

1999 Owner's Manual



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IMPORTANT SAFETY INSTRUCTIONS:

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

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

- 1) **WARNING:** To reduce the risk of injury, do not permit children to use this spa unless they are closely supervised at all times.
- 2) **WARNING:** A grounding wire connector is provided on this spa to connect a minimum No. 8 AWG (8.4 mm²) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5 m) of the spa.
- 3) **DANGER :** Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this spa unless they are supervised at all times.
- 4) **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 suction fitting.

- 5) **DANGER:** Risk of Electric Shock. Install at least 5 FEET (1.5 m), 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 AWG (8.4 mm²) solid copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment can.

- 6) **DANGER: Risk of Electric Shock.** Do not permit any electrical appliance, such as a light, telephone, radio, television, etc. within 5 feet of a spa.
- 7) **ELECTRICAL SUPPLY:** The electrical supply for this spa must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with section 680-42 of the National Electrical Code, ANSI/NFPA 70-1993. The disconnect must be readily accessible and visible to the spa occupant but installed at least 5 feet (1.5 m), from the spa water.
- 8) **WARNING: To Reduce the Risk of Injury:**
 - a) The water in a spa should never exceed 104° F (40° C). Water temperatures between 100° F (38° C) and 104° F (40° C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
 - b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 100° F (38° C).
 - c) Before entering a spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices may vary as much as +/- 5° F (2° C).
 - d) The use of alcohol, drugs, or medication 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 medication should consult a physician before using a spa since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure, and circulation.

IMPORTANT SAFETY INSTRUCTIONS (CSA SAFETY INFORMATION)

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

- a) **READ AND FOLLOW ALL INSTRUCTIONS.**
- b) A green coloured terminal or a terminal marked G, GR, Ground, Grounding, or the symbol * is located inside the supply terminal box or compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying this equipment.

* IEC Publication 417, Symbol 5019.

- c) At least two lugs marked "BONDING LUGS" are provided on the external surface or on the inside of the supply terminal box/compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub or spa to these terminals with an insulated or bare copper conductor not smaller than No. 6 AWG.
- d) All field-installed metal components such as rails, ladders, drains or other similar hardware within 3 M of the spa or hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG.

- e) **SAVE THESE INSTRUCTIONS.**

WARNING : Children should not use spas or hot tubs without adult supervision.

AVERTISSEMENT: NE PAS LAISSER LES ENFANTS UTILISER UNE CUVE DE RELAXATION SANS SURVEILLANCE.

WARNING : Do not use spas or hot tubs unless all suction guards are installed to prevent body and hair entrapment.

AVERTISSEMENT: POUR ÉVITER QUE LES CHEVEUX OU UNE PARTIE DU CORPS PUISSENT ÊTRE ASPIRÉS, NE PAS UTILISER

UNE CUVE DE RELAXATION SI LES GRILLES DE PRISE D'ASPIRATION NE SONT PAS TOUTES EN PLACE.

WARNING: People using medications and/or having adverse medical history should consult a physician before using a spa or hot tub.

AVERTISSEMENT: LES PERSONNES QUI PRENNENT DES MÉDICAMENTS OU ONT DES PROBLÈMES DE SANTÉ DEVRAIENT CONSULTER UN MÉDECIN AVANT D'UTILISER UNE CUVE DE RELAXATION.

WARNING : People with infectious diseases should not use a spa or hot tub.

AVERTISSEMENT: LES PERSONNES ATTEINTES DE MALADIES INFECTIEUSES NE DEVRAIENT PAS UTILISER UNE CUVE DE RELAXATION.

WARNING : To avoid injury exercise care when entering or exiting the spa or hot tub.

AVERTISSEMENT: POUR ÉVITER DES BLESSURES, USER DE PRUDENCE EN ENTRANT DANS UNE CUVE DE RELAXATION ET EN SORTANT.

WARNING : Do not use drugs or alcohol before or during the use of a spa or hot tub to avoid unconsciousness and possible drowning.

AVERTISSEMENT: POUR ÉVITER L'ÉVANOUISSEMENT ET LA NOYADE EVENTUELLE, NE PRENDRE NI DROGUE NI ALCOOL AVANT D'UTILISER UNE CUVE DE RELAXATION NI QUAND ON S'Y TROUVE.

WARNING : Pregnant or possibly pregnant women should consult a physician before using a spa or hot tub.

AVERTISSEMENT: LES FEMMES ENCEINTES, QUE LEUR

GROSSESSE SOIT CONFIRMÉE OU NON, DEVRAIENT CONSULTER UN MÉDECIN AVANT D'UTILISER UNE CUVE DE RELAXATION.

WARNING: Water temperature in excess of 38° C may be injurious to your health.

AVERTISSEMENT: IL PEUT ÊTRE DANGEREUX POUR LA SANTÉ DE SE PLONGER DANS DE L'EAU À PLUS DE 38° C.

WARNING: Before entering the spa or hot tub, measure the water temperature with an accurate thermometer.

AVERTISSEMENT: AVANT D'UTILISER UNE CUVE DE RELAXATION MESURER LA TEMPÉRATURE DE L'EAU À L'AIDE D'UN THERMOMÈTRE PRÉCIS.

WARNING: Do not use a spa or hot tub immediately following strenuous exercise.

AVERTISSEMENT: NE PAS UTILISER UNE CUVE DE RELAXATION IMMÉDIATEMENT APRÈS UN EXERCICE SATIGANT.

WARNING: Prolonged immersion in a spa or hot tub may be injurious to your health.

AVERTISSEMENT: L'UTILISATION PROLONGÉE D'UNE CUVE DE RELAXATION PEUT ÊTRE DANGEREUSE POUR LA SANTÉ.

WARNING: Do not permit electric appliances (such as a light, telephone, radio, television, etc.) within 1.5 m of this spa or hot tub.

AVERTISSEMENT: NE PAS PLACER D'APPAREIL ÉLECTRIQUE (LUMINAIRE, TÉLÉPHONE, RADIO, TÉLÉVISEUR, ETC.) À MOINS DE 1.5 M DE CETTE CUVE DE RELAXATION.

CAUTION: Maintain water chemistry in accordance with manufacturer's instructions.

ATTENTION: LA TENEUR DE L'EAU EN MATIÈRES DISSOUTES DOIT ÊTRE CONFORME AUX DIRECTIVES DU FABRICANT.

HYPERTHERMIA

Prolonged immersion in hot water may induce hyperthermia. A description of the causes, symptoms, and effects of hyperthermia are as follows:

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6° F, or 37° C. The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- a) Unawareness of impending hazard;
- b) Failure to perceive heat;
- c) Failure to recognize the need to exit spa;
- d) Physical inability to exit spa;
- e) Fetal damage in pregnant women; and
- f) Unconsciousness and danger of drowning.

WARNING: The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

AVERTISSEMENT: LA CONSOMMATION D'ALCOOL OU DE DROGUE AUGMENTE CONSIDÉRABLEMENT LES RISQUES D'HYPERTHERMIE MORTELLE DANS UNE CUVE DE RELAXATION.

SAVE THESE INSTRUCTIONS

CAUTIONS

- 1) Persons suffering from heart disease, diabetes, high or low blood pressure, any condition requiring medical treatment, pregnant

women, the elderly, or infants should consult with a physician before using a spa.

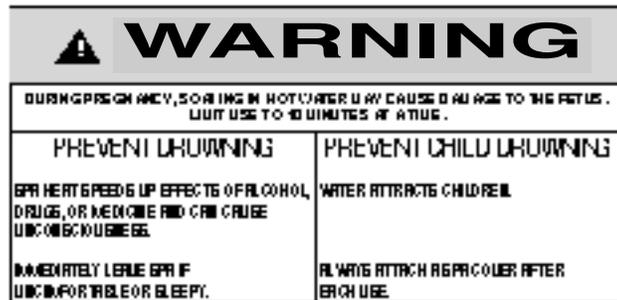
- 2) The consumer products safety commission has stated that the water temperature in a spa or hot tub should not exceed 104° F. Immersion in water in excess of 104° F can be hazardous to your health.
- 3) Observe a reasonable time limit when using the spa. Long exposures at higher temperatures can cause high body temperature. Symptoms may include dizziness, nausea, fainting, drowsiness, and reduced awareness. These effects could result in possible drowning.
- 4) Do not use the spa under the influence of alcohol, narcotics, or other drugs. Use of the spa under these conditions may lead to serious consequences.
- 5) Always test the spa water temperature before entering the spa. Enter and exit the spa slowly. Wet surfaces can be very slippery.
- 6) Never bring any electrical appliances into or near the spa. Never operate any electrical appliances from inside the spa or when you are wet.
- 7) Proper chemical maintenance of spa water is necessary to maintain safe water and prevent possible damage to spa components.
- 8) Use the spa straps and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the spa and keep the spa cover secure in high-wind conditions. There is no representation that the cover, clip tie downs, or actual locks will prevent access to the spa.

