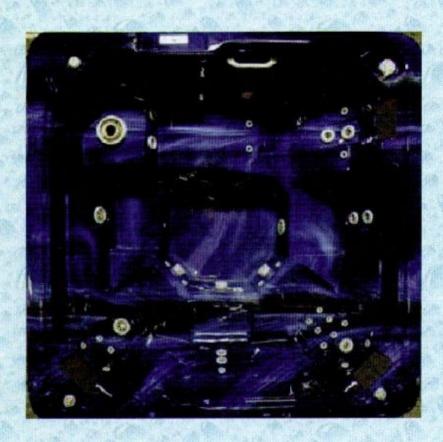
# Infinity Spas Owner's Manual



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# Owner's Manual

This Owner's Manual will acquaint you with the operation and general maintenance of your new Infinity Spa. Please keep this manual available for reference.

If you have any questions about any aspect of your spa's set up procedures, operation or maintenance, contact your authorized Infinity Spa dealer or Technical Support at Infinity Spa (423) 477-7796.

IMPORTANT: Infinity Spa reserves the right to change specifications or designs, without notification and without incurring any obligation.

Date purchased:

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Date installed:

Dealer name:

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Dealer address:

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Dealer telephone:

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Spa model and serial number:

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# **Table of Contents**

Please take the time to read the contents in its entirety to avoid any warranty issues in the future.

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# **Our Mission Statement**

Quality. Quality is never an accident. It is always the result of high intention, sincere effort, hard work, intelligent direction and skillful execution. Infinity Spas has made a commitment to ensure all spas and hot tubs are built with the best quality products.

<u>Price</u> sells a Spa. We know you want to buy at the lowest price possible and we don't think you should apologize for it. We are able to offer spas at the lowest price by selling direct to the public eliminating the middleman.

Fairness. Our job is to help you understand both the positive and negative aspects of any transaction.

<u>Communication</u> is essential. We are available through telephone and email. We keep you informed at every step. If you have any questions starting your new Infinity Spa, please contact us anytime.

Thank you for purchasing your new Infinity Spa.

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IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS!!!!

### SAVE THESE INSTRUCTIONS!!

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

- 1. <u>Danger:</u> To reduce the risk of injury, <u>do not ever</u> permit children to use the spa without adult supervision.
- 2. Warning: Risk of Child Drowning: Exercise extreme caution to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use the spa unless supervised at all times.
- 3. Warning: To reduce the risk of electrical shock, replace damaged or defective wiring immediately.
- Danger: To reduce the risk of injury to persons, DO NOT REMOVE Suction Fittings.
- 5. A pressure wire connector is provided on the side of the control box to permit connection of a minimum No. 8 AWG (8.4mm) solid copper bonding conductor between this point and any metal equipment, metal enclosures of electrical equipment, metal water pipe or conduit within 5 ft (1.5m) of the unit, as need to comply with local requirements and or electrical code. Install the spa at least 5 ft (1.52m) from all metal surfaces. A spa may be installed within 5 ft of metal surfaces if metal surfaces are permanently connected by a minimum No. 6 AWG solid copper bonding conductor attached to the wire conductor on the terminal box that is provided for this purpose. (National Electrical Code ANSI/NFPA 70)
- This appliance is provided with a Ground-Fault Circuit Interrupter near the spa pack. Before each use, with the plug connected to the power supply and with the unit operating, push

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the Test Button. The unit should now operate normally. If the

interrupter fails to operate in this manner, there is a ground current flowing indicating the possibility of an electric shock. Disconnect the plug from the receptacle (for 110 volt spa) until the fault has been identified and corrected.

- 7. (For permanently installed units with GFCI) This appliance is provided with a ground-fault circuit-interrupter on front panel of the spa system. Before each use and with the unit operating, push the test button. The unit should stop operating and the reset button should appear. Push the reset button. The unit should now operate normally. If the interrupter does not perform in this manner, a ground current is flowing indicating the possibility of an electric shock. Disconnect the power until the fault has been identified and corrected.
- 8. Install to provide drainage of compartment for electrical components.
- 9. <u>Danger-Risk of Electric Shock.</u> Install at least 5 feet (1.5M) from all metal surfaces.
- 10. <u>Danger-Risk of Electric Shock.</u> Do not permit any electric appliance, such as a light, telephone, radio, or television, within 5 feet (1.5m) of a spa or hot tub.
- 11. (For all units) To reduce the risk of injury:
- A. The water in a spa or hot tub should never exceed 40 degrees C (104 degrees F). Water temperatures between 38 degrees C (100 degrees F) are considered safe for a healthy adult. Lower water temperatures are recommended for extended use (exceeding 10-15 minutes) and for young children.
- 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

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or hot tub water temperatures to 30 degrees C (100 degrees F).

