ultimately harm the finish of the spa and void your warranty.

1. Once the spa has been placed on an approved surface and has been correctly wired by a licensed electrician, inspect all plumbing connections in the equipment area of your spa. Ensure that these connections are secure and that they did not loosen during shipment.
2. If equipped, open all gate valves in the equipment area. Before operating the spa, these valves must be in the up or "open" position.



VERY IMPORTANT!

Never run the spa with the gate valves closed or without water circulating for long periods of time. Be careful not to over-tighten the plumbing fittings.

3. Remove the cartridge from filter canister.
4. Place a garden hose in the filter canister and fill your spa with **regular tap water** about six inches from the top.



VERY IMPORTANT!

Always fill the spa through the filter canister! Failure to do so may cause air to be trapped in the filtration system and prevent the pumps from operating properly.

5. Presoak the filters in spa water.



VERY IMPORTANT!

You must presoak the filters before inserting them in the filter canister. Dry filters can allow air into the filtration system which can cause pump failure.

6. Once the water is at the correct level and air is bled, plug in the spa into a dedicated electrical outlet.

Note: When the power is turned on to the spa, the controls will perform a diagnostic check for approximately five minutes. When the diagnostic is complete, the spa will automatically operate at filter speed and continue heating until the spa water temperature reaches the default temperature of 100°F.

8. If no water is flowing when the pump is running, there could be an air pocket at the suction side of the pump. Shut off power to the spa and loosen the pump union on the suction side of the pump to bleed the air. When air is bled, turn power back on.
9. Install the pre-soaked filters into the filter canister.

The spa is now ready for use.

Operating Your Spa

Electronic Control Operation

Initial Start up

When first powered up, your spa will perform a self-diagnostic check and go into priming mode. The topside will display **PR** to indicate this. Priming mode will be active for less than five minutes. When the spa has finished priming, the heater will be activated and the water temperature will be maintained in standard mode. The spa will heat to 100°F (37.5°C) at start up until the set temperature is changed as described below.

Temperature Adjustment

(Range 80°F to 104°F, 26°C to 40°C)

The electronic control panel displays the actual water temperature in degrees Fahrenheit. The displayed temperature will only be current after the pump has been running for at least two minutes.

To display the temperature that the spa is set to:

- Press either the **Up** or **Down** button. The temperature setting will flash.
- While the display is flashing, each time you press the **Up** or **Down** button, the set temperature will change up or down one degree.

Standard, Economy and Sleep Heating Modes

Your new spa is equipped with a heating feature that gives you complete control of the heating system. When the spa is powered up, it will automatically start in standard heating mode.

- **St** will light briefly on the main display. In this mode, the heating system will automatically maintain the set spa temperature. In the economy-heating mode, the heating system will only activate during filtration times.
- **Ec** will display solid if temperature is not current and will alternate with spa temperature if measured temperature is current.
- Economy mode will heat the water to the set temperature while Sleep mode, indicated by a **SL** on the main display, will also only activate the heater during the filtering cycles but will only heat the water to within 20°F (10°C) of the set temperature. Like Economy mode, **SL** will display solid when temperature is not current and will alternate with actual temperature when it is current.



Switching Modes

- Press either the **Up** or **Down** button followed by the **Light** button.
- Press the same sequence to switch to the next mode.

Jets

Press the **Jets** button:

- Once to activate low speed pump.
- Twice to activate high speed.
- Three times to turn pump off.

Light

Press the **Light** button to turn on the light. Press it once again to turn the light off. All optional lighting such as the control panel light and cabinet perimeter lighting is controlled by the **Light** button and will turn on and off with the spa light.

Automatic Time outs

These features will automatically turn themselves off during periods of continuous use:

- | | |
|--------------------|------------------|
| • Low speed pump | After 2 hours |
| • High speed pumps | After 15 minutes |
| • Spa light | After 4 hours |

Setting Filtration Cycles

Your spa is programmed to filter twice a day. The first cycle will begin 6 minutes after the spa is turned on and the second cycle 12 hours later. The factory has programmed the cycle to last for 2 hours but this can be switched to 4, 6, or 8 hours depending on your requirements. The default filter time is two hours.

To set filtration time, turn off the power to the spa at the time of day you would like one of the filtration cycles to begin, then turn back on after 30 seconds.

When power has been restored, press either the **Up** or **Down** button then the **Jets** button. Press either the **Up** or **Down** button again to change the filtering cycle duration. When desired duration is selected press the **Jets** button to exit.

The low speed pump will run for the duration of the filtering cycle and if an ozone system is installed it will be activated. During filtering, **FC** will appear on the main display.

Your new spa comes equipped with an electric heater. Following the directions listed below will ensure the most efficient operation:

NOTE: This method is only for spa usage under two hours a week.

- Keep the spa's operating temperature 5°F below the desired usage temperature when not in use. One or two hours before use, set the temperature to the desired temperature.
- If the spa usage exceeds two hours a week, the set temperature should remain at the desired usage temperature.

Allowing the water temperature to lower more than 10°F below the desired usage temperature and reheating it prior to usage will cause the heater to operate longer than it normally would maintaining the desired temperature. Doing this will increase your operating cost and makes your heater work more than necessary.

