

Owners Manual

Making Your Home a Haven

Effective Jan 1 2004

PLEASE SAVE FOR FUTURE USE

Congratulations

Thank you for choosing HAVEN SPAS for your choice with the highest quality and most innovative and best in the Spa Industry.

INDEX

| | |
|-------------------------|--|
| Section One | Important Safety Instructions.....Page 01 |
| Section Two | Circuit Requirements.....Page 07 |
| Section Three | How To Use Your Spa Controls.....Page 08 |
| Section Four | Starting Your Spa System.....Page 09 |
| Section Five | Hydro Jet Operation.....Page 10 |
| Section Six | Filling And Draining Your Spa.....Page 11 |
| Section Seven | Cleaning The Filter.....Page 12 |
| Section Eight | Spa Cover Usage.....Page 13 |
| Section Nine | Water Level.....Page 13 |
| Section Ten | Chemical Use.....Page 14 |
| Section Eleven | Care Of Your Spa Finish.....Page 16 |
| Section Twelve | Wood Cabinet Care and Maintenance.....Page 17 |
| Section Thirteen | Care Of Your Spa Cover.....Page 18 |
| Section Fourteen | Transportation.....Page 18 |
| Section Fifteen | Trouble Shooting Guide.....Page 19 |

SECTION ONE

IMPORTANT SAFETY INSTRUCTIONS

PLEASE READ, FOLLOW, AND SAVE ALL INSTRUCTIONS

WARNING!

RISK OF ACCIDENTAL DROWNING: Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this product unless they are supervised at all times.

RISK OF ACCIDENTAL DROWNING: The use of alcoholic beverages, drugs, or medication before or during spa or hot tub usage may lead to unconsciousness and the possibility of drowning.

RISK OF ACCIDENTAL DROWNING DUE TO HYPERTHERMIA: Consult the instructions provided with this unit for a description of the causes, symptoms, and effects of hypothermia.

RISK OF ELECTRIC SHOCK: Do not connect to a circuit operating at more than 150 volts to ground for a 220-240 volt, 2 wire, single-phase spa.

RISK OF ELECTRIC SHOCK: Do not permit any electrical appliance (such as a light, telephone, radio or television) within five- (5) feet (1.5m) of this spa.

RISK OF ELECTRIC SHOCK: Connect only to a properly grounded, grounding type receptacle for a cord and plug connected unit.

NOTE: You will find these designators throughout this entire manual.
Read each item very carefully.

W = WARNING

D = DANGER

PR = PLEASE READ

INTRODUCTION

Before this spa can be fully and safely enjoyed, you should be aware of several conditions which should be considered hazardous, and therefore require caution. Please familiarize yourself with the rules for safe installation and operation printed in this manual prior to the installation or use of your spa.

Before using your spa, we recommend that you take a few minutes to read the instructions in the manual. This will allow you to enjoy the maximum benefits offered to you through the quality and convenience built into the spa. This manual will also help you to avoid service expenses resulting from causes, which are beyond our control.

HEALTH WARNINGS

“W” Immersion in heated, turbulent water can cause strong physiological effects on some people depending on length of exposure, and the individual’s physical condition. We suggest that you limit your exposure in the spa for the first few times to assure maximum enjoyment and healthful benefits. Gradually increase the time spent in the water as you become accustomed to it. Persons with heart trouble or the other major health problems should consult with their physician prior to using any type of spa system.

HYPERTHERMIA

“D” Hypothermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 degrees F. The symptoms of hypothermia include dizziness, fainting, drowsiness, lethargy and an increase in the internal temperature of the body. The effects of hypothermia include (1) unawareness of impending hazard; (2) failure to perceive heat; (3) failure to recognize the need to exit spa; (4) physical inability to exit spa; (5) fetal damage in pregnant women; and (6) unconsciousness resulting in a danger of drowning.

WARNING

The use of alcohol, drugs or medication can greatly increase the risk of fatal hypothermia in hot tubs and spas.

PRECAUTION

“PR” Before entering a spa or hot tub, the user should measure the water with an accurate thermometer since the tolerance of water temperature-regulating devices may vary as much as plus or minus 5° degrees F.

IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

1. **Read and follow all instructions carefully. Failure to follow these rules and instructions could cause serious bodily injury, fire and/or property damage.**

DANGER

2. **Do not allow unsupervised children to enter a spa or spa area. Water turbulence and depth of water make it unsafe for children to be left unattended. This will reduce the risk of injury.**

WARNING: RISK OF CHILD DROWNING

3. **The physiological effects of heated, turbulent water can be hazardous to children, particularly to those who are very young. Please maintain close adult supervision at all times when children are present.**
4. **We recommend that you obtain the advice of your physician regarding the use of spas. People with certain health problems, particularly heart disease, should not be permitted to use a spa unless they have received the specific permission of a physician. Pregnant women should refrain from using the spa unless advised otherwise by their physician. Excessive water temperature can cause fetal damage. Spa temperature should be limited to 100° degrees F (38° degrees C) for pregnant women, higher temperatures could cause fetal damage during early months of pregnancy.**
5. **Observe a reasonable time limit in the spa. Maximum recommended water temperature is 104° degrees F (40° degrees C). Immersion time should be shortened as the water temperature approaches the recommended maximum. Keep an accurate thermometer in the water and check it before entering and frequently during use of your spa, regulating devices may vary as much as plus or minus 5° degrees F (3° degrees C). Lower water temperatures are recommended for children.**
6. **Do not enter the spa while under the influence of alcohol or drugs. The physiological effects of immersion in a spa can produce rapid and dangerous changes in body condition when the user is under the influence of medication, drugs or alcohol. This may lead to unconsciousness with the possibility of drowning.**
7. **If symptoms of dizziness, nausea, or headache occur while in the spa, get out immediately. Cool the body by use of a cool shower, ice pack or cold towels. Seek medical attention particularly if symptoms persist.**
8. **Using your spa for physical therapy, or to promote relief from injury discomfort should be done only at the direction of your physician. Obtain recommendations concerning immersion time and water temperature for maximum benefit.**

DANGER

9. To reduce the risk of injury to person, do not remove suction fittings. 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 fitting or pump, be sure that the flow rates are compatible.

Never operate the spa if the suction fittings are broken or missing. Never replace suction fitting with one rated less than the flow rate marked on the original suction fitting.

10. Do not allow anyone to block off the water flow from the inlet main drain within the spa. This may cause damage to the support equipment, cause water damage to the surrounding area or create an electrical shock hazard.

DANGER

11. Risk of electrical shock. Do not permit any electrical appliance such as a light, telephone, radio or television within five (5) feet of a spa or hot tub.

WARNING

12. This equipment may be provided with a factory-installed ground fault circuit interrupter (GFCI) (optional) on the spa equipment chassis. Before each use, push the test button. The unit should stop operating and reset button should pop out. Push the reset button. The unit should now operate normally. If the GFCI fails to operate in this manner. There is a good current flowing indicating the possibility of electrical shock. Disconnect the power until the fault has been identified and corrected.
13. A pressure wire connector (bonding lug) is provided on the surface of the control box. This permits bonding (grounding) between the bonding lug and any metal equipment, enclosures of metal, equipment with water pipes, or conduit within five (5) feet of the spa, as needed. Comply with local requirements and codes. It is recommended that a qualified licensed electrician inspect wiring for safety and compliance to code. The bonding wire must be at least No. 8 awg (8.4 mm²) solid copper wire. NOTE: no connection is to be made between the ladder, the drain and the bonding control box unless a local common bonding grid is provided with the installation.
14. Install the spa with non-metallic pipe connections. The distance from the metal enclosure of assembly to the inside wall of the spa should be at least five- (5) feet (1.52m). NOTE: A spa may be installed within five (5) feet (1.52m) of a metal surface is permanently connected. "A minimum No. 8 (8.4mm²) solid copper conductor attached to the wire connector on the terminal box that is provided for this purpose"

DANGER: RISK OF ELECTRICAL SHOCK

15. **The entire unit, including the piping system, must be protected against freezing temperature (32° degrees F or below). Failure to do so could cause severe damage, and will void the warranty.**
16. **Always check your local electrical wiring codes before installation. If your local codes are not followed, your spa will not work to its full capacity. If in doubt, contact your electrical power company or a license electrician.**
17. **Never operate the spa with the equipment access door removed from the skirt. This will present shock hazards and void the warranty.**
18. **Be sure your installation meets all plumbing and electrical codes.**
19. **Keep the equipment pack closed at all times. NOTE: With the exception of fuse replacement, use only authorized factory service representatives to service the equipment pack.**
20. **Always install spa to provide drainage of equipment compartment for electrical components.**
21. **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 or hot tub.**
22. **The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code (NEC) ANSI/FPA 70-1987. The disconnecting means must be readily accessible to the tub occupant but installed at least five (5) feet (1.5m) from the tub water.**
23. **Persons using medication should consult a physician before using a spa or hot tub since some medications may induce drowsiness while other medications may affect heart rate, blood pressure and/or circulation.**

SAVE THESE INSTRUCTIONS!

