



Amish Country Spas

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Amish
Country Spas 
A Tradition of Quality

OWNER'S MANUAL

240V
ELECTRONIC CONTROL SUPPORT SYSTEMS
FOR MOVEABLE AND PORTABLE
AMISH COUNTRY SPAS

THIS IS AN IMPORTANT
SAFETY DOCUMENT.
• Keep it in a safe place.
• Pass it on to any new owner.
• If lost, contact your local Amish Country
dealer or write to Amish Country
Incorporated and a new copy will be
provided at no extra charge.

The symbol on the products name plate
means it is listed by
UNDERWATER LABORATORIES, INC.



1701

SAVE THESE INSTRUCTIONS

It is important that you take a few minutes to read this manual. A complete knowledge of the basic safety precautions and proper maintenance procedures will provide years of safe and pleasant enjoyment of your Amish Country Spa.

(Please note that, in some cases, failure to follow these instructions may result in damage that may not be covered by your warranty or may void the warranty entirely.)

SERIAL NUMBER LOCATION

On Amish Country spas, the serial number is engraved directly above the filter cannister area (see picture). On those models which are listed by Underwriters Laboratories (U.L.), you will also find the serial number engraved on the foil tag attached to the equipment bay door.

PERMANENT SPA INSTALLATIONS

Because outdoor or sunken spa installations are usually permanent, the installation may require special considerations. It is important that you consult with your Amish Country Spa dealer.

Please fill out for future reference.

AMISH COUNTRY SPA MODEL _____

SERIAL NUMBER _____

CAPACITY (GALLONS) _____

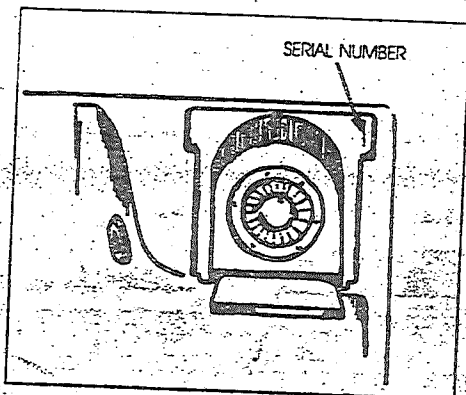


TABLE OF CONTENTS

SERIAL NUMBER LOCATION (PAGE 2)

IMPORTANT SAFETY

INSTRUCTIONS (PAGE 3-6)

ELECTRIC SHOCK RISK (#2-6)

RISK OF HYPERTHERMIA (#6c)

GROUNDING & WIRING (#8-11)

CHEMICAL SAFETY (#14)

INSTALLATION & USE (PAGE 6-16)

LOCATION (#16)

SHUT-OFF VALVES (#17)

Air Control Valves (#18)

Hydro Jet Control Valve (#19)

Hydro Jets (#20-24)

Digital Electronic Control (#25)

Circuit Analyzer Lights (#26)

Spa Side Controls (#27-30)

How-To Operate The Controls (#31)

How To Set Time (#32)

How To Set Temperature (#33)

How To Set Filter Cycles (#34-35)

Panel Lock (#36)

LCD Messages (#37)

Water Chemistry Guidelines (#38-43)

Electrical Requirements (#44-45)

Starting Your Spa (#46-50)

Operating Your Spa (#51-52)

Energy Cover (#53)

Freeze Protection (#54)

Maintenance Schedules (PAGE 17-20)

Regular Maintenance (#55-64)

Spa Maintenance (#65-69)

Troubleshooting (PAGE 20-21)

Support System Diagram (PAGE 22)

IMPORTANT SAFETY INSTRUCTIONS

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

1. READ AND FOLLOW ALL INSTRUCTIONS.

2. DANGER - RISK OF ELECTRICAL SHOCK!

Install at least five feet from all metal surfaces.

3. DANGER - Risk of electrical shock. Do not permit any electrical appliance, such as a light, telephone, radio, or T.V. within 5' (1.52 M) of a spa or hot tub.

4. **DANGER** - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

WARNING - RISK OF CHILD DROWNING. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa or tub unless they are supervised at all times.

5. **DANGER** - To reduce the risk of injury, do not remove suction cover or grate.

6. **TO REDUCE THE RISK OF INJURY:** The following spa use rules are most important. Using your spa properly and safely will give you countless hours of enjoyment and pleasure. But, just as with many products today, misuse can be extremely harmful. Protect yourself, your family and your guests by following the safety rules listed below:

(A) Do not drink alcoholic beverages before or during spa use. One of the effects of alcohol is slowed reflexes and it can make people drowsy. Jetted hot water also helps induce muscle relaxation. The two together could induce sleep and this, in turn, could possibly lead to drowning. Because of these facts, it is vitally important that you do NOT allow the mixing of alcoholic beverages with spa usage.

(B) Pregnant women and people under medical care (for such problems as heart disease, diabetes, blood pressure or circulatory problems, or obesity) must consult their physician prior to using the spa. Some medications can induce drowsiness. Never use the spa when taking anticoagulants, antihistamines, vasoconstrictors, vasodilators, stimulants, hypnotics, narcotics or tranquilizers. In all cases, if you are not thoroughly familiar with the medication you are taking,

MEMBER



NATIONAL
A & POOL
INSTITUTE



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check with your doctor prior to using the spa.

(C) Spa water temperatures should be maintained in the 98° to 104° range. An accurate underwater thermometer is a "must". 100° water is generally safe and enjoyable for most adults. However, remaining in 100° water for an extended period will raise your body temperature to this level and you may experience some discomfort. As a general rule, when you raise the temperature of the spa water, you should reduce the amount of time you soak. Twenty minutes is about the limit for 102° water; limit your soaking to 10 minutes above 102°. Never soak in water hotter than 104° because temperatures above this level may raise your body temperature to a level that could cause drowsiness, fainting, hyperthermia or heat stroke. Symptoms of hyperthermia are: muscle incoordination and cramps, nausea, rapid heartbeat, pale skin and delirium. Before entering a spa or hot tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices may vary as much as $\pm 3^{\circ}\text{C}$ (5°F). It is always important to check your in-spa thermometer before using your spa and to limit your time in the spa as suggested above. Use 98° to 99° - normal body temperature - for extended periods of soaking.