DO'S AND DON'TS

- DO test water temperature with your hand before entering to be sure that it's comfortable.
- DO keep the spa cover closed when the spa is not in use. This is also the key to economical spa operation.
- DON'T block the equipment compartment vents. Blockage may cause damage to the spa equipment and will void the warranty.
- DON'T block or sit on the filter recess area.

WARNING SIGN

Each spa has been provided with a warning sign which outlines safety precautions. This sign should be permanently placed in a location that is visible to the spa user. Replacement signs can be obtained from:



Dimension One Spas
2611 Business Park Drive
Vista, CA 92083
(760) 727-7727

SPA FEATURES

Congratulations! You have purchased one of the finest portable spas available. Take the time to read these instructions carefully. If installed and maintained properly your spa will provide many years of enjoyable, trouble-free operation. Read all of the instructions and view your owner's manual video for further reference on spa operation. If you have any questions, please contact your local Authorized Dimension One Spas Dealer.

The following features are included on your spa:

- UL listed/CUL approved
- Completely self-contained with load sharing capabilities
- 100% foam insulated
- All spa shells are formed from UltraLife™ high impact thermo-plastic, or Quarite Plus™ Acrylic
- Designed for indoor or outdoor usage
- Top access, easy to clean filter systems
- Water level referencing weir skimmer
- Handcrafted cabinets
- Proportional FastFlo™ Heater
- A variety of interchangeable HydraFlex® and VCR™ jets
- Multiple jet systems with Selector Valve
- Exclusive, custom designed tile coordinates with shell material and control panel
- Polyethylene floor completely seals the spa, eliminating moisture or insect intrusion
- Built-in, automatic freeze protection
- Automatic high/low speed filtration cycles

Additional features of the Chairman II, Diplomat, Chairman, Californian, Nautilus, and Aurora II:

- Scrolling Message Center with digital display self-diagnostic, instructional, and maintenance messages
- Ultra Pure™ Water Management System
- NeckFlex™ Jet Pillow
- Twin long life, dual speed HydraMax® pumps
- 115 sq. ft. of filtration

Additional features of the Aurora HP, Interlude, Arena, Quadra and Triad:

- Programmable Digital control with digital read-out and self diagnostics
- Pre-plumbed for the optional CrystalZone™ Water Management System
- Long life, dual speed HydraMax pump
- 75 sq. ft. of filtration

JET SYSTEM SELECTOR VALVE

All spas are equipped with spaside Selector Valves. These valves can be used to divert jet power from one area within the spa to another. The valves are fully adjustable and can be used to suit the bather's taste. The valves may offer some resistance to operation when the spa pump is on. This is a normal condition, and is caused by the high rate of water flow and pressure that travels through the valves.

JET OPTIONS

Dimension One Spas jetting systems provide complete flexibility in personalizing hydrotherapy sessions. The HydraFlex® Jet is the most versatile jet in the industry. It allows you to adjust the flow and pressure of the jet for each specific muscle group. A wide variety of interchangeable jet styles allow you to control and modify massage patterns at any seat in the spa to personalize your massage to your own preference.

Additionally, the Variable Circulation Rotator jet can be adjusted to user preference, adding to the overall flexibility of the spa's jetting systems. The AquaPed foot jet located in the bottom of the footwell of the Californian, Nautilus, Aurora, Aurora II, and Arena also has a variety of interchangeable nozzles for different patterns. Likewise, the whirlpool jet found in the Nautilus and Arena may use these interchangeable nozzles. Contact your local Authorized Dimension One Spas Dealer for more information on the availability of optional jet styles.

NECKFLEX JET PILLOW

The NeckFlex Jet Pillow offers five height adjustable positions to accommodate different body sizes. The standard mini directional jets can be interchanged with rotating jets and are adjustable for water volume. See your local Authorized Dimension One Spas Dealer for more information.

ULTRA PURE WATER MANAGEMENT SYSTEM

The Chairman II, Diplomat, Chairman, Californian, Nautilus and Aurora II are equipped with a highly advanced spa water treatment method, the Ultra Pure Water Management System. Ultra Pure is an integrated water management system with two-stages of ozone injection, two contact chambers, 100% filtration, and heating on demand.

CRYSTAL ZONE WATER MANAGEMENT SYSTEM

Specifically engineered for Dimension One spas, the CrystalZone Water Management System provides an integrated ozone purification and filtration for spas that do not include the patented, Ultra Pure Water Management System. It even maintains the pre-set spa temperature, without the use of a jet pump. Using a Mazzei-T ozone injector and a specially designed contact chamber, the CrystalZone Water Management System provides cleaner water at lower operating costs. You'll spend more time enjoying your spa and less time maintaining it. Ask your Authorized Dimension One Spas Dealer for more information.

ULTRAVISION AND PUREVISION

The Ultra Pure Water Management System can be used in conjunction with UltraVision, an alternative purification cartridge that can be added

to the 5" filter canister. In use, its advantages over conventional halogens (bromine and chlorine) can be softer-feeling water and lower maintenance. Additionally, low chemical levels can also mean less dissolved solids and fewer maintenance adjustments. PureVision, an UltraVision counterpart, can be used in conjunction with the optional CrystalZone Water Management System.

How UltraVision and PureVision Work: The UltraVision and PureVision purification cartridges, which have no moving parts and require no electrical connections, contain a powerful, silver catalyst bed with a very large surface area. In the Ultra Pure system, water flows through the purification cartridge, then through the dedicated, 40 sq. ft. filter (PureVision uses the standard 75 sq. ft. filter), and then through a heater housing before being ozonated and returned to the spa. During the process, the Silver (Ag) residual is put into the water, which acts as a bactericide. When used in the Ultra Pure or CrystalZone Water Management Systems, UltraVision and PureVision provide a natural, residual bactericide which compliments the ozone oxidizing power. After excessive bather loads, however, an additional oxidizer may be required to remove accumulated organic compounds. Be sure to carefully follow the included instructions for proper use - DO NOT follow the standard water chemistry start-up procedures contained in this manual and do not use a metal sequesterant in combination with UltraVision or PureVision or add any Vision product to your spa within 72 hours of the addition of a metal sequesterant.

WARNING: While Vision is a bactericide which can be safely used as an alternative for conventional halogens, it is not a "chemical free" system. In order to gain the maximum benefits of Vision products, follow the manufacturer's directions. All other aspects and adjustments of water chemistry such as pH and total alkalinity must adhere to the manufacturer's instructions relative to that specific product. As Dimension One Spas has no control over the water source used in any spa application, it will not be responsible for any staining below the water line and any such occurrence will not be covered under any of its warranties.

HEATER AND CIRCULATION PUMP CONTROL

On all Dimension One Spas, when the water temperature is 1° below the set temperature the heater will turn on and remain on until the water temperature rises to 1° above the set temperature. On models that do not have circulation pumps (Aurora, Interlude, Arena, Triad and Quadra without the CrystalZone Water Management System) the low speed pump will turn on during the heating cycle.

On models with Ultra Pure (Chairman II, Chairman, Diplomat, Californian, Nautilus and Aurora II) and models with the Crystal Zone Water Management System: To prevent the spa from overheating, the circulation pump turns off when the water temperature rises 2° above the set temperature. When the water temperature cools down to the set temperature, the circulation pump will turn on.

NOTE: The circulation pump will run for short periods when the water temperature is 2° above set temperature to provide optimum operation.

INSTRUCTIONS FOR YOUR SPA

BEFORE ATTEMPTING TO HOOK-UP OR USE YOUR SPA, PLEASE READ THROUGH THESE INSTRUCTIONS AND CAREFULLY VIEW YOUR VIDEO OWNER'S MANUAL.

POSITIONING YOUR SPA

Because your spa is completely self-contained, you can locate it just about anywhere you wish... on a deck, patio or even indoors. Just be sure to position it above ground, in an area with good drainage, and on a level, continuous surface that contacts the bottom of the spa fully. A concrete slab is best but not required. Locate your spa so that the equipment is above grade and not subject to flooding. **WATER SHOULD ALWAYS DRAIN A WAY FROM THE SPA.**

SAFETY DEVICES

Your spa is equipped with the following safety features:

- 1) A water flow sensor that prevents the heater from activating unless there is sufficient water flow, thus preventing "dry firing" of the heater.
- 2) Automatic spa shutdown timers that shut off the spa jet pump after 30 minutes of operation. The Chairman II, Diplomat, Chairman, Californian, Nautilus and Aurora II can be programmed to shut off after longer intervals (I.E. 45, 60 minutes). The spa light automatically shuts off after 4 hours.
- 3) An electronic high limit switch that automatically shuts off the heater if the spa water temperature exceeds 112° F.
- 4) An automatic freeze sensor which puts the spa into 'Smart Winter Mode' if the air temperature in the equipment bay drops below a factory preset level. In 'Smart Winter Mode', your spa will start the jets for 1 minute, at high speed, every two hours, for 24 hours.