24. This warning label has been placed on the inside of your equipment compartment. It is for your safety. Please review these important safety features with the entire family. It is for your protection and the safety of others.

WARNING

**DURING PREGNANCY, SOAKING IN HOT WATER MAY CAUSE
DAMAGE TO FETUS.**

LIMIT USE TO 10 MINUTES AT A TIME.

PREVENT DROWNING

1. SPA HEAT SPEEDS UP EFFECT OF ACOHOL, DRUGS OR MEDICINE AND CAN CAUSE UNCONSCIOUSNESS.
2. IMMEDIATLEY LEAVE SPA IF UNCONFORTABLE OR SLEEPY.

PREVENT CHILD DROWNING

1. WATER ATTRACTS CHILDREN
 2. ALWAYS ATTACH A SPA COVER AFTER EACH USE
-
-

SECTION TWO

CIRCUIT REQUIREMENTS

IMPORTANT!

YOUR EQUIPMENT MUST BE CONNECTED BY A BONDED LICENSED ELECTRICIAN OR THE WARRANTY WILL BE VOID.

Hooking up a portable spa requires a three (3) wire (110v) or a four (4) wire (220v) wire connection. They are as follows:

| Lines/Wires | 50 amp/6 kW | 60 amp/2 pump 6 kW | Any Electrical |
|--------------------|-------------------------|---------------------------|------------------------|
| Line One | Black #8 Copper | Black #6 Copper | Service Run |
| Line Two | Red #8 Copper | Red #6 Copper | over 75' should |
| Neutral | White #10 Copper | White #8 Copper | increase wire |
| Ground | Bare #10 Copper | Bare #8 Copper | by one size. |

NOTE: Recommended wire sizes listed above will vary according to lengths, but will not decrease from the size listed above. Please consult your dealer if there is any variation in local code requirements. Use proper size service required for your spa, please review the amperage sticker located on the face of your control unit in the system compartment.

Consult your local building authorities.

We must stress that incorrect wire size will cause damage to the system and all of the components. One possibility is that thermostats will not control proper temperature. Contactors and relays will overheat and fail. Excessive heat will cause degradation to all internal wiring.

State and Local codes probably require a GFCI and a quick disconnect no closer than five (5) feet from spa. Please check with a licensed electrician or the local building department.

SECTION THREE

HOW TO USE SPA CONTROLS

Topside Control:

1. Your therapy jets, water temperature, mood light and air blower (optional) can all be controlled from your topside control.
2. Please refer to the topside instructions included in the owner's pack for all information related to the programming and operating of your particular topside control.

Air Dial (s):

1. Your spa has at least one air dial, which is used to control the amount of air drawn into the therapy jets. Turned counter-clockwise too fully open will give you the maximum amount of air/water mixture available at each set of therapy jets for a soft feeling therapy. The jets can be operated with the air dial(s) completely closed, or adjusted to desired strength. The "turbo air" is also adjusted with the Air Dials.
2. Ensure that the air dial(s) are open when the spa is not in use.

GFCI (Ground Fault Circuit Interrupter) (Optional):

1. This optional, factory-installed switch is provided for your safety and is designed to protect you against electrical shock. It is necessary to test this device before each use of the spa, and at least once a month when the spa is not being used regularly.
2. To test, make sure the power to the unit is on. Press the test button on the GFCI, which is located on the outside left of the equipment pack. This should disable the spa and cause the reset button to pop out. When the reset button is pushed in, this should re-engage the spa. If the GFCI fails to reset, do not use the spa until a qualified and licensed electrician or spa service person corrects the problem.

Fused Protection:

1. The fuse(s) and breakers are located inside the equipment pack, and are for the protection of the current overload to the pump(s). If the fuse is blown, replace only with the same type of fuse. Do not keep re-setting the breakers if it keeps tripping, call for service.

