



Owner's Manual

Certified Quality ISO-9001



Sonoma Spas
A Division of Amtech Corporation
180 East Jones Road.
Wapato, Washington 98951
1-888-998-1772
www.sonomaspas.com

Dear Valued Customer,

The Sonoma Spa or Hot Tub that you have purchased is one of the best values you can buy. It is designed for long, enjoyable and healthful use if it is properly maintained.

This instruction manual will provide you with information, procedures and tips to aid you in the use and necessary care of your spa. You should pay particular attention to the safety instructions and tips in this manual to insure safe operations. We urge you to become thoroughly familiar with, and carry out the safety practices described in this manual.

Over the years we have gained a lot of input from our customers as well as developed procedures based on our research and development. Reading this manual, referring to it if you have a problem and following the routine maintenance procedures will save you time and expense. Service calls relating to routine maintenance and nontechnical problems can be avoided. (Those types of service calls are not covered by the manufacturer's warranty.) Injury or damage caused by failure to follow the instructions in this manual will not be recoverable from the manufacturer.

Do Not Discard This Manual.

If you lose your manual contact your dealer or write the factory for a replacement. If you lose any warning signs, contact the factory immediately for a replacement.

Contents

Page

General Operating Principles	4
Important Safety Instructions	4-6
Spa Installation Considerations	6
Hook-Up Instructions	6-7
Important! Read before filling your spa	8
Startup and Operating Procedures	9
Items to get familiar with	10
Draining your spa	11
Removing your filters	12
Chemical Maintenance	13-14
Vacation and winter use	14
Spa Maintenance	15
Spa parts and our part numbers	16-17

Owner Information

Date Purchased: _____

Dealer Name: _____

Installed By: _____

Spa Model Number: _____

Spa Serial Number: _____

Technical Support: Thomas Bonagofski @ toll free 1 888 998 1772

Notes:

- The filter(s) number used in your spa is Unicel 6 CH 940 or Pleatco # PWW50 with pad adapter.
- The Jets used in your spa are made by CMP (Custom Molded Plastics)
- The equipment pack used in your spa is a Bal-boa VS 501-Z
- The spa light bulb used in your spa is a GE 912 (found at any auto parts store)

General Operating Principles

Understanding Your Spa

A spa emulates the soothing environment of a natural hot spring and there are several components involved in this task. Your Sonoma Spa is an acrylic/fiberglass vessel. The spa, unlike a whirlpool bathtub, is self-contained. The spa heats, filters and recirculates the water and does not need to be refilled between each use. However, the spa does require periodic draining, cleaning and refilling as the water clarity and balance gradually deteriorates.

As with a natural hot spring, the spa's therapeutic effect is derived from heated agitated water. Located inside the spa below the water line, are the hydrotherapy jets. Forcing a stream of aerated water through these jets creates a direct massage-like action. Sonoma Spas are equipped with directional hydrotherapy jets. These types of jets provide a directional flow of water that will soothe your tired muscles.

At the heart of the spa is the spa support equipment. The support equipment performs the basic activities of heating, filtering and circulating the water. Water is drawn from the spa through the suction(s) and the filter housing, then passes through the pump, heater and finally back into the spa through the therapy jets. This cycle is activated by the spa-side control, either to heat the water or to maintain a minimum level of circulation. The spa pump operates on low speed to provide filtering and the heater will cycle as necessary to maintain a constant temperature. The high speed pump, activated by the user, increases flow through the jets and provides hydrotherapy action. This unique vessel, the Sonoma Spa, provides the user with an experience hard to equal. A healthful soak in hot water will reduce stress and relax the body, improving your quality of life.

Important Safety Instructions

The following information is presented as a condition of Underwriters Laboratories (UL) listing of Sonoma Spas and Sonoma Spa Support Equipment. These instructions provide good, common sense practices for individuals to install and use their spa safely. Please read and follow all instructions. When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

READ AND FOLLOW ALL INSTRUCTIONS.

1. **WARNING:** For units for use in other than single-family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 5 feet (1.52m) away, adjacent to, and within sight of the unit.
2. **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised by an adult at all times.
3. **WARNING:** A wire connector is provided on this unit to connect a minimum No. 6 AWG solid copper conductor between this unit and any metal equipment, metal water pipe or conduit within 5 feet (1.5 meters) of the unit.