ELECTRICAL REQUIREMENTS AND HOOK-UP INSTRUCTIONS

ELECTRICAL HOOK -UP INSTRUCTIONS

NOTE: Do not turn on electrical power to your spa until told to do so later in this manual.

Have a licensed electrician run the required 240 volt power line to the spa installation site. The power inlet connection is located in the pedestal on the left side of the spa, approximately 25" from the front. This connection is designed to mate with a Carlon 1" conduit body Type LB, Access Fitting E986F or any 1" female PVC conduit fitting.

The manufacturer's label lists the power requirements for your spa. We recommend that only a licensed and bonded electrician do the initial spa hook-up.

NOTE: This unit requires a GFCI (Ground Fault Circuit Interrupter). We have provided an enclosed instructional flyer for a licensed electrician. A "line of sight" service disconnect must be located where visible from the spa, not less than 5 feet from the spa and not to exceed 50 feet from the spa. This requirement may be filled with the GFCI sub-panel.

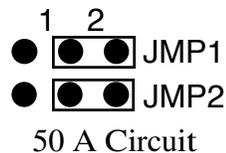
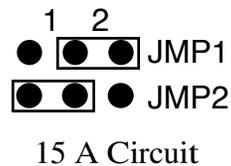
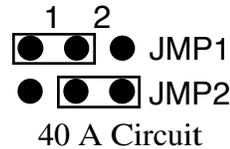
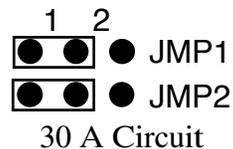
NOTE: Unless a 110V GFCI protected cord is provided with your spa, it has already been factory wired for 240V.

ELECTRICAL REQUIREMENT CHART

Model	Electrical Rating	Branch Cir .	Branch Cir . Protection	Gauge
Chairman II	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Diplomat	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Chairman	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Californian	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Nautilus	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Aurora II	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Aurora HP	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 30A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Interlude	240V, 30A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Arena	240V, 30A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Triad	240V, 30A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Quadra	240V, 36A	3 Wire + ground	50A	#6 AWG
	240V, 29A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
	120V, 12A	2 Wire + ground	15A	#12 AWG

To hook-up your spa, follow these instructions:

- 1) Remove the screws holding the equipment access panel to the front of the spa cabinet and set the panel aside.
- 2) Loosen the four screws located on the front of the black equipment control can and remove the door from the control can to allow access to the four wire connection terminal block.
- 3) Attach 1" rigid non-metallic conduit to the conduit nipple located in the pedestal base on the side of the spa and run required conductors through the conduit to the equipment can.
- 4) Connect the four wires to the equipment system terminal block (TB1) as indicated on the wiring diagram in the back of this manual.
- 5) Configure jumpers 1 and 2 on the upper right corner of the PC Board to match the circuit size being used for the spa (see Electrical Requirements Chart on previous page for proper wire size). See the chart below for the correct settings.



- 6) Replace the door on the control can and re-tighten the securing screws.
- 7) Electrical hook-up is now complete. Do not replace the ventilated equipment access panel yet.

If you have an Aurora, Interlude, Arena, Triad or Quadra please read below for Initial Start-up Information. If you have a Chairman II, Diplomat, Chairman, Californian, Nautilus or Aurora II, please turn to the next section for Initial Start-up information.

INITIAL START-UP FOR THE AURORA HP, INTERLUDE, ARENA, TRIAD AND QUADRA

- 1) Before filling your spa, install the hose bib that is included in the owner's manual packet located in the equipment compartment. Screw the hose bib onto the male fitting located at the bottom of the spa on the pedestal, to the lower left of the equipment compartment. Close the valve on the side of the hose bib and screw the cap onto the end of the hose bib.
- 2) Check the pump unions to be sure that they are tight to prevent the possibility of leakage in the equipment compartment. Also, open the bleeder valve located next to the sidewall of the skimmer area to allow air to escape from the pump(s).
- 3) Fill your spa with water to a level of one to two inches above the bottom of the tile line.
- 4) Remove the two shipping bolts located on the front of the pump mount and ensure that the gate valves on the pump are in the open position (handles fully extended).
- 5) Turn on the circuit breaker. Dashed lines will appear for 30 seconds on the LCD followed by the current water temperature flashing. Press the UP or DOWN pads to set your desired spa temperature. If your spa is equipped with the CrystalZone Water Management System and there is a call for heat, the circulation pump will then activate and turn on the heater. If CrystalZone is not installed, and there is a call for heat, the low speed pump will come on with the heater. One minute after start-up, the internal time clock is automatically set to initiate the first filtration cycle. The system factory default is two, one hour cycles. Let the system run for 30 to 45 seconds to prime the pump(s). If there is no jet action, then the water level is too low, the gate valves are closed or there is air trapped in the plumbing lines. To eliminate the trapped air, turn the pump(s)

on and off several times to force the trapped air through the pump(s). If there is still no jet action, and the bleeder valve has been open for some time, turn off the pump(s) and loosen the top pump union slightly to let any trapped air escape. Re-tighten the pump union and turn the pump(s) on again. Turn the pump(s) on and off several times until the jets function properly.

- 6) When the jets are in full operation, close the bleeder valve and push the UP pad until the desired spa temperature is indicated on the display screen. (The maximum settable temperature is 104°, OR5 or OR6.)

NOTE: While setting the temperature the LCD display will read out the temperature up to 104° F. When the temperature exceeds 104° F, the display will read in "over-range" figures. I.E. At 105° F the temperature will read "OR5" and at 106° F the temperature will read "OR6". Water temperatures in excess of 104° F should be used with extreme caution.

NOTE: On initial start-up, you can confirm that the heater is on by looking to see that the heat LED indicator, located on the right side of the upper control panel, is illuminated. The heater icon on the LCD and the heat indicator LED on the display will blink when there is a call for heat and will come on solid when the heater is actually on. Once you have verified that the heater is functioning, you can reinstall the ventilated equipment access panel.

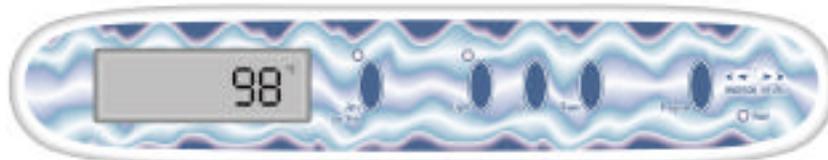
- 7) Depending upon the size of your spa and the size of the circuit breaker used, heating will occur at the rate of 3-10° F per hour. The Quadra operating in the 120 Volt mode will heat at 1° F to 2° F per hour and will not heat when the jets are on high speed.
- 8) After completing the above steps, it is necessary to ensure proper water chemistry. See the Water Chemistry section in this manual, for the easy steps to maintaining clean and safe water. The schedule shown may require more frequent adjustment depending on the bather load.
- 9) Place the thermal cover on the spa to conserve energy and to keep it ready for use.

THE PROGRAMMABLE DIGITAL CONTROL

Advanced microprocessor technology has been utilized to produce the Programmable Digital Control. Easy to use and understand, Dimension One Spas has put every spa function within fingertip control.

Temperature setting, jet power control, and the spa light are all spaside accessible. That means you don't have to get out of the spa to enjoy complete control of all spa functions. Safety is assured through design concepts and materials, which meet or exceed the most stringent requirements of Underwriters Laboratories (UL) and the Canadian Standards Association (CSA). The Programmable Digital Control lets you relax and enjoy everything your spa has to offer.

HOW TO USE THE PROGRAMMABLE DIGITAL CONTROL



JETS LOW/HIGH CONTROL PAD

When the JETS control pad is pushed, the spa jet pump is energized and the respective ICON and LED indicator light will be illuminated. Each time the JETS pad is pushed it will activate a 30 minute automatic shut-off cycle. This auto shut-off cycle is a safety device and also allows for convenient filtration immediately after using the spa. The first time a JETS control pad is pushed the pump will energize on LOW speed. When the same control pad is pushed again, the pump will energize on HIGH speed. The third time the same control pad is pushed, the pump will turn off.

NOTE: Pushing the JETS pad will disable any concurrent filter cycle.

TEMPERATURE PADS

Pushing the UP pad increases the temperature and pushing the DOWN pad decreases the temperature. Push the respective pad one time for each degree of temperature change, or push and hold the pad for rapid adjustment. The existing spa water temperature will remain in the digital display window until a temperature pad is pushed. When the UP or DOWN pad is pushed the digital readout will indicate the new temperature setting, with the SET POINT Icon on the right side of the display. Once the new temperature is set, the current spa water temperature will again be indicated. The spa will heat to the pre-set temperature automatically.

LIGHT

Push the LIGHT control pad once to activate the brightest setting. A second push will activate the medium setting and a third push will activate the dimmest setting. The light icon and LED on the display will come on when the light is activated. Push the LIGHT control pad a fourth time to turn off the light. The light will automatically turn off after 4 hours of continuous operation.