- C. Before entering a spa or hot tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulation devices may vary as much as plus or minus 3 degrees C (5 degrees F).
- D. The use of alcohol, drugs, or medication before or during spa or hot tub 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 or hot tub.
- F. Persons using medication should consult a physician before using a spa or hot tub since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
- 12. The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code, ANSI/NFPA 70-1987. The disconnecting means must be readily accessible to the tub occupant but installed at least 5 feet (1.5M) from the tub water. Hypothermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 F. The symptoms of hyperthermia include dizziness, fainting, drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include (1) unawareness of impending hazard, (2) Failure to perceive heat, (3) Failure to recognize the need to exit spa, (4) Physical inability to exit spa, (5) Fetal damage to pregnant women, and (6) Unconsciousness resulting in a danger of drowning.

<u>WARNING:</u> The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

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13. Audio/Video Equipped Units: The instruction manual for

spas equipped with audio/video components shall be provided with the following or equivalent:

 CAUTION-Risk of Electric Shock. Do not leave compartment door open.

 CAUTION-Risk of Electric Shock. Replace components only with identical components.

DO NOT operate the audio/video controls while inside the spa

 WARNING-Prevent Electrocution. Do not connect any auxiliary components (for example, cable, additional speakers, headphones, additional audio/video components, etc.) to the system.

 These units are not provided with an outdoor antenna; when provided, it should be installed on accordance with Article 810 of the National Electrical Code, ANSI/NFPA 70.

 DO NOT service this product yourself as opening or removing covers may expose you to dangerous voltage or other risk of injury. Refer all servicing to qualified service personnel.

When the power supply connections or power supply cord(s)
are damaged; if water is entering the audio/video
compartment or any electrical equipment compartment area; if
the protective shields or barriers are showing signs of
deterioration; or if there are signs of other potential damage to
the unit, turn off the unit and refer servicing to a qualified
service personnel.

 This unit should be subjected to periodic routine maintenance (for example, one every 3 months) to make sure the unit is operating properly.

### **Site Selection**

**IMPORTANT:** Site selection and preparation are your responsibility. Carefully read these instructions and consult your authorized Infinity Spa dealer if you have any questions.

Manufacturer recommends a poured, reinforced concrete slab with a minimum thickness of 5 inches. Wood decking is also acceptable provided it is constructed so that it meets the requirements outlined above. The spa must be installed in such a manner as to provide drainage away from the spa. Placing the spa in a depression without provisions for proper drainage could allow rain, overflow and other casual water to flood the equipment and create a wet deck. Install so as to permit access to the equipment, either from above or below, for servicing. Make certain that there are not any obstructions which would prevent removal of the cabinet side panels and access to the jets components, especially on the side with the equipment bay doors. If the allocated site appears to be unstable or unsafe, have it checked by a building contractor.

#### Site

Select a level surface so that the water is level and weight distribution is maintained equally. Any deck, patio or floor with adequate support should be suitable to carry the weight of the spa filled with water and people. To determine if your spa site can withstand the weight of the tub, water, and bathers, multiply the number of gallons required to fill your spa times 8(water weight approximately 8 lbs per gallon) then add the weight of the Spa and the bathers to determine the total weight.

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You probably have a spot picked out for you new spa, whether it's indoors or outdoors, on a patio or on a deck. Just make sure you check the following:

- Always put your spa on a structurally sound, level surface.
   A filled spa can weigh a great deal. Make certain that the location you choose can support the weight of your filled spa.
- Don't forget to level your spa before filling it.
- Locate your equipment compartment, which houses all of the electrical components, in a place where water will drain away from it. Allowing water into the equipment compartment can damage the electronics, or may result in tripping your houses circuit breaker.
- Leave yourself easy access to the circuit breakers in the sub-panel (230 volt models), or to the interrupter switch on the end of the power cord (115 volt models).
- Never let water get into the sub-panel (230 volt models), into the interrupter switch (115 volt models), or into the electrical outlet that your spa is plugged into. Your 115 volt Infinity spa will come with a protective box designed to keep out rain and water from sprinkler systems. Your 230 volt spa's sub-panel is rain tight when installed correctly with the door closed.
- Leave access to the equipment compartment for periodic spa care and maintenance.

