

## North American Edition

**Congratulations on your decision to enjoy a Pacific Spa!**

**Welcome to the Pacific Spas family!**

Your Pacific Spa has been engineered and built to the highest standards. Enjoy it regularly and experience the wellness, serenity and satisfaction that you've wanted.

The information and instructions set out in this Owner's Manual are provided to help you fully use your Pacific Spa and care for it as easily as possible.

We ask that you read this manual thoroughly. Your Pacific Spas dealer will be happy to assist if you have any questions.

Your comments and suggestions are always appreciated. We welcome all correspondence and want you to share your experiences with us.





## **Safety Instructions**

**Read all of the instructions in this manual before you install or attach any electrical power to your Pacific Spa.**

This manual provides safety tips, installation instructions, operating directions, and maintenance procedures to help ensure the safety of those enjoying your spa, and to protect it from potential damage. Please follow these instructions carefully and retain this manual for future reference.

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## Owner's Record

Please take a moment to write down the following information from your Pacific Spa in the space provided below. This information may be needed if you wish to acquire additional items for your spa or if service is required. Please consult with your dealer to ensure the accuracy of this information.

**Date Purchased:** \_\_\_\_\_

**Date Installed:** \_\_\_\_\_

**Dealer:** \_\_\_\_\_

**Dealer Address:** \_\_\_\_\_

**Dealer Telephone:** \_\_\_\_\_

**Spa Model:** \_\_\_\_\_

**Serial No.:** \_\_\_\_\_



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## Safety Warnings and Precautions



**READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY!**

### IMPORTANT SAFETY INSTRUCTIONS (UL STANDARD)

**(1) WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

**(2) WARNING:** A grounding wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4mm<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 (1.5m) of the unit.

**(3) DANGER: Risk of Accidental Drowning.** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this spa unless they are supervised at all times.

**(4) DANGER: Risk of Injury.** The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the spa if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.

## Safety Warnings and Precautions

**(5) DANGER: Risk of Electric Shock.** Install at least 5 feet (1.5m), 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 (bonded) 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 box.

**(6) DANGER: Risk of Electric Shock.** Do not permit any electrical appliance, such as a light, telephone, radio, television, etc. within 5 feet (1.5m) of a spa unless such appliances are built-in by the manufacturer.



**(7) 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). If pregnant, please consult your physician before using a spa.



## **Safety Warnings and Precautions**

c) Before entering the spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices may vary (+/- 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 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 STANDARD)**

**(For Canadian spa owners, in conjunction with UL Standard)**

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



## Safety Warnings and Precautions



**(a)** READ AND FOLLOW ALL INSTRUCTIONS.

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

**(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 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 3m (10 feet) of the spa shall be bonded to the equipment grounding buss with copper conductors not smaller than No. 6 AWG.



## Safety Warnings and Precautions

**(e) WARNING:** WATER TEMPERATURE IN EXCESS OF 38°C (100°F) MAY BE INJURIOUS TO YOUR HEALTH.

**AVERTISSEMENT:** IL PEUT ETRE DANGEREUX POUR LA SANTE DE SE PLONGER DANS DE L'EAU A PLUS DE 38°C (100°F).

**(f) SAVE THESE INSTRUCTIONS.**



**RISK OF INJURY, HEALTH HAZARD AND CAUTIONS!**

**WARNING:** Children should not use spa without adult supervision.

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



## Safety Warnings and Precautions

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

**AVERTISSEMENT:** NE PAS UTILISER LA CUVE DE RELAXATION SI LES GRILLES DE PRISE D'ASPIRATION NE SONT PAS TOUTES EN PLACE; POUR EVITER QUE LES CHEVEUX OU UNE PARTIE DU CORPS SOIENT ASPIRES.

**WARNING:** People using medication and/or having an adverse medical history should consult a physician before using a spa. Any persons with heart or circulation conditions or on prescribed medication should consult their physician before using a spa.