PROGRAMMING THE PROGRAMMABLE DIGITAL CONTROL

To initiate the programming sequence at any time, push and hold the PROGRAM pad for 3 seconds. If, within 10 seconds, you do not proceed with the spa programming, the spa will automatically exit the programming sequence and revert to the pre-set factory default settings. To exit the programming sequence at any time, do not press any pad for 10 seconds. Any programming changes made up to that point will be saved.

CLOCK SET

Push and hold the PROGRAM pad for 3 seconds to engage the time setting mode. The time screen will appear with "hours" (_ _ .00) flashing

on and off. Push the UP or DOWN pad to increase or decrease the number until the desired hour appears. When the desired number is displayed, push the LIGHT pad to accept the selection and change the flashing number to the “ten minute” place (12:_0). Adjust the number with the UP or DOWN pad in the same manner as the hour number. When the desired number is displayed, push the LIGHT pad to accept the selection and change the flashing number to the “minute” place (12:1_). Adjust this number with the UP or DOWN pad in the same manner as the hour number. When the desired number is displayed, push the LIGHT pad to accept the selection and change the flashing number to a flashing AM or PM indicator. Adjust the indicator with the UP or DOWN pads. When the desired indicator is displayed, push the PROGRAM pad to accept the selection and enter the Filter Cycle Start Time programming mode.

NOTE: If you do not set the proper time, the system will default to 11:59 a.m. upon startup.

FILTER CYCLE START TIME

To adjust the filter cycle start time, push the UP or DOWN AND LIGHT pads as done in the Clock Set programming mode to choose a time. Once the desired time is displayed, push the PROGRAM pad to accept the selection and move into the Filter Cycle Duration programming mode.

NOTE: You will be later prompted to set the filter cycle duration and the number of filter cycles. Be sure to keep this in mind when programming your filter cycle start time. During the filter cycle, JETS 1 will activate, the first 5 minutes at high speed and the remainder of the filter cycle time at low speed.

FILTER CYCLE DURATION

To adjust the filter cycle duration, push the UP or DOWN pad to cycle through the choices of 60, 90, 120, 150 or 180 minutes (the default is 60). Once the desired time is displayed, push the PROGRAM pad to accept the selection and move into the Number of Filter Cycles programming mode.

CAUTION: Long and/or numerous filter cycles could cause overheating of the spa - especially in hot climates.

NUMBER OF FILTER CYCLES

To adjust the number of filter cycles per day, push the UP or DOWN pad to cycle through the number of filter cycles - 1, 2, 3 or 4 (the default is 2). Once the desired number of cycles is displayed, push the PROGRAM pad to accept the selection and move into the Temperature Unit Selection programming mode..

TEMPERATURE UNIT SELECTION

To select temperature units push the UP or DOWN pads to toggle between °F (degrees Fahrenheit) or °C (degrees Celsius). Once the desired temperature unit is selected push the PROGRAM pad to exit the programming mode.

NOTE: The time of day can be viewed by pushing the Dimension One Spas icon (logo) pad on the far right of the control. If no pad is pushed within 5 seconds, the display will revert to the spa water temperature reading.

NOTE: All programming will revert to the factory defaults when power to the spa is shut off and the LCD on the control will flash until a pad is pressed.

PROGRAMMABLE DIGITAL CONTROL MESSAGES

“OH” - OVERHEAT PROTECTION

When “OH” is displayed on the control system digital display, the spa is in a high limit condition. If such a condition exists, **DO NOT ENTER THE WATER**. If this happens, remove the spa cover and allow the water to cool below 110° F, then the system will automatically reset. If the problem recurs, turn off all power to the spa and contact your local Authorized Dimension One Spas Dealer, or authorized service center.

“FL”- LOW FLOW

When “FL” is displayed, check the following:

- 1) Check the water level. If the water level is too low, fill the spa to one to two inches above the bottom of the tile line.
- 2) Check to see if your filter is clean. Please see the ‘Care For Your Spa’ section later in this manual for instructions.
- 2) A flow switch has malfunctioned. The spa will operate but the heater will not activate. Contact your local Authorized Dimension One Spas Dealer, or authorized service center.

“PRR” TEMPERATURE SENSOR

This message will be displayed if the temperature value from the sensor is not in the normal range (I.E. a spa just filled with very cold water.)

During normal operation, this message will disable the heater.

NOTE: This message will be disabled during the 1st hour after power up.

“HL” - HIGH LIMIT SENSOR

When “HL” is displayed, DO NOT ENTER THE WATER. and check the following:

The high limit sensor will disable the heater if the water temperature at the high limit sensor reaches 119°F. The heater will be disabled until the High Limit condition is no longer present and someone pushes a key on the keypad to reset the circuit.

“FLC - FLO” - PRESSURE SWITCH ERROR

When “FLC” or “FLO” is displayed, the pressure switch has malfunctioned. If this message does not clear itself, contact your local Authorized Dimension One Spas Dealer or authorized service center.

INITIAL START-UP FOR THE CHAIRMAN II, DIPLOMAT, CHAIR - MAN, CALIFORNIAN, NAUTILUS AND AURORA II

- 1) Before filling your spa, install the black plastic hose bib that is included in the owner's manual packet located in the equipment compartment. Screw it onto the male fitting at the bottom of the spa on the pedestal, to the lower left of the equipment compartment. Close the valve and screw the cap onto the end of the bib.
- 2) Check the pump unions to be sure that they are tight to prevent the possibility of leakage in the equipment compartment. Also, open both bleeder valves located in the skimmer area.
- 3) Fill your spa with water to a level of one to two inches above the bottom of the tile line.
- 4) Turn on the circuit breaker. Dashed lines will appear in the LCD for 30 seconds. After this 30 second diagnostic check, the ozone generator and circulation pump will come on.
- 5) Push the JETS 1 and 2 pad to turn both pumps onto high speed. Let the system run for 30 to 45 seconds to prime the pumps. If there is no jet action, then the water level is too low or there is air trapped in the plumbing lines. To eliminate the trapped air, turn the pumps on and off several times to force the trapped air through the pumps. If there is still no jet action, and the bleeder valves have been open for some time, turn off the pumps and loosen the top pump unions slightly to let any trapped air escape. Re-tighten the pump unions and turn the pumps on again. Turn the pumps on and off several times until jets function properly.

NOTE: Bubbles will continue to release from the skimmer recess Ultra Pure bleeder valve as long as the valve remains open. This is a normal function.

- 6) When the jets are in full operation, close the bleeder valve and push the UP pad until the desired spa temperature is indicated on the display screen. (The maximum settable temperature is 104°, OR5 or OR6.) The screen will then read 100° F for thirty seconds to allow the thermostat time to read the correct current water temperature. Then, the screen will display the current spa water temperature.

NOTE: While setting the temperature, the LCD display will read out the temperature up to 104° F. When the temperature exceeds 104° F, the display will read in “over-range” figures. I.E. at 105° F the temperature will read “OR5” and at 106° F the temperature will read “OR6”. Water temperatures in excess of 104° F should be used with extreme caution.

NOTE: On initial start-up, you can confirm that the heater is on by looking to see that the heat LED indicator located on the right side of the spa control panel is illuminated. A scrolling message will also appear on the lower line of the LCD reading SPA HEATING TO ___ ° F (whatever the set temperature is) as well as an animated icon on the LCD. Once you have verified that the heater is functioning, you can reinstall the ventilated equipment access panel.

NOTE: Depending upon the size of the spa and the size of the circuit breaker used, heating will occur at the rate of 3-10° F per hour.

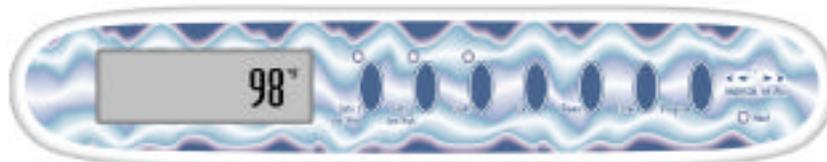
- 7) After completing the above steps, it is necessary to ensure proper water chemistry. See the Water Chemistry section in this manual, for the easy steps to maintaining clean and safe water. The schedule shown may require more frequent adjustment depending on the bather load.
- 8) Place the thermal cover on the spa to conserve energy and to keep it ready for use.

THE SCROLLING MESSAGE CENTER

Advanced microprocessor technology has been utilized to produce the Scrolling Message Center. The most technologically advanced spa control in the world is also the easiest to operate. Dimension One Spas has put every spa function within fingertip control.

Temperature setting, jet power control, the spa light and all other functions are spaside accessible. That means you don't have to get out of the spa to enjoy complete control of all spa functions. Safety is assured through design concepts and materials which meet or exceed the most stringent requirements of Underwriters Laboratories (UL) and Canadian Standards Association (CSA). The Scrolling Message Center lets you relax and enjoy everything your Dimension One spa has to offer.