SECTION FOUR

STARTING YOUR SYSTEM

Please read these instructions, as well as the topside control instructions, before starting your system. Failure to do so could result in damage to your spa system.

- 1. The water in the spa should be filled to within four (4) inches of the top. Depending on which filtering system you have, the water should completely cover the opening of the top-mounted skim filter, and reach the halfway point of the opening on the flange-mounted skim filter.**
- 2. Turn the main power breaker on. Check and see if GFCI is reset and/or power switch is on. At this time your pump (Primary pump on a two-pump system) will energize and begin to operate at low speed. The jets in your spa will sputter for a short period of time and then provide a steady stream of water out of each nozzle.**
- 3. If after thirty (30) seconds, no water is coming out of the jets, there may be air trapped in front of the pump. Turn off the pump and open up the air drain valve, allowing the air to escape until water comes out. Shut the Air drain valve and restart pump. Allow approximately five (5) minutes for the system to purge out all of the air in the plumbing lines. The air drain valve is a small white capped hose.**

NOTE: A small percentage of spas may leak in the equipment area, pump unions, valve and fitting connections during to shipping and delivery conditions. Please do not be alarmed. If you desire, visually inspect the area for leaks and hand tighten all connections.

- 4. Following the directions provided in your topside control instructions set the heater to the desire temperature. The spa will now begin to heat the water, only shutting off when the desired temperature is reached.**

SECTION FIVE

HYDRO JET OPERATION

1. All of the jets (except the “mini” jets) in your spa are adjustable. By turning the face of each jet, you can increase or decrease the flow thereby designing each jet to fit your therapy needs. There are also valves used to turn the water on to some of the jets.

WARNING

DO NOT CLOSE ALL OF THE JETS NOZZELS AT ONE TIME. THIS WILL CAUSE THE PUMP(S) TO OVERHEAT AND POSSIBLY BURN UP, THEREBY VOIDING YOUR WARRANTY.

SECTION SIX

FILLING AND DRAINING YOUR SPA

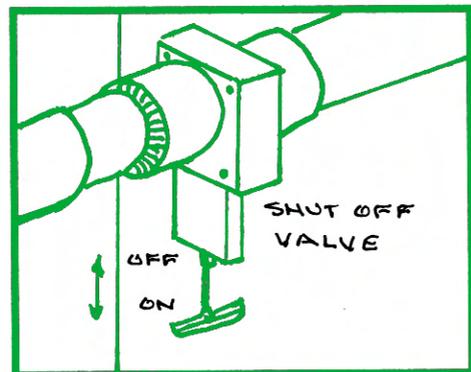
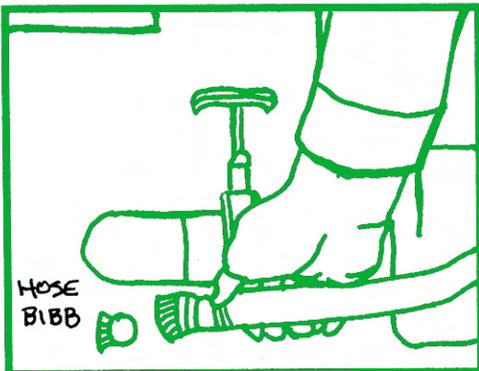
It will be necessary to drain your spa periodically. It is our recommendation that this be done every three – six (3-6) months depending on water clarity and cleanliness

Draining Your Spa Is Easy:

24. It is very important to disconnect your power source.
24. Attach a garden hose to the drain valve provided in the equipment compartment.
NOTE: Chemicals in your water may be harmful to grass, vegetation or animals.
24. Open drain valve and allow spa to drain all the way down in the footwell or until the water stops. To prevent damage to your equipment, please do not use your main pump to drain the spa. Although this method takes approximately four (4) hours, it will prolong the life of the system. You may wish to start the process the night before. Please do not remove the thermal cover during the draining operation. Refer to sections “Care Of Your Spa Finish” SECTION ELEVEN) and “Cleaning The Filter” (SECTION SEVEN) after cleaning operation is completed. Refill your spa.

To Fill The Spa:

1. Disconnect garden hose from drain valve in the equipment compartment.
2. Close drain valve.
3. Connect garden hose to house hose bib and place hose in spa.
4. Fill your spa to within four (4) inches of the top or to the halfway mark on your skim filter opening (if flange-mounted)
5. Turn power on and set thermostat to desired temperature (spa will automatically engage heater).
6. Place thermal cover back on spa.