A WORD ABOUT PREGNANT WOMEN

Soaking for extended periods in water 102°F or higher may affect body temperature to the point that it could affect the fetus. This is especially important during the first 90 days of pregnancy. Spa use at 102°F should be limited to no more than 15 minutes. It is strongly suggested that women who are pregnant (or those who are considering becoming pregnant in the near future) check with their doctor on his recommendation for safe spa use.

A WORD ABOUT CHILDREN

As previously explained, soaking in hot water will affect the body's temperature. In small children, the body temperature can increase more quickly than with a full-grown adult. Thus, children are unable to absorb the same amount of heat. Therefore, children's time in the spa should be less than an adult's and children using a spa must be constantly supervised. Children should never be allowed to swim underwater.

(D) People with infections, skin sores or open

wounds should not use the spa. Warm or hot water may serve as a "breeding ground" for some types of bacteria. It is vitally important to keep your spa properly disinfected with chlorine or other equally effective disinfectants.

(E) It is recommended that people shower before and after using the spa. Showering before removes deodorants, lotions, perspiration and oils which may clog the filter. Showering after soaking will help remove any bacteria that may be in a spa that is not fully disinfected.

(F) NEVER allow children to use the spa without adult supervision.

(G) Adults should not use the spa without someone nearby who can be called should anything unexpected occur. As an added precaution, you may want to post emergency phone numbers near your phone so that they are handy should a need arise.

(H) Always use unbreakable containers around the spa; never use glass.

(I) Always use caution when entering and exiting the spa. Wet surfaces can be slippery and may cause a fall. Hand rails and non-skid surfaces are recommended.

(J) Suction through drains and skimmers can be powerful. Any drain or skimmer with a damaged cover can be dangerous, especially to small children or adults with long hair. Should any part of the body become drawn to a drain or skimmer, turn off the spa immediately. Long hair should be restrained in a bathing cap; never allow long hair to float in the spa. Always replace broken drain outlet covers immediately.

(K) Keep electrical appliances, including telephones, away from the spa to avoid a possible shock hazard. Do not try to adjust or touch the spa equipment such as the pump, heater or any other electrical appliance while you are in the spa.

(L) Never walk, climb, play or jump on the Energy Cover of your spa. Never swim or play under this cover when it is installed on the spa. Also, do NOT rely on your Energy Cover as a safety cover for children. It is a precautionary measure only and children must be supervised when they are in or around the spa.

(M) A fence around your spa with a self-closing, self-latching gate can be the best protection against unauthorized entry and use. If your spa is indoors, lock the door to the room to keep out unauthorized users.

(N) Do not use a spa in conjunction with strenuous exercise without consulting your physician and obtaining his approval.

7. Turn OFF all electric power at the main circuit breaker or disconnect panel prior to performing any service to the spa equipment.

8. It is the responsibility of the spa owner to ensure that all electrical connections are made in accordance with the National Electric Code and any state or local electrical codes in effect at the time of installation. For all permanently connected units 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, ANSI/NFPA-70-1987. The disconnecting means must be readily accessible to the tub occupant but installed at least 5 feet (1.5m) from tub water.

9. A pressure wire connector is provided on the side surface of the control box inside the spa to permit connection of a bonding wire between this point and any metal equipment, metal water pipe or conduit within five feet of the spa as needed to comply with local requirements. The bonding wire must be at least a #8 AWG (8.4 mm²) solid copper wire. This is to reduce the risk of electric shock.

10. Connections should be made with cop-

per conductors only. All conductors, circuit breakers and/or fuses must be sized in accordance to the Total Amperage Load as specified on the electrical control box data label.

11. All 230V support systems require a three wire plus ground electrical service (line 1, line 2, neutral ground). All 230V connections can be made by removing the front of the electrical control box.

12. The spa must be installed to provide proper drainage and to keep water out of the electrical equipment components.

The spa must be installed in such a manner as to provide access for servicing all electrical and plumbing components from above or below any decks or floors.

13. NEVER operate the spa support system when the spa is empty. This could result in severe damage to the heater, pump and spa support components and is a potential fire risk.

CHEMICAL SAFETY

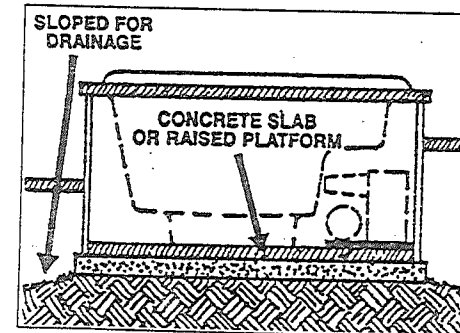
14. Add only one chemical at a time to the spa water. Never mix chemicals or chemical solutions together. Always follow the manufacturer's instructions for dilutions and handling precautions. When diluting, add chemicals to water - not water to chemicals. Avoid skin contact when working with acid. ALWAYS STORE CHEMICALS OUT OF THE REACH OF CHILDREN (#43)

15. SAVE THESE INSTRUCTIONS

INSTALLATION AND USE

LOCATION

16. For your portable spa to function properly and safely, it must be located on a hard, flat, level surface. Inground spas require special installation techniques and should be planned in conjunction with your dealer. Improper installation can result in structural damage to the spa and a voiding of your spa warranty. Items to discuss with your dealer include local construction codes, electrical service requirements, accessibility and serviceability of equipment and components, present underground obstructions such as



gas, water and telephone lines, safety measures such as fences and locks and visibility of the spa installation from the home, street and neighbors.

You must allow for sufficient water drainage around the spa to help preserve the wood skirt and support structure and to provide adequate drainage of the equipment bay for the components.

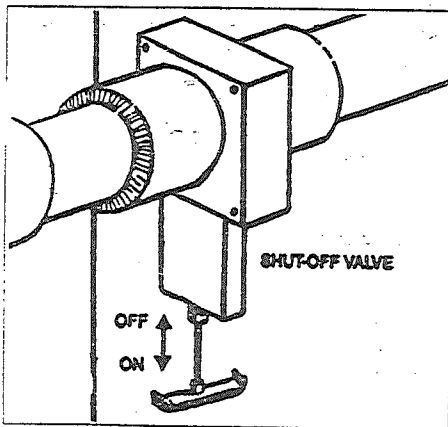
Your spa **MUST** be installed to permit access for servicing the equipment above and/or below any decks or floors. Access is essential and must allow adequate room for service personnel.

