

# 2001 Owner's Manual



**D I M E N S I O N   O N E   S P A S<sup>®</sup>**

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## IMPORTANT SAFETY INSTRUCTIONS: READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

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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 mm<sup>2</sup>) 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 Serious Injury or Death. 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 mm<sup>2</sup>) 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)**

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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  $\oplus$  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 TRE 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 IMMEDIATEMENT 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 hot tub 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.
- DO check the operation of the equipment compartment cooling fan monthly, by activating a pump and checking for airflow out of the lower left or right front corner of spa.
- 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

 <b>WARNING</b>	
During pregnancy, soaking in hot water may cause damage to the fetus. Limit use to 10 minutes at a time.	
<p><b>PREVENT DROWNING</b></p> <p>SPA HEAT SPEEDS UP EFFECTS OF ALCOHOL, DRUGS OR MEDICINE AND CAN CAUSE UNCONCIOUSNESS.</p> <p>IMMEDIATELY LEAVE SPA IF UNCOMFORTABLE OR SLEEPY.</p>	<p><b>PREVENT CHILD DROWNING</b></p> <p>WATER ATTRACTDS CHILDREN.</p> <p>ALWAYS ATTACH A SPA COVER AFTER EACH USE.</p>

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

## **HOT TUB FEATURES**

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Congratulations! You have purchased one of the finest portable hot tubs available. Take the time to read these instructions carefully. If installed and maintained properly your hot tub 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 hot tub operation. If you have any questions, please contact your local Authorized Dimension One Spas Dealer.

**The following features are included on your hot tub:**

- UL and ETL listed/CUL approved
- Completely self-contained with load sharing capabilities
- 100% foam insulated
- All hot tub shells are formed from UltraLife™ high impact thermoplastic or Granitech™ Acrylic
- Designed for indoor or outdoor use
- Top access, easy to clean filter systems
- Water level referencing weir skimmer
- Handcrafted cabinets
- Proportional FastFlo™ Heater
- A variety of interchangeable jets
- Multiple jet systems with Selector Valve (except in the Aurora XLT)

- Exclusive, custom hand-set ceramic tile adds a distinctive touch
- Polyethylene floor completely seals the hot tub, 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, Aurora, Aurora XLT and Triad 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
- 150 sq. ft. of filtration

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

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

**JET SYSTEM SELECTOR VALVE**

All hot tubs (except the Aurora HP, Aurora XLT and Triad II) are equipped with spaside Selector Valves. These valves can be used to divert jet power from one area within the hot tub 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 hot tub 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 Variable Circulation Rotator™ jet allows you to adjust the flow and pressure of the jet for each specific muscle group. The Typhoon foot jet located in the bottom of the footwell of most models offers up to 100 GPM of soft, controllable flow. 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, Aurora, Aurora II, Aurora XLT and Triad II are equipped with a highly advanced hot tub 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.

## **CRYSTALZONE WATER MANAGEMENT SYSTEM**

Specifically engineered for Dimension One spas, the CrystalZone Water Management System found in the Interlude, Arena, Triad and optionally on the Aurora HP, provides an integrated ozone purification and filtration for hot tubs that do not include the patented Ultra Pure Water Management System. It even maintains the pre-set hot tub 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 hot tub and less time maintaining it.

## VISION SYSTEMS

Vision, an alternative purification cartridge, can be used in conjunction with your Ultra Pure and CrystalZone Water Management Systems. The advantage of Vision over conventional halogens (bromine and chlorine) is that it will, as a result of lower chemical use, provide softer-feeling water. Additionally, low chemical levels can mean fewer dissolved solids, which results in less water chemistry maintenance. Please refer to the Vision instructions for proper installation.

### How Vision Works

The Vision purification cartridge, which has no moving parts and requires no electrical connections, contains a powerful, silver (Ag) catalyst bed with a very large surface area. In the patented Ultra Pure or CrystalZone Water Management System, water circulates through the Vision purification cartridge, then through the dedicated 75 sq. ft. filter, then through the heater housing and is then ozonated in a two-stage contact chamber before being returned to the bathing area. During this process, the Silver (Vision) combines with the water, where it then serves as a residual bactericide. When used with Ultra Pure or CrystalZone, Vision provides a soft, residual bactericide that compliments the natural oxidizing power of ozone.

**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 hot tub 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.

To prevent the hot tub 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. (The circulation pump is optional on the Aurora HP.)

## **INSTRUCTIONS FOR YOUR NEW HOT TUB** **BEFORE ATTEMPTING TO HOOK-UP OR USE YOUR** **HOT TUB, PLEASE READ THROUGH THESE** **INSTRUCTIONS AND CAREFULLY VIEW YOUR** **VIDEO OWNER'S MANUAL.**

### ***POSITIONING YOUR HOT TUB***

Because your hot tub 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 hot tub fully. A concrete slab is best but not required. Locate your hot tub so that the equipment is above grade and not subject to flooding. **WATER SHOULD ALWAYS DRAIN AWAY FROM THE HOT TUB.**

### ***SAFETY DEVICES***

Your hot tub 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 hot tub shutdown timers that shut off the hot tub jet pump after 30 minutes of operation. The Chairman II, Diplomat, Chairman, Californian, Nautilus, Aurora II, Aurora XLT and Triad II can be programmed to shut off after longer intervals (I.E. 45, 60 minutes). The hot tub light automatically shuts off after 1 hour.
- 3) An electronic high limit switch that automatically shuts off the heater if the hot tub water temperature exceeds 112° F.
- 4) An automatic freeze sensor which puts the hot tub into 'Smart Winter Mode' if the air temperature in the equipment bay drops below a factory preset level. In 'Smart Winter Mode', your hot tub will start the jets for 1 minute, at high speed, every two hours, for 24 hours.