SECTION SEVEN

CLEANING THE FILTER

The filter is one of the most important pieces of equipment in your spa. It requires regular maintenance to ensure the health and safety of everyone in the spa. Its maintenance is also mandatory to the total efficiency of your system. Frequent filter cleaning, at least once every three (3) weeks, in accordance with use, as well as chemical balance and upkeep, are necessary maintenance requirements.

As a general rule, your filter must be cleaned every three (3) weeks to ensure proper performance and improve and maintain the water clarity.

Filter Cleaning Instructions:

- 1. Turn off power.**
- 2. Remove filter cover. (Only on some models)**
- 3. Remove basket or floating weir.**
- 4. Reach in and remove the cartridge(s).**
- 5. Your filter cartridge(s) must be thoroughly cleaned by one of the following methods.**
 - A. Use a standard garden hose to pressure wash the filter and remove any residue or debris. While cleaning, ensure that water is forced into each pleat of the filter.**

NOTE: Other high-pressure devices such as those found at local self-cleaning car washes or dishwashers will cause damage to the filter cartridge and decrease the life expectancy.
 - B. Every second to third cleaning should also include a soaking bath for a minimum of twelve (12) hours. See your spa dealer for cartridge filter cleaning solutions.**
- 6. After cartridge(s) has been thoroughly cleaned, place cartridge(s) into canister; replace basket or floating weir and turn power on. With the closed top filters, fill them with water and quickly invert with your hand over the hole to keep water in the filter.**

SECTION EIGHT

SPA COVER USAGE

The thermal cover provided with your spa has many important uses. If installed correctly, each side has a locking strap. Please check Local City and county ordinances on locking devices to help prevent unauthorized access to your spa. This thermal cover also greatly reduces heat and chemical loss. It is necessary to keep cover in place at all times when not in use to help fight against deterioration of your spa due to harmful effects of the sun.

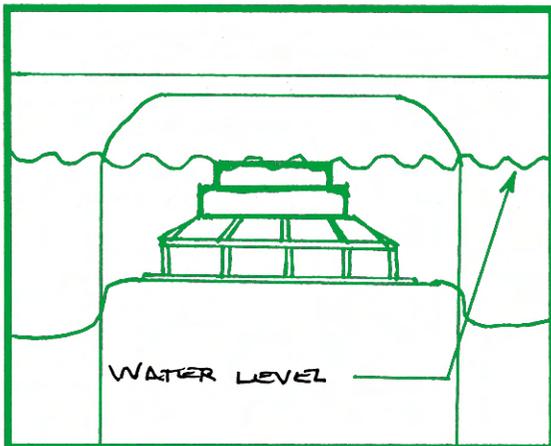
WARNING!

**DO NOT LEAVE SPA UNCOVERED WHEN EMPTY.
SURFACE TEMPERATURES CAN EXCEED 250 DEGREES FROM THE SUN.
SEVERE DAMAGE CAN OCCUR.
DO NOT COVER SPA WITH CLEAR PLASTIC.**

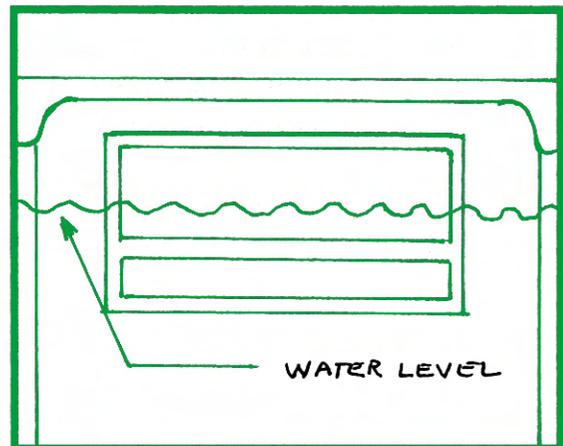
SECTION NINE

WATER LEVEL

1. Water level should be maintained at least halfway between the top and the bottom of the filter opening (flange-mounted skim filter) or at least two (2) inches over the filter opening (top-mounted skim filter). This will allow the floating weir to properly skim the top of the water and remove debris such as hair, leaves, etc. If water is too low, then the pump may pull in air, which will cause cavitation and possible damage to the pump and heater. If you are in doubt as to the proper level for your water, please call your dealer.