Be sure the spa is in the final position **BEFORE** filling with water. Check for power cords, tools or hoses which may be caught underneath the spa.

CAUTION: Never try to move a spa that has not been fully drained. To do so can result in damage to the spa and physical injury to the mover.

SHUT-OFF VALVES

17. Your spa is equipped with two **SHUT-OFF VALVES** that can completely shut off the water flow to the support system for dealer servicing. At times, a new spa or one that has recently been serviced may have the **SHUT-OFF VALVES** partially closed which can re-



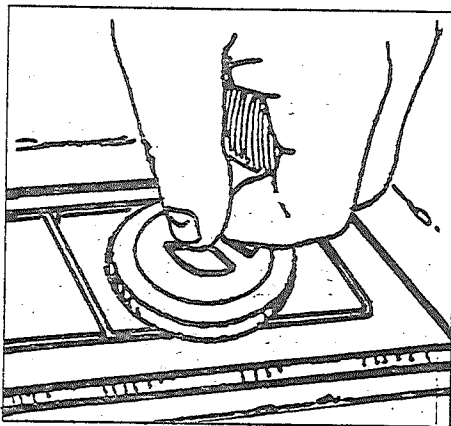
strict the water flow and hinder jet performance. Be sure the valves are **ALWAYS** fully open with the handles fully extended.

AIR CONTROL VALVES

18. Your spa is equipped with dual air control valves which allow regulation of the water action from the jets.

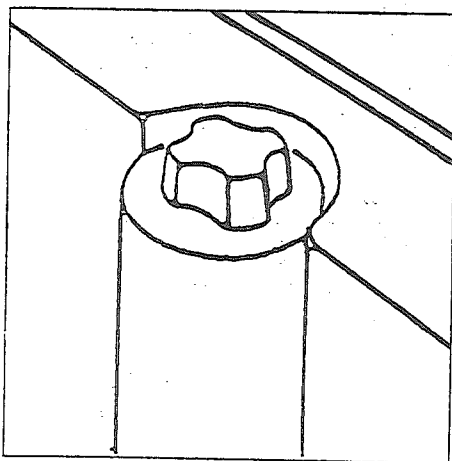
The water action can be increased by turning the air control valves counter-clockwise, or reduced by turning clockwise.

NOTE: Because heat loss occurs as air is injected into the water, close the air control valves completely when the spa is not in use.



HYDRO JET CONTROL VALVE

19. Your spa is equipped with a valve which controls the flow of water to the hydro jets. Turning the valve allows you to select which bank of hydro jets operate at that time. This valve is located in a special recess on the top of the spa.

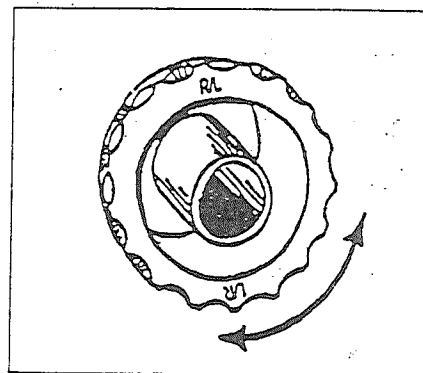


MICRO-MASSAGE JETS

20. Your spa is equipped with two micro massage jets. When the pump is on high speed the jet will rotate in a 360° circle.

TURBO MESSAGE JET

21. If your spa is equipped with a Turbo Massage Jet, the control knob for this jet is located on the jet face. By fully turning this knob in one direction you can concentrate the flow of water from the hydro jets to the Turbo Jet. To return the flow of water to the hydro jets, turn the knob in the opposite direction.

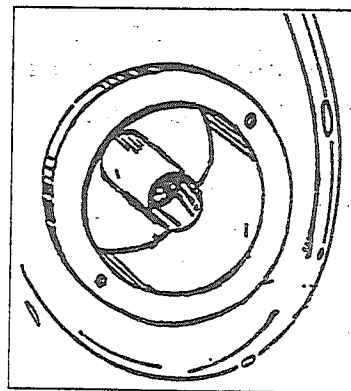


MINI HYDRO JETS

22. Your spa features from two to five mini hydro jets. These personal sized jets are designed to provide a gentle, soothing massage.

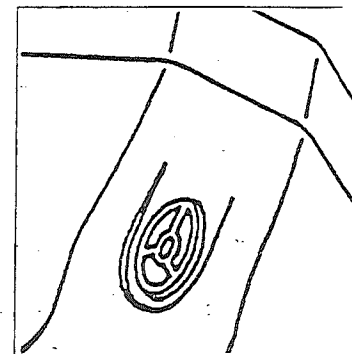
HYDRO JETS

23. Your spa is fitted with convertible, directional hydro jets. The jet action can be directed 360° by aiming the swivel ball nozzle.



THERA-SSAGE JET

24. Your spa may be equipped with the large thera-ssage jet. This jet is designed to massage a large portion of your back for a strong everchanging massage. This jet operates whenever the hydro jets are operating.



DIGITAL ELECTRONIC CONTROL (DEC)

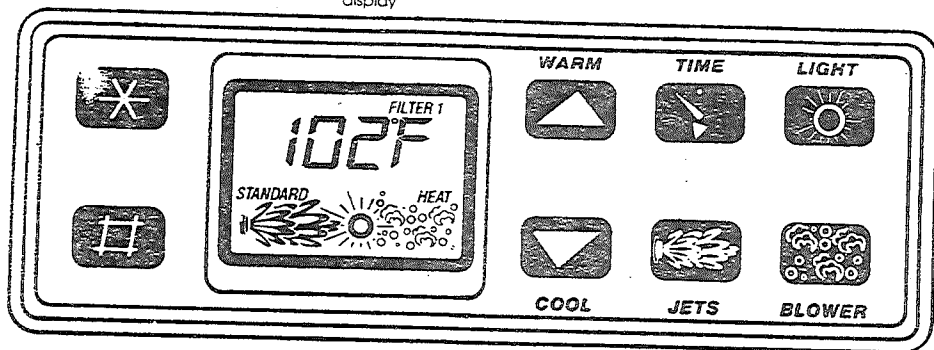
25. The Amish Country DEC system features state of the art design and allows you to control all of your spa's functions from the spa side control panel. Other than the spa drain, there are **NO** user serviceable components in the equipment compartment.