## **ELECTRICAL REQUIREMENTS AND ELECTRICAL HOOK-UP INSTRUCTIONS**

### ***ELECTRICAL HOOK -UP INSTRUCTIONS***

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

Have a licensed electrician run the required 240 volt power line to the hot tub installation site. The power inlet connection is located in the pedestal on the left side of the hot tub, 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 hot tub. We recommend that only a licensed and bonded electrician do the initial hot tub hook-up.

**NOTE: This unit requires a GFCI (Ground Fault Circuit Interrupter).** We have provided an enclosed instructional flyer

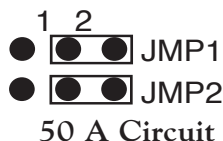
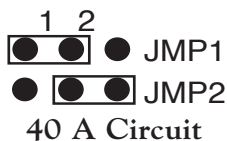
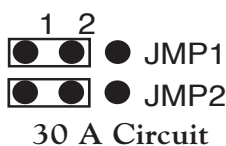
for a licensed electrician. A “line of sight” service disconnect must be located where visible from the hot tub, not less than 5 feet from the hot tub and not to exceed 50 feet from the hot tub. This requirement may be filled with the GFCI sub-panel.

**NOTE:** All supply wire to be rated minimum 90° C.

## ELECTRICAL REQUIREMENT CHART

To hook-up your hot tub, follow these instructions:

- 1) Remove the screws holding the equipment access panel to the front of the hot tub 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 hot tub 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 hot tub (see Electrical Requirements Chart on previous page for proper wire size). See the chart below for the correct settings.



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
Aurora XLT	240V, 38A	3 Wire + ground	50A	#6 AWG
	240V, 32A	3 Wire + ground	40A	#6 AWG
	240V, 24A	3 Wire + ground	30A	#8 AWG
Triad II	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

- 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 equipment access panel yet.

If you have an Interlude, Arena, Triad or Aurora HP, please read below for Initial Start-up Information. If you have a Chairman II, Diplomat, Chairman, Californian, Nautilus, Aurora II, Aurora XLT or Triad II, please turn to page 24 for Initial Start-up information.

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

- 1) Before filling your hot tub, 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 hot tub 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) Remove the filter and fill your hot tub with a hose through the empty filter compartment 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 hot tub temperature. If there is a call for heat, the

circulation pump (or Pump 1 Low Speed on the Aurora HP without the CrystalZone Water Management System) will then activate and turn on the heater. Push Jets button(s) to turn pump(s) to High Speed. 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.

**NOTE:** While setting the temperature the LCD display will read out the temperature up to 104° F. **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 hot tub and the size of the circuit breaker used, heating will occur at the rate of 3-10° F per hour.
- 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 hot tub 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 hot tub function within fingertip control.

Temperature setting, jet power control, and the hot tub light are all spaside accessible. That means you don't have to get out of the hot tub to enjoy complete control of all hot tub functions.



Digital Control lets you relax and enjoy everything your hot tub has to offer.

### **HOW TO USE**

## **THE PROGRAMMABLE DIGITAL CONTROL**

### ***JETS LOW/HIGH CONTROL PAD***

When the JETS control pad is pushed, the hot tub 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 hot tub. 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 actual hot tub 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 actual hot tub water temperature will again be indicated. The hot tub 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 one hour.

## **PROGRAMMING THE PROGRAMMABLE DIGITAL CONTROL**

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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 hot tub programming, the hot tub 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.

## **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 prompted later 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. On the Aurora HP, JETS 2 will also activate for 1 minute on high speed and then turn off.

### ***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 hot tub - 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 hot tub water temperature reading. The pre-set factory default is Fahrenheit.

## **PROGRAMMABLE DIGITAL CONTROL MESSAGES**

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### ***“OH” - OVERHEAT PROTECTION***

When “OH” is displayed on the control system digital display, the hot tub is in a high limit condition. If such a condition exists, **DO NOT ENTER THE WATER**. If this happens, remove the hot tub 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 hot tub and contact your local Authorized Dimension One Spas Dealer, or authorized service center.

### ***FLASHING LED ON THE CONTROL PANEL***

If you see 3 flashing LEDs on the control panel, **DO NOT ENTER THE WATER**. The system has detected a problem. Check the water level and clean the filters. If the problem persists, reset the power to the spa by resetting the GFCI breaker. If the error is not resolved after resetting the spa, call your dealer for service.

### ***FLASHING TEMPERATURE ON THE DISPLAY***

If you see a flashing temperature of 34° F or 134° F, **DO NOT ENTER THE WATER**. The system has detected a problem. Call your dealer for service.

**INITIAL START-UP FOR THE CHAIRMAN II,  
DIPLOMAT, CHAIRMAN, CALIFORNIAN,  
NAUTILUS, AURORA II, AURORA XLT  
AND TRIAD II**

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- 1) Before filling your hot tub, 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 hot tub 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. Also, open both bleeder valves located in the skimmer area.
- 3) Remove either filter and fill your hot tub with a hose through the empty filter compartment 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(s) and ensure that the gate valves on the pump(s) are in the open position (handles fully extended).
- 5) 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.
- 6) 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.