The spa should be placed a minimum of 3 feet from all structures to allow access to all sides for servicing and repair. If the spa cannot be serviced and repaired due to unaccessibility of sides, it is the customer's obligation to have tub drained, moved, and placed in accessible site.

### Start - Up Instructions

Always refill spa through one filter housing to purge any trapped air from pump intakes. Failure to do so may cause air to be trapped in wither pump #1 or the circulation pumps intake creating an (air lock), preventing either pump from circulating water. Insure both shutoff valves are fully open. Re-install filter cartridge, filter housing assembly and lid. Make sure filter cartridge is clean before installing.

### Filter Housing Assembly

Remove filter lid and rotate top filter housing counterclockwise and remove assembly. Remove filter cartridge upward, and inspect element for cleanliness. The proper way to fill your spa using a common garden hose is with cartridge element removed. Once spa is filled with water 1" below pillows, re-install filter cartridge and housing assembly locking it back in place replacing filter lid.

### **Fiberoptic Lighting**

All replacement lighting must be provided by Infinity Spas or J & J Electronics. Warranty will be void with any other replacement.

### **Draining and Refilling Spa**

### Draining:

Turn the power off to the system by turning off the GFCI breaker. Remove the drain cap from the drain valve and attach a garden hose to the drain bib. Turn the drain bib counterclockwise to open and allow water to drain. Close drain bib by gently turning clockwise (carefully and do not over-tighten) and install drain bib cap.

### Filling:

Water level is centered in area of weir door or 1 inch above extended skimmer opening. Never fill past the recommended level. Check to see if all slice valves are open. The slice valves should have the handles pulled out as far as possible when open. The drain bib should be closed and drain cap installed. Fill your spa with water by removing you filter lid (all models may not have a lid) and place the garden hose into the filter housing. This will help prevent air from being trapped in the plumbing lines commonly known as an <u>air lock</u>.

### **Jets, Valves and Air Controls**

#### Jets

The jet inserts in the spa that have a textured feel are adjustable allowing you to increase or decrease the water flow by turning the jet face clockwise or counterclockwise. This makes it easier to get the right pressure needed in the right areas. Jets with a smooth face are not adjustable. Please try adjusting the jets to acquire the proper technique.

### Slice Valves

These valves allow removal of equipment without having to drain the spa. The T-handles should always be in the open position, allowing water flow before operating the spa. The slice valves are located on the intake and discharge sides of the pump(s) they will be placed down in closed position.

### Air Control Valves

Turning counterclockwise increases the airflow and the pressure of the jets. Turning valve clockwise will control the air supply for less pressure. All air Control Valves are located on the top of the spa and used to control the amount of air that mixes with the water flow of the jets.

### Waterfall Valve

By turning the handle counterclockwise the water flow will decrease. By turning the handle clockwise, the water flow will increase. Some models are not equipped with this option. The Waterfall Valve is located at the top of the spa and is similar to the air control valve.

### Diverter Valve

This valve allows you to increase or decrease pressure (by turning handle from side to side) in certain areas of the spa. The diverter valve can balance jet pressure throughout the spa. Some models may not be equipped with this option. The Diverter Valve is located on the top of the spa and is large in size to left corner of keypad. Diverter control can only be moved when the pump(s) are turned off. Otherwise, damage will occur to the diverter control

### **General Maintenance**

Every two to five months, drain your spa, clean with spa multipurpose cleaner (found in your chemical maintenance kit) and then polish with a silicone sealant polish.

To temporarily remove foam, apply anti foaming agent to foamy areas. To correct the condition, be sure the water is balanced. Add dirt neutralizer and a sanitizer.

Be sure to add a metal build up inhibitor each time you are refilling your spa. Shock treat the water with a non-chlorine shock each week.

It is important to use scale and stain inhibitor weekly to prevent calcium deposits from damaging your spa and equipment. If this happens, it could void the warranty. Refer to your chemical handbook for further information on water chemistry and troubleshooting.

### DRAINING THE WATER

Locate drain hose near or around the equipment. Remove cap and attach garden hose. Open the back valve on hose bib to drain spa.

#### FILTER MAINTENANCE

At least once a week, check and clean the skimmer basket and weir to insure proper filter flow. Remove leaves, foreign matter

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and debris when present. It is very important to maintain your spa filter cartridge clean and free of particles that can obstruct water flow. A clean filter will permit the hydrotherapy system to function properly and also allows more efficient filtering.