HOW TO USE THE SCROLLING MESSAGE CENTER



JETS 1 AND JETS 2 CONTROL PADS:

When either JETS control pad is pushed, the spa jet pump is energized, the respective LED indicator light will be illuminated, the pump speed will be indicated on the lower left of the LCD display and a rotating swirl icon will be displayed in the upper left corner of the display. The rotation speed of the swirl will vary according to the pump's speed. The first time a JETS control pad is pushed the respective pump will energize on LOW speed. When the same control pad is pushed again, the pump will energize on HIGH speed. The third time the same control pad is pushed, the pump will turn off.

Each time a JETS control pad is pushed it will activate a 30 minute, programmable, automatic shut-off cycle. A progress bar for each pump will indicate the time remaining before the pump will turn off. This auto shut-off cycle is a safety device and also allows for convenient filtration immediately after use of the spa.

NOTE: The Chairman II has an auxiliary Jets control pad that also controls pump 1.

NOTE: Pushing either JETS control pad will disable any concurrent filter cycle.

LIGHT CONTROL:

Push the LIGHT control pad once to activate the brightest setting. A second push will activate the medium setting and a third push will activate the dimmest setting. A message indicating the current light intensity will scroll twice on the bottom left of the LCD (i.e. LIGHT HIGH, LIGHT MEDIUM, LIGHT LOW) and an animated icon, with zero, three or six dots around it indicating the light's intensity will be displayed. Push the LIGHT control pad a fourth time to turn off the light. The light will automatically turn off after 4 hours of continuous operation.

TEMPERATURE CONTROL:

When the UP or DOWN control pad is pushed to change the set temperature, the bottom left of the LCD will read "SET TEMP TO __ _ ° F". When there is a call for heat, the heater icon and LED will turn on when the heater engages. This is a normal function. The right side of the LCD will read the current temperature and the bottom left will read "HEATING TO __ _ ° F" until the spa reaches the set temperature.

If the water reaches 2° above the set temperature, the message "COOLING TO __ _ - CIRC PUMP & O3 OFF" will be displayed in the bottom left hand side of the display and a cooling cycle will start.

ENTER PAD:

This pad is used to exit any programming sequence at any time.

PROGRAM PAD:

This pad is used to initiate the time setting, filter programming, and other programming features. For more information, see the next section, "Programming the Scrolling Message Center".

DIMENSION ONE SPAS ICON PAD (LOGO):

The ICON pad is used to view the time-of-day. It is also used to initiate the panel lock features and functions as a reset.

LIQUID CRYSTAL DISPLAY:

The LCD continuously shows the operating status of the spa, as well as the various monitoring functions, self-diagnostics, and programming information.

PROGRAMMING THE SCROLLING MESSAGE CENTER:

Your Scrolling Message Center is the most advanced in the industry and can virtually walk you through customizing your spa to your exact needs.

To initiate the programming sequence at any time, push and hold the PROGRAM pad for 3 seconds. If, within 10 seconds, you do not proceed with the spa programming, the spa will automatically exit the programming sequence and revert to the pre-set factory default settings. To exit the programming sequence at any time, push the ENTER pad or do not press a pad for 10 seconds. Any programming changes made up to that point will be saved.

SETTING THE TIME:

After holding the PROGRAM pad, the top line of the LCD will read "SET TIME OF DAY" and the bottom line will read "PUSH UP OR DOWN TO CHANGE - PUSH PROGRAM TO SELECT NEXT FUNCTION - PUSH ENTER TO EXIT ". Push the UP or DOWN pads to engage the time setting mode. The time screen will appear with

“hours” (_ _ .00) flashing on and off. Push the UP or DOWN pad to increase or decrease the number until the desired hour appears. When the desired number is displayed, push the LIGHT pad to accept the selection and change the flashing number to the “ten minute” place (12: _ 0). Adjust the number with the UP or DOWN pad in the same manner as the hour number. When the desired indicator is displayed, push the LIGHT pad to accept the selection and change the flashing number to the “minute” place (12:1 _). Adjust this number with the UP or DOWN pad in the same manner as the hour number. When the desired number is displayed, push the LIGHT pad to accept the selection and change the flashing number to a flashing AM or PM indicator. Adjust the indicator with the UP or DOWN pads. After reaching the correct time, push the PROGRAM pad to set the time and exit the time-setting mode. You will then be prompted to set the filter start time.

FILTER CYCLE START TIME

After setting the time-of-day, the top line of the LCD will read “SET FILTER CYCLE TIME”. Push the UP or DOWN pads in the same manner as setting the clock to select the time you want your filter cycle to start. When your desired filter cycle start time is set in the LCD display, push the PROGRAM pad to continue. The pre-set factory default is 12:00 p.m. to 1:00 p.m. repeating every 12 hours unless the number of filter cycles per day has been changed.

NOTE: Keep in mind that you will be later prompted to set the filter cycle duration and the number of filter cycles. Be sure to keep this in mind when programming your filter cycle start time.

During a filter cycle, the bottom left of the LCD will read “SPA FILTER-ING”. During the filter cycle, JETS 1 will activate, the first 5 minutes at high speed and the remainder of the filter cycle time at low speed. JETS 2 will also activate for 1 minute on high speed and then turn off.

FILTER CYCLE DURATION

After setting the filter cycle start time, the top line of the LCD will read “SET CYCLE DURATION”. Push the UP or DOWN pads to toggle between 60, 90, 120, 150 and 180 minutes. The first 5 minutes of the

filter cycle will be at high speed and the remaining time at low speed. When your desired filter cycle length appears in the LCD, push the PROGRAM pad to select it. The pre-set factory default is 60 minutes.

NUMBER OF FILTER CYCLES

After setting the length of the filter cycle, you will be prompted to set the number of filter cycles. The top line of the LCD will read "SET # OF CYCLES". Push the UP or DOWN pad to toggle from 1 to 2 to 3 to 4 cycles per day. When your desired number of cycles appears on the LCD push the PROGRAM pad to select it. The pre-set factory default is 2 cycles per day.

CAUTION: Long and/or numerous filter cycles could cause overheating of the spa - especially in hot climates.

PUMP RUN TIME

After setting the number of filter cycles, the top line of the LCD will read "SET PUMP RUN TIME". Push the UP or DOWN pads to toggle between 30, 45 and 60 minutes. This sets the length of time the pump will run when a jets pad is pushed. For example, if you choose 45 minutes, when you push a jets pad, the pump will run for 45 minutes before shutting down automatically. When your desired pump run time appears on the LCD push the PROGRAM pad to select it. The pre-set factory default is 30 minutes.

TEMPERATURE UNITS

After setting the pump run time, the top line of the LCD will read "SET TEMPERATURE UNITS". Push the UP or DOWN pads to toggle from °F to °C. When your desired temperature unit appears in the LCD, push the PROGRAM pad to select it. The pre-set factory default is Fahrenheit.

VISION CARTRIDGE

After setting the temperature units, the top line of the LCD will read "SET VISION CARTRIDGE". Push the UP or DOWN pads to toggle between "Yes" and "No". If you are currently using a Vision Cartridge select yes, if

not, select no. Selecting “yes” will prompt the control to notify you when your cartridge needs replacement. When your desired selection appears in the LCD, push the PROGRAM pad to select it. The pre-set factory default is “No”.

LCD INVERT

The invert feature will flip the text on the LCD so it can be easily read from both inside and outside the spa. To invert the text, simply push the “ENTER” pad three times. To return the text to its original position, repeat this process - push the “ENTER” pad three times.

CONTROL PANEL LOCK

To help prevent unauthorized use of the spa, the control panel may be locked. When the control panel lock is engaged, all programmed or default spa functions will operate normally but all control pads will not operate. When the panel is locked, the LCD will display message “ALL SPA FUNCTIONS LOCKED”.

To lock the panel all the following pads must be pushed within 3 seconds:

- 1) Push the Dimension One Spas ICON (logo) pad.
- 2) Push the Dimension One Spas ICON (logo) pad.
- 3) Push the ENTER pad.

To unlock the panel: All the following pads must be pushed within 3 seconds:

- 1) Push the ENTER pad.
- 2) Push the ENTER pad.
- 3) Push the Dimension One Spas ICON (logo) pad.

When the last pad is pushed all pads will be active.

PROGRAMMING LOCK

The programming lock is to prevent unauthorized programming and water temperature adjustments. When the programming lock is engaged, all programmed or default functions will operate normally. Also, the spa user may operate the pumps, the spa light or view the time-of-day, but no

programming changes may be made. When the programming lock is enabled, the LCD will scroll "PROGRAMMING LOCKED" twice on the lower left side of the display, then a lock icon will be displayed on the right side of the LCD

To enable the programming lock, all the following pads must be pushed within 3 seconds:

- 1) Push the Dimension One Spas ICON (logo) pad.
- 2) Push the Dimension One Spas ICON (logo) pad.
- 3) Push the PROGRAM pad.