Diagnostic Messages

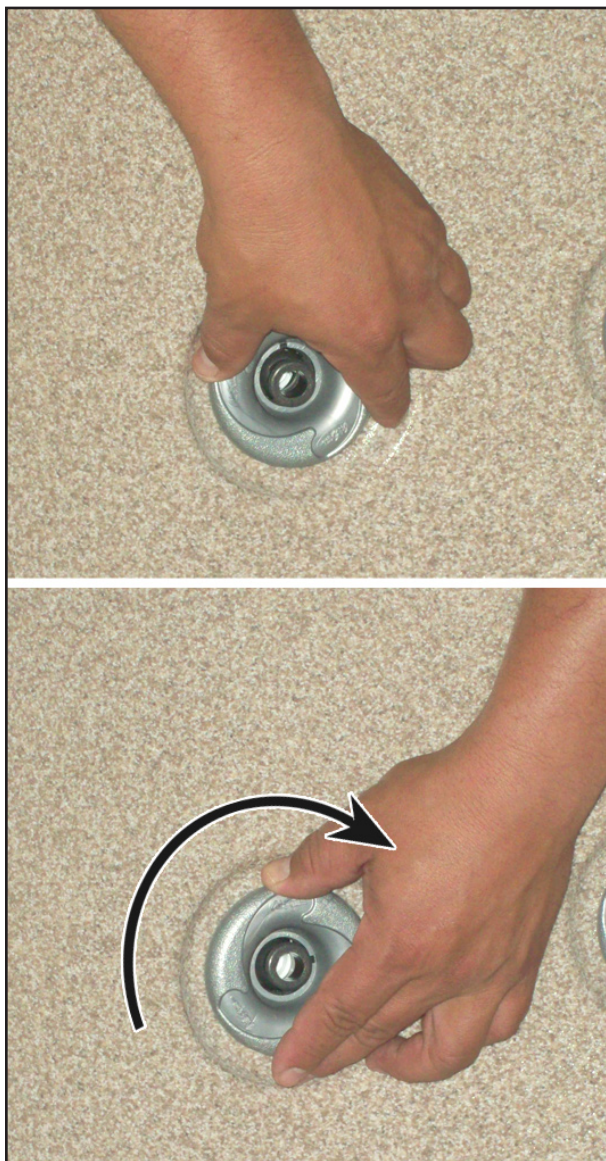
Message	Meaning	Action Required
No message on display	1) Spa temperature is unknown. 2) Spa is in Economy or Sleep mode. 3) Power has been cut off to the spa.	1) After pump has been running for 2 minutes temperature will be displayed. 2) In Economy or Sleep mode, the pump may be off for hours outside a filter cycle. If you wish to see the current spa temperature, either switch to Standard mode or turn Jets1 on for at least two minutes. 3) The control panel will be disabled until power returns. Spa settings and time of day will be preserved for 30 days with a battery back-up.
dr	Insufficient water detected in heater. Spa will be shut down for 15 minutes.	Check water level in spa. Refill if necessary. Make sure pumps are been primed and filter cartridges are clean. Press any button to reset or wait 15 minutes and spa will automatically reset. If message spa does not reset, call your dealer or service organization.
drY	Insufficient water detected in heater. Spa is shut down. (Displays on third occurrence of dr message.)	Follow directions for dr message and press any button to reset spa. Spa will not automatically reset when dry or dY is displayed.
Ec	Indicates heater is in Economy Mode.	None.
--	Temperature unknown	After the pump has been running for two minutes, the temperature will be displayed.
HFL	A difference in readings between temperature sensors has been detected indicating a possible water flow problem.	Make sure spa is filled to proper level and that pumps are primed and filter cartridges are clean. If message does not reset, call your dealer or service organization.
ICE	Potential freeze condition detected.	No action required. The pumps and the blower will automatically activate regardless of spa status.
LF	Persistent low flow problems. Heater is shut down, but other spa functions continue to run normally. Displays on the fifth occurrence of the HL or HFL message within 24 hours.	Follow action required for HL or HFL message. Heating capacity of the spa will not reset automatically. Press any button to reset.
OHS	Overheat protection. The spa has shut down. One of the sensors has detected that the spa water is 110°F.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 107°F, the spa should automatically reset. If spa does not reset, shut off the power to the spa and call your dealer or service organization.

Message	Meaning	Action Required
OHH	Overheat protection (spa is shutdown). One sensor has detected 118°F (48°C) at the heater.	DO NOT ENTER THE WATER! Remove the spa cover and allow spa to cool below 107°F (42°C). Press any button on the topside display to reset spa. If spa will not reset after spa has cooled, turn off power for approximately 30 seconds and then turn power back on. If display message is repeated then shut the power off to the spa and call your dealer or service organization.
Pr	When your spa is first actuated, it will go into priming mode.	The priming mode will last for up to four minutes and then the spa will begin to heat and maintain the water temperature in the Standard mode.
SL	Indicates heater is in Sleep Mode.	None.
SnA Snb	Spa is shut down. The sensor that is plugged into the sensor "A" or "B" jack is not working.	If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat situation and disappear when the heater cools.)
SnS	Sensors are out of balance. <ul style="list-style-type: none"> • If this is alternating with the temperature, it may just be a temporary condition. • If the display shows only this message (periodically blinking), the spa is shut down. 	Contact your dealer or service organization.
ST	Indicates heater is in Standard Mode.	None.

Jets

Almost all of the jets in your spa are adjustable. Rotating the face of an adjustable jet to the left (counter-clockwise) will decrease the amount of water flow through the jet. Rotating the face of an adjustable jet to the right (clockwise) will increase the amount of water flow through the jet. (See example shown below.)