**AVERTISSEMENT:** LES PERSONNES QUI PRENNENT DES MEDICAMENTS OU ONT DES PROBLEMES DE SANTE DEVRAIENT CONSULTER UN MEDECIN AVANT D'UTILISER UNE CUVE DE RELAXATION

**WARNING:** People with infectious diseases should not use a spa.

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



## Safety Warnings and Precautions

**WARNING:** To avoid injury, exercise care when entering or exiting the spa.

**AVERTISSEMENT:** POUR EVITER DES BLESSURES, SOYEZ PRUDENT EN ENTRANT ET SORTANT DE LA CUVE DE RELAXATION.

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

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

**WARNING:** Pregnant or possibly pregnant women should consult a Physician before using a spa.

**AVERTISSEMENT:** LES FEMMES ENCEINTES, QUE LEUR GROSSESSE SOIT CONFIRMEE OU NON, DEVRAIENT CONSULTER UN MEDECIN AVANT D'UTILISER LA CUVE DE RELAXATION.



## Safety Warnings and Precautions

**WARNING:** Water temperature in excess of 38 °C (100 °F) may be injurious to your health.

**AVERTISSEMENT:** IL PEUT ETRE DANGEREUX POUR LA SANTE DE SE PLONGER DANS DE L'EAU A PLUS DE 38 °C (100 °F).

**WARNING:** Before entering the spa, measure the water temperature with an accurate thermometer.

**AVERTISSEMENT:** AVANT D'UTILISER UNE CUVE DE RELAXATION MESURER LA TEMPERATURE DE L'EAU A L'AIDE D'UN THERMOMETRE PRECIS.

### Safety Warnings and Precautions

**WARNING:** Do not use a spa immediately following strenuous exercise.

**AVERTISSEMENT:** NE PAS UTILISER LA CUVE DE RELAXATION IMMEDIATEMENT APRES UN EXERCICE FATIGANT.



## Safety Warnings and Precautions

**WARNING:** Prolonged immersion in a spa may be injurious to your health.

**AVERTISSEMENT:** *RESTER TROP LONGTEMPS DANS LA CUVE DE RELAXATION PEUT ETRE DANGEREUX POUR LA SANTE.*

**WARNING:** Do not permit electric appliances (such as lights, telephone, radio, television, etc.) within 1.5m (5 feet) of this spa unless such appliances are built-in by the manufacturer.

**AVERTISSEMENT:** *NE PAS PLACER D'APPAREIL ELECTRIQUE (LUMINAIR, TELEPHONE, RADIO, TELEVISEUR, ETC.) A MOINS DE 1.5M DE LA CUVE DE RELAXATION, SAUF SI INSTALLÉ À LA MANUFACTURE.*

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

**ATTENTION:** *LA TENEUR DE L'EAU EN MATIERES DISSOUTES DOIT ETRE CONFORME AUX DIRECTIVES DU FABRICANT.*

**SAVE THESE INSTRUCTIONS!**



## **Safety Warnings and Precautions**

### **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 37°C (98.6°F). The symptoms of hyperthermia include drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include:

- Unawareness of impending hazard;
- Failure to perceive heat;
- Failure to recognize the need to exit spa;
- Physical inability to exit spa;
- Fetal damage in pregnant women; and
- Unconsciousness and danger of drowning.



## Safety Warnings and Precautions

**WARNING:** THE USE OF ALCOHOL, DRUGS, OR MEDICATION CAN GREATLY INCREASE THE RISK OF FATAL HYPERTHERMIA.

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

**NOTE:** Never bring or operate any electrical appliances from inside the spa or when you are wet unless the appliances are built-in by the manufacturer. To maintain safe and clean water and prevent possible damage to spa components proper chemical maintenance of spa water is necessary. Use only dealer approved accessories and recommended spa chemicals and cleaners. Enter and exit the spa slowly and carefully, wet surfaces can be very slippery (use only the spa front access steps). Use and lock the vinyl cover when the spa is not in use (whether it is empty or full). Use the straps and clip tie downs to secure the cover when not in use (lock the cover). This will help to discourage unsupervised children and other persons or/and animals from entering the spa. Do not stand, sit, or lie on the cover. Do not leave a spa uncovered or unattended. Follow the Spa Maintenance recommendations.