- 7) When the jets are in full operation, close the bleeder valves and push the UP pad until the desired hot tub temperature

is indicated on the display screen. 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 hot tub water temperature.

**NOTE:** While setting the temperature, the LCD display will read out the temperature up to 104° F. **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 hot tub 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 hot tub and the size of the circuit breaker used, heating will occur at the rate of 3-10° F per hour.

- 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 hot tub to conserve energy and to keep it ready for use.

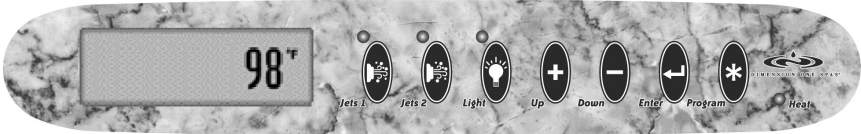
## **THE SCROLLING MESSAGE CENTER**

Advanced microprocessor technology has been utilized to produce the Scrolling Message Center. The most technologically advanced hot tub control in the world is also the easiest to operate.

Dimension One Spas has put every hot tub function within

fingertip control.

Temperature setting, jet power control, the hot tub light and all other functions are spaside accessible. That means you don't have to get out of the hot tub to enjoy complete control of all hot tub functions. Safety is assured through design concepts and materials which meet or exceed the most stringent requirements



of Underwriters Laboratories (UL), Edison Test Labs (ETL) 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 hot tub 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 hot

tub.

**NOTE:** The Chairman II, Chairman, Diplomat, Californian, Nautilus, Aurora II and Aurora XLT all have 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 one hour.

### **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 hot tub 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:**

**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 hot tub, as well as the various monitoring functions, self-diagnostics, and programming information.

**PROGRAMMING  
THE SCROLLING MESSAGE CENTER:**

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Your Scrolling Message Center is the most advanced in the industry and can virtually walk you through customizing your hot tub 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 hot tub programming, the hot tub 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 later be 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 FILTERING”. 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 hot tub - 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 UNIT SELECTION**

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 hot tub. 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 hot tub, the control panel may be locked. When the control panel lock is engaged, all programmed or default hot tub 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.

### **CONTROL PANEL UNLOCK**

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 hot tub user may operate the pumps, the hot tub 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.

## **PROGRAMMING UNLOCK**

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 hot tub 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 hot tub 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 hot tub, 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 hot tub 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**

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### **OVERHEAT**

When "OVERHEAT" and the water temperature are displayed on the LCD, the hot tub is in a high-limit condition. In such a condition, **DO NOT ENTER THE WATER.** Remove the hot tub 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 hot tub and call your dealer for service.

### **FLASHING LED AND/OR "CHECK WATER LEVEL..."**

If you see 3 flashing LEDs and/or the message, "CHECK WATER LEVEL -CLEAN FILTER-IF PROBLEM CONTINUES, TURN OFF POWER AND RESTART THE SYSTEM-IF PROBLEM CONTINUES, CALL FOR SERVICE" on the control panel, follow the instructions as stated.

### **FLASHING TEMPERATURE ON THE DISPLAY**

If you see a flashing temperature of 34° F or 134° F, **DO NOT ENTER THE WATER.** The system has detected a problem. Call your dealer for service.

## **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 hot tub function. No corrective action is necessary.

## **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 hot tub function. No corrective action is necessary.

**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 hot tub.

## **INITIAL START-UP FOR THE AURORA XLT**

The purpose of this supplement is to help you become familiar with the operation of, and differences in the Aurora XLT. The Aurora XLT is unique from other Dimension One Spas in three ways:

1. Initial setup
2. How the Pumps and the Jets buttons function
3. Zoning of the Dynamic Massage Sequencer

## INITIAL SETUP

The initial setup of the Aurora XLT is similar to all other Dimension One spas, however it requires an additional step. Please refer to the “**INITIAL START UP...**” section preceding this section and follow steps 1 thru 7. Then, use the following procedure:

- 1) Remove the sequencer valve compartment access panel by removing the five screws holding the panel in place.



**NOTE:** To locate the Sequencer Valve Compartment, stand in front of the upper control panel. The sequencer compartment access panel is the side panel directly to the left.

- 2) Turn the spa pumps on to high speed by pushing the JETS pad three times.
- 3) Depress the top of each valve until water begins to weep out of the valve. Repeat this process on each of the six valves.



- 4) Reinstall sequencer valve compartment access panel.
- 5) Refer back to the “**INITIAL START UP...**” section in your Owners Manual and follow the remainder of the setup procedure.

## **PUMPS AND JETS PADS**

The Aurora XLT comes standard with two 4.0 HP pumps that operate in a “Step Mode” and are both hooked up to one plumbing system. Each time the “JETS” pad is pushed, it will step you through the series of pump speeds and combinations. Push the JETS pad the first time to engage Pump 1 and Pump 2 at low speed. (**Note:** There is a two-second delay between the activation of Pump 1 and Pump 2.)

Push the JETS pad a second time and Pump 1 steps into the high-speed mode and Pump 2 turns off.

Push the JETS pad a third time and both Pumps 1 and 2 will engage at high-speed.

Push the JETS pad a fourth time to turn off both pumps.