Neck jets adjust in the opposite directions (counter-clockwise to increase, clockwise to decrease).



LED Light Operation

Press the LIGHT button on the topside control panel to turn the spa light on. If your spa has LED lights, they will also light up at the same time as the spa light.

The LED lights operate in three three modes:

1. **Cycle:** The first time you press the LIGHT button, the lights will cycle through all the colors in this order:

White
Cyan
Magenta
Blue
Yellow/green
Green
Red

To cycle through the different color choices, press the button repeatedly. Each time you press the button, you advance to the next color.

2. **Flashing white:** When you have cycled through all the colors, the next time you push the LIGHT button, the LED lights will flash white.
3. **Fading cycle:** The next time you push the LIGHT button, the lights will gradually fade from one color to the next in the order shown above.

Clear Water Plan

This section is intended for new spa owners with no experience with water chemistry. Everyone's experience with maintaining water quality is different, but there are some general concepts you need to know.

Water maintenance is not difficult, although it requires regular attention. The most important thing to understand about taking care of your spa water is that preventive action is much easier than correcting water quality issues.

Contents of this section:

Testing and Adjusting Spa Water
Sanitation
Filtration
Bather Load
Starting the Spa with Fresh Water
Maintenance Schedule
Troubleshooting Water Clarity Problems

The Key to Clear Water

Excellent water quality is a simple matter of four things:

Regularity

Clear water requires regular maintenance. Establish a routine based on a regular schedule for your spa water maintenance.

Maintaining your water quality helps the enjoyment of your spa and extends your spa's life by preventing damage from neglect and chemical abuse.

See page 16 for the schedule of recommended maintenance.

Filtration

Cleaning your filter regularly is the easiest and most effective single thing you can do to keep your water clear.

A clogged or dirty filter will cause the heater and pump to work harder than they need to, possibly causing them to fail.

The spa's heating system will only function with the proper amount of water flow through the system.

See page 14 for filter cleaning instructions.

Sanitation

Sanitizers kill bacteria and viruses and keep the water clean. A low sanitizer level will allow microbes to grow quickly in the spa water.

We recommend using either chlorine or bromine as your sanitizer.

Spa owners with an ozonator also need to add sanitizer, although their requirements are different.

See page 12 for learn how to use sanitizer.

Chemical Balance

You will need to test and adjust the chemical balance of your spa water. Although this is not difficult, it needs to be done regularly.

Depending on your choice of sanitizer, you need to test the level of calcium hardness, total alkalinity, and pH. Spa owners with a Cal Clarity bromine generator also need to check total dissolved solids and phosphates.

See page 12 for learn how to balance your spa water.



Testing and Adjusting Spa Water

You have two types of testing methods to choose from:

- The **reagent test kit** is a method which provides a high level of accuracy. It is available in either liquid or tablet form.
- **Test strips** are a convenient testing method commonly used by spa owners.

Balancing the Total Alkalinity

Total alkalinity (TA) is the measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA can be considered a "pH buffer". It is the measure of the ability of the water to resist changes in pH level.

The recommended total alkalinity is 80 - 120 ppm.

If the TA is too low, the pH level will fluctuate widely from high to low. Low TA can be corrected by adding Cal Spas "pH-Alkalinity Up".

If the TA is too high, the pH level will tend to be too high and may be difficult to bring down. High TA can be corrected by adding Cal Spas "pH-Alkalinity Down".

When the TA is balanced, it normally remains stable, although adding water with high or low alkalinity will raise or lower the TA level.

Balancing the Calcium Hardness

Calcium hardness (CH) is a measure of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of the spa's water and is why soft water is not recommended. The low calcium content of soft water is very corrosive to the equipment and can cause staining of the spa shell.

The recommended calcium hardness is 150 - 200 ppm.

If the CH is too low, add Cal Spas "Liquid Hardness Increaser".

If the CH is too high, dilute the spa water with soft water or, if this is not available, add Cal Spas "Stain and Scale Defense".

When the CH is balanced, it normally remains stable, although adding soft water or very hard water will raise or lower the CH level.

Balancing the pH

The pH level is the measure of the balance between acidity and alkalinity.

If the pH is too low, it can cause corrosion of metal fixtures and the heating element. Low pH can be corrected by adding pH-Alkalinity Up.

If the pH is too high, it can cause scaling by allowing metals or minerals to form deposits and stain spa surfaces. High pH can be corrected by adding pH-Alkalinity Down.

Too alkaline, causes scaling	8.2	↓ Need to lower the pH level
	8.0	
	7.8	
Ideal balance	7.6	
	7.4	
	7.2	
Too acidic, causes corrosion	7.0	↑ Need to raise the pH level
	6.8	
	6.6	

Testing For:	Ideal Range (ppm)		Chemicals To Use:	
	Minimum	Maximum	To Raise	To Lower
Total Alkalinity	80	120	pH-Alkalinity Up	pH-Alkalinity Down
Calcium Hardness	150	200	Liquid Hardness Increaser	Stain and Scale Defense
pH	7.4	7.6	pH-Alkalinity Up	pH-Alkalinity Down

Sanitation

After you fill your spa, you need to decide which chemical sanitizer you wish to use. Consult your Cal Spas dealer for the right decision with regards to your lifestyle and spa usage.