## Starting Your Pacific Spa (in Above Freezing Temperature)

(Starting Your Pacific Spa in Below Freezing Temperature – contact your dealer.)

After your spa has been moved to the final installation site and wired correctly (see electrical requirements), follow these instructions for start-up.

THE FOLLOWING INSTRUCTIONS MUST BE READ AND FOLLOWED EXACTLY TO ENSURE A SUCCESSFUL START-UP OR REFILL.

The same steps apply each time the Spa is emptied and refilled:

**1. Ensure electrical power is off (main breaker and GFCI).**

**2. DO NOT CONNECT POWER TO AN EMPTY SPA.** Power to the spa automatically activates the electrical equipment (electronic controls, heater, circulation pump etc.); serious damage to the equipment components may result and this is a non-warranty component failure.





## Starting Your Pacific Spa

3. **DO NOT FILL WITH HOT WATER** (above 95 °F/ 35 °C)!

(Unless starting up spa in below freezing conditions then hot and cold can be mixed to max. 100 °F and added to spa once 12" of cold water has been added to spa first. (Call your dealer for more details) Note: the default set point water temperature is 95 °F.

4. Every Pacific spa has been tested during the manufacturing process to ensure functionality, performance, reliability and complete customer satisfaction. As result a small amount of water may have remained in the system after testing. Clean the interior of the spa of any remaining debris. **Completely wipe interior of the spa with a wet sponge and / or a soft rag.** Do not use any abrasive cleaner, metal brushes, or tools. Windex or isopropyl alcohol will remove most stains. Call your dealer for more details.

5. Before filling your spa for the first time, remove the pump compartment door; **ensure hose bibb/drain tap is closed and check to ensure that the unions on either side of the pump are hand-tight and the knife valves (if installed) are fully open.**



## Starting Your Pacific Spa

Close all drains and fill the spa with water by removing the filter lid, weir, skimmer basket, and filter. Then insert the end of a garden hose into the filter canister **(this will avoid airlocks – do not fill the spa by pouring water into the shell)** and begin filling the spa to the recommended level. The water level of the spa should be approximately one inch above the highest jet in the spa, at least 2/3's of the way up the opening of the skim filter. **Low water levels can cause damage to the pump and heater unit.**

Check all connections for leaks and hand tighten union fittings as required. The equipment may shift slightly during transportation, making hand tightening of the union fittings difficult. Should this occur, simply loosen or remove the screws securing the pump and module to the base, and shift the components into alignment so that the unions can be hand tightened.

**Note:** Never fill your spa with soft water. Soft water makes it impossible to maintain the proper water chemistry and may cause the water to foam, which will ultimately harm the finish of the spa and void your warranty.





## Starting Your Pacific Spa

6. Install the filtering equipment (Reinstall the filter, skimmer basket, weir, and filter lid once the spa is filled) and check to ensure that the filter is installed correctly.

7. **AFTER** the spa has been filled with water (Only when water level is adequate to avoid pump damage) and the equipment compartment door is secured, power must be applied to the spa.

- Activate power to the sub panel from the main house panel first. (Turn on circuit breaker at the main electrical panel).
- Open the door of the electrical sub panel and reset the GFCI breakers.

The breaker should be tested prior to each use:

Push the “**TEST**” button on each GFCI breaker, and observe it click OFF.



## Starting Your Pacific Spa

Wait 10 seconds, then push the breaker switch to the OFF (down) position (completely disengaged), then push the breaker switch to the ON (up) position. Close and secure the sub panel door.

Note: Do not expect to feel hot water immediately coming from the jets. The highly efficient heaters are designed to provide cost-saving, low level heating. Initially the spa will take approximately 7 – 8 hours to reach the set point. This performance figure is based on an average sized; fully insulated spa with a 4" thick insulated spa cover and depends on spa capacity, fill water temperature and ambient temperature.