Depending on how frequently your spa is used, we recommend cleaning the spa filter cartridge every four to six weeks. If this is not done, the filter may clog and restrict water flow, which causes inadequate filtration and poor jet performance.

### **Electrical Requirements and Servicing**

The Spa shall be hooked up by a licensed electrician and observing all municipal codes. Codes may vary from state to state. Check with a local electrician to find out wiring requirements for your area.

Minimum specifications: A # 6/3 wire (this is a 4 wire system as the ground wire is not referred to) making up a #6 Black (hot), a #6 Red (hot), a #6 White (neutral), and a #6 Green (ground). A 60 amp 240 volt breaker for 3 pump hot tubs and 50 amp 240 volt breaker for all other 240 volt applications. A corresponding GFCI either 60/50 amp depending on electrical needs.

We recommend using a "square D" GFCI as wired in diagram.

**IMPORTANT NOTICE:** The electrical wiring if this spa must meet the requirements of the National Electrical Code (NEC) and any applicable state or local codes. The electrical circuit must be installed by a qualified electrician and approved by a local building/ electrical inspection authority.

- 1. This spa must be permanently connected (hard-wired) to the power supply. No plug-in connections or extension cords are to be used in conjunction with the operation if this spa. Supplying power to the spa which is not in accordance with these instructions will code both of the independence testing agency listings and the manufacturer's warranty.
- The power supplied to this spa must be a dedicated circuit with no other appliances or lights sharing the power provided by the circuit.
- 3. To determine the current, voltage, and wire size required, refer to section "Power Requirements" Wire size must be appropriate per NEC and/or local codes.
  - 4. We recommend type THHN wire.
- 5. All wiring must be copper to ensure proper connections. Do not use aluminum wire. When using wire larger than #6 (10mm2), add a junction box near the spa and reduce to short lengths of #6 (10mm2) wire to connect to spa.
- 4. The electrical supply for this product must include a suitably rated circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code. ANSI/NFPA 70. The disconnecting means must be readily accessible to the spa's occupant but installed at least 5 feet (1.5m) from spa water.
- 6. The electrical circuit supplied for the spa must include a suitable ground fault circuit interrupter (GFCI) as required by NEC Article 680-42.
- 7. To gain access to the spa's power terminal block, remove the screws and cabinet panel setting it aside, then remove the securing screws from the panel from the control equipment pack system.

- 8. Select the power supply inlet you want to use and remove the cabinet panel from the front of the spa to allow you to feed the cable through to the control box. Install the cable with connectors through the conduit.
- Connect wires, color to color, on terminal blocks,
   TIGHTEN SECURELY! All wires must be hooked up securely or damage could result.
- Install control box door panel with screws and re-install the cabinet side panels.

### Filter Maintenance

The filter(s) in your spa should be cleansed at least every 5-6 weeks, depending on spa usage. This will ensure that the water is being filtered properly, and there is no restriction in the filer due to dirt and grease build-up.

Cleansing the filter can be done easily using a Filter Degreaser solution and following the directions on the bottle. Soak filter in a degreaser and power wash with a garden hose. It is recommended to have a second filter, which can be cleaned between filter changes. This will enable you to quickly exchange the dirty filter with a clean filter and immediately start your spa up again.

Filter Removal: Your spa may have either of the two filter systems described. The most common filter is the top-load type. This style is round, approximately 8" in length located in the corner of the spa below the water level when the spa is full). To remove basket turn counterclockwise ¼ turn removing the basket and lid, re-install to turn lid clockwise to lock into place.

The other style filter would be similar to a pool skimmer, a front load filter system, square-shaped for a 1-pump system and rectangular on a 2-pump system. This skimmer door would be half in and half out of water when spa is filled to recommended level. To remove, lift weir door (face of filter housing) straight up, slide basket out of slotted track, turn filter counterclockwise about 3 full turns and lift out of housing. When re-installing cartridge filter (s), basket and weir door, you may find that the weir door will not fold back into the filter housing. Either the basket is not in its slotted track, the basket may be backwards (dimple side in first on 2 filter systems), and the face of filter housing with the weir door is not pushed down all the way, with it in its slotted track. The weir door must not be opened during operation of the spa.

Cleaning Filter (s): There are a few ways to clean your filter. A very effective way is to use a garden hose and nozzle with good water pressure. Start at the top of the filter spraying a side-to-side pattern downward, turning filter as necessary. It is recommended to clean filter (s) every month depending on activity in the spa. Speak to your dealer about other methods of cleaning spa filters. Replace your filter (s) about every 6 months depending on activity. If your spa stops heating, please check to make sure the filter (s) are clean and free of debris before contacting the dealer.