We recommend either **bromine** or **chlorine** as your sanitizer. Both work well when maintained regularly.



DO NOT use trichlor. Trichlor is very acidic and the hot temperature of the spa causes it to dissolve too quickly. It will cause damage to your spa and will void your warranty.

Sanitizers kill bacteria and other organic waste by breaking them down to non-harmful levels and are filtered out.

Make sure you follow all instructions and use only Cal Spas brand chemicals.

Whichever plan you decide on, follow it completely and don't take shortcuts. It will provide you with clean, safe, clear spa water with a minimum of effort. Spa owners with the ozonator still need to use a chemical sanitizer. See page 13 for instructions.

Using Chlorine as a Sanitizer

If you choose to use chlorine as a sanitizer, only use granulated chlorine, not liquid chlorine. We recommend you use only Cal Spas "Chlorinating Granules".

Once a week, check the chlorine level using either a test strip or a reagent kit. See the table on the following page for the ideal range.

Add one or two tablespoons of Cal Spas "Chlorinating Granules" to the spa water weekly. Note that chlorine dissipation rate will be faster at higher water temperatures and slower at lower temperatures.

When you add chlorine, open all of the jets and run the spa at high speed with the cover open for at least 30 minutes.

Follow the maintenance schedule on page page 16.

Using Bromine as a Sanitizer

Bromine is a very effective sanitizer that produces low chemical odors. Unlike chlorine, it can break down bacteria and other impurities to a safe level with a low burn-out rate.

Bromine is available in both granulated and tablet form. Use granulated bromine to establish your bromine base. Use tablets to maintain it. The filter cartridge provided with your spa has an internal chamber for bromine tablets. Do not use a floater.

When you begin with fresh water, add 2 ounces of Cal Spas Go Brom. Open all of the jets and run the spa at high speed. This is your base bromine level as the tablets will take a while to dissolve.

Add two ounces of Oxidizer Shock. Open all of the jets and run on high speed with the cover half open for at least 30 minutes.

Follow the maintenance schedule on page page 16.

Testing For:	Ideal Range (ppm)		Chemicals To Use:	
	Minimum	Maximum	To Raise	To Lower
Chlorine level				
Without ozonator	3.0	5.0	Chlorinating Granules	
With ozonator	2.0	4.0		
Bromine level				
Without ozonator	6.7	11.0	Go Brom	
With ozonator	5.7	10.0		

Shocking the Water

In addition to using a chemical sanitizer, you will periodically need to shock the water. Shocking the water helps remove burned-out chemicals, bacteria, and other organic material from your spa's water and improves your sanitizer's effectiveness.

Do not use chlorinating shock, which will damage your spa's jets and pump seals. The only shock you should use is Cal Spas Oxidizer Shock. It is an easy way to maintain either chlorine or bromine chemical plans.

For best results use the directions below.

Add one ounce of Cal Spas Oxidizer Shock:

- Once a week
- After heavy bather loads
- If water has a strong odor

Spa must be running with all of the jets on high for 30 minutes with the cover open. If necessary, repeat oxidizer shock in 30 minute intervals.



Chemical Safety

Read and follow all printed instructions listed on bottles and packages. Failure to follow chemical directions may result in serious injury, sickness, or even death.

Do not exceed chemical dosages as recommended in the Clear Water Plan or on chemical bottles and packages.

Never change chemical brands or types without completely draining, flushing and thoroughly cleaning the spa and cover first.

Never mix chemicals together.

Do not allow chemicals to come in contact with skin, eyes or clothing. Remove and wash clothing that

may have been exposed to chemical contact prior to wearing them again.

Inhaling or ingesting chemicals will cause serious injury, sickness, or even death.

Chemicals must be stored completely out of the reach of children in an area that is well vented, cool, and dry. Failure to provide a proper area for chemical storage may result in serious injury, sickness, fire explosion and even death. Do not store your chemicals inside the equipment area of your spa.

Cleaning the Filter

The filter is the part of your spa that removes the debris from the water and needs to be cleaned on a regular basis to maximize your spa's filtering performance and heating efficiency.

In addition to spraying off the filter weekly to remove surface debris, your filter should be deep cleaned periodically to dissolve scale and particles that get lodged deep within the filter fibers and impede the filtration process. Even if the filter looks clean, scale and particles can clog the fibers and prevent water from flowing through the filter resulting in the most common spa problem—no heat, caused by a dirty filter.

We recommend you clean your filter once a month and replace it once a year or as necessary.

1. Remove the filter by turning it counterclockwise, unscrewing the bottom threads, then pulling it up and out.
2. Place the dirty filter into a bucket of water deep enough to cover the filter. Add 8 oz of Cal Spas "Liquid Filter Cleaner" to the bucket of water.

Note: It is a good idea to keep a spare filter to use in the spa while the dirty filter is being deep cleaned. This way, you can rotate the filters and both will last longer.

3. Soak the filter for a minimum of 24 hours.
4. Spray the filter with a water hose. Spray each pleat carefully.
5. Reinstall the filter. Do not overtighten.

Cleaning the Filter Basket

You will need to clean the filter basket periodically. To remove the filter basket, twist the weir skimmer counter-clockwise and lift up to remove it. You can do this while the spa is filled, but make sure you first turn off the jet pump.



Bather Load

"Bather Load" is the term used to describe the number of people using a spa, combined with the length of usage, and the frequency of usage. All these factors have a great effect on the spa water. The higher the bather load, the more chemicals need to be added and a longer filtration time will be needed.