**THIS NEXT SECTION IS MEANT FOR SEL SERIES SPA PACKS AND SHOULD BE PERFORMED BY THE DEALER OR SPA TECHNICIAN WHEN INSTALLING THE SPA AND POWERING IT UP FOR THE FIRST TIME. FOR CONNECTIONS & STARTING PROCEDURES FOR S & SE SERIES SPAS PLEASE SEE PAGE 138.**

## Starting Your Pacific Spa – SEL Series

When the spa is powered up, the electronic system/spa pack will automatically activate. You must

<u>Breaker</u>	=	<u>Pack</u>
60	=	48
50	=	40
40	=	32
30	=	24

set the electronic system/spa pack to the correct GFCI amperage draw used for the spa. This is done by pressing the “Select” key on the spa pack once until “Br” is shown on the display, then use the change button to set the correct amperage draw setting for the corresponding breaker size. For example, under revision 2, the correct setting for a 50 amp GFCI breaker is 40 (which

represents the maximum allowable amperage for that breaker allowing a 20 percent margin).



**NOTE:** Display = Max Amp Draw  
**NOT** GFCI Breaker size!

**NOTE:** If breaker immediately trips, verify that the pack amperage is set up correctly!



## Starting Your Pacific Spa – SEL Series

If customer is limited to a smaller breaker size than recommended, set the spa pack to a lower amperage setting and the pack will restrict the heater and then the pumps as required to meet the maximum amperage draw allowed for the breaker.

The remaining setting is the **Low Level setting**, which sets the spa equipment configuration, and essentially tells the spa pack the number and type of components that are attached to it. This is set at the factory when the spa is being tested. The spa pack uses a built in amp meter to self diagnose and has a memory which retains the correct amperage of each component, based on available voltage.

**It is recommended that the memory be cleared and reset once the spa is installed.**

### 2 SPEED SYSTEM

LL	CONFIG	Spa Configuration
1	1 Config 1	1 Pump
3	3 Config 3	1 Pump + Blower
5	5 Config 5	2 Pumps
7	7 Config 7	2 Pumps + Blower
9	9 Config 9	3 Pumps
11	11 Config 11	3 Pumps + Blower

### CIRC. PUMP SYSTEM

LL	CONFIG	Spa Configuration
2	2 Config 2	1 Pump
4	4 Config 4	1 Pump + Blower
6	6 Config 6	2 Pumps
8	8 Config 8	2 Pumps + Blower
10	10 Config 10	3 Pumps
12	12 Config 12	3 Pumps + Blower



## Starting Your Pacific Spa – SEL Series

**Clearing the memory will force the spa pack to measure the amperage based on the spas final installed location and not the amperage from having been tested at the factory.**

- Hold down the Select key until LL is displayed
- Press and release the change key until - - (two dashes) appears.
- Press and release the select key

The memory is now cleared.

### **To reset Low Level Programming**

- Hold down the Select key until LL is displayed
- Press Change Key until the correct number appears
- Then Press the Select Key again to reset the pack.

The spa pack will now go through a process of turning on and off components to measure the correct amperage for each component. The results will be displayed on the topside control. Do not use the pumps during this cycle as it may affect the recorded amperage.





## Starting Your Pacific Spa – SEL Series

The duration of complete start-up system is 5-6 minutes. In the first 35 seconds, the system will be in auto-diagnosis step; checking the power (voltage, correctness of wiring, fuses etc.). Do not attempt to use the jets or other functions during this time. At the end of the first step, a message will appear on the display and LED indicators situated on the front of spa pack.

A successful setup of the spa pack results in an "OK" message and the green LED on, otherwise an error message will appear (wrench symbol and red LED on). In the second step, the electronic system will check all equipment (jet pumps, blower, circulation pump, ozone generator, etc.).

If the water temperature is more than one degree below the set temperature, the heating system will automatically activate and heat the spa water to the set temperature (**default set point water temperature is 95 F**).

You may raise or lower the water temperature by pressing the "(▲▼)" button on the control panel.