## **DYNAMIC MASSAGE SEQUENCER™**

The Dynamic Massage Sequencer, located in the lounge is unlike other Dimension One Spas sequencers. Not only does the lounge sequence, two therapy seats will sequence simultaneously. Each corner sea is divided into six massage zones. When zone 1, 2, 3, 4, 5 or 6 is active in the lounge, the same zone will be active in the sequencing seats. Please refer to the “Dynamic Massage Sequencer Instructions” supplement included with your Owner’s Manual for operating instructions.

## **WATER CHEMISTRY**

The chemicals mentioned in this section may be purchased from your Authorized Dimension One Spas Dealer, or from our virtual showroom at [www.d1spas.com](http://www.d1spas.com).

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

## START-UP PROCEDURES:

NOTE: If using the PureVision system, refer to the instructions located in Dimension One Spas' **Vision Spa Starter Kit** for start-up procedures. If using Chlorine or Bromine as a sanitizer, follow these start-up instructions:

- 1) If possible, test water for metals and calcium. See your local authorized Dimension One Spas Dealer for testing instructions.
  - a) If metals are present, while water is being added to the hot tub, add recommended dosage of Dimension One Spas' **Sequestrant**.
  - b) The Calcium level should be between 225 and 400 ppm (parts per million). If it is not, you may use Dimension One Spas' **Liquid Hardness Increaser** to raise your Calcium level accordingly, or you may contact your local authorized Dimension One Spas Dealer for further assistance.
- 2) Test Total Alkalinity and pH using the Dimension One Spas' **Test Strips** found in the Dimension One Spas' **Starter Kit**. With the jets turned off, dip the test strip 12-18 inches into the water and swirl three times for an accurate reading. TA should read between 120 – 150 ppm and pH should read between 7.2 – 7.8. Should you need to make adjustments, use the following guidelines:
  - a) Lowering Total Alkalinity: Use Dimension One Spas' pH/Alkalinity Decreaser. Take one gallon of water from the hot tub, and mix in 1/2 oz. of Decreaser. Pour this mixture into the center of the hot tub. Wait 5 minutes, then turn jets on high speed for at least 10 minutes. Turn jets off, retest and repeat until the Total Alkalinity reads between 120 – 150 ppm.

- b) Lowering pH: Use Dimension One Spas' **pH/Alkalinity Decreaser**. Take one gallon of water from the hot tub, and mix in 1/2 oz. of Decreaser. With the jets turned on high speed, pour this mixture around the inside perimeter of the hot tub. Continue running jets on high speed for at least 15 minutes. Turn jets off, retest and repeat until the pH reads between 7.2 – 7.8.
- c) Raising Total Alkalinity and/or pH: Use Dimension One Spas' **pH/Alkalinity Increaser**. With the jets turned on high speed, add the recommended dosage to the hot tub water. Continue running jets on high for at least 15 minutes. Turn jets off, retest and repeat until the Total Alkalinity reads between 120 – 150 ppm, and the pH reads between 7.2 – 7.8.

**NOTE:** One tablespoon equals approximately 1/2 oz.

### 3) Add Sanitizer.

- a) If using Chlorine, add the 2oz. packet of Chlorine included with your owner's start-up kit. Run jets on high for at least 15 minutes. Monitor Chlorine level with Dimension One Spas' **4-Way Test Strips** (found in Dimension One Spas' **Chlorine Spa Starter Kit**) and maintain a residual of 1 – 3 ppm.
- b) If using Bromine, fill and adjust the Dimension One Spas' Adjustable Bromine Feeder with 6 Dimension One Spas' Bromine Tablets and snap it into the center of the 8" weir skimmer basket. Then add the 2oz. packet of Bromo Shock and the 2oz. packet of Shock Treatment (found in Dimension One Spas' Bromine Spa Starter Kit.) Run jets on high for at least 15 minutes. Monitor Bromine level with Dimension One Spas' 4-Way Test Strips (also included in the Bromine Spa Starter Kit) and maintain a residual of 2 – 4 ppm.

**NOTE:** We recommend starting the Dimension One Spas' **Adjustable Bromine Feeder** on its lowest setting and gradually opening as needed to maintain a proper level of 2 – 4 ppm. This will help prevent elevated Bromine levels in the hot tub.

- 4) After day one, shock the water with 2oz. of Dimension One Spas' **Shock Treatment** with jets running on high speed. Continue running jets on high speed for at least 15 minutes.
- 5) After day two, you may consider adding Dimension One Spas' **Enzyme Formula** to reduce water line build-up normally associated with body oils. Run jets on high speed for at least 15 minutes.

## **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 hot tub. Use of the wrong chemicals can be dangerous and may void the warranty on your hot tub.

## **WATER TESTING**

We recommend that you test your hot tub water at least twice a week with Dimension One Spas' **4-Way Test Strips**.

## **PH CONTROL**

All bodies of water have pH, which is a measure of the active acidity. A pH reading of 7.0 is considered neutral, a lower reading is considered “acidic” and a higher reading is considered “basic”. The proper pH for hot tub water is between 7.2 – 7.8. High pH (above 7.8) 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 Dimension One Spas’ **pH/Alkalinity Decreaser**. Low pH (below 7.2) is equally damaging and can cause equipment corrosion, water that is irritating, and rapid sanitizer dissipation. When pH is too low, add Dimension One Spas’ **pH/Alkalinity Increaser**.

**NOTE:** Follow directions in the Start-Up Procedures section of this manual on adding Decreaser or Increaser.

## **SANITIZER**

The importance of maintaining an adequate level of sanitizer in your hot tub 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 hot tub surface will damage your hot tub and will void the warranty completely.