4. **WARNING:** This product must be protected with a ground fault circuit interrupter (see equipment.) The GFCI should be tested before each use. With the product in operation, push the test button on the GFCI, the product should not operate. Push the reset button on the GFCI, the product should now operate normally. If the product fails to operate in this manner, there is a ground current flowing indicating the possibility of an electric shock. Disconnect the power until the fault has been identified and corrected.
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 by an adult **at all times**.
6. **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 that the flow rates are compatible. Never operate the 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 fitting.
7. **DANGER: Risk of Electrical Shock.** Install a minimum of 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 connected by a minimum No. 8 solid copper conductor to the wire on the terminal box that is provided for this purpose.
8. **DANGER: Risk of Electric Shock.** Do not permit any electric appliance, such as a light, telephone, radio or television within 5 feet (1.5m) of a spa.
9. **WARNING:** To reduce the risk of injury:
 - A) The water in the 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 younger 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). **Consult your physician prior to use.**
 - C) Before entering a spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulation devices varies.
 - D) The use of alcohol, drugs or medications before or during spa use may lead to unconsciousness with the possibility of drowning.
 - E) Persons suffering from obesity or with a medical 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 medications should consult a physician before using a spa since some medications may induce drowsiness while other medications may affect heart rate, blood pressure or circulation.
10. During installation provide drainage for the electrical components compartment.
11. **SAVE THESE INSTRUCTIONS.**

Hyperthermia Warning

Prolonged immersion in hot water may result in Hyperthermia, which is a dangerous condition that occurs when the internal temperature of the body reaches a level above the normal 98.6 degrees F.

Sonoma Spas does not recommend spa water temperatures in excess of 104 degrees F or 40 degrees C. High body temperatures affect people differently; limit your use of the spa to 10-15 minutes or consult your physician about your health and safety before using your spa.

Prolonged immersion in hot water may induce hyperthermia. The causes, symptoms, affects of hyperthermia may be described as follows: Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 degrees Fahrenheit. Symptoms of Hyperthermia include: failure to perceive heat, failure to recognize the need to exit the spa or hot tub, unawareness of impending hazard, fetal damage in pregnant women, the physical ability to exit the spa or hot tub and unconsciousness, resulting in the danger of drowning. **WARNING:** The use of alcohol, drugs, or medications can greatly increase the risk of fatal hyperthermia.

Spa Installation Considerations

Sonoma Spas are designed as freestanding units with the equipment enclosed and protected within the skirt cavity. The spa may be installed on any solid, non-settling surface. We recommend a level concrete pad that is at least 4 inches thick. Always provide drainage of the base so the spa does not stand in water.

Sonoma Spas are also frequently installed on decks and indoors. In this type of installation it is important to be sure that the floor joists below the spa are adequate to accommodate the spa's weight filled with water. We recommend that you consult your building department, contractor or architect when planning this type of installation.

Whatever type of base used, the spa needs to be level in order to maintain the proper water line and to ensure the jets all function properly. The design of the spa is such that the entire bottom framework must be supported on a flat, level surface in order to reduce the possibility of stress cracks in the acrylic surface. **AN IMPROPERLY INSTALLED SPA WILL VOID THE SPA'S WARRANTY.** Do not shim corners. The entire bottom must be supported.

If you are installing the spa yourself, have on hand 5 or 6 strong helpers to assist you in moving the spa to its site. Be sure not to lift the spa by the equipment door. Be sure the weight bears evenly on the horizontal frame members, not the acrylic surface or the vertical skirting. If the spa must be tipped up, do so very carefully with the equipment access door side down and be sure the support is on the horizontal trim and lower rail only; never on the acrylic surface.

Spa Hookup Instructions

Once your spa is in its designated place and properly supported, the final step will be to complete the electrical hookup. Water hookup is not required. Your spa can be filled with a garden hose.

Electrical Connections

WARNING: We insist a licensed electrical contractor be employed to provide, and connect the wiring to your spa. Faulty wiring may result in electrical shock or fire. The licensed electrician **MUST** follow all applicable codes. They **MUST** follow each step exactly to prevent damage during startup. The licensed electrician must read and understand all instructions before proceeding. Improper wiring will void all warranties.

The electrical power supply to your spa, if wired 110V service, must be a minimum of 20 amp dedicated service with a 20amp GFCI.

WARNING: For units for use in other than single-family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 5 feet (1.52m) away, adjacent to, and within sight of the unit.

NOTE: Some models are equipped with a 110/220 volt convertible unit and may be hooked up by using either 110 or 220 volt electrical service.