All versions of the Cal Spas Clear Water Plan are designed for spas with average bather load (3

to 4 people, 15 minutes of usage, three times a week at 100 degrees) If your bather load exceeds these guidelines, and you experience water quality problems, increase the amount of filtration first, (go to the next higher filtration number) then if water quality is still not adequate, consult the advice of your Cal Spas dealer for additional chemical or system recommendations. Be sure to give them your bather load information.

Starting the Spa with Fresh Water

We recommend you use Cal Spas chemicals only. Other brands of chemicals may have similar names and/or usage descriptions but due to manufacturing differences, use of other chemicals can increase the likelihood of under- or over-dosing the spa chemicals. Damage to the spa or spa's components from improper chemicals or chemical usage is not covered under the spa's warranty.

Prior to filling a spa for the first time, or after a routine draining, you will want to follow this start-up plan to extend water life and performance.

As with all chemical dosages listed in these Clear Water Plans, start-up dosages are intended for 500-gallon spas. Please adjust the chemical dosages to the capacity of your particular spa.

1. Clean the surface of the spa with Cal Spas "Multi-Purpose Cleaner".
2. Apply a protective coat of Cal Spas "Fast Sheen" to the acrylic surface.
3. Fill the spa to the proper water level with normal tap water. (Do not use soft water.)
4. Use test strip and balance the spa water.

- Adjust total alkalinity (acceptable range is 80-120ppm).
- Adjust pH if necessary (between 7.2 to 7.8).

5. Pour in 16 oz of Cal Spas "Metal Protector" in the center of the spa.
6. Add Stain and Scale Prevention.
7. Add either chlorine or bromine (but not both).

Chlorine: Add two tablespoons of Cal Spas "Chlorine Granules" to the spa water.

Bromine: Add 2 oz of Cal Spas "Go Brom" to establish a bromine base.

Add 2 Cal Spas "Bromine Tablets" to bromine floater.

8. Turn on jets for 15 minutes. Leave spa uncovered during this time.
9. Put cover on spa and allow to heat up to desired temperature.

Water level is very important to the operation of your spa. If the water level is too low or too high, your spa will not operate properly. The water level should be about six inches from the top when the spa is not being used.

Maintenance Schedule

Each time you refill the spa	Follow the section "Starting the Spa with Fresh Water".
Prior to each use	Test the spa water using either test strips a reagent test kit. Adjust chemical levels as necessary.
Once a week	Test the spa water using either test strips a reagent test kit. Adjust chemical levels as necessary.
Once a month	Deep clean your spa's filter. (Follow filter cleaning instruction at beginning of Clear Water Plan)
Every two to four months	Drain and clean your spa with "Multi-Purpose Cleaner". Polish the acrylic surface with "Fast Sheen". Clean and treat spa cover with "Cover Protector". Refill your spa, following the section "Starting the Spa with Fresh Water".
Once a year	Replace filter cartridges if the pleats appear frayed.

We recommend that your spa water be changed every 4 to 6 months. You may find the need to change your spa water more frequently with heavy use. When empty, your spa should be cleaned with a non-abrasive cleaner, such as Cal Spas™ All Surface Cleaner, and then rinsed thoroughly.

Troubleshooting Water Clarity Problems

Problem	Probable Causes	Possible Solutions
Cloudy Water	<ul style="list-style-type: none"> • Dirty filter • Excessive oils / organic matter • Improper sanitization • Suspended particles / organic matter • Overused or old water 	<ul style="list-style-type: none"> • Clean filter • Shock spa with sanitizer • Add sanitizer • Adjust pH and/or alkalinity to recommended range • Run jet pump and clean filter • Drain and refill the spa
Water Odor	<ul style="list-style-type: none"> • Excessive organics in water • Improper sanitization • Low pH 	<ul style="list-style-type: none"> • Shock spa with sanitizer • Add sanitizer • Adjust pH to recommended range
Chlorine Odor	<ul style="list-style-type: none"> • Chloramine level too high • Low pH 	<ul style="list-style-type: none"> • Shock spa with sanitizer • Adjust pH to recommended range
Musty Odor	<ul style="list-style-type: none"> • Bacteria or algae growth 	<ul style="list-style-type: none"> • Shock spa with sanitizer – if problem is visible or persistent, drain, clean and refill the spa
Organic buildup / scum ring around spa	<ul style="list-style-type: none"> • Buildup of oils and dirt 	<ul style="list-style-type: none"> • Wipe off scum with clean rag – if severe, drain the spa, use a spa surface and tile cleaner to remove the scum and refill the spa
Algae Growth	<ul style="list-style-type: none"> • High pH • Low sanitizer level 	<ul style="list-style-type: none"> • Shock spa with sanitizer and adjust pH • Shock spa with sanitizer and maintain sanitizer level
Eye Irritation	<ul style="list-style-type: none"> • Low pH • Low sanitizer level 	<ul style="list-style-type: none"> • Adjust pH • Shock spa with sanitizer and maintain sanitizer level
Skin Irritation / Rash	<ul style="list-style-type: none"> • Unsanitary water • Free chlorine level above 5 ppm 	<ul style="list-style-type: none"> • Shock spa with sanitizer and maintain sanitizer level • Allow free chlorine level to drop below 5 ppm before spa use
Stains	<ul style="list-style-type: none"> • Total alkalinity and/or pH too low • High iron or copper in source water 	<ul style="list-style-type: none"> • Adjust total alkalinity and/or pH • Use a stain and scale inhibitor
Scale	<ul style="list-style-type: none"> • High calcium content in water – total alkalinity and pH too high 	<ul style="list-style-type: none"> • Adjust total alkalinity and pH – if scale requires removal, drain the spa, scrub off the scale, refill the spa and balance the water • Use a stain and scale inhibitor

Cleaning and Maintenance

Removing the Access Panel

You will need to remove the access panel in order to drain your Genesis spa.