## Starting Your Pacific Spa – All Series

The temperature is displayed on the control panel with a potential variance of 1°F (0.5°C). If the temperature read is invalid (such as at startup when the temperature is still unknown), the display will show \_ \_ \_ (3 flashing dashes). Wait until the water temperature appears and then set the desired value. The system can take up to thirty minutes to begin heating if it senses an airlock or a lack of flow. If the system has not begun to heat after thirty minutes from first being turned on, activate the jet pump at high speed to clear any potential airlocks and restart the system by turning the breaker off and on again.



*In.k450 06PAN3400*



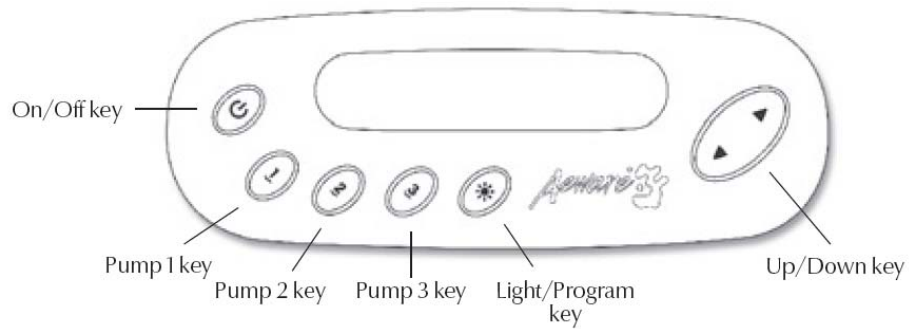
*In.k600 06PAN3600*

## S & SE Series Controls in.k450

Compact full-featured keypads that gives complete control to wet fingers

Pacific's in.k450 keypad features a large LCD display and raised keys that you control directly from the spa side.






### In.k450 Top Side Control for 1, 2 and 3 pump system








## S & SE Series Controls in.k450

### Icons

Icons are useful in determining spa status:

Icon	Description
	<p><i>Fast animation:</i> High speed output on  <i>Slow animation:</i> Slow speed output on  <i>Off:</i> Pump/Accessory off</p>
	<p><i>Fast animation:</i> High speed output on  <i>Slow animation:</i> Slow speed output on  <i>Off:</i> Pump/Accessory off</p>
	<p><i>Fast animation:</i> High speed output on  <i>Slow animation:</i> Slow speed output on  <i>Off:</i> Pump/Accessory off</p>
	<p><i>All segments on:</i> High intensity light/fibre  <i>Inner circle and long rays:</i> Medium intensity light/fibre  <i>Inner circle and short rays:</i> Low intensity light/fibre  <i>Off:</i> Light/Fibre off</p>
	<p><i>On:</i> Temperature shown is the set point  <i>Off:</i> Temperature shown is the current spa temperature</p>

	<p><i>On:</i> Heater is on  <i>Blinking:</i>                  - when a call for heat exists, but output cannot be turned on yet                  - when heating has finished heating, during cool down                  - when breaker rating would be exceeded if heater is turned on  <i>Off:</i> Heater is off</p>
	<p><i>On:</i> Filter cycle is in progress  <i>Blinking:</i> Filter cycle is suspended  <i>Off:</i> No Filter cycle in progress</p>
	<p><i>On:</i> SmartWinter mode is active  <i>Off:</i> SmartWinter mode is inactive</p>
	<p><i>On:</i> A problem has been detected, service required</p>
	<p><i>On:</i>                  - shows how much time is left before a pump/accessory is turned off                  - shows how much time is left before the end of Standby mode  <i>Flashing:</i> Last (leftmost) segment flashes, when less than 1/10 of time remains</p>

## S & SE Series Controls in.k450

### DISPLAY

#### 4-digit, 7-segment

- Time information is shown using AM or PM:



- Temperature information is shown in degrees F or C, depending on user choice



- Other programming information is also displayed here, as required

## S & SE Series Controls in.k450

### Spa functions

#### On/Off key

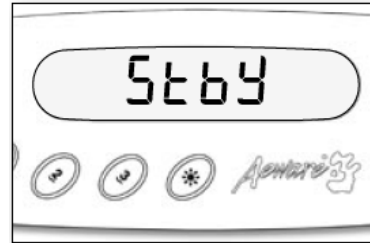
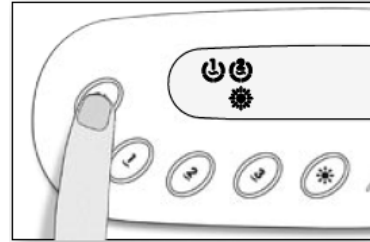


**Standby/Economy Mode:** Press the **On/Off** key once quickly to go into **Standby mode** which will pause all pumps\*. The progress bar will display the remaining time before the system automatically exits **Standby mode** (user can also exit Standby mode at any time by pressing again on the **On/Off**

key). Press and hold the **On/Off** key for 5 seconds to enter or leave **Economy mode** which will heat the spa 10 degrees F below the set point. The user can also exit **Economy mode** at any time by pressing again on **On/Off** key for 5 seconds).

In order to warn the user, the spa light will flash for a few seconds before the exit of Standby mode and it restarts the pumps. The "Stby" message is also displayed during Standby mode.

*\*The pump will stay turned on if there is a request for more heat to ensure flow.*

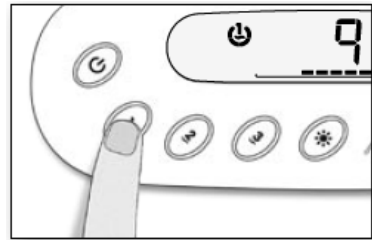


## S & SE Series Controls in.k450

### Pump 1 key

**1**

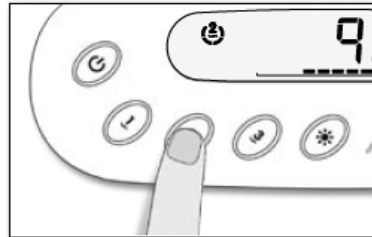
Press **Pump 1** key to turn Pump 1 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.



### Pump 2 key

**2**

Press **Pump 2** key to turn Pump 2 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

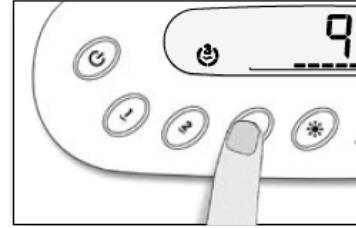




## S & SE Series Controls in.k450

### 3

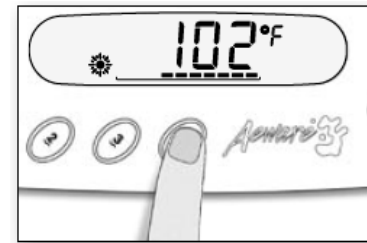
Press **Pump 3/Blower** key to turn Pump 3 on. Press a second time to turn Blower on. Press a third time to turn Pump 3 off. Press a fourth time to turn Blower off. A built-in timer automatically turns pump/ blower off after 20 minutes, unless pump/ blower has been manually deactivated first. **When using the blower it is important to keep your jets and air controls open so as not to restrict the flow of air and water or the blower may overheat.**



### Light key



Press **Light** key to turn light on at high intensity. Subsequent presses change light intensity. A last press turns light off. A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.



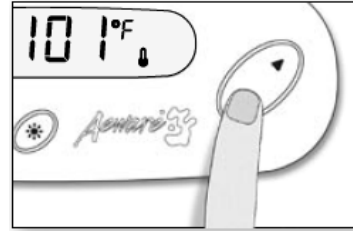
## S & SE Series Controls in.k450

### Up/Down keys



Use **Up** or **Down** key to set desired water temperature. The temperature setting will be displayed for 5 seconds to confirm your new selection.

The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!