NOTE: Some of our spa models are strictly 220 volt only equipment.

NOTE: After electrical power is connected to the spa, make sure all power is off to the spa before proceeding with the initial startup. This will prevent inadvertent operation which could cause damage to the support equipment.

NOTE: As of January 1, 1994, the National Electric Code requires a 50amp GFCI be wired in the electrical service for all 220 volt installations.

All spa equipment packs are labeled with electrical requirements. Please refer to these when installing electrical service for your spa.

220 Volt Electrical Hookup

Again, **we insist a licensed electrical contractor to perform the electrical hookup.** The electrical contractor will be well versed on the code requirements for your area and will be able to complete a safe and sure hookup.

SERVICE POWER SUPPLY:

Systems connected for 220 volt operation require 6 AWG copper wire supply with 4 wires in a proper conduit or cable. This supply must have 2 hot wires, 1 neutral wire and 1 ground wire. Voltage drop should not exceed 3% at full load and grounding should be done in accordance with local electrical codes. The amperage rating for most units is 50 amps. Consult equipment nameplate for minimum supply circuit amperage. **DO NOT** use a circuit breaker larger or smaller than circuit amperage given on the name plate. System malfunctions are frequently a result of undersized wiring. The use of improper wiring will void your equipment warranty.

POWER GFCI BREAKER SWITCH. Provide a power GFCI breaker switch which is within sight and accessible to someone working on the equipment. It should be closer than 25 feet, but not any closer than 5 feet to the spa. It must be rated equal to or greater than the minimum supply circuit.

HOOKUP. The wiring connection from your Power GFCI breaker to your spa should be completed by a certified electrician. Wiring information is located on the cover of the equipment control box.

NOTE: AS OF JANUARY 1, 1994 A REVISION OF N.E.C. REQUIRES 220V 50AMP GFCI INSTALLED IN ELECTRICAL SERVICE TO ANY 220V SPA EQUIPMENT.

IMPORTANT

Read these instructions and tips before filling your spa.

- Be sure the power to your spa is **OFF**.
- Remove the door to access the equipment area of the spa
- Make sure the hose bib is closed (the device to drain your spa) see page 11.
- Hand tighten, all pump and pack unions. There are (2) on each pump and (2) on the stainless heater vessel at the bottom of the electrical equipment pack. Check these periodically to insure they are not leaking. Hand- tighten them again if needed to stop any water dripping.
- Insure all slice valves (also known as TEE handles or on/off valves) are in the opened position. Pulling them out-ward is on and pushing them in-ward is off.
- Check to insure all jet faces are in the “ON” position by turning the outer face of each jet counter-clock-wise. In some of our spa models some of the jets can not be adjusted. They stay open all of the time.
- Remove the filter housing face-plate, the filter basket, and the filter element(s) as explained on page 12.
- Insert your garden hose into the filter housing and fill the spa to the correct water level. This is usually not less than half way up the filter housing opening.

NOTE: If you wish to fill your spa with hot water to speed up usage time, **DO NOT** run straight hot water from your hot water faucet into the spa. Mix the hot water with cold water to a lukewarm temperature. Straight hot water from your water tank could damage your spa. Do not leave the spa exposed to high temperature or direct sunlight while cleaning or while the spa is empty. Do not spray directly with cold water. Cool the surface by sprinkling with water before filling. Treat your spa very carefully when empty to prevent damage. Never cover with plastic sheeting. Use only an approved cover with edge flaps that completely cover the acrylic surface. Keep the spa filled with water and covered at all times when not in use.

Getting the spa running after filling the spa

After filling the spa with water, turn the power to the spa on, you should see “Pr” in the window. DO NOT push any buttons! for at least 15 minutes. This will allow the equipment to program its self and may also help to prime the pump(s). After letting the spa set for 15 minutes, the low speed on the main pump may start automatically. If you hear the pump running but do not see any water spraying from any of the jets, you may need to prime your pump(s). Sometimes it is possible to prime the pump by pressing the “jet” button on and off while hesitating, 5 to 10 sections in between pushes several times.