## **BROMINE**

### **(BROMINE CANNOT BE USED WITH VISION SYSTEMS)**

Bromine is one of the more common sanitizers used in hot tubs. Brominating tablets are a convenient and effective source of bromine. Do not drop bromine tablets directly into the water as this may damage the hot tub surface.

Use Dimension One Spas' **4-Way Test Strips** to maintain a reading of 2 – 4 ppm of Bromine. If the reading is below 2 ppm, the level should be raised before the hot tub is used. If the reading is above 4 ppm, it should be allowed to drop to the proper range before use. Read the instructions on your Dimension One Spas' **Brominating Tablet** container carefully, or consult your local Authorized Dimension One Spas Dealer if you are having difficulty adjusting your Bromine level. Use Dimension One Spas' **Adjustable Bromine Feeder** to safely and properly dispense the tablets.

**NOTE:** Shocking hot tub water at least once a week will help keep your water clean, clear, and odor free by reducing the build-up of “bromamines”.

## CHLORINE

Chlorine is also a very effective and common sanitizer. However, chlorine is sensitive to pH, so for maximum effectiveness, you must keep a hot tub's pH range between 7.2 – 7.8. Any reading outside this range will greatly reduce the chlorine's ability to sanitize.

Use Dimension One Spas' **4-Way Test Strips** to maintain a reading of 1 – 3 ppm of Chlorine. If the reading is below 1 ppm, the level should be raised before the hot tub 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 hot tub is a granular “Di-Chlor” compound, such as Dimension One Spas' **Concentrated Chlorine Granules**. It dissolves quickly in moving water and has a nearly neutral pH. Be sure to add Chlorine while the jets are running and let the jets run on high speed for at least 15 minutes.

**NOTE:** Shocking hot tub water at least once a week will help keep your water clean, clear, and odor free by reducing the build-up of “chloramines”.

## **SHOCK TREATMENT (POTASSIUM PEROXYMONOSULFATE)**

Even with regular sanitization, Dimension One Spas’ **Shock Treatment** is still necessary on occasion. Shock treatment is recommended instead of Super Chlorination because it does not add additional sanitizer to the water. It is effective in oxidizing wastes and will reduce chloramines or bromamines.

General Guideline:

- 1) If you are using your hot tub 1 – 3 times a week – shock the hot tub with a 2oz. dose once a week.
- 2) If you are using your hot tub 4 – 6 times a week – shock the hot tub with a 2oz. dose twice a week.

**NOTE:** To maximize the effectiveness of a Dimension One Spas’ **Shock Treatment** we recommend shocking at least 24 hours before or 24 hours after adding any other hot tub chemicals.

## **SUPER CHLORINATION**

Super chlorination quickly oxidizes the hot tub water and burns out body waste such as perspiration, hair spray, lotions, etc. that cannot be removed by the hot tub 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. Super chlorinating as needed can eliminate this. A chlorine level of 8 – 10 ppm (3-4 oz.) will act as an adequate treatment.

**Note:** Do not use the hot tub until the chlorine level of the hot tub’s water has dissipated to 1 – 3 ppm. We also recommend waiting until the hot tub water’s Chlorine level has returned to

1 – 3 ppm before adding any other hot tub chemicals as this will help maximize their effectiveness.

## **ENZYMES**

Some wastes (such as body oils) may not be filtered and can result in water lines and other aesthetically undesirable accumulations in hot tub water. Using Dimension One Spas' **Enzyme Formula** whenever you fill your hot tub, and weekly thereafter, will help reduce these build-ups. This mild enzyme is a derivative of plants and is an effective alternative to stronger water clarification chemicals. It uses natural enzymatic processes to “digest” excess waste in hot tub water.

**NOTE:** Water lines can be caused by oils in your water supply. We recommend checking your filters 24 hours after filling your hot tub and, if visible discoloration is present on your filters, remove and rinse them.

## **WATER CLARIFIERS (FLOCCULATING AGENTS):**

Water clarifiers are designed to gather small particles into large clusters so they can be captured by the filter. However, do not use Dimension One Spas' **Water Clarifier** on any hot tub equipped with an ozone system.

## **SEQUESTRANTS**

### **(AGENTS FOR CONTROLLING STAINS AND SCALE)**

(If using **Vision**, sequestrants can be used only upon initial fill up of the hot tub. Install the **Vision** cartridge 48 hours later. Do not use sequestrant when **Vision** is installed in the hot tub.)

A weekly dose of Dimension One Spas' **Sequestrant** will help minimize stain caused by metals, and scale caused by excessive calcium in your hot tub. Sequestrant should be added to the hot tub water upon initial fill or whenever changing the hot tub water. This will suspend metals and calcium in the water and increase the life of your hot tub equipment.

**NOTE:** Another means of improving source water is to use the Dimension One Spas' **Spa Water Pre-Filter Conditioner**. This two-stage filter/conditioner effectively removes impurities and kills bacteria found in source water. It is effective for up to 8 hot tub fill-ups (approximately 3200 gallons of water) and can be used whenever topping off the hot tub's water level.

### **TOTAL ALKALINITY**

Total Alkalinity is a measurement of the water's ability to resist changes in pH. Total Alkalinity affects and buffers the pH of the water. With Total Alkalinity above 150 ppm, pH becomes difficult to adjust. With Total Alkalinity below 120 ppm, pH becomes unstable and is more difficult to keep in the ideal range. Proper Total Alkalinity levels also allow other chemicals to perform optimally.