CIRCUIT ANALYZER LIGHT

26. The front of the control box features two circuit analyzer lights. These neon lights allow your electrician to identify a proper electrical connection from the power source to the control system. One light indicates a proper ground circuit, while the other indicates a correct voltage line correction. When power is turned on to the spa, **BOTH** lights must be brightly lit. If either light is dim or unlit, there is an improper connection or supply source. This must be corrected before the spa is used.

Spa side controls (SSC)

27. The illuminated SSC panel gives you a complete update of your spa's status at the touch of a finger. Water temperature setting, filtration cycles, control of the jets, blower and light, and even the time of day are maintained with the unique spa side control panel. The control panel consists of three main sections. Each of these sections is explained in the following.



28. USER PADS

Temperature controls

When either of these pads are touched once, the LCD will display the temperature which has been set, as well as the words "set heat". Each time either of these pads is pressed again, the set temperature will increase or decrease, depending on which pad is pressed. After 3 seconds, the LCD will automatically display the spa temperature.



JET CONTROLS

Touch this pad once to activate the low-speed pump. Touch again to start the high-speed pump, and again to turn off the pump. The low-speed pump will start automatically when the heater is turned on, when a filter cycle is activated, or when a freezing condition is detected. If automatic activation occurs, the low speed pump cannot be turned off with the "jets" pad; however, the high-speed pump may be started. Whenever the high-speed or low-speed pump is started with this pad, it will automatically stop after some period of operation.



BLOWER

Starts or stops the blower for aeration in the spa. The blower will also automatically stop after some period of operation.



LIGHT

Turns light on or off.



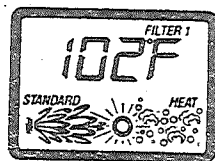
TIME

Press to view time of day, press again to view temperature. Current spa temperature display will automatically resume after 5 seconds.



29. LIQUID CRYSTAL DISPLAY

Continually shows operating status of the spa, as well as the various monitoring functions and programming information.



30. OWNER CONTROL PADS

Program function

Initiates time setting, filter programming, and panel lock routines.



Mode function

Switches spa operation to either the economy or standard mode. In the economy mode, the spa will heat only during the filter cycles. In the standard mode, the spa will be continuously heated to the set temperature. This pad also resets the control in the rare instance of an overheat.



HOW TO OPERATE CONTROLS

31. Your DEC is preprogrammed to automatically bring your spa up to 100°F and a filter for a two hour period every 12 hours. However, to fully utilize all the features of your DEC, you must first set the internal timeclock to the proper time of day. This is done by following the sequence shown below.

SET TIME

32. Once the spa has been properly connected a "set time" message will flash on the

screen. This flashing message indicates that you can proceed with the following steps:

1. Press the time pad
2. Press
3. Press or

After either pad is pressed once, the internal timeclock will ascend or descend in very rapid one minute increments. Press either pad to stop the time setting once it nears the proper time. You may then touch the appropriate pad to fine tune the setting to match the time of day.

NOTE: You should make sure that the timeclock not only displays the correct time but that it coordinates to either a.m. or p.m. as well.

4. Press to exit the "set time" procedure.

TEMPERATURE SETTINGS

33. Your DEC will automatically bring your spa water to 100°F. The length of time it takes the water to reach this temperature depends on several factors. Initial water temperature, spa size, energy type and insulative qualities of the energy cover, and consistency of electric power are all factors. DO NOT EXPECT TO FEEL HOT WATER FROM THE HYDRO JETS AT INITIAL START-UP!

While 100°F is generally considered to be the ideal water temperature for spa use, you can select a different temperature if you so desire. To change the water temperature setting press either or

You will now see "SET HEAT" on the display. To raise the temperature, begin pressing the pad within 3 seconds.



To lower the temperature, begin pressing the pad within 3 seconds of the initial pad contact. Three seconds after you stop pressing either pad the actual temperature will be displayed.



Your DEC is designed to allow a maximum programmable temperature of 104°F, and a minimum programmable temperature of 80°F.

CAUTION: The spa should never be operated at temperatures above 104°F. An accurate underwater thermometer is vital in monitoring water temperatures. If the thermostat allows the heater to heat the spa to temperatures greater than 104°F, contact your dealer.

PRESET FILTERING

34. With the internal timeclock properly set, your spa will automatically filter itself twice a day. The filter cycles are set to operate in the following manner.

FILTER CYCLE 1

Begins filtering at 2:00 a.m. and stops filtering at 4:00 a.m. During the filter cycle, the pumps will operate at low speed and the heater will operate in the economy mode.

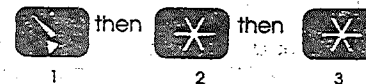
FILTER CYCLE 2

Begins filtering at 2:00 p.m. and stops filtering at 4:00 p.m. During the filter cycle the pump will operate at low speed and the heater in the economy mode.

CHANGING FILTERING CYCLES

35. Should you find that the two preset filtering cycles are not conveniently set for your schedule or should you want to increase the length of either cycle, you can change the filtering cycle times.

To gain access to the filter cycle time program, you must press the following three pads within 3 seconds of each other:



"SET START FILTER" will now be displayed on the screen. (At this point each time the pad is touched it will display a "SET START" "HEATER ENABLE" or "SET STOP" message for either the first or the second filter cycle.)

To adjust the "SET START FILTER 1" time, use either the or the pad as described earlier.

Once you have set the new start time you must press the again.



"SET HEAT" will now be shown on the display screen. To activate the heater during the filter cycle press the  pad.

To inactivate the heater during the filter cycle press the  pad.

In the "ON" position, the heater will bring the water to the preset temperature during the filter cycles. In the "OFF" position the heater in the economy mode, will not be activated during the filtering cycles.

Once you have selected the "heater" function you can now adjust the end of the first filter cycle by pressing the  pad.

"SET STOP FILTER 1" will now be shown on the display screen. Once again you use the  or the  pads to adjust the

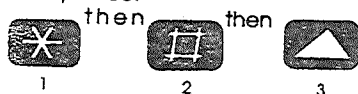
timer  to the selected stop time. You have now reprogrammed the first filter cycle. You may either press  to begin the resetting process for three second filter cycle or you may press  to exit the filter time set program.