If the pump does not prime after several times of pushing the jet button on and off, it might be necessary to bleed the air out of the pump(s) by slightly un-screwing the pump plug located on the face of the pump. Do not turn the plug completely out. Only open the plug until water slowly drips from it, while at the same time have someone push the jet button. If needed slowly un-screw the plug a little further but be ready to screw the plug shut in a hurry if the pump starts working and spraying water out of the jets. **DO NOT** unscrew the plug too far. **BE CAREFUL** not to get any water in or on any electrical components! If anything gets wet **turn the power off to the spa immediately** and dry them off, with a towel or hair dryer if needed. Only snug the plug back up. Do not over-tighten the plug! After water is spraying from out of the jets, press the pump 2 button on the control panel. This should activate the main pump to either high speed or low speed. You should have active circulation coming out of the jets, that particular pump operates. Open all air volume controls (located on the top rim of the spa) to check for full operation of each jet. The pump must be on the high speed in order for the air-controls to work. You can stop the high speed pump action by pressing the pump button. This will either shut off the pump completely or it will activate the pump to low speed for heating the spa to your desired temperature or it may go into the filtration cycle. **NOTE:** If the temperature of the water used to fill your spa is between 40 degrees F and 75 degrees F, the low speed on the pump will stay on along with the heater until it comes up to temp. This is normal operation.

Heating your spa

To begin heating your spa, press “Temp” button to your desired temperature. This will activate the low speed on the main pump that will begin your heating cycle. The current water temperature will be displayed on the control panel. After (2) hours check the water temperature. The degrees of rise divided by the number of hours will give you the heat rate per hour. Calculate the number of hours to find the time the spa will be ready to use.

After your spa has reached your desired temperature, be sure to test the chemical balance and always use a sanitizer such as chlorine, bromine, Nature 2 or any other spa sanitizer. Be sure the chemicals you choose to use are for hot tubs, not for swimming pools! Always follow the chemical manufactures instructions carefully and consult your dealer for proper water treatment. We recommend that you change the spa water at least once every (3) months, (4) months is maximum. If you do not change your water as stated your spa water will get over saturated with chemicals that will send off a bad odor that will affect your breathing and may also cause a very bad rash. So be diligent with your water changes.

Here are a few items you should get familiar with:

Digital Topside Control: Located on the top edge of your spa, the top-side (or spa-side) allows you to monitor the temperature of the spa water and also has buttons for you to activate your pump(s).

Temperature Control: The spa temperature is controlled by the “Temp” button on the digital topside control. Each time you press the temp button the spa temperature will increase or decrease.

Air Volume Control: Located on the top rim area of the spa or in a special recess, these dials when rotated increase the amount of air that is drawn into the hydrotherapy jets, increasing hydrotherapy action. The air controls will only function while the pump is in the high speed.

Hydrotherapy Jets: These jets are adjustable both in direction and water flow. To turn a jet on or off you must turn the out-side face of the jet (not the nozzle the out-side face) counter clock-wise to turn the jet on and clock-wise to turn the jet off. Some models have jets that can not be adjusted. You must not turn all of the jets off at one time or you will damage the plumbing!!

Neck jet control: If your spa has neck jets installed (models K-910; K-710; or K-1210) you can control the water volume on the neck jets by turning the dial installed on the inside wall of the spa next to the captains seat on or off.

Water-fall control: If your spa is equipped with a water-fall, on most models the water-fall control is located to the left of the water-fall. Turn it on or off to operate the water-fall volume.

Bottom Suctions: The spa suction covers are installed in the lower portion of the footwell of the spa. Water is drawn thru these suction fittings, goes thru the pump and heater assembly then returns into the spa thru the jets. Always insure that the suction covers are on at all times.

Filter housing: Located in the spa is the filter housing also known as the skimmer housing. In this housing you will find the filter(s) for your spa. Some models may have 2 filters. To remove the filter(s) refer to page 12.

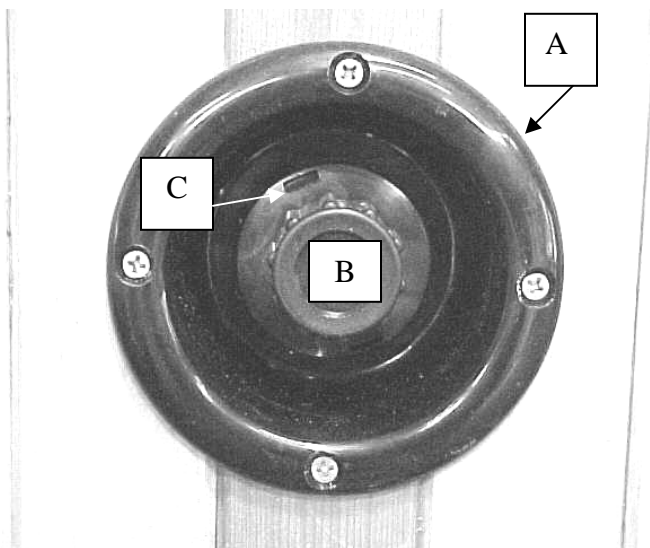
Equipment Compartment: Inside the equipment compartment located behind the front access panel, is the pump(s), equipment pack, the ozonator (if equipped) and the water shut-off valves also known as the slice valves.