To unlock the Panel: The following pads must be pushed within 3 seconds:

- 1) Push the ENTER pad.
- 2) Push the ENTER pad.
- 3) Push the Dimension One Spas ICON (logo) pad.

When the last pad is pushed all pads will be active.

CONTROL PANEL RESET

This function is used to completely reset the clock and all other system variables to the factory defaults. Please keep in mind that this resets all maintenance messages (clean filters, change water, etc.) as if the spa is being installed the day of the panel reset.

To reset the control system all of the following pads must be pushed within 3 seconds:

- 1) Push the ICON (logo) pad
- 2) Push the ENTER pad
- 3) Push the PROGRAM pad
The top line of the LCD will read "RESET PROGRAMMING?"
The bottom line of the LCD will read "IF SO, PUSH ICON"
- 4) Push the ICON pad to reset the entire control system to factory defaults or do not touch a pad for 10 seconds to exit.

SCROLLING MESSAGE CENTER MESSAGES

Because of the advanced programming features of your scrolling display, your spa will prompt you when you need to perform routine maintenance. For example:

RINSE FILTERS

Every other month, the top line of your LCD display will read, "RINSE FILTERS" and the message "REMOVE FILTERS & RINSE WITH HOSE... PUSH AND HOLD ICON PAD MORE THAN 3 SECONDS TO RESET THIS MESSAGE" will scroll from right to left on the bottom line of the display. To reset this message, push and hold the Dimension One Spas ICON (logo) pad located at the right hand side of the control for 3 seconds.

CLEAN FILTERS

Every alternating month, the top line of your LCD display will read, "DIRTY FILTER" and the message "REMOVE FILTERS & CLEAN IN SOLUTION... PUSH AND HOLD ICON PAD MORE THAN 3 SECONDS TO RESET THIS MESSAGE" will scroll from right to left on the bottom line of the display. To reset this message, push and hold the Dimension One Spas ICON (logo) pad located at the right hand side of the control for 3 seconds.

CHANGE WATER

Every four months the top line of your LCD will read "CHANGE WATER" and the message "TURN POWER OFF, DRAIN & REFILL SPA...PUSH AND HOLD ICON PAD MORE THAN 3 SECONDS TO RESET THIS MESSAGE" will scroll from right to left on the bottom line of the display. To reset this message, push and hold the Dimension One Spas ICON (logo) pad located at the right hand side of the control for 3 seconds.

CHANGE VISION CARTRIDGE

When "CHANGE VISION CARTRIDGE" is displayed on the LCD, the system is telling you that it is time to replace it. To reset this message,

push and hold the Dimension One Spas ICON (logo) pad located at the right hand side of the control for 3 seconds.

NOTE: If you purchased a Vision cartridge subsequent to the initial start up of your spa, please follow the programming instructions for VISION as outlined in the preceding section to set the six month time frame.

SPA CHECK-UP

When "SPA CHECK UP" is displayed on the LCD, we recommend that you have your spa inspected by your dealer as a preventative maintenance measure. To reset this message, push and hold the Dimension One Spas ICON (logo) pad located at the right hand side of the control for 3 seconds.

NOTE: To eliminate any prompting message on the LCD the system can be reset by pushing and holding the Dimension One Spas ICON (logo) on the right end of the control for 3 seconds. If the error still exists the message will redisplay.

DIAGNOSTIC MESSAGES

OVERHEAT

When "OVERHEAT" along with the water temperature of the spa, is displayed on the LCD, the spa is in a high limit condition. In such a condition, **DO NOT ENTER THE WATER**. If this happens, remove the spa cover and allow the water to cool below 110° F, and the system will automatically reset. If the problem recurs, turn off all power to the spa and contact your local Authorized Dimension One Spas dealer, or authorized service center.

LOW FLOW

When "LOW FLOW" is displayed on the LCD, check the following:

- 1) Check the water level to see if it is too low. If the water level is too low, fill the spa to one to two inches above the bottom of the tile line.

- 2) Check the Ultra Pure filter cartridge to make sure that it is clean and not impeding the flow of water. If the filter is dirty, clean it and reinstall.
- 3) A flow switch has malfunctioned. The spa will operate but the heater will not activate. Contact your local Authorized Dimension One Spas dealer.

FLOW SENSOR

When "FLOW SENSOR ERROR" is displayed on the LCD, the flow switch has malfunctioned. Contact your local Authorized Dimension One Spas dealer, or authorized service center.

ICE

When "ICE CONDITION" and the water temperature are displayed on the LCD, the air temperature in the equipment can have gone below a factory preset level, and the system has activated "Smart Winter Mode". It will then automatically activate the pump(s) to circulate water. This is a normal spa function, no corrective action is necessary.

HIGH LIMIT SENSOR

When "HIGH LIMIT SENSOR" is displayed on the LCD, the high limit sensor is non-functional. Contact your local Authorized Dimension One Spas dealer, or authorized service center.

TEMP SENSOR

When "TEMP SENSOR" is displayed on the LCD, the water temperature sensor is non-functional. Contact your local Authorized Dimension One Spas dealer, or authorized service center.

COOLING

When "COOLING" and the water temperature are displayed on the LCD, the water temperature has reached 2° above the set temperature. The circulation pump and ozone generator will turn off to allow the water to cool back to the set temperature. This is a normal spa function. No corrective action is necessary.

WATER CHEMISTRY

NOTE: The circulation pump and ozone generator will be on while either jet pump is on and they will remain on for 30 minutes after the pump(s) turn off regardless of the water temperature.

NOTE: The Dimension One Spas Scrolling Message Center will keep all programming for 40 years with no power supply and the time of day for 30 days. This battery back up will not provide power to heat or operate the spa.

Maintaining proper water chemistry is imperative to maintaining safe water and preventing possible damage to your spa components.

START-UP PROCEDURES:

NOTE: If using Vision systems, disregard the steps listed below and follow the start-up procedures in the instructions located in the box with the purification cartridge.

- 1) Add stain and scale control, or a similar sequestering agent, such as Metal Gon.
- 2) Test and adjust total alkalinity. Run the pump for 1/2 hour at high speed.
- 3) Test and adjust pH. Run the pump for 1/2 hour at high speed.
- 4) Add Sodium Bromide with jets running.
- 5) Fill and set Bromine floater or Adjustable Bromine Feeder and place it in the spa water.
- 6) Shock water with Potassium Peroxymonosulfate with jets running.
- 7) Add clarifier (you may wish to add clarifier the following day, as the introduction of stain and scale control with water clarifier may temporarily cloud the water).
- 8) Run the pump for 1 hour at high speed.

WATER QUALITY

Your Dimension One spa is equipped with a cartridge filter system. Filtering the water helps maintain water cleanliness and clarity. While the filter traps most solid materials, it is still necessary to add a sanitizer such as chlorine or bromine to the water in order to control bacteria, algae, and to oxidize any organic materials in the water.

We strongly recommend that you buy your chemicals from your local Authorized Dimension One Spas dealer. Your local Authorized dealer can also advise you on alternative methods for water sanitation. Discount store chemicals, while sometimes less expensive, are not always the proper strength or type for your spa. Use of the wrong chemicals can be dangerous and may void the warranty on your spa.

WATER TESTING

It is recommended that you test your spa water regularly with an accurate test kit or test strips. These are available from your local Authorized Dimension One Spas dealer. Also, be sure to follow manufacturer's instructions for chemical use.

PH CONTROL

All water solutions have pH, which is a measure of the acid to base relationship. While a pH reading of 7.0 is considered neutral, a lower reading is considered acidic and a higher reading is basic. The proper pH for spa water is between 7.4 and 7.6. High pH (above 7.6) can reduce sanitizer efficiency, cloud the water, promote scale formation on surfaces and equipment, and interfere with filter operations. When pH is too high, add a pH decreaser. Low pH (below 7.2) is equally damaging and can cause equipment corrosion, water that is irritating, and rapid sanitizer dissipation. Add pH increaser to adjust the level.

NOTE: Never add more than 3 teaspoons of pH adjuster per 250 gallons of water. Always add adjuster with jets operating and circulate all chemicals for at least 30 minutes. Remember that good pH control and sanitization are absolutely essential for proper spa water treatment.

SANITIZER

The importance of maintaining an adequate level of sanitizer in your spa cannot be overemphasized. Warm water presents a fertile environment for the growth of bacteria and virus. This growth is prevented when adequate sanitizer levels are continuously maintained.

*****WARNING*****

Sanitizers such as Tri-chlor (tablets or sticks), calcium hypochlorite, sodium hypochlorite, and any chemical which dissolves on or remains undissolved in contact with the spa surface will damage your spa and will void the warranty completely.