NOTE: To properly clean and maintain your spa water a total filtering time of at least 4 hours is recommended. Longer filtering cycles may need to be programmed depending on sanitation methods or user load.

PANEL LOCK

36. Your DEC features a panel lock to prevent unauthorized operation of your spa controls. When either activating or deactivating the panel lock, each pad must be pressed within a 3 second interval.

To lock the panel, press the following 3 pads in sequence:



The display will now show a  indicating that the panel lock is activated.

To unlock the panel, press the following 3 pads in sequence:



The small  will

disappear. This indicates that the panel lock has been deactivated. Remember that in either process the pads MUST be pressed within a 3 second interval.

LCD DISPLAY MESSAGES

37. The advanced technology built into the digital electronic controls allows it to perform a number of self diagnostic system checks. As the system performs these various checks, it can display a variety of messages on the LCD panel. Below are some of the messages you may see on the LCD panel.

ILOC: Interlock (spa is deactivated)

The spa's equipment doors are open or ajar. Doors must be closed to resume spa operation.

Pd: Battery backup

Power has been cut off to the spa, and it is using its battery backup to preserve its settings (for short interruptions). The control panel will be disabled until power returns to the unit.

OH: Overheat protection (spa is deactivated)

If a malfunction occurs and spa water reaches 112°F, the system will completely shut down. In such a condition, DO NOT ENTER THE WATER. Turn off all power to the spa and contact your dealer or service organization.

NOTE: If you set the low-speed to operate for extended periods of time (in economy mode), overheating may occur. If this happens, remove the spa cover and allow the water to cool to below 110°F. Touch the Mode pad  to reset the system.

If the water is still hotter than the set temperature, touch the blower pad to cool the spa.

FLO: Flow switch

A pressure switch has malfunctioned. Contact your dealer.

COOL: Temperature set back

If spa water is more than 20°F cooler than the temperature set point, the heater will automatically activate to provide freeze protection. This is a normal spa function; no corrective action is necessary.

ICE: Freeze protection

If a freeze condition is detected, the low-speed pump is automatically activated. This is also a normal spa function, no corrective action is necessary.

Sn. 1: Open sensor (spa is deactivated)

The high-limit temperature sensor is non-functional. This must be repaired only by a qualified dealer.

Sn. 8: Open sensor (spa is deactivated)

The main sensor is non-functional. This also must be repaired by a qualified dealer.

42. Chlorine levels should not exceed 3 ppm except during periods of super chlorination (#30). Super chlorination is used only to treat raw water after completely draining the spa, and after periods of heavy use.

Since water chemistry and hardness varies from region to region, you should contact your dealer for advice on how to best treat your water. He has a complete line of chemicals to help you get optimum use and enjoyment from your spa.

WATER CHEMISTRY GUIDELINES

38. When filling the spa with water, use the chemicals recommended by your dealer to bring the water to a correct chemical balance. **NEGLECT IN MAINTAINING THE CORRECT WATER CHEMISTRY CAN VOID YOUR SPA WARRANTY!**

There are several methods available to sanitize the water in your spa. We recommend using chlorine, bromine, or ozone. No other oxidizing agents are suggested. Use of other oxidizing agents may damage equipment and void the warranty.

39. **CAUTION:** It is essential that you shock chlorinate your spa after filling it with water BEFORE you begin to use it. Directions for shock or super chlorination are given on the chlorine concentrate container. This shock treatment will give an initial sterilization to your water, kill any algae spores that may be present and oxidize undesirable minerals and organic matter in the raw water.

This treatment must be repeated anytime the spa is refilled or the water has lost its chemical control due to neglect or lack of use.

It is recommended that sodium dichlorocyanurate (DyCloro) or lithium hypochlorite be used for spa use. Calcium hypochlorite is a type of chlorine which is used in swimming pools and it is not recommended for spa usage.

CHEMICAL LEVELS

40. pH levels should be kept between 7.2 and 7.6. Failure to maintain these levels can result in burning of the eyes, skin rashes and other discomforts as well as clogged pipes, staining and equipment damage.

41. Alkalinity should be maintained between 100-150 parts per million (ppm).

CHEMICAL SAFETY

43. It is important that you read and follow the safety tips for chemical usage and storage listed here. This valuable information is contained on pages 11 and 12 of the "Sensible Way to Enjoy Your Spa or Hot Tub" issued by the National Spa and Pool Institute (NSPI) who have granted us permission to use this information here.

The chemicals needed for your spa or hot tub help make it clean, disinfected and more attractive to use. But remember that these chemicals are potentially dangerous and may present some hazards if not used properly. Carefully follow the manufacturer's instructions for the use and storage of chemicals.

In general, here are some tips for chemical use and storage:

- Before using chemicals, read the labels and directions carefully. Follow label use instructions.
- Keep all chemicals out of the reach of children.

STORAGE

- Chemicals for test kits should be replaced each year.
- Keep the original lids on all chemical containers and make sure the lids are closed tightly when not in use.
- Do not stack different chemicals on top of one another.
- Store your spa or hot tub chemicals in a clean, cool, dry, well-ventilated area, preferably off the floor, to prevent contamination from other materials. Keep them away from chemicals and equipment used for garden and lawn maintenance.

- Keep liquid chemicals away from dry chemicals. Keep apart chemicals which are different forms of oxidizing compounds. Physically separate all different forms of chemicals.

- Do not store your spa or hot tub chemicals where other flammable items may mix with them. For example, a mixture of these chemicals and fertilizer can cause a fire or explosion.

USAGE

- Never mix two chemicals together. Use a clean scoop for each chemical, and avoid combining materials from "old" and "new" containers.
- Test the water in your spa or hot tub with a reliable test kit on a schedule recommended by your spa or hot tub professional. Add the necessary chemicals according to the test results and the manufacturer's instructions. In the hot water environments of spas and hot tubs, disinfectants may rapidly break up and spread out, requiring more frequent water testing. Follow your manufacturer's instructions in this regard. The more people who use the facility, the more frequently you should test the water.
- Do not inhale dust or fumes from any chemicals. If necessary, use proper protective devices for breathing, handling and eye protection. Promptly wash off any residues which get on your skin.
- Never reuse old containers unless specified by the manufacturer.
- If you have any questions regarding safe handling, storage or use of spa or hot tub chemicals, contact the manufacturers.
- Always add the chemicals directly to the spa or hot tub water, either in a suitable feeder, or distributed across the surface of the water or diluted and poured into the water. Follow label use instructions.
- When preparing water solutions for feeder application, pour the chemical slowly into the appropriate amount of water, stirring constantly to provide mixing and dilutions.
- Always add chemicals to water. Never add water to chemicals.
- Never add chemicals to the spa or hot tub

water while people are using the facility.