Shut off valves: Sometimes called slice vales or T-valves these valves usually located on the pump(s) and one on the end of the heater vessel are operated by pulling up the handle to allow water flow or pushing down on the handle to stop the water flow.

A few Warnings in regards to your spa:

- Always check the water temperature in your spa before getting in it.
- Always insure that children are supervised at all times when they are in or around the spa.
- To avoid any type of hair entrapment, DO NOT allow any one to put their head under the water and always be sure the suction covers are on the suction fittings.
- Do not drink alcoholic beverages while using your spa to avoid falling asleep or passing out.

Draining Your Spa



Before draining your spa, it is very important to turn OFF the power to your spa! On your spa locate the hose bib assembly on the outside skirt of the spa, see the above photo for reference, marked "A." While holding the ON and OFF valve marked "C" in photo above in the OFF position (clock-wise), unscrew the hose bib cap marked "B" counter clock-wise. After removing cap install your garden hose onto the ON and OFF valve "C" and turn the valve "C" ON, counter-clock-wise and pull out-ward on your hose slightly until the assembly pops forward to begin emptying your spa. When you are finished push the valve back into place and turn the ON and OFF valve to the "OFF" position (clock-wise) and re-install the hose bib cap.

NOTE: Do not run pump without water as this may damage the pump seal.

TO CLEAN THE SPA: Use a nonabrasive acrylic cleaner or polish with a soft cloth. USE EXTREME CAUTION TO PROTECT THE EMPTY SPA FROM HIGH HEAT OR FROM SUNLIGHT. COOL THE SURFACE BY SPRINKLING WATER OR WIPING WITH A WET CLOTH BEFORE REFILLING. HINT: Windex OR soft scrub followed with a clean damp cloth will remove streaks and scum lines.

CARING FOR A VINYL COVER: A good spray on or wipe on vinyl conditioner along with using a bubble or barrier blanket will preserve and protect your cover for several years. Using a bubble or barrier blanket will cut your heat loss and costs in half and will protect the cover from absorbing the steam and getting water-logged.

REMOVING AND CLEANING SPA FILTER(S):

We recommend that you keep a spare filter cartridge on hand to use as a replacement when a filter change is required. This will give you time to properly clean your filter without having to interrupt operation of your spa.

REMOVING THE FILTER (S)

- To remove your filter(s) you must slide the face plate on the filter housing straight up.
- Slide the skimmer (or strainer) basket out of the filter housing (towards the center of the spa).
- Reach into the filter housing and un-screw the filter(s) counter-clockwise. You may rinse the filters off by using a garden hose or the spray attachment on your sink. You may choose to soak your filters in a filter solution usually found at any spa Dealer store that sells chemicals and/or spa parts. Some customers choose to put the filters in the top rack of their dish washer and put them through a wash cycle. They **DO NOT USE** any type of soap just a hot water wash and **NO** dry cycle is used. Rather than using a filter cleaner solution, some customers prefer to soak their filters in a bleach and water bath by using (1) cup of bleach to (3) gallons of water and let them soak for a half to one hour. This may not only clean your filter, but it will also help to disinfect them.
- To re-install your filter, simply install the filter element(s) by screwing them into the filter housing. **DO NOT** over tighten them. Screw the filter down snug. A sign of an over tightened filter is broken or cracked filter element threads located on the bottom of your filter elements or a crack that will appear on the top of the filter, so be careful!
- Re-install the skimmer (or strainer) basket by sliding it back into the filter housing between the inner filter housing guides.
- Line up the back side of the filter housing face plate with the notches located on the filter housing face then slide the face plate straight down-ward.
- There again we recommend you have a spare set of filters on hand so you can alternate them during each filter cleaning. We recommend you check you filter(s) at least every two weeks. If treated correctly and kept clean a set of filters may last 6 months to a year.