BROMINE (BROMINE CANNOT BE USED WITH THE VISION SYSTEMS)

Bromine is the most common sanitizer used in spas. Bacteria can be controlled by maintaining a proper total bromine level of 3.0 to 5.0 ppm. Brominating tablets are a convenient and effective source of bromine for your spa. Do not drop bromine tablets directly into the water as this may damage the spa surface. A bromine "floaters" will safely and properly dispense the tablets for you or you may purchase the Dimension One Spas Adjustable Bromine Feeder from your local Authorized Dimension One Spas dealer. When used properly, brominating tablets will keep your water clean, clear, and odor free. To ensure maximum effectiveness, add a 1/2 ounce of sodium bromide per 100 gallons of water every time you fill your spa. This will establish a bromine reserve.

CHLORINE

Chlorine can also be used as a water sanitizer, however, it is highly sensitive to pH. To be effective, you must have a spa pH range of 7.4 - 7.6. Any reading outside this range will greatly reduce the chlorine's effectiveness.

Use your chlorine test kit or test strips to maintain a reading of 1.0 - 3.0 parts per million (ppm) of free chlorine. If the reading is below 1 ppm, the level should be raised before the spa is used. If the reading is above 3 ppm, it should be allowed to drop to the proper range before use. Read the instructions on your chlorine container carefully, or consult your

local Authorized Dimension One Spas dealer if you are having difficulty adjusting your chlorine level.

The best chlorine for your spa is a granular "Dichlor" compound. It dissolves quickly in moving water and has a nearly neutral pH. Add chlorine while the jets are running and let the jet system run for 1/2 hour. Generally, heavily contaminated water can be disinfected using large chlorine doses, in the range of 8 - 10 ppm, but a more practical method is to drain the spa and refill it with fresh water.

The effectiveness of chlorine is decreased when the cover is left off the spa for two reasons: (1) sunlight decays chlorine rapidly and (2) organic debris blown into the spa taxes the effectiveness of the chlorine. In addition, the higher the water temperature, the faster chlorine will decay.

NOTE: Two individuals in a spa may use as much as 3 ppm of chlorine in 20 minutes.

SHOCK TREATMENT (POTASSIUM PEROXYMONOSULFATE)

Even with regular sanitization, shock treatment may be necessary on occasion. Shock treatment is recommended over Super Chlorination because it does not add additional sanitizer to the water. It is also effective in oxidizing wastes and will reduce chloramines or bromamines. Follow the manufacturer's instructions listed on the label.

SUPER CHLORINATION

Super chlorination (or chlorine shock treatment), quickly oxidizes the spa water to burn out wastes such as perspiration, hair spray, lotions, etc. that cannot be removed by the spa filter. This waste build up reduces the power of the sanitizer, making the water dull and irritating to the eyes and skin. It may also produce an odor. When this occurs, the "free" chlorine has become a "chloramine" which is ineffective for sanitizing. This can be eliminated by super chlorinating as needed. An application of 5 times the normal chlorine dosage will act as an adequate treatment.

WATER CLARIFIERS (FLOCCULATING AGENTS)

Some wastes left in the spa water may not be filterable and can result in cloudy, dull water. Using a water clarifier whenever you fill your spa and then weekly thereafter will help keep your water clear. A flocculating agent will attract small particles and form larger ones that will become big enough to get trapped in the filter.

NOTE: Cloudy water may also be caused by high pH.

STAIN AND SCALE INHIBITOR (SEQUESTERING AGENTS FOR CONTROLLING STAINS AND SCALE) (Stain and scale inhibitors cannot be used with the Vision systems.)

Staining and scaling are common problems in spas. Because the water is hot, scale is deposited more rapidly. The circulation of water can cause the erosion of metals from spa equipment which can then stain interior surfaces. A weekly dose of a stain and scale fighter will help control these problems. A sequestering agent, such as Metal Gon, should always be added to the spa water when filling a spa (for the first time or when draining and refilling). This will eliminate any metals in your water and increase the life of your spa equipment.

TOTAL ALKALINITY

Total alkalinity is the amount of Carbonate, Bicarbonate and Hydroxyl ions in the water. TA (total alkalinity) affects and buffers the pH of the water. With high TA above 160, pH resists adjustment. With low TA below 130, pH is unstable and difficult to keep in the ideal range. Proper TA levels allow other chemicals to work at their optimum.

FOAM INHIBITOR

Soap residue from a bather's body, hair, and swimsuit combined with rapid circulation of spa water may eventually cause foaming in your spa. Foam inhibitors will suppress foam but cannot remove soap from water. When foaming occurs, a shock treatment can oxidize the soap in your water and help prevent this condition. If foam remains a problem, change the water.

CARE FOR YOUR SPA

DRAINING YOUR SPA

All Dimension One spas are gravity drained. Do not drain water onto your lawn or plants unless all of the bromine or chlorine has dissipated from the spa water. The sanitizer in your spa water can be dissipated very quickly by leaving the spa cover off and exposing the water to direct sunlight. Drain and replace your spa water every three to four months. For heavy spa use, you may wish to change the water more frequently.

To drain your spa:

- 1) Turn off all power to the spa.
- 2) Attach a hose to the hose bib at the bottom of the spa on the pedestal to the left of the equipment compartment (or you can place a hose directly in the spa and gravity drain by the siphon method). Open the valve and allow the water to drain away from the spa.
- 3) Clean the spa surface (see **CARE FOR THE SPA SURFACE** later in this chapter).
- 4) Refill the spa and restore power. Follow the Initial Start-up procedures for your model to reheat the spa.

FILTER CLEANING

Always turn the spa off before cleaning the filter elements. Your spa is equipped with one or two top access filter cartridges. We recommend that you clean the filters every month, as preventative maintenance.

To clean the skimmer filter cartridge, remove the access lid covering the filter area. Lift the center float of the skimmer assembly until it is fully extended. Hold the center piece of the assembly and turn it counter clockwise until the flats of the basket are aligned with the securing tabs. Then pull the basket assembly straight up to remove it. Next, pull the filter element out by twisting the molded handle until the filter is loos-

ened. Clean the element with a high pressure garden hose. Every other cleaning, soak the element in a filter cleaning solution, then rinse it thoroughly, and reinstall. Replace the skimmer basket assembly and the access lid or cover. After cleaning, run the pump for a few minutes at high speed, then return to the heating mode.

To clean the Ultra Pure filter element for those spas with Ultra Pure, remove the skimmer access lid and pull up on the Ultra Pure filter flange. Next, pull the filter element out by twisting the molded handle until the filter is loosened. Clean the element with a high pressure garden hose. Every other cleaning, soak the element in a filter cleaning solution, then rinse it thoroughly, and reinstall. Replace the access lid or cover.

LIGHT BULB REPLACEMENT

All spas are equipped with a 12 volt light using a GE912 bulb. To change the bulb, turn the power off and drain the spa below the level of the spa light. Using the special tool provided in the owner's manual packet, unscrew the cover for the light housing. Remove the old bulb and install the new bulb. Screw the cover for the light housing back into the female receptacle. Check to ensure proper operation of the new bulb before refilling the spa.

NOTE:

- 1) Do not attempt to remove the light housing cover without the special tool. If you are not able to locate it, contact the Dimension One Spas Service Department to have one sent.
- 2) Be sure the O-ring is not damaged and is properly in place when replacing the lens. Contact Dimension One Spas if a replacement O-ring is needed.

CARE FOR THE SPA SURFACE - ULTRALIFE

Your UltraLife spa has a very high quality finish. Stains and dirt will generally not adhere to the surface. Cleaning of the surface should be done with baking soda or Soft Scrub. Be careful when using detergents not to leave soap residue on the spa shell as this will cause suds build up

in the spa water and you'll find yourself changing the water more frequently than should be necessary.

CARE FOR THE SPA SURFACE - QUARITE PLUS

Your Quarite Plus spa has a very high quality finish. Stains and dirt will generally not adhere to the surface. Cleaning of the Quarite Plus surface should be done with an acrylic surface cleaning solution. Your local Authorized Dimension One Dealer can recommend a good product for this use. Be careful when using detergents not to leave soap residue on the spa shell as this will cause suds build up in your spa water and you'll find yourself changing the water more frequently than should be necessary.

CAUTION: Do not use "409" type cleaners or other caustic solutions as they may damage the spa shell surface and void the warranty. If you are using baking soda to clean your spa shell, be careful not to get it on the skirt. It may bleach the wood.

CARE FOR THE SPA CABINET

When properly cared for, the wood cabinet of your spa will maintain its beauty for many years. All woods react to the elements differently by expanding and contracting. Re-stain the wood every 3-6 months, to thoroughly protect it. 'Redwood' or 'Coastal Gray' stain, manufactured by Sherwin Williams serves as a good sealing agent for the wood. Please note that the cabinet is not warranted against reaction to natural weather conditions. The wood must be properly maintained.

CARE FOR THE SPA COVER

The thermal cover for your spa is an extremely durable foam insulated product. See the manufacturer's literature for proper cleaning instructions. When the spa is not in use, it is recommended that the cover tie downs always be utilized to discourage unsupervised children and minimize heat loss. Small locks are also available for the cover tie downs. In either case, these locking methods are not considered adequate to keep unauthorized people from entering the spa.