- Carefully clean up any spilled chemicals with large amounts of water, to dilute and wash away the chemicals. Disinfectants and pH adjustment chemicals can usually be sent to the sewer with large quantities of water, since they are intended for use at low levels.
- Wash out empty, disinfectant containers before disposing to eliminate danger of fire, explosion or poisoning.

ELECTRICAL REQUIREMENTS

44. Before start-up or performing any service to the spa equipment, turn OFF all electric power at the main circuit breaker or disconnect panel.

It is the responsibility of the spa owner to ensure that all electrical connections are made by a qualified electrician in accordance with the National Electric Code and any state and local electric codes in effect at the time of installation.

All connections must be made in accordance with the wiring diagram found on the inside of the electrical box cover.

Connections should be made with copper conductors only. All conductors, circuit breakers and/or fuses must be sized in accordance to the Total Amperage Load as specified on the electrical control box data label.

This equipment is designed to operate on 60Hz Alternating Current only at a voltage of 230V as required.

A pressure wire connector is located on the exterior of the electrical control box. If the installation includes a common bonding grid (reinforced concrete slab, ground plate beneath the spa or any metal water pipe connection), this pressure wire connector should be bonded with at least #8 AWG copper wire to any metal ladder, water pipe or other metal within five feet of the spa.

230 VOLT INSTALLATION

45. Units operated at 230V must have all connections made by a qualified electrician in accordance with the National Electric Code and any state and local electric codes in effect at the time of installation. All 230V units require a three wire plus ground (line 1, line 2, neutral, ground). Refer to the diagram on the electrical box cover.

NOTE: All 230V field supplied wires must be sized and installed in accordance with any and all national, state and local electrical requirements in effect at the time of installation.

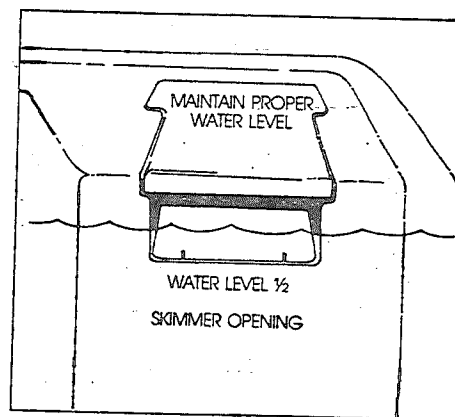
STARTING YOUR SPA

46. Make sure power supply is off. On this 230V system the circuit breaker in the residence electrical panel must be off.

47. Tighten all disconnects, open both shut-off valves and clean all debris from the spa.

Make sure the suction fitting cover is in place in the footwell of your spa. This unit is not to be installed without a suction fitting cover approved to prevent hair and body entrapment. An approved fitting is supplied by the factory with your spa.

48. Fill the spa to the middle of the skimmer opening. Shock chlorinate the water before entering and using the spa. It is essential that this shock treatment be done after each refill.



NOTE: If the spa is equipped with an optional ozone sanitation system, refer to the supplemental manual for instructions on the sanitation steps needed prior to using the spa.

49. Turn electrical power on to the spa. On this 230V system, flip on the circuit breaker in the residence electrical panel.

50. Your spa is equipped with a door safety system. If the equipment bay door is opened, or ajar, the support system will not operate. **THE DOOR MUST BE CLOSED COMPLETELY FOR ANY OF THE SUPPORT SYSTEM COMPONENTS TO BE ACTIVATED.**

OPERATING THE SPA

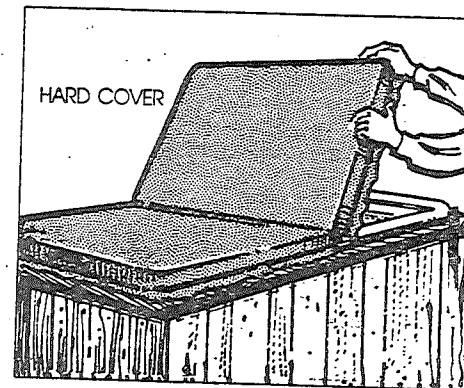
51. Allow the spa to circulate on high speed for 4-5 minutes to discharge air from the plumbing system. Do not expect hot water immediately from the jets. The heater will take several hours to heat the spa to the desired temperature.

NOTE: Your spa has been filled and test run at the factory. The first time your spa is filled with water, some discoloration from residual test water may appear. This will disappear when the spa is completely filled and the filtration system is activated.

52. Retest the water for the proper chemical balance and adjust as necessary. **PROPER BALANCE IS IMPORTANT.**

ENERGY COVER

53. When the spa is not in use, the Energy Cover should be kept on the spa to retain the water's heat and to keep out dirt, leaves, etc. Your preset heater thermostat will maintain a constant water temperature between spa use for a very low cost per day.



NOTE: The Amish Country energy saving hard cover is not intended to serve as a safety device. However, the hard cover may serve as a deterrent to unauthorized spa use. Cover locks are available from your Amish Country dealer and should be installed.

FREEZE PROTECTION

54. Your Amish Country spa has a built-in freeze protection feature. The DEC is set to automatically activate the heater and speed pump whenever the temperature drops below 80°F. The spa will continue to heat the water temperature reaches 80°F.

REGULAR MAINTENANCE

AR SKIRTING

55. The solid cedar wood skirt has been treated at the factory with a sealant. We suggest that you apply an additional coat of Teak Oil (available at most paint stores) or any quality wood preservative about twice a year to protect your skirting from the weather.

DRAINING YOUR SPA

56. Your spa should be drained and refilled AT LEAST four times a year. Unless draining is performed on a regular basis, the water can become chemically saturated and will not respond to normal chemical treatments.

Your spa should also be drained if you anticipate a long period of non-use or when performing repairs on the spa system.