Chemical Maintenance

Water Chemistry

Water chemistry varies due to many external and internal conditions. Water chemistry is very important. Consult your dealer and chemical manufacturer for more details on the following information and procedures.

Water Sanitation

There are several spa disinfectants available from your spa dealer. The purpose of using a water disinfectant is to sanitize the water (kill the bacteria and algae) and to break down (or oxidize) organic material in the water such as body oils and perspiration. Bromine is the most commonly used disinfectant for hot water sanitizing.

There are various bromine products available and you can obtain advice from your dealer as to what's best for your area. In general, we recommend slow dissolving bromine tablets dispensed from a floating brominator which is available from your dealer.

Inorganic chlorine products with a calcium base (i.e. Calcium Hypochlorite) can be combustible when mixed with organic substances and can cause a buildup of calcium carbonate in your equipment. **NEVER USE THIS FORM OF DISINFECTANT.**

Carefully read the labels on your chemical products to determine their components, their instructions for storage and proper methods for handling and use. Residential spas should be maintained at a bromine level of at least 3 to 5 ppm (parts per million) free bromine residual for non-ozonated systems and .5 to 1.5 ppm free bromine residual for ozonated systems.

It can be quite tricky to keep the proper amount of bromine in your spa. Sunlight, heat, bubbling water, perspiration, foreign bodies and body oils cause the release and use of bromine in the water. That is why the term "free bromine residual" is important. The free bromine residual is the amount of bromine that is still in the water after some has been released, used up or combined chemically with other substances in the water. You need to check the free bromine residual level regularly, especially prior to use, and when the spa is being used to make sure you are keeping free bromine residual at the proper level. Do not use the spa with the bromine level below .5 ppm or above 5 ppm or you risk the possibility of unsanitary conditions or skin irritations from chemical concentrations.

In addition to maintaining the proper free bromine residual level, another important maintenance step is a weekly addition of Renew (shock treatment), which removes chloramines and bromamines (substances which are chemically combined with the used chlorines and bromines in the spa). Chloramines and bromamines are undesirable because they prevent the bromine from disinfecting properly and they also cause burning of the eyes and foul odors. These symptoms are often taken as a sign of too much bromine, but they are actually signs of not enough bromamine residual. The smell is caused by chloramines and bromamine, not by the free residual bromine. After applying a shock treatment to the spa, allow the bromine level to drop to the proper level before using the spa.

There are a variety of chemicals and devices advertised as spa water disinfectants. Whichever you choose, it is very important to carefully follow the manufacturers' instructions and to check with your pool and spa dealer if you have any questions before using these chemicals.

Chemical Balance

Maintaining a proper chemical balance will reward you with clear, clean, fresh smelling spa water. Chemically balanced water depends primarily upon the pH level of the water (explained below); the chemicals which help maintain the pH level and water hardness (primarily excessive calcium minerals).

The acidity or alkalinity of water is expressed as a pH value. The pH range is on a scale from 0 to 14. The most alkaline possible is 14 and 0 is the most acidic. Neutral is 7, which is considered being neither acidic nor alkaline. The optimum pH level for spa water is 7.4 with a range of 7.2 to 7.6.

Depending on the acidity or alkalinity of the water used to fill the spa, you may need to adjust your water's pH level by adding an acid or alkaline chemical. Your local dealer can sell you these chemicals for this purpose and can advise you on their proper usage.

Failure to maintain the proper pH level can cause user discomfort, unsanitary water, eye irritation, clogging of pipes, staining and heater damage due to calcification. Failure to maintain proper pH levels will also void your heater warranty.

TOTAL ALKALINITY: In addition to the acidity /alkalinity of the water, the total alkalinity of the water should be adjusted and maintained to proper levels. The total alkalinity of the water is the ability of the water to resist pH changes. The proper level for total alkalinity should be in the range of 80 to 180 ppm. This will insure that the pH will not fluctuate easily. Your pool and spa dealer can supply you with the proper chemicals and explain their proper uses.

Vacation and Winter Use

Many spa owners find that using the spa in the winter gives them a whole new and enjoyable perspective on weather and the outdoors. We recommend this highly. If the winter climate in your area has prolonged periods below freezing (32° F):

1. Be sure power to the spa remains on at all times.
2. Set temperature to desired level (suggested 60° F). If temperature of the high limit probe drops below 40°F, the system will start a special process to circulate the water. The message "IC" will be displayed (see Topside Control Section).
3. Be sure to maintain proper chemical levels, water level and keep the spa covered at all times.
4. If you must leave the spa unattended for a few days up to a couple of weeks, add a floating chemical feeder to the spa and set it to your normal feed level. If freezing temperatures will be encountered, have the spa checked daily to insure power remains on, circulation is maintained and the water level is proper.
5. The spa may be left for extended periods if chemical balance, water level and filtration are maintained.