40 or 50 SF Filter



100 or 200 SF Filter

SECTION TEN

CHEMICAL USE

Spa chemical treatment is very important to keep your spa crystal clear and in good condition. This not only protects the user and ensures full enjoyment, but also adds life to the equipment system.

Please do not treat your spa as a swimming pool. The chemicals used in your spa are in no way the same as those used in a swimming pool. The water in your spa ranges from 98 to 104 F degrees in temperature and is obviously much warmer than swimming pool water. In fact, the ratio of people in relation to the amount of water in the spa is greater by far. Example: Two people in your spa is the equivalent of about 150 people in a average size swimming pool which means that because of the higher temperature of 98 to 104F degrees, your body and any clothing you wear will leave residues of soap, body oils, perspiration, cosmetics and hair spray-not to mention what may come form ones' pores.

It is for these reasons and many more that your spa should be chemically treated in a special way. Caring for your spa means testing the water every other day, at least three (3) days a week.

We do not recommend using Bromine tablets with your Haven Spa, unless it is used commercially. Spa care takes approximately ten (10) minutes depending on necessary chemical additives. Never use trichlor tablets in a Haven Spa! It voids the equipment & plumbing warranty

Sunday – Program I

1. Test water by submerging test kit vial or three- (3) way test strip at least eighteen (18) inches into the water.
2. Adjust total alkalinity (60 to 100PPM)
3. Adjust pH (7.2 to 7.6).
4. Make sure copper is .4 to .9 PPM.
5. Add water clarifier suitable for Ions.
6. Check water level of spa. Add water if level is low.

Wednesday – Program 2

1. Test water.
2. Adjust alkalinity and pH, if necessary.
3. Adjust copper , if necessary.
4. Add scale and calcium preventative liquid.
5. Check water level of spa.

After Each Use.

- 1. Add 1 teaspoon Chlorine Granular and 1 tablespoon shock per person.**

Once a week

- 1 Add prescribed amount of non-chlorine shock treatment (at least 2 ounces)**
- 2 Check water level of spa.**
- 3 Enjoy your spa.**

For a proper chemical supply, keep this handy guide:

- 1. Adequate test kit solutions or test strips.**
- 2. Spa alkalinity up for TA and pH adjusts up.**
- 3. Spa alkalinity or pH adjusts down.**
- 4. Chlorine (dichlor) granulated.**
- 5. Non Chlorine shock.**
- 6. Water clarifier.**
- 7. Calcium and scale preventative liquid.**
- 8. Calcium booster, if necessary.**
- 9. Foam down.**
- 10. Spa surface wax.**
- 11. Spa sequestering liquid for use when spa is drained and refilled.**
- 12. Filter soaks and clean solution.**

SECTION ELEVEN

CARE OF YOUR SPA FINISH

There are three types of material used in the manufacturing of a portable spa: 1) Acrylic, 2) Quarite, and 3) Rovel (C) Centrex, each of which will provide many years of enjoyable use.

ACRYLIC:

The acrylic portable spa has a lustrous finish and requires minimal maintenance. At least twice a year the spa should be drained completely. To begin, thoroughly clean the inside and top of the spa with any cleaner suitable for plastic. Ensure it is a non-abrasive cleaner. If stains have occurred, rub with a small amount of rubbing compound. After spa is clean and dry, apply an acrylic wax – one that is recommended by your dealer. Protect your spa from sharp or heavy objects and do not use cleaners such as Ajax or Comet because they may scratch the surface.

QUARITE:

The quarite portable spa has a matte “granite” finish and also require minimal maintenance. At least twice a year, the spa should be drained completely. To begin, thoroughly clean the inside and top of spa with any cleaner suitable for plastic. Ensure it is a non-abrasive cleanser. If stains have occurred, clean with a mild solution of baking soda and water. After spa is clean and dry, apply an acrylic wax-one that is recommended by your dealer.