### Care of the Exterior

### Spa Shell

Your spa shell is made of acrylic. Stains and dirt generally will not adhere to the surface. Using a soft rag or a nylon scrubber should easily remove most dirt. Most household chemicals are harmful to your spa's shell. See your dealer for the best product to use. The only products which have passed the manufacture's test are Soft

Scrub and Windex. Sodium bicarbonate (baking soda) can also be used for minor surface cleaning. Always thoroughly rinse off any spa shell cleaning agent with fresh water.

**NOTES:** Iron and copper in the water can stain the spa shell if allowed to go unchecked. Ask your Infinity Spa dealer about a stain and scale inhibitor to use if your spa water has a high concentration of dissolved minerals.

The use of alcohol or any household cleaners other than those listed to clean the spa shell surface s NOT recommended. DO NOT use any cleaning products containing abrasives or solvents since they may damage the shell surface. NEVER USE HARSH CHEMICALS! Damage to the shell by the use of harsh chemicals are not covered under the warranty.

**IMPORTANT:** Some surface cleaners contain eye and skin irritants. Keep all cleaners out of reach of children and use care when applying.

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#### **Maintenance Free Cabinet**

Infinity Spa's consists of a rigid polymer that combines the durability of plastic with the beauty of redwood or gray looking cabinet. Cabinet will not crack, peel, blister, or delaminate. Cleaning consists of simply spraying the cabinet with a mild soap and water solution to remove any stains and residue.

### Chemicals

Chemicals are used to sanitize the water and to balance the pH level. This is done to maintain clear and sanitary water at all times. When the water chemistry is out of balance, a number of things can happen, many types of bacteria form inside the warm waters of your spa and inside the plumbing and fittings. For this reason, the sanitized level must be constantly monitored and adjusted. The pH level affects how well the sanitizer works and the acidity level of the water. The lower to 7.2 the Ph, the more effective the sanitizing agent will work, and last.

Bromine is the most common form of sanitizer. Bromine has been found to be very compatible with warmer waters in the spa environment. Bromine is the most widely used chemical as a sanitizer in spas. A pH level of 7.2-7.8 is considered a satisfactory level with 7.4 being the ideal level. At this level, your sanitizer works more effectively and the water is close to a neutral pH level. As the pH level rises a little, more chemicals are needed to effectively eliminate the bacteria. However, as the pH lowers to 7.0, the water becomes more acidic to the equipment and lends itself to the rapid growth of bacteria. The opposite is also true high Ph level have caustic reactions. Chemicals affect pH levels and improper levels can even give a false pH reading.

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Therefore, it is important to keep your chemical balance in check

as much as possible. Your warranty does not cover pH damage to your equipment such as cracking or peeling of jet housing. Continuous high Ph levels will cause sealing and will stop heater from working and very low Ph levels will cause trace metals in water and cause malfunctions.

#### Remember:

You cannot keep the chemicals perfectly balanced in a spa constantly. Don't try to keep everything in perfect order everyday. Check the chemical balance every two or three days. Maintain, as nearly as you can, an ideal level of sanitizer. Keep the pH level in the upper level of ideal range, somewhere around 7.4-7.8. If it drifts above this level, do not try to bring the level down rapidly.

A non-chlorine shock should be used a minimum of once per week to maintain accurate levels. Defoamer is available to reduce the foaming caused by high chemical levels. Be aware that too much Defoamer will cause cloudiness of the water. 1-inch Bromine tablet should be used in an adjustable floater for proper dispersal.

When water chemistry is unstable or water turbidity (cloudy water) is present, drain and re-fill Spa.

### **Ozonator**

First discovered in the 1840's, ozone has been used to treat drinking water for more than 90 years. Then in 1937, the Mohawk Cruiser Swim & Tennis Club in Bryam, NJ became the first commercial swimming pool in the United States to utilize an ozone-only oxidation and disinfecting system. Despite its long history of use as a drinking water oxidizer and sanitizer, ozone

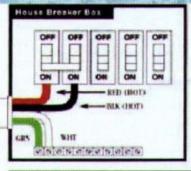
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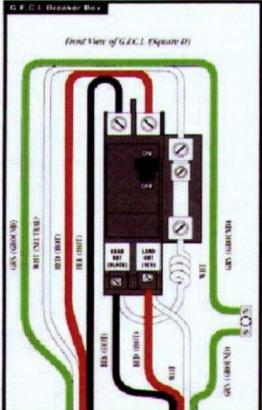
has only seen significant use in pools and spas in the U.S. in the last 15 to 20 years.