1. Unplug the spa.
2. Remove the screws from the access panel.
3. Remove the access panel and set it aside.



Replace the access panel when you are finished. Do not overtighten the screws.

Do not run the spa with the access panel removed!

Draining Your Portable Spa

Your spa should be drained every four to six months and refilled with fresh tap water. The following is the recommended method for draining your spa.

1. Turn off the power at the breaker.
2. Remove the filter.
3. Remove the access panel as described above.
4. Locate hose ending with the 3/4 inch hose-bib fixture.
5. Hook up the female end of a garden hose to the drain fitting.
6. Place the other end of the garden hose where you would like the water to drain to.
7. Twist the hose-bib fixture counterclockwise to open the drain.
8. Let the spa drain completely, then remove the garden hose.
9. Twist the hose-bib fixture clockwise to close it.



Winterizing (Cold Climate Draining)

In many areas of the country, the temperature drops below 32°F (0°C). We recommend that you always have your spa full of water and running at normal spa temperatures (80°F to 100°F, 26.7°C to 37.8°C). This will help reduce the risk of freezing in your spa and your spa's equipment.

Warning: If you find the need to drain your spa, please be aware of the potential of freezing in your spas equipment and plumbing. Even if the directions below are followed perfectly, there is no guarantee that your spa will not suffer freeze damage.

Freeze damage is not covered by your warranty.

1. Open all filter covers.
2. Remove the filter baskets and filters.
3. Drain your spa completely as described in the instructions above.
4. Remove drain plugs from the front of the pumps.
5. Disconnect the unions from both sides of the pump.
6. Use a wet/dry vacuum to blow any remaining water out of the jets and equipment area.

Cover your spa with a good spa cover and an all-weather tarp to ensure that neither rain nor snow enters the spa.

Installing Cover Latches

You will need a drill with a 3/32" drill bit and a Phillips screwdriver.

Your cover will have four clips attached to the ends of the four latches, two on each end of the spa cover. There will also be a small bag with 12 screws.

1. Place the cover on the spa with the latches placed where you want to mount them on the spa.
2. Using the latch clips as a guide, drill three holes for the mounting screws.



3. Insert three screws in the latch clip and fasten it to the spa shell. Make sure they are snug, but do not overtighten them. Do the same for the remaining latches. Drill and attach latch clips to the shell **one at a time**.
4. When you have finished inserting all of the screws, use the latch key to unlock the cover latches.



Covering Your Spa

Important! Keep the spa covered when not in use!

- Covered spas will use less electricity in maintaining your set temperature.
- Covering your spa will protect your spa's finish from the sun's ultraviolet rays.
- You are required to keep the spa covered to maintain warranty coverage.
- Covering your spa helps prevent children from drowning in the spa.

See the manual enclosed with your cover for instructions on mounting the locks and how to lock and unlock the cover.

In addition, while the spa cover is rigid, it is not designed to support any weight. Therefore, as a safety precaution and to preserve the life of your cover, you must not sit, stand, or lie on it, nor should you place objects of any kind on top of it.

Cleaning and Replacing the Filter

Filtration is one of the most important steps you can take to ensure clean, clear water. It is far less expensive to fix water clarity problems by filtering your spa than by using excessive amounts of chemicals, excessive filtration times, or by water replacement.

In addition, you need to regularly clean out the filter basket mounted on top of the filter well.

See the section "Clear Water Plan" on page 10 for more information on cleaning your filter.

Cleaning the Cover



Vinyl and Leather Cleaner

Because the cover is constantly exposed to weather, you should protect it as part of your monthly maintenance plan. Cal Spas Vinyl and Leather Cleaner is specifically designed to protect spa covers from chemical and ultraviolet light damage. It accomplishes this without leaving an oily residue behind that is normally associated with common automotive vinyl protectants. Cal Spas Vinyl and Leather Cleaner should be used sparingly. Incorrect usage may cause water clarity issues.

Periodic Maintenance

1. Remove spa cover from spa.
2. Allow spa cover to dry completely.
3. Spray Vinyl and Leather Cleaner to cover evenly and wipe dry.
4. Allow spa cover to dry completely.
5. Reinstall cover on spa.

Warning: Do not use automotive vinyl protectants on spa covers. These products are generally oil-based and will cause severe water clarity issues that are difficult to correct.

Cleaning the Shell



All-Purpose Cleaner (Spa Finish Cleaning)

Cal Spas All-Purpose Cleaner is an essential part of maintaining your spa's finish. Through normal use, the spa's finish can accumulate dirt, oil, and calcium causing a rough feel and unsightly scum lines. Cal Spas All-Purpose Cleaner is a low detergent, non-abrasive cleaner specifically formulated to clean the spa without damaging its acrylic finish.