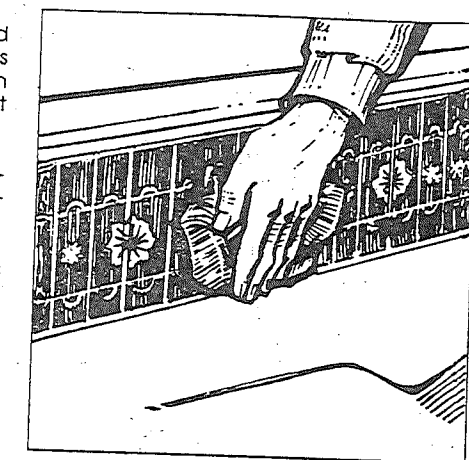
Note: Prolonged direct sunlight on the acrylic surface may cause severe damage or create blemishes on the spa shell, voiding any surface warranty. Therefore, always cover an empty spa.

The small volume of water in a spa often makes it simpler and less costly to drain and refill the spa than to attempt to adjust water chemistry with additives.

Any public spa should be drained and refilled AT LEAST once a month or more frequently.

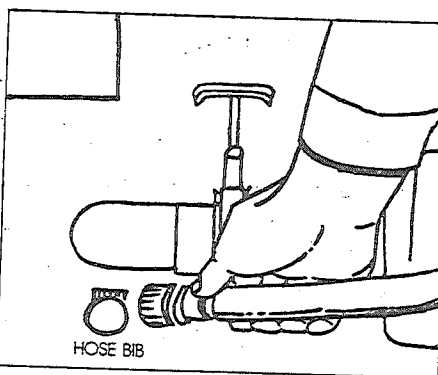
57. To drain your spa:

- (1) Make sure power supply is off. On this 230V system the circuit breaker in the residence electrical panel must be off.
- (2) Use a garden hose and attach it to the bib located to the left of the spa pack.
- (3) Open the bib by turning counterclockwise. Gravity will cause the water to drain out the hose.
- (4) Close the hose bib and remove the hose once the spa is fully drained.



CLEANING YOUR SPA

58. Use a soft cloth or sponge to wipe the tile, or water line area, should it become soiled. Abrasive cleaners SHOULD NOT be used as they can dull or scratch the tiles or acrylic surface. See "Spa Maintenance Schedule" for additional recommendations on cleaning.



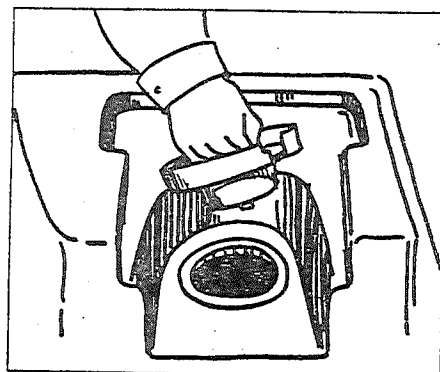
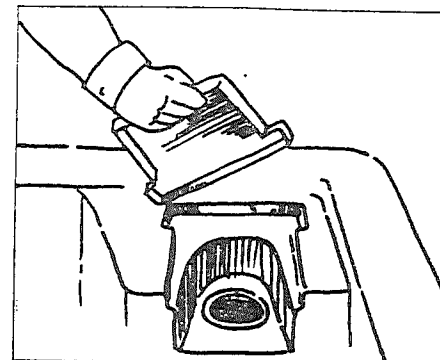
59. The Amish Country spa hard cover may be washed with soap and water or any NON-ABRASIVE household cleanser. Any quality NON-SILICONE vinyl restorer may be used to help protect the cover from the sunlight.

REMOVING THE FILTER CARTRIDGE

60. Please see "Spa Maintenance Schedule" (#74) for a recommended cleaning frequency to help extend the life of the cartridge.

To clean the cartridge:

- (1) Lift off the skimmer lid.
- (2) Twist the skimmer basket counterclockwise and lift out.
- (3) Reach down and lift out the filter cartridge. Note: the LARGE HOLE in the cartridge ALWAYS FACES DOWN.
- (4) Clean or replace the cartridge.
- (5) Replace the filter (with large hole DOWN), replace skimmer basket and replace skimmer lid.



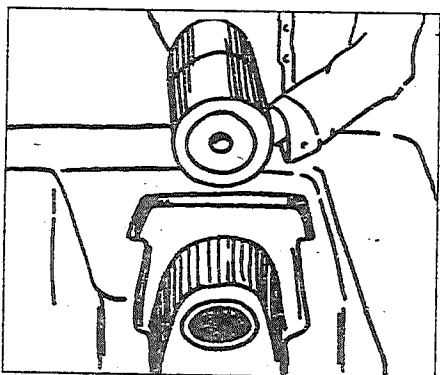
CLEANING THE FILTER CARTRIDGE

61. We recommend that the filter cartridge be removed and thoroughly rinsed with a high pressure hose on a weekly basis. Due to body oils and suntan lotions, it will be necessary to occasionally soak the filter cartridge in cartridge cleaner. (See your Amish Country spa dealer for a suitable cleaner.)

REFILLING THE SPA

62. Refill your spa with fresh water, using a garden hose, test the water and add any necessary chemicals.

Remember that, anytime you refill the spa, it is necessary to shock chlorinate before entering and using the spa. Simply follow the procedures outlined in "Starting Your Spa"



REPLACING SPA LIGHT BULB

63. Open the access door to the spa pack.

We suggest you turn the power switch to OFF.

Locate the spa light access tunnel located at the rear of the equipment bay. The light housing is accessed by reaching through tunnel.

Remove the lamp socket from the rear of the

light assembly; turn to the right and pull off. Gently remove the bulb and take to your Amish Country spa dealer to obtain a replacement bulb.

Install new bulb, re-install lamp socket into the light assembly, turn power switch to ON and close access door to the spa pack.

WINTERIZING

64. The Amish Country spa is designed for year-round use, even in outdoor conditions. However, should you decide to shut-off your spa during the winter months (or for any other prolonged time period), please follow the guidelines below:

Note: Damage can occur to equipment during long periods of inactivity/non-use due to condensation.

- (1) Make sure power supply is off. On this 230V system the circuit breaker in the residence electrical panel must be off.
- (2) Use a garden hose and attach it to the bib located to the left of the spa pack.
- (3) Open the bib by turning counterclockwise. Gravity will cause the water to drain out the hose.
- (4) Leave hose bib in OPEN position.