PLEASE READ

Prolong exposure of any spa with either surface to direct sunlight has a cumulative effect on the surface of your spa and will, in time, cause cracking and damage to the exposed surface. Therefore, do not leave spa empty or unprotected from the sunlight. The spa manufacture, as stated in your warranty, is not responsible for damage brought about by neglect and mistreatment of the spa. It is your responsibility to be aware of this possibility and to take proper preventative measures to keep your spa covered when not in use and out of direct sunlight

For more detailed informaton go to www.spaspecialist.com click on "Haven Care"

SECTION TWELVE

WOOD CABINET CARE AND MAINTENANCE

The cabinet on your spa has been cut and assembled from a high quality redwood or western red cedar wood. This type of wood will require certain care when exposed to the elements such as rain or excessive moisture, i.e., misguided sprinklers and ultra-violet rays from the sun. These elements could cause some swelling or shrinkage depending on where the spa is placed. A good maintenance recommendation would be twice a year. Once at the beginning of the summer before it gets hot, but after the rain and once in the winter after heat and before it rains. A good quality material such as Super Deck / duck back preservative is recommended. Each of the above products has a penetrant for oil and preservative saturation and equally a ultra-violet inhibitor to prevent graying and staining. Care of your cabinet is essential to the life and appearance of your spa. Even with the highest quality of construction and material, there is no quarantee against cracking, separating, or any natural occurrence common to wood products.

PERMA WOOD CABINET

Perma wood is an alternative material to wood. It is a poly-based material, which requires no stain or sealant. A soft cloth and water can be used to wipe down siding.

SECTION THIRTEEN

CARE OF YOUR SPA COVER

Proper spa cover care is important. Twice each month clean and condition your spa cover. It is important to use a high-quality cover cream. Your warranty will be void if other products are used because they may cause damage to the vinyl and/or stitching after prolonged use. Clean and condition your cover using the following steps:

1. Remove cover from spa and lay on a flat surface.
2. Rinse the cover with lots of water from hose or bucket.
3. Using a soft-bristle brush, scrub the cover clean with a mild solution of dishwashing liquid (1 teaspoon of dishwashing liquid to 2 gallons of water).

CAUTION: DO NOT let the soap solution dry on the spa cover before it can be rinsed. Be sure to rinse thoroughly.

4. Apply a high-quality cover protectant (303 Aerospace protectant).
5. Re-install cover on the spa.
6. Open the cover on a regular basis to allow accumulated chemical vapors to dissipate. Also, turn the cover upside down on the spa for a period of 3-4 hours at least two times per year.

Proper spa water chemistry is an important factor in exceeding the performance life of your spa cover!

SECTION FOURTEEN

TRANSPORTATION

A spa weighs approximately 600-1000 lbs., when empty, depending upon options and size. If moving your spa becomes necessary, we recommend you to contact your dealer for qualified spa delivery personnel to help you with this project.

SECTION FIFTEEN

TROUBLE SHOOTING GUIDE

The spa equipment package will normally function for long periods of time without interruption caused by a malfunction. Occasionally however, incidents occur which may cause stoppage of the system or certain functions. The following information is presented to simplify checking and solving certain operating problems that may occur. If a problem cannot be resolved using the following suggestions, contact your spa dealer.

| GENERAL PROBLEMS | USUAL CAUSE | POSSIBLE SOLUTION |
|--------------------------------------|--|---|
| Nothing Functions | <ul style="list-style-type: none"> A. Main power panel circuit Breakers tripped or in off Position. B. Sub-panel circuit breaker Tripped or in off position. C. Sub-panel fuse blown D. GFCI (optional) installed on Equipment pack tripped E. Power cord (120 volts only) Not connected to outlet F. 30 amp main fuse inside Equipment pack blown | <ul style="list-style-type: none"> A. Reset circuit breaker B. Reset circuit breaker C. Replace fuse D. Push GFCI reset button in * E. Connect power cord to outlet F. Replace fuse ** |
| TOPSIDE CONTROL PROBLEMS | USUAL CAUSE | POSSIBLE SOLUTION |
| Blank Display | <ul style="list-style-type: none"> A. No incoming power B. Electrical disturbance C. 30 amp main fuse inside Equipment pack down | <ul style="list-style-type: none"> A. See above B. Trip and reset GFCI (Optional) on equipment pack or turn off, and then turn on power to spa C. Replace fuse ** |
| “ . . . “ Three Flashing Dots | <ul style="list-style-type: none"> A. Dirty filter B. Air lock C. Pump(s) not operating D. Electrical disturbance (if water temperature does not seem elevated) | <ul style="list-style-type: none"> A. Clean or replace filter cartridge(s) B. Open drain valve and bleed Out any captive air C. See Component Problems D. Reset by pressing any key and monitor the situation *** |