SPECIAL COLD WEATHER INSTRUCTIONS

Winter is one of the best times of the year to enjoy the warmth of your spa. Your Dimension One spa is 100% fully foam insulated and will not cost significantly more to operate in the winter than any other time of year. Because it is very difficult to get all the water out of the plumbing lines, we do not recommend draining your spa for the winter. However, if you don't plan to use your spa during the winter, we recommend you winterize it as follows:

If you decide to drain the spa, drain it as completely as possible. You may wish to tilt the spa on edge and use a wet-vac or high pressure blower to evacuate as much water as possible. This will require additional people. Try to get as much water out of the plumbing lines and equipment as possible. If you want to use the spa water on surrounding vegetation, make sure that it is free of sanitizers.

When the spa is completely drained, leave the hose bib open and open the pump drain valve located on the bottom front side of the pump. Also, loosen all pump unions and fittings to allow air and water to expand freely within the system. This should prevent water freezing expansion from damaging pipes and fittings. The key is to eliminate any sealed areas in the systems that may contain water.

If you receive heavy snowfall during winter months, you may want to build a cover cap for the spa cover. This can be done with a 1/2" to 3/4" thick piece of plywood and a few supporting 2" X 4" cross members.

CAUTION: Your spa is equipped with automatic freeze protection. However, power outages can cause your spa equipment system to freeze quickly. During freezing conditions, check your spa frequently to ensure proper operation. Always check your spa after any power failure to ensure that it is operational. Draining and not operating your spa disables this feature.

For additional information about winterizing your spa, please contact your local Authorized Dimension One Spas dealer.

WARRANTY SERVICE INFORMATION

Your spa warranty gives you specific coverage. Be sure to read the enclosed warranty sheet carefully.

The warranty does not cover problems arising from misuse, abuse, or neglect, and it does not cover problems caused by improper installation or “perceived” problems caused by failure to read the spa owner’s manual. A service charge will be made if a service call is made for any of the following:

- 1) Equipment failure due to improper/inadequate electrical service. All systems require dedicated circuits as described in this manual. Low voltage can cause equipment failure and seriously shorten equipment life. It is the owner’s responsibility to ensure proper electrical service is available.
- 2) Failure of spa to reach desired temperature because the set temperature is not turned up high enough. Maximum thermostat setting is approximately 106° F.
- 3) Burned out spa light. Bulbs are not covered.
- 4) Spa water chemistry is the responsibility of the spa owner. Cloudy, dirty or chemically unbalanced water and cleaning of the spa filter are also the responsibility of the spa owner.
- 5) Spa shell or equipment damage caused by improper water maintenance. Serious damage can be caused if your spa water is not maintained carefully and correctly.
- 6) Poor jet action because the jet Selector valve is in the middle position. For full performance, turn the jet Selector valve to either the full clockwise or full counterclockwise position.

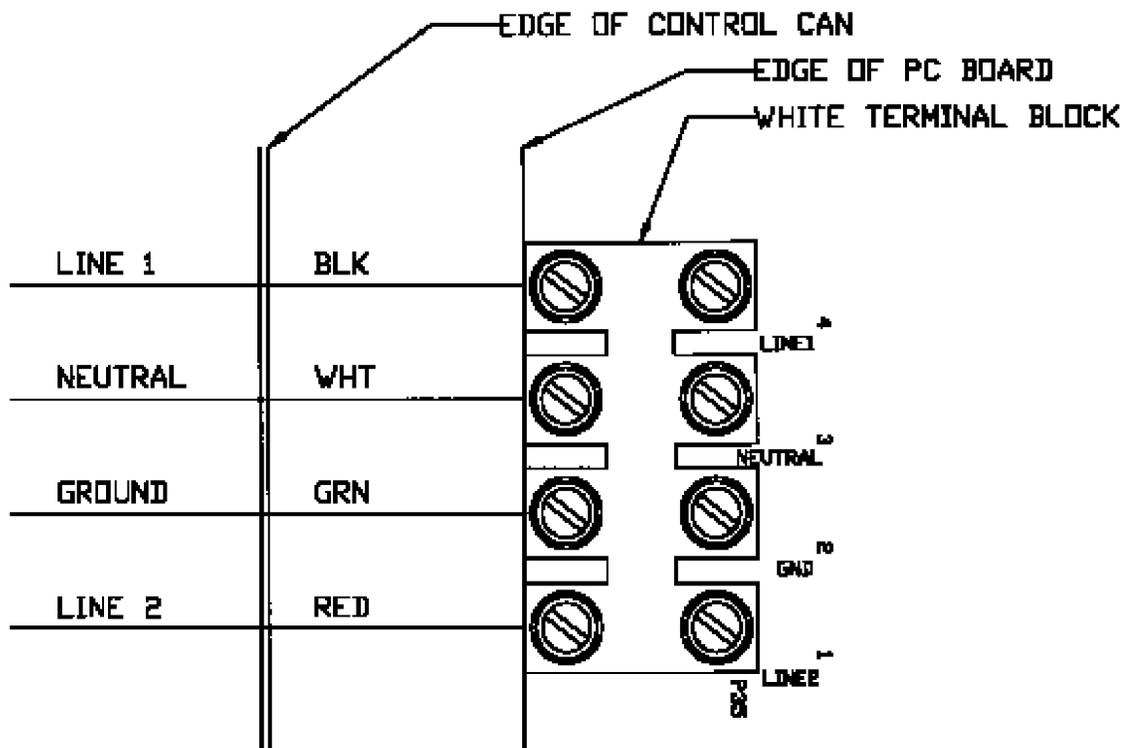
WARNING: Do not block air intakes located on the front left corner underneath the spa (the front right corner for the Chairman II) and under the equipment access panel. Resulting malfunctions are not covered under warranty.

PROBLEM	DIAGNOSIS	ACTION
1. Spa will not come on in any mode	a. No power to spa	a. Check circuit breaker
2. Spa does not heat	a. Temperature setting is too low b. Dirty filter c. Flow switch out of adjustment d. High limit tripped	a. Turn up thermostat b. Clean filter c. Call for service d. Reset high limit
3. Pulsating jets	a. Water level too low	a. Fill spa to 1"-2" above bottom of the tile line
4. Poor jet action or no jet action	a. Dirty filter b. Selector valve in middle c. Air lock d. Gate valve closed	a. Clean filter b. Move valve clockwise or counterclockwise c. Loosen pump union to allow air to escape d. Open gate valve
5. Spa temperature erratic	a. Water level	a. Fill spa to 1"-2" above bottom of the tile line
6. Spa light out	a. Burned out bulb	a. Replace bulb
7. Spa comes on by itself	a. Normal automatic daily power filtration or anti-freeze cycle	a. No action required
8. Pump shuts down unexpectedly while in use	a. Automatic 30 minute timer has shut pump off b. Spa motor overheated and automatic protective device has shut down pump(s)	a. Push JETS pad again to start another 30 minute cycle b. Normal function Make sure that the equipment panel vent area is not blocked. Vent blockage can cause serious damage to your spa equipment

GLOSSARY OF TERMS

- BLEEDERVALVE** - A small valve used to relieve or expel air from the spa's plumbing or pump.
- CIRCULATION PUMP** - A small pump that circulates the water in the spa continuously.
- DRY FIRING** - Turning the heater element on when there is no water in the heater.
- GFCI - GROUND FAULT CIRCUIT INTERRUPTER** - A type of Circuit Breaker that automatically disconnects power to the spa when there is an electrical power leakage to ground.
- HALOGENS** - Free chlorine, bromine or iodine ions that are very strong oxidizers used to sanitize water.
- ICON PAD** - This is a button accessed by pressing the Dimension One Spas Logo on the far right of the Upper Control Panel.
- LOAD SHARING** - When the circuit breaker size is smaller than the total power needed to operate both the heater & the jet pump at the same time, load sharing automatically turns off the heater when a jet pump is turned onto high speed.
- OZONE GENERATOR** - A specialized ultraviolet light that changes oxygen into ozone for use in the water sanitation process.
- PUMP UNION** - A removable fitting that connects the pump to the spa's plumbing.
- SELECTORVALVE** - Located on the top edge of the spa, it diverts jet power from one area of the spa to another.
- SUCTION FITTING** - Fitting located in the footwell of the spa where water is pulled from the spa to the jet pump.
- VENTURI** - A device used to inject air into the water.
- VISION CARTRIDGE** - A safe, halogen free alternative water sanitizer that can be used in place of chlorine or bromine.
- WEIR SKIMMER** - A floating water referencing device that skims debris from the surface of the water.

220 V TERMINAL BLOCK



120V TERMINAL BLOCK

ELECTRICAL HOOK-UP DIAGRAM
FOR 120 VAC, 60 HZ
APPLICATIONS (QUADRA)