(5) Remove any remaining water (from seats, footwell area, etc.) If necessary, use a plastic bucket to bail out water and dry with towels. A wet/dry vacuum cleaner may also be used.

(6) Wipe out the spa, including the tile or border area.

(7) Take out, clean, and re-install the filter cartridge. Dry cartridge before re-installing.

(8) Cover the spa with your Amish Country hard cover.

For outdoor spas, we suggest you contact your Amish Country spa dealer for instructions on protecting any below-ground water piping.

Note: A special spa anti-freeze is available from your Amish Country spa dealer. Contact your dealer regarding proper use and follow all instructions on the container label.

SPA MAINTENANCE

Suggested schedule

65. On a Daily Basis -

- (a) Add water to proper level by filling up to 1/2 the skimmer opening. Clean and check skimmer basket.
- (b) Check the pH and add chemicals to water if needed.
- (c) Check disinfectant level and add chemicals required.
- (d) Circulate water for at least four hours each day to allow for effective filtration.

66. On a Weekly Basis -

- (a) Wipe the edge of the spa at the water line.
- (b) Remove and clean the filter cartridge. Spray thoroughly with a garden hose with a high pressure nozzle.

(c) If your spa is equipped with an ozone sanitation system soak the filter cartridge in a solution of trisodium phosphate (TSP).

67. On a Monthly Basis -

- (a) Remove and place the filter in filter cartridge cleaner and allow to soak. Then, rinse thoroughly with clearwater (#67 & #68).
- (b) Wipe the spa cover.

68. Every Three Months -

- (a) Drain the spa, wipe it clean, and refill with fresh water. Replenish all chemicals.

NOTE: Never wax your spa's surface. Wax can dissolve in water and may clog the filter.

69. Every Six Months -

Oil cedar skirt with protective sealant.

TROUBLESHOOTING

PLEASE NOTE: The following corrective actions may be performed by the spa owner. If the trouble cannot be corrected in the steps below, please refer to your Amish Country

Dealer for service. (Improper servicing by an unauthorized serviceman or spa owner could result in damage that will not be covered by the warranty or could cause serious injury.)

SYMPTOMS

SUGGESTED ACTION

Equipment will not operate

Make sure the equipment spa pack door is completely closed.

Check the circuit breaker on the control box panel or in the main circuit panel.

Pump does not work (in low speed circulation)

Be sure spa pack access door is closed.

Be sure the shut-off valves are completely open.

Check for obstructions or restrictions at the main drain and catch basket.

Check the filter cartridge for dirt and debris. Clean or replace.

Pump does not work (in high speed circulation)

Push the  on the spa side control.

Check items in "Pump does not work (in low speed circulation)" above.

Inadequate jet action

Turn the Turbo Jet control knob.

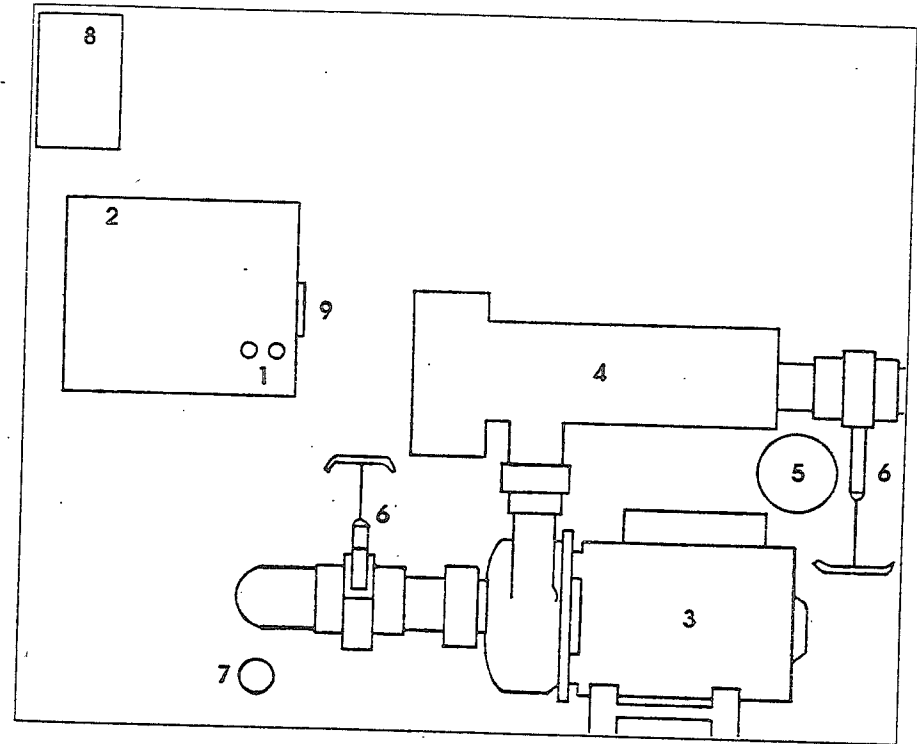
Check the spa water level; water must be 1/2 the depth of the skimmer opening.

Be sure the shut-off valves are completely open.

Check that the air control valves are open (#30).

The filter cartridge may be clogged. Remove the cartridge from the canister. If the jet action improves, clean or replace the filter.

SUPPORT SYSTEM



1. Circuit Analyzer Lights

2. Control Box

3. Pump

4. Heater

5. Light Tunnel

6. Shut-off Valves

7. Hose Bib

8. Ozonator (optional)

9. Pressure Wire Connector

Check all steps above in "Equipment does not operate."

Activate heater during filtering cycles.

Check that the thermostat is set to the desired setting.

Switch to standard mode.

Note: Do not expect instant hot water from the jets. It will take the heater several hours to heat the spa to the temperature you desire.

Inspect the filter cartridge for dirt and debris.

Prolonged use of the air blower and jets will have a significant cooling effect on the water. Turn off both the blower and the jet action to allow the heater to raise the spa temperature.

No heat

Underwater spa light does not work

Push the  pad on the spa side control.

Tighten the light bulb in the socket.

Replace the light bulb.

Water is cloudy

Check the water chemistry and balance as needed.

Clean or replace the filter cartridge.

Air blower does not work

Push the  pad on the spa side control.

Check all steps above in "Equipment does not operate."