Spa Maintenance

Proper maintenance of your spa will help to maintain its beauty and function for many years. Maintenance is not difficult nor time consuming and should be performed on a regular basis.

THE ACRYLIC SURFACE: Cast acrylic is a high performance surface that should, with a minimum amount of care, provide many years of beauty and performance. The spa should be kept clean and free of any abrasive sand or grit. The water should be changed every three months four months is the maximum with average use, and we recommend at this time you wipe the surface down with a cleaner. Windex followed by a damp cloths works well.

DO NOT USE ANY CLEANER WITH ABRASIVE FILLER OR THE SURFACE WILL BECOME SCRATCHED AND DULL.

IT IS IMPERATIVE YOU NEVER ALLOW THE SPA TO SIT EMPTY IN HIGH HEAT OR DIRECT SUNLIGHT. THE SPA IS DESIGNED TO BE USED WITH AN APPROVED RIGID COVER AND IT SHOULD ALWAYS REMAIN IN PLACE WHEN THE SPA IS NOT IN USE. THE SPA SHOULD ALWAYS HAVE WATER IN IT.

CEDAR SIDING (if so equipped): The siding material of your Sonoma Spa is constructed from Western Red cedar. The siding is stained at the factory the only maintenance that should be required would be retreating with stain. We use Thompson water seal clear cedar tone.

PLASTIC SIDING: (If so equipped) may be **WIPED DOWN ONLY!!** with a clean damp cloth. **DO NOT** use a garden hose to wash down your cabinet!! Water will enter the skirt thru the seams and will damage the electrical components and the spa cabinet interior. This could also electrocute anyone in contact with the spa.

Tips about your spa

The high speed of your pump(s) will turn off after running 15 minutes of constant running, this is normal. It is a safety feature in case the spa user forgets to turn off the pump(s).

The Bal-boa equipment pack, has a built in freeze protector, also known as a smart winter mode. This system monitors ambient air temperature in the plumbing area of the spa. It is activated when the air temperature in the plumbing area drops to 40 degrees F. The system will automatically start the pump(s) to heat and circulate the water. If you ever lose power to your spa in the winter, keep the spa cover closed to retain the heat. Usually a spa will not freeze for 3 to 5 days if power goes off as long as you leave it covered.

Parts and our part numbers used in your spa

CMP JETS AND COMPONENTS used "06" Our Part Numbers

2 inch Euro jet Bodies	102469
2 inch Euro Jet Insert	102470
3 & 4 inch Jet Bodies	102471
3 inch Jet Inserts	102472
4 inch Jet Inserts	102485
3 & 4 inch Jet Gaskets	102463
5 inch jet body	102473
5 Inch Jet Insert	102474
5 Inch Massage Insert	102481
5 Inch Jet Gasket	102462
7 inch Massage Jet Body	102487
7 Inch Massage Jet Insert	102491
Top Access Air-Dial	102468
100 Percent ON / OFF Valve	102490
Aqua Rail Water-Fall	102489
3 Way Valve	102464
112 GPM Suction Fitting	102467
Ozone jet assembly	102466

FILTER REPLACEMENTS

50 SQUARE FOOT SCREW IN FILTERS	101302
---------------------------------	--------

PUMPS

2 HP 2-SPEED 115 VOLT PUMP	100083
3.6 2- SPEED 230 VOLT PUMP	06620321-2040
4.8 HP 2- SPEED 230 VOLT PUMP	3654

Parts and our part numbers used in your spa

OZONATOR used prior to 5/1/07	1201600
NEW OZONATOR used after 5/1/07	1201620
LARGE GRAY PILLOWS	2787
SMALL GRAY PILLOWS	3007
2 TONE GRAY "04" PILLOWS	102486
LARGE GRAY PILLOWS	2787
5-INCH LIGHT LENSE	101594
COLOR KINETIC BULB	101330
OZONE JET (light gray thru wall fitting)	100022
ACRYLIC GRAB RAIL	2825
GROMMET FOR GRAB RAILS	2826