The most effective solution to minimize cleaning time is prevention. When the following steps are followed, the spa's finish will actually start to resist most of the elements that cause calcium build-up and make scum line clean up easier.

Prior to Spa Start-Up and Refilling

1. Spray Cal Spas Multi-Purpose Cleaner directly on to the spa's finish.
2. Wipe clean with a clean soft cloth.
3. Repeat on heavily calcified areas.
4. Wipe spa thoroughly with a wet sponge, rinsing often with a bucket of clean water.
5. Allow spa to dry completely.
6. Apply a coat of Cal Spas Fast Sheen to the spa's entire finish with a soft towel or sponge.
7. Allow Fast Sheen to dry until white and powdery.
8. Buff clean with a soft cloth, rotating frequently.

Periodic Maintenance

1. Spray Cal Spas Multi-Purpose Cleaner directly to the spa's finish.
2. Wipe clean with a clean soft cloth.
3. Wipe spa thoroughly with a wet sponge, rinsing often in a bucket of clean water.

Cal Spas Multi-Purpose Cleaner should not be sprayed directly into the spa water. Incorrect usage of this product will cause water clarity issues.



Fast Sheen (Spa Finish Protecting Wax)

Cal Spas Fast Sheen is an essential part of maintaining your spa's finish. Through normal use, the spa's finish can accumulate dirt, oil, and calcium, causing a rough feel and unsightly scum lines. Cal Spas Fast Sheen is a non-oil based wax that is specifically formulated to protect the spa's finish from the chemicals and minerals associated with normal spa use.

The most effective solution to minimize cleaning time is prevention. When the following steps are followed, the spa's finish will actually start to resist most of the elements that cause calcium build-up and make scum line clean-up easier.

Prior to Spa Start-Up and Refilling

1. Spray Cal Spas Multi-Purpose Cleaner directly to the spa's finish.
2. Wipe clean with a soft cloth.
3. Repeat on heavily calcified areas.
4. Wipe spa thoroughly with a wet sponge, rinsing often in a bucket of clean water.
5. Allow the spa to dry completely.


6. Apply a coat of Cal Spas Fast Sheen to the spa's entire finish with a soft cloth or sponge.
7. Allow Fast Sheen to dry until white and powdery.
8. Buff clean with a soft cloth, rotating frequently.

IMPORTANT: Cal Spas Fast Sheen should not be used on spas full of water. Only apply to clean, cool, dry surfaces. Incorrect product usage may cause water clarity issues.


Appendix


Replacement Parts

Jets	
EW 2" Euro	
Standard gray PLU21703420	
Stainless steel PLU21703621	
mfw 3" Micro Flow	
Standard gray PLU21703432	
Stainless steel PLU21703631	
OZ 2" Ozone Injector	
Standard gray PLU21700818	

Drain	
Main Drain, Super Hi Flo Suction 2" Silver	
PLU21400132	

Waterfall	
Waterfall	
PLU21800700	

Filters	
Filter Cartridge, 50 Sq Ft, Anti-Bacterial	
FIL11100201	

Light	
Light Mini 2" Diameter	
LIT16000151	

Covers	
G418T	72" x 72"
G318R	78" Round
G518L	80" x 80"
Standard Rust	ACC01200495
G618B	84" x 76"

2009 WARRANTY

This limited warranty is effective for Genesis portable spas manufactured after January 14, 2009.

All Cal Spas portable spas are warranted to be free from defects in material and workmanship at the time of delivery. This warranty becomes valid at time of purchase and ends either by specified time-frame listed above, owner-transfer, relocation, or installation of any component other than by manufacturer.

This limited warranty is only valid on portable spas delivered in the United States and Canada. However, it does not apply to special offers and events and extends through the selling dealer to the original purchaser at the original site of installation.

Spa Shell / Structural

LMS warrants against the loss of water through the spa shell due to defects in materials and/or workmanship for a period of one year.

Interior Surface

LMS warrants against cracks, blisters, peeling, discoloration and delamination of interior surfaces for a period of one year.

Equipment

LMS warrants the spa's electrical and electronic components, specifically, the control system and pumps, against malfunction due to defects in materials and/or workmanship for a period of one year.

Components

LMS warrants manufacturer-installed ozonator and LED light source against malfunction due to defects in materials and/or workmanship for one year.

Manufacturer Warranty

Spa cover warranty is extended through the manufacturer of the product. Spa cover is warranted for 90 days unless otherwise specified. For more information, see their warranties in the owner's information package that was delivered with your spa for more information.

Warranty Performance

In the event of a malfunction or defect covered under the terms of this warranty, the factory authorized selling dealer is responsible for performing all necessary repairs. To obtain service, contact the selling dealer. In the event the consumer is unable to obtain satisfactory customer service from the selling dealer, written notification must be given to the LMS Customer Relations Department within 30 days of the reported failure.

In the event of any warranty replacement, all labor costs (not limited to removal, replacement, and installation) and shipping costs are the responsibility of the spa owner. There will be no charge for parts on a covered item. However, the LMS Service Agent may assess a reasonable travel or mileage charge per service call, which may include diagnostic time. If LMS determines that repair of a covered item is not feasible, LMS reserves the right to replace the defective merchandise with merchandise equivalent or equal in value to the original merchandise.

Warranty Limitations and Exclusions

The limited warranty applies only to spas normally used for personal, family or household purposes.

This warranty specifically excludes factory installed plumbing. Replaceable service items, such as filters, light bulbs, and jet inserts are specifically excluded from the limited warranty.