**NOTE:** Follow directions in the Start-Up Procedures section of this manual on adding Decreaser or Increaser.

### **FOAM REMOVER**

Soap residue from a bather's body, hair, and swimsuit combined with rapid circulation of hot tub water may eventually cause foaming in your hot tub. Dimension One Spas' **Foam Remover** will suppress foam but cannot remove soap from the hot tub water. When foaming occurs, add a small amount Foam Remover to the base of foamy area. Use only the amount necessary to remove the foam. If foam remains a problem, shock the hot tub with Dimension One Spas' **Shock Treatment**.

**Note:** Excessive foaming can be an indication that your water Hardness (Calcium level) is below 225 ppm. Test and, if necessary, raise Hardness with Dimension One Spas' **Liquid Hardness Increaser**.

## CARE FOR YOUR HOT TUB

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### *DRAINING YOUR HOT TUB*

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

### *FILTER CLEANING*

Always turn off the power to the hot tub before cleaning the filter elements. Your hot tub 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, remove the E-Z Lock Filter cartridge by twisting the cartridge 1/4 turn counterclockwise to its stop. (Be careful not to overturn the filter) Then lift the filter out of its canister. Clean the cartridge with a high pressure garden hose. Every other cleaning, soak the cartridge 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 cartridge for those hot tubs with Ultra Pure, remove the access lid and remove the E-Z Lock Filter cartridge by twisting the cartridge 1/4 turn counterclockwise to its stop. Then lift the filter out of its canister. Clean the cartridge with a high pressure garden hose. Every other cleaning, soak the

cartridge in Dimension One Spas' **Cartridge Cleaner**, then rinse it thoroughly, and reinstall. Replace the access lid or cover.

### ***LIGHT BULB REPLACEMENT***

All hot tubs are equipped with a 12 volt light using a GE912 bulb. To change the bulb, turn the power off and drain the hot tub below the level of the hot tub 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 hot tub.

#### **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 HOT TUB SURFACE – ULTRALIFE AND GRANITECH***

Your hot tub has a very high quality finish. Stains and dirt will generally not adhere to the surface. We recommend cleaning the entire shell surface with Dimension One Spas' **Water Line Cleaner**. You may also use Dimension One Spas' **ph/Alkalinity Increaser** or mild cleaners like Soft Scrub. Be sure to thoroughly rinse the shell. After cleaning, you will want to restore your hot tub shell's original luster by using Dimension One Spas' **Poli-Gloss**.

**CAUTION:** Do not use "409" type cleaners or other caustic solutions as they may damage the hot tub shell surface and void

the warranty. If you are using baking soda to clean your hot tub shell, be careful not to get it on the skirt. It may bleach the wood.

### ***CARE FOR THE WOOD HOT TUB CABINET***

When properly cared for, the wood cabinet of your hot tub will maintain its beauty for many years. All woods react differently to the elements by expanding and contracting. To protect your beautiful wood finish, re-stain it every 3-6 months with Dimension One Spas' **Redwood** or **Coastal Gray Stain**, which 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. Should your hot tub cabinet require re-conditioning, try Dimension One Spas' Wood Refurbishing Kit.

### ***CARE FOR THE SYNTHETIC WOOD HOT TUB SURFACE***

This surface is unaffected by most corrosive substances, and will not absorb moisture. To maintain the original finish, clean with soap and water. No sealing or painting is required.

### ***CARE FOR THE HOT TUB COVER***

The thermal cover for your hot tub is an extremely durable foam insulated product. See the manufacturer's literature for proper cleaning instructions. When the hot tub 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 hot tub.

### ***SPECIAL COLD WEATHER INSTRUCTIONS***

Winter is one of the best times of the year to enjoy the warmth of your hot tub. 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 hot tub for the winter. However, if you don't plan to use your hot tub during the winter, we recommend you winterize it as follows:

If you decide to drain the hot tub, drain it as completely as possible. You may wish to tilt the hot tub 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 hot tub water on surrounding vegetation, make sure that it is free of sanitizers.

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

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

## WARRANTY SERVICE INFORMATION

Your hot tub 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 hot tub 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 hot tub to reach desired temperature because the set temperature is not turned up high enough. Maximum thermostat setting is approximately 104° F.
- 3) Burned out hot tub light. Bulbs are not covered.
- 4) Hot tub water chemistry is the responsibility of the hot tub owner. Cloudy, dirty or chemically unbalanced water and cleaning of the hot tub filter are also the responsibility of the hot tub owner.
- 5) Hot tub shell or equipment damage caused by improper water maintenance. Serious damage can be caused if your hot tub 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 hot tub (the front right corner for the Chairman II and Triad II) and under the equipment access panel. Resulting malfunctions are not covered under warranty.