All spas are ozone ready, meaning the spa is plumbed and jetted for an ozone generator. Dealers can order for customers any spa with or without the ozone generator. This feature can be installed in minutes by the dealer's service technician.

Ozone has found a niche in the spa industry as a very popular sanitizer. It is a very fast acting and powerful sanitizer that destroys almost all types of bacteria that it comes in contact with. However, it is only effective for a few minutes, so the supply has to be constantly replenished. This is done by the use of an ozone generator. Although ozone is a very powerful sanitizer, it has no residual properties, which means that you must still use chemicals but the amount necessary will be greatly reduced. The low speed mode on pump 1, is the only mode in which the ozonator will operate.

One of the uses of the ozone that is accepted worldwide is the purification of drinking water. Much of today's bottled water has been purified with ozone and there are large water systems that use ozone to make drinking water safe. Ozone is an unstable form of oxygen and will react with oxidized bacteria much more rapidly than the chemicals we use. Ozone creates no residuals or by-products when they oxidize or eliminate bacteria. The ozone generator produces ozone that is immediately introduced into the spa water by an injector system. Therefore, you will spend less time cleaning and adding chemicals and will save in the amount of chemicals you use. This system provides a means of the interior of the spa with a soft cloth and warm water. This should adequately clean the acrylic surface. If necessary, apply a small amount of multi-purpose non-abrasive cleaner to the cloth to









Remove Power from the spa/hot tub and circuit breaker panel BEFORE working on electrical equipment! Failure to comply with this requirement, can lead to electrical shock and/or electrocution! This is a GENERAL GUIDE ONLY! USE this information at your OWN RISK!

Consult with or hire a licensed electrician before beginning any work of this type.

Any hot tub or spa installation must have a remote cut off switch, that must be mounted at least five feet away from, and within sight of the spa. Be sure that your remote cut off is NOT installed closer than this.

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# Pillows



### Stereo & TV Components





Stereo



Power Cord





Speaker





Protective TV Cover

Interior

Speaker



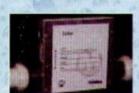
Adapter Speaker





TV Motor Switch

### Spa Pack



### Spa Keypad



240v keypad



120v keypad

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### Ozonator





### Filters



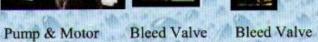




# Spa Pump









### Fiberoptic Components



F/O Power F/O Light Adapter



### Plumbing Components



Flex Pipe



Diverter Assembly



Waterfall Assembly



Diverter



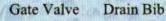




6 port manifold



10 port manifold





Skimmer with weir door



Filter Basket



Waterfall Knob



Air Diverter



Filter Basket



Suction Valve



Master Jet



Mini-Master Jet



Standard Jet



Master Jet Housing Housing



Standard Jet Mini Se-



Mini Jet



Standard Jet Housing

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# Cabinet Pieces



Slatted Synthetic Cabinet



Synthetic Cabinet Corner



Round



Cabinet

# Light Components



Light Assembly



Light

### Subzero Insulation





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#### Lite Digital Control System Quick Reference Card

When first powered up, you spa tub will automatically heat and maintain 100°F (38°C) until you change the temperature.

#### Temperature Adjustment

AN 18 (A Press the pad to display the temperature previously set. Pressing the pad a second time will cause the set temperature to increase or decrease depending on what direction was last chosen. Each successive press will change the set temperature in the direction. CO VER IN THE LABOR



Touch the pad once to turn on the spa light. Touch the pad again and the light and low-speed pump will be on. Press the pad a third time and the light and the highspeed pump will be on. Press the pad again to turn the light and high-speed pump off. The light and pump will automatically turn off after some period of operation.

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The low-speed pump starts automatically when the heater is turned on. If automatically activated, the low-speed pump cannot be turned off with the functions pad, however, the high-speed pump may be started.

The first filter cycle will start one minute after the spatub is powered up. The second filter cycle will begin twelve hours later. Filter cycle duration is preset for 3 hours. The first filter cycle will start one minute after the spa twelve hours later. Filter cycle duration is preset for 3 hours.

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#### Freeze Protection

If the high-limit sensor detects 40°F(4°C) at the heater, then the pumps automatically activate to provide freeze protection. The equipment stays on until the sensor detects 46°(7°C) at the heater. Freeze protection is enabled regardless of spa status. In colder climates, an optional additional freeze sensor may be added to protect against freeze conditions. See Infinity Spas for details.