This warranty is void if the spa has been subject to negligence, alteration, misuse, abuse, repairs by non-LMS authorized personnel, incorrect electrical installation, installation of any component other than by the manufacturer, acts of God (including, but not limited to, acts of nature and surrounding environments), and any other cases beyond the control of LMS.

Examples of common acts invalidating this warranty include, but are not limited to:

- Use of spa in a non-residential application
- Scratches caused by normal use
- Operation of spas water temperature out of the normal operating range of 32°F (0°C) to 118°F (47.8°C)
- Damage caused by incorrect water level (low, overflow, etc.)
- Damage caused by extreme weather conditions (hot, cold, etc.)
- Damage caused by dirt, sand and calcium
- Damage caused by clogged filter cartridges (see filter cleaning instructions in this owner's manual)
- Damage caused by continued operation of this spa with either a known or an unknown problem
- Damage caused by tri-chlor, acids, chlorine tablets, any floating chemical devices, or any spa chemicals not authorized by LMS
- Damage caused by improper water chemistry (high levels of chlorine, bromine, calcium, pH and other excessive chemical levels)
- Damage caused by direct sunlight. Spas should always be covered when not in use
- Damage caused as a result of failure to follow operating instructions as defined within this owner's manual

- Damage caused by incorrect electrical installation, electrical brownout, voltage spikes, or operation of spa out of voltage range by more than $\pm 10\%$
- Spas improperly installed or placed on non-approved surfaces

Although shell cracks, which are breaks in the shell that go all the way through, are covered by this limited warranty, cosmetic scratches, gouges and crazing are not considered cracks and are not covered.

For relocating your spa without voiding your warranty, contact Customer Service for relocation procedures.

Equipment adjustments (such as pressure switch adjustments) are specifically excluded from this warranty.

Disclaimers

This limited warranty is made with the express understanding that the spa is not an essential device or medical device as defined under State and Federal Law. LMS shall not be liable for loss of use of the spa or other incidental or consequential costs, expense or damages, which may include but are not limited to removal of permanent deck or other custom fixtures or the necessity for crane removal. Any implied warranty shall have duration equal of the applicable warranty stated above. Under no circumstances shall LMS or any of its representatives be held liable for injury to any person or damage to any property, however arising.

Legal Remedies

This limited warranty gives you specific legal rights and you may have other rights, which may vary from state to state.

Customer Service

See your Cal Spas dealer for a copy of the applicable warranty, details, and any questions you may have regarding the warranty coverage on your spa.

Cal Spas Chemicals



Bromine/Chlorine Starter Kit

#CHE07000290/#CHE07000295

When used as directed, this product is effective as a spa and hot tub sanitizer/disinfectant. Treats 250 gallons for up to three weeks.



Vinyl & Leather Cleaner

#CHE07000620

Specifically designed to protect spa covers and pillows from chemical and ultraviolet damage.



Fast Sheen

#CHE07000610

Unique water-based, chemically reactive silicone sealant and polish. Seals, shines, and protects spa surfaces.



Brominating Tablets

#CHE07000760/#CHE07000770

Sanitizer, disinfectant for spas and hot tubs.



Chlorinating Granules

#CHE07000865/#CHE07000880

When used as directed, this product is effective as a spa and hot tub water disinfecting agent.



Go Brom

#CHE07000830

Establishes a bromide bank in spas and hot tubs.



Filter Cartridge Cleaner

#CHE07000690

Breaks down organic and inorganic material. Removes calcium scale and mineral deposits.



Liquid Hardness Increaser

#CHE07000250

Increases water hardness to reduce corrosion. Helps reduce foaming.



Spa Brite

#CHE07000580/#CHE07000590

Clears up cloudy water in spas and hot tubs. Effective at all spa and hot tub temperatures.



Foam Gone

#CHE07000800/#CHE07000810

Breaks up existing foam in spa water. Effective at all spa and hot tub temperatures.



pH-Alkalinity Up

#CHE07000720/#CHE07000730

Helps maintain pH in spas and hot tubs.



pH-Alkalinity Down

#CHE07000750

Lowers pH in spas and hot tubs.



Enzyme Formula

#CHE07000600/#CHE07000605

Emulsifies and biodegrades bodily oils, suntan lotion, and other contaminants in spas and hot tubs.



Metal Protector

#CHE07000630/#CHE07000640

Controls water discoloration caused by minerals. Special Extra Strength formula for spas and hot tubs.



Stain & Scale Prevention

#CHE07000650/#CHE07000660

Prevents minerals from damaging spa components and affecting performance.



Oxidizer Shock

#CHE07000680/#CHE07000710

Destroys organic contaminants and odor-causing wastes.



Locating the product serial number

The serial number of your spa is located on a metal plate attached to the base of the equipment pack inside the equipment area of the spa. You will need this number to properly register your spa and activate coverage. Write this information in the space provided below.

Spa Model: _____

Spa Serial Number: _____

Date Purchased: _____

Date Installed: _____

Dealer's Phone Number: _____

Dealer's Address: _____

CONTACT INFORMATION

For customer service, please contact your authorized dealer immediately. If you need additional information and/or assistance, please contact:

LMS Customer Service Department

1462 East Ninth Street
Pomona, CA 91766.

Toll Free: 1-800-CAL-SPAS

Fax: 1-909-629-3890

www.calspas.com