PROBLEM	DIAGNOSIS	ACTION
1. Hot tub will not come on in any mode	a. No power to hot tub	a. Check circuit breaker
2. Hot tub 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 hot tub 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. Hot tub temperature erratic	a. Water level	a. Fill hot tub to 1"-2" above bottom of the tile line
6. Hot tub light out	a. Burned out bulb	a. Replace bulb
7. Hot tub 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. Hot tub 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 hot tub equipment

PROBLEM	DIAGNOSIS	ACTION
<p>9. The “CHECK WATER LEVEL...” scrolling message and/or 3 flashing LEDs appear on the display.</p>	<p>a. Possible sensor errors.</p>	<p>a. Check water level. b. Clean filter.</p> <p>If problem continues: c. Turn off power. d. Restart the system.</p> <p>If problem persists: e. Call your dealer for service.</p>
<p>10. 3 flashing LEDs appear on the display.</p>	<p>a. Possible sensor errors.</p>	<p>a. Check water level. b. Clean filter.</p> <p>If problem continues: c. Turn off power. d. Restart the system.</p> <p>If problem persists: e. Call your dealer for service.</p>
<p>11. Flashing temperature of 34° F or 134° F appears on the display.</p>	<p>a. Possible temperature sensor failure.</p>	<p>a. Call your dealer for service.</p>

## **GLOSSARY OF TERMS**

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**BLEEDER VALVE** - A small valve used to relieve or expel air from the hot tub's plumbing or pump.

**CIRCULATION PUMP** - A small pump that circulates the water in the hot tub 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 hot tub 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 hot tub's plumbing.

**SELECTOR VALVE** - Located on the top edge of the hot tub, it diverts jet power from one area of the hot tub to another.

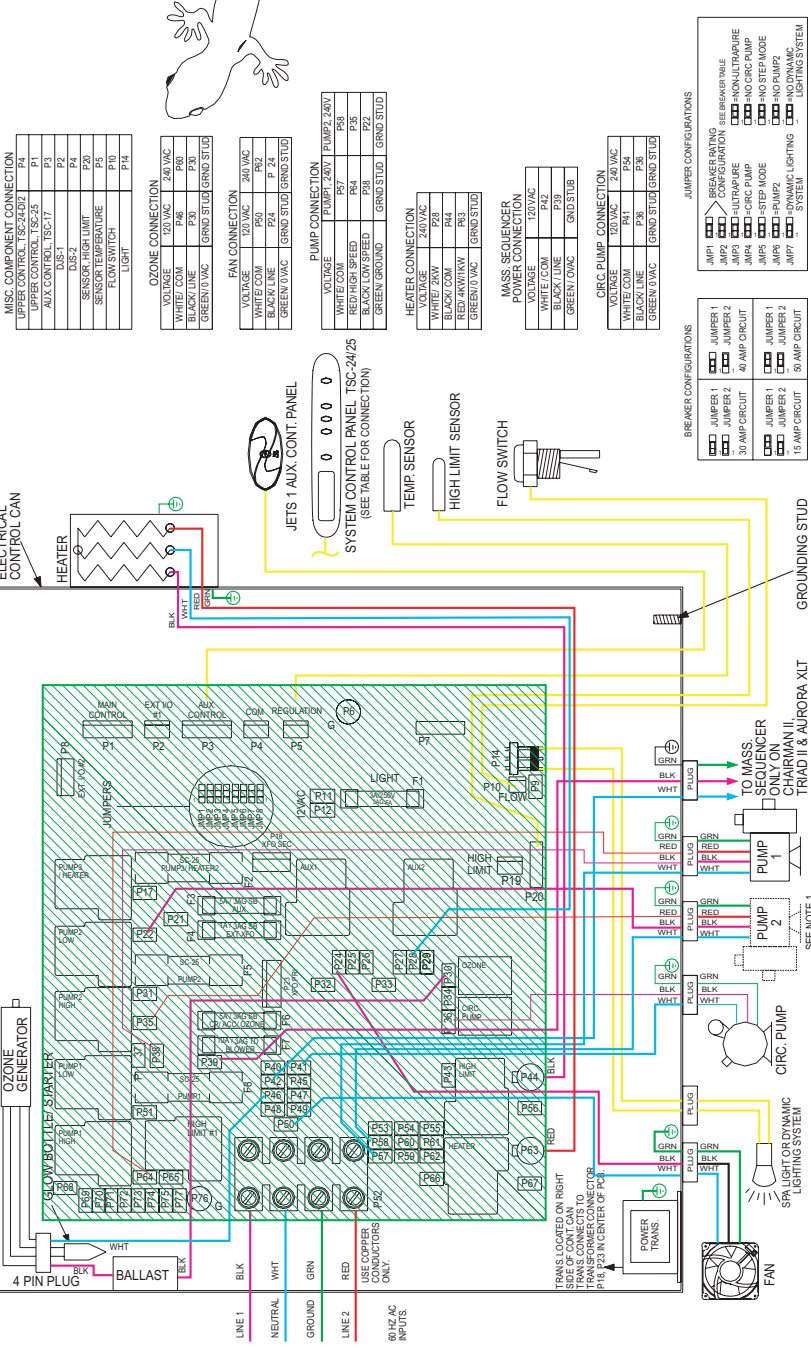
**SUCTION FITTING** - Fitting located in the footwell of the hot tub where water is pulled from the hot tub to the jet pump.