**“ . . . “ Three Flashing Dots
Continued**

33°

- | | |
|---|--|
| E. Elevated water temperature (above 115°F degrees) | E. Turn off power to spa and notify dealer |
| F. Three flashing dots appear below the temperature display an error and a need for service has occurred. | F. Contact your dealer |
| G. Three flashing dots appear Below the temperature Display and the temperature displayed is 112° F Degrees or higher | G. Contact your dealer |
| A. Actual water temperature differs from the displayed Temperature or the display reads a constant 33°F | A. Contact your dealer |

COMPONENT PROBLEMS

USUAL CAUSE

POSSIBLE SOLUTION

Spa not heating

- | | |
|--|--|
| A. Dirty Filter | A. Clean or replace filter Cartridge(s) |
| B. Thermostat set lower Than water temperature | B. Set thermostat to desired water temperature |
| C. GFCI (optional) installed On equipment pack tripped | C. Push GFCI reset button in* |

Pump doesn't work

- | | |
|--|--|
| A. Main panel circuit breaker Tripped or in off position | A. Reset circuit breaker |
| B. Sub-panel circuit breaker Tripped or in off position | B. Reset circuit breaker |
| C. Sub-panel fuse blown | C. Replace fuse |
| D. GFCI (optional) installed On equipment pack tripped | D. Push GFCI reset button in* |
| E. Power cord (120 volts only) Not connected to outlet | E. Connect power cord to outlet |
| F. 30 amp main fuse inside Equipment pack blown | F. Replace fuse** |
| G. Pump motor overload Protection engaged | G. Let cool for a couple hours and try again. Contact dealer if problem Persists |
| H. Pump not plugged into Side of equipment pack | H. Plug pump receptacle into equipment pack |

COMPONENT PROBLEMS**CONTINUED****Pump is noisy****USUAL CAUSE****POSSIBLE SOLUTION**

A. Low water level

A. Add water to normal water Level

B. Intake/Return slide valve Closed

B. Open both valves

C. Clogged or blocked suction Inlet(s)

C. Clean suction inlet(s)

D. Damaged or worn motor

D. Notify dealer

E. Debris inside of pump

E. Notify deal

Light will not operate

A. Bulb burned out

A. Replace bulb

Ozonator (optional) not Operating

A. Ozonator not plugged Into side of equipment Pack

A. Plug ozonator into side of equipment pack

WATER PROBLEMS**USUAL CAUSE****POSSIBLE SOLUTION****No water flow**

A. Air lock in water line

A. Open drain valve and bleed out any captive air

B. Pump not operating

B. See Component Problems

Lower water flow from jets

A. Dirty filter

A. Clean or replace filter cartridge(s)

B. Clogged or blocked Suction inlet(s)

B. Clean suction inlet(s)

C. Slide valves closed

C. Open gate valves

D. Jet face(s) partially closed

D. Open Jet face(s)

E. No air to jets

E. Open air dials

F. Pump running at sub-Normal speed

F. Check voltage coming into spa. If correct, then contact Dealer

G. Worn or damaged pump Seal

G. Notify dealer

Water not clean

A. Dirty filter

A. Clean or replace filter cartridge(s)

B. Clogged or blocked suction Inlets

B. Clean suction inlet(s)

**WATER PROBLEMS
CONTINUED**

USUAL CAUSE

POSSIBLE SOLUTION

Water not clean

C. Poor water chemistry

C. See SECTION TEN

D. Insufficient filtering time

D. Run filtration mode longer

E. Improper maintenance

E. See SECTION TEN

**F. High content of solids in
Water**

**F. Use clarifier or drain and
refill spa. See SECTION
SIX**

*** A tripped GFCI could be caused or an indication of other problems. If the GFCI continues to trip, or you cannot push in the reset button. Call your dealer or an Authorized Service Center.**

**** A blown fuse could be caused or an indication of other problems. If the fuse soon blows again, call your dealer or an Authorized Service Center.**

***** The “. . . “ Three flashing lights does not necessarily mean the water temperature of the spa is elevated. Please check the temperature with a secondary thermostat, and if the temperature is not elevated, please reset by pressing any key and monitor the situation. If the “. . . “ Three flashing lights occurs again on a regular basis, contact your dealer or an Authorized Service Center.**