#### Diagnostic Messages

- Overheat—(Spa is deactivated)— DO NOT ENTER THE WATER. The spa tub has shut down. Turn off all power to the spa tub and call your Dealer. To reset the spa tub, press any panel button.
- Flow-A pressure switch is not working. Call your dealer.
- Sensor-(Spa is deactivated)-The highlimit sensor or water temperature sensor is not working. Call your Dealer.

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#### Serial Standard Digital Control System-Quick Reference Card

Start-Up-Your spa control has been specifically designed so that by simply connecting the spa to its properly grounded source, the spa will function properly and safely at 100°(38°C). When your spa is first activated, the LCD will alternately flash "ECON", the currently spa temperature, and "FC" until the spa water is less than 45°(8°C) cooler than the set temperature. During each filter cycle, the spa will heat to the set / temperature.

Temperature Adjustment-The current temperatures is constantly displayed on the LCD. Press either up or down once to display the set temperature. (The set temperature is designated by a triangle in the upper left corner. Each time either pad is pressed again, the set temperature will increase or decrease depending upon which pad is pressed. After three seconds, the LCD will automatically display the current spa temperature.

Jets-Touch the jets pad once to activate the low speed and again for the high speed of the pump. Press the "Jets" pad again to turn off the pump. The low speed pump runs when the spa is heating, when a filter cycle is activated, or when a freezing condition is detected.

Light-Press the light pad to turn the spa light on and off. After a preset amount of time, the light will automatically turn off.

Standard and Economy Mode-Press mode to switch between modes. Economy mode only harts water during filter cycles. Standard mode maintains the desired temperature at all times.

Preset Filter Cycles - The first filter cycle begins 1 minute after the spa is energized. The second filter cycle begins 12 hours later. Filter duration is programmable at the topside panel for 2, 5 or 12 hours. To program, press the "Warm" or "Cool" pad, then the "Jets" pad. The default filter time is 2 hours. Continue pressing the "Warm" or "Cool" pad to cycle through the rest of the filter time options. Press the "Jets" pad again to exit programming. The low speed pump constantly runs during the filter times (unless the high speed pump is on: and the heater and ozone generator (if installed) will be enabled.

Freeze Protection -- If the high-limit sensor detects 40° (4°C) at the heater, then the pumps automatically activate to provide freeze protection. The equipment says on until the sensor detects 45°(7°C) at the heater. Freeze protections is enable regardless of spa status. In colder climates, an optional additional freeze sensor may be added to protect against freeze conditions.

#### Diagnostic Messages

Econ-Economy-The spa is in economy mode. Econ is flashed alternately with the current spa temperature and Cool until the spa is 45°(7°C) cooler than the set

OH-Overheat-(Spa is deactivated)-DO NOT ENTER THE WATER. If the spa water has reached 112°(45°C) remove the spa cover to cool the water. Overheating may occur if the filter cycle is set too long. At 110°(43°C), the spa should reset itself. If the highlimit sensor detect 118°(48°C) at the heater, the spa will shut down. When the heater cools to 110°(43°C), press any button to reset the spa. If the spa will not reset, then shut off power to the spa and call your dealer or service organization.

flo-Flow-(Flashing alternately with perature)-The filter needs cleaning. The water level may be low. Be sure flow valves are open.

flo-Flow-(Not flashing)-A pressure witch has malfunctioned. Contact your dealer or service organiza-

Cool-Cool-The spa water is more than 20°(11°C) cooler than the temperature last set. No action is required. Spa is functioning properly.

Ice Ice (Freeze Protection) If a freeze condition is detected, the pump(s) are automatically activated, This is a normal spa function, no corrective action is necessary. Freeze protection is enabled regardless of the spa's status.

Sal Sensor 1-(Spa is Shut Down)-The high limit sensor is not working. Call your dealer or service organization.

Sa3-Sensor 3-(Spa is Shut Down)-The main sensor in not working. Call you dealer or service organiza-

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#### Duplex Digital Control System Quick Reference Card

# Initial Start-Up

When your spa is first powered up, it will automatically heat and maintain 100°(38°C) until you change the set temperature.