**VENTURI** - A device used to inject air into the water.

**VISION CARTRIDGE** - A safe, halogen-free 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.

MASBPAMP-P12-P22-CP-A1-L-RTC-D11  
5254-01D



MISC. COMPONENT CONNECTION

P1	24VDC
P2	24VDC
P3	24VDC
P4	24VDC
P5	24VDC
P6	24VDC
P7	24VDC
P8	24VDC
P9	24VDC
P10	24VDC
P11	24VDC
P12	24VDC
P13	24VDC
P14	24VDC
P15	24VDC
P16	24VDC
P17	24VDC
P18	24VDC
P19	24VDC
P20	24VDC
P21	24VDC
P22	24VDC

OZONE CONNECTION

10VDC	24VDC
WHITE/COM	P30
BLACK/LINE	P30
GREEN/0VAC	GRND STUD
GRND STUD	GRND STUD

FAN CONNECTION

120VAC	24VDC
WHITE/COM	P20
BLACK/LINE	P24
GREEN/0VAC	GRND STUD
GRND STUD	GRND STUD

PUMP CONNECTION

VOLTAGE	PUMP1, 280V2	PUMP2, 280V2
WHITE/COM	P44	P38
RED/HIGH SPEED	P44	P38
BLACK/LOW SPEED	P44	P38
GREEN/GROUND	GRND STUD	GRND STUD

HEATER CONNECTION

120VAC	24VDC
WHITE/COM	P40
BLACK/COM	P44
RED/ARWIKW	P83
GREEN/0VAC	GRND STUD

MASS. SCIENCE CENTER PUMP CONNECTION

120VAC	24VDC
WHITE/COM	P42
BLACK/LINE	P39
GREEN/0VAC	GRND STUB

CIRC. PUMP CONNECTION

120VAC	24VDC
WHITE/COM	P41
BLACK/LINE	P36
GREEN/0VAC	GRND STUD
GRND STUD	GRND STUD

JUMPER CONFIGURATIONS

JMP1	SEE BREAKER CONFIGURATION
JMP2	SEE BREAKER CONFIGURATION
JMP3	NON-ULTRAPURE
JMP4	NO CIRC PUMP
JMP5	NO STEP MODE
JMP6	NO JMP2
JMP7	NO CIRC PUMP
JMP8	NO CIRC PUMP
JMP9	NO CIRC PUMP
JMP10	NO CIRC PUMP
JMP11	NO CIRC PUMP
JMP12	NO CIRC PUMP
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JMP96	NO CIRC PUMP
JMP97	NO CIRC PUMP
JMP98	NO CIRC PUMP
JMP99	NO CIRC PUMP
JMP100	NO CIRC PUMP

BREAKER CONFIGURATIONS

JUMPER 1	30 AMP CIRCUIT
JUMPER 2	40 AMP CIRCUIT
JUMPER 3	50 AMP CIRCUIT
JUMPER 4	15 AMP CIRCUIT
JUMPER 5	15 AMP CIRCUIT
JUMPER 6	15 AMP CIRCUIT
JUMPER 7	15 AMP CIRCUIT
JUMPER 8	15 AMP CIRCUIT
JUMPER 9	15 AMP CIRCUIT
JUMPER 10	15 AMP CIRCUIT
JUMPER 11	15 AMP CIRCUIT
JUMPER 12	15 AMP CIRCUIT
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JUMPER 57	15 AMP CIRCUIT
JUMPER 58	15 AMP CIRCUIT
JUMPER 59	15 AMP CIRCUIT
JUMPER 60	15 AMP CIRCUIT
JUMPER 61	15 AMP CIRCUIT
JUMPER 62	15 AMP CIRCUIT
JUMPER 63	15 AMP CIRCUIT
JUMPER 64	15 AMP CIRCUIT
JUMPER 65	15 AMP CIRCUIT
JUMPER 66	15 AMP CIRCUIT
JUMPER 67	15 AMP CIRCUIT
JUMPER 68	15 AMP CIRCUIT
JUMPER 69	15 AMP CIRCUIT
JUMPER 70	15 AMP CIRCUIT
JUMPER 71	15 AMP CIRCUIT
JUMPER 72	15 AMP CIRCUIT
JUMPER 73	15 AMP CIRCUIT
JUMPER 74	15 AMP CIRCUIT
JUMPER 75	15 AMP CIRCUIT
JUMPER 76	15 AMP CIRCUIT
JUMPER 77	15 AMP CIRCUIT
JUMPER 78	15 AMP CIRCUIT
JUMPER 79	15 AMP CIRCUIT
JUMPER 80	15 AMP CIRCUIT
JUMPER 81	15 AMP CIRCUIT
JUMPER 82	15 AMP CIRCUIT
JUMPER 83	15 AMP CIRCUIT
JUMPER 84	15 AMP CIRCUIT
JUMPER 85	15 AMP CIRCUIT
JUMPER 86	15 AMP CIRCUIT
JUMPER 87	15 AMP CIRCUIT
JUMPER 88	15 AMP CIRCUIT
JUMPER 89	15 AMP CIRCUIT
JUMPER 90	15 AMP CIRCUIT
JUMPER 91	15 AMP CIRCUIT
JUMPER 92	15 AMP CIRCUIT
JUMPER 93	15 AMP CIRCUIT
JUMPER 94	15 AMP CIRCUIT
JUMPER 95	15 AMP CIRCUIT
JUMPER 96	15 AMP CIRCUIT
JUMPER 97	15 AMP CIRCUIT
JUMPER 98	15 AMP CIRCUIT
JUMPER 99	15 AMP CIRCUIT
JUMPER 100	15 AMP CIRCUIT

4 PIN PLUG

BALLAST

LINE 1 BLK NEUTRAL WHT

GROUND GRN

LINE 2 RED USE COPPER CONDUCTORS ONLY. BLK AC INPUTS

TRANS. LOCATED ON RIGHT SIDE OF CONT. CAN. TO TRANSFORMER CONNECTOR P16 P23 IN CENTER OF P16

GROUNDING STUD

TRIAID II & AUROORA XT

SEE NOTE 1