#### Temperature Adjustment

Press the Set pad to display the temperature previously set. This set temperature is flashed on the display. In a few seconds, the numbers will stop flashing and the display will show the actual water temperature. Pressing the pad a second time will cause the set temperature to increase or decrease depending on what direction was last chosen. Each press to follow will change the set temperature in the same direction. If the opposite direction is desired, release the pad and let the display revert to the actual water temperature. Press the pad to display set temperature and again to make the temperature change in the desired direction.



San Carlo Andrews Press the Jets pad to activate the low speed, again for the high speed and once more to turn off the pump. After a preset period of time, the pump will turn off.



Light



Press the Light pad to turn the spa light on and off. The light will automatically turn off after a preset period of operation.

Preset Filter Cycles

Your spa will automatically filter itself twice a day. The first filter cycle will start one minute after the spa is powered up. The second filter cycle will begin twelve hours later. Filter cycle duration is 2 or 5 hours

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#### Freeze Protection

If the high-limit sensor detects 40°(4°C) at the heater, then the pump automatically activates to provide freeze protection. The equipment stays on until the sensor detects 46°(7°C) at the heater. Freeze protection is enabled regardless of spa status. In colder climates, an optional additional freeze sensor maybe added to protect against freeze conditions.

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### ssages Diagnostic Messages

Overheat Protection (Spa is shut down)-DO NOT ENTER THE WATER. If the spa water has reached 112°(45°C) remove the spa cover to cool the water. Overheating may occur if the filter cycle is set too long. At 110°(43°C), the spa should reset itself. If the high-limit sensor detect 118° (48°C) at the heater, the spa will shut down. When the heater cools to 110°(43°C), press any button to reset the spa. If the spa will not reset, then shut off power to the spa and call your dealer or service organization.

Flow Switch Detection A pressure switch is not working. Call your dealer or service organization.

Sensor-(Spa is shut down) The high-limit sensor or water temperature sensor is not working. Call your dealer or service organiworking. Call your dealer of service digala-zation.

LIMITATIONS

The Infinity Spas warranty is terminated if the spa has been subject to alteration, misuse, or abuse. Misuse or abuse is defined as but not limited by defined as but not limited to: use of spa in non-residential situation, water temperatures outside the range of 32 to 110 degrees, damage caused by clogged or dirty filters, damage of spa caused by the absence of a hard cover, damage of components from improper pH, use of any type of acid, water left standing or water chemical imbalance. This warranty is components from improper pri, use or any type of acid, water cat starting or made the cat starting or made by anyone other than an authorized agent of Infinity Spas. This

terminated if any repairs have been attempted or made by anyone other than an authorized agent of Infinity Spas. This warranty is terminated if any extra components area installed after the manufacturer date.

DISCLAIMER

No one has the authorization to add, take away, or make any promise of performance or representation not included in Infinity's spa warranties that accompany each Infinity Spa. Infinity would not be taken upon to go by any other warranty. There are no additional warranties, express or implied, which extend beyond the terms of the warranty.

Disclaimer:

The flability of the Manufacturer under this limited warranty, of any, shall not exceed the

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The liability of the Manufacturer under this limited warranty, of any, shall not exceed the original amount paid for the original product. Spa owner is required to provide adequate access to the spa for any repair or inspection. Infinity Spas will not be liable for loss of use of the spa or other incidental or consequential costs, expenses or damages, which may include but are not limited to water damage, or the removal of a permanent deck or other custom fixture. Under no circumstances shall we or any of our representatives be held liable for injury to any person or damage to any property, however arising. This warranty gives you specific legal rights and costs expenses or damages, which may include but are not limited to water damage, or the removal of a permanent deck or other custom fixture. Under not circumstances shall we or any of our representatives be faith for injury to any person or damage to any property, however, arising. This warranty gives you specific logal rights and you may have no other rights. No agent, clearly, Service Company, or other parts are personative is authorized to change, modify, or extend the terms of this warranty in any manner what so ever. Infinity Spas is not responsible for the removal or placement of a spa under any circumstance.

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### Full Feature Keypad Quick Reference

To change between these modes press the Temp button then the Light button:

EC- Economy mode- only heats at filter cycle

SL- Sleep mode- keeps low heat for freeze protection

ST- Standard Mode- keeps full temp all the time

To change these, press the Temp button then the Jets button closest to the display screen.

F2-F8: Filtration Cycles- how many times the spa filters per 12-hour cycle (F2=once every 12 hours; F4=twice every 12 hours; F6=three times every 12 hours; F8=every 1.5 hours every 12 hours)

FC: Constant Filtration Mode- filters all the time, will not shut off

Note: A single filtration cycle can last up to 2 hours.