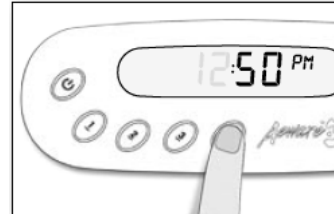


### Programming steps

#### Program key



Use **Program** key to display time or enter Programming menu by pressing and holding the key. In Programming mode, the following parameters can be set: time, filter cycle start time, filter cycle duration, filter cycle frequency, and temperature unit. **Note: Light key is also used as Program key.**

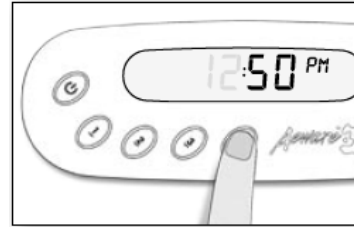


## S & SE Series Controls in.k450

### Setting the time

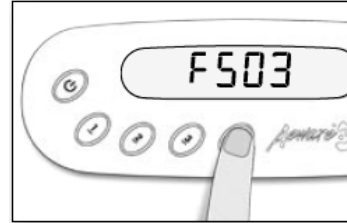
Enter Programming mode by holding Program key pressed down for 3 sec. The display will show the current time setting.

**Setting the hour:** Use **Up** or **Down** arrows to change hour setting (**AM/PM**).



### Setting filter cycle start time

To program the filter cycle, you must enter these parameters: the start time, duration and frequency. During a filter cycle, pumps run for one minute to purge the plumbing, and then Pump 1 runs for the programmed number of hours. Press **Program** key a third time. The display will show **FSxx**, with "xx" representing the starting hour. Use **Up** or **Down** key to change setting.

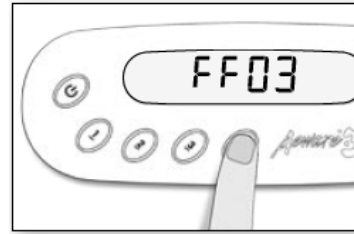


## S & SE Series Controls in.k450

### Setting filter cycle Duration

Factory default settings are 24 hours a day for circulation systems and 8 out of every 12 hours for one or two pump systems.

Press **Program** key a fourth time. The display will show **Fdxx**, with "xx" representing the duration in hours. Use **Up** or **Down** key to change setting.



### Filter cycle Frequency

Press **Program** key a fifth time. The display will show **FFxx**, with "xx" representing the number of filter cycles per day (up to 4).

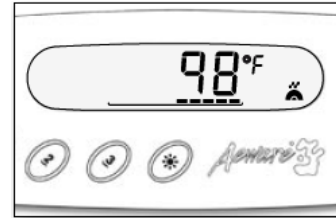
Use **Up** or **Down** key to change setting.

## S & SE Series Controls in.k450

### Setting temperature unit

Water temperature can be displayed in either Fahrenheit (°F) or Celsius (°C). Press **Program** key a sixth time. The display will show either °F or °C.

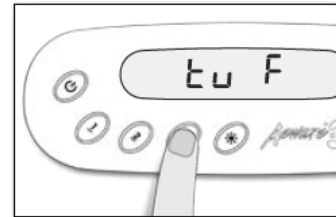
Use **Up** or **Down** key to change setting.



### Water temperature regulation

In a regulation cycle, the system first generates water flow through the heater housing and the plumbing, in order to ensure accurate water temperature readings as well as avoiding heater activation in dry conditions.

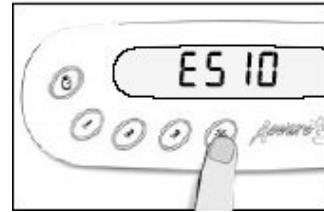
After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.



## S & SE Series Controls in.k450

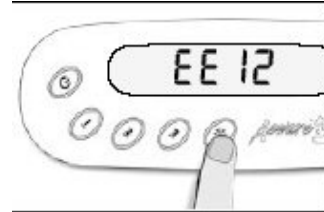
### Setting economy start time

Press **Prog.** key an eighth time. The display will show **ESxx**, with "xx" representing the starting hour. Use **Up** or **Down** key to change setting.



### Setting economy end time

Press **Prog.** key a ninth time. The display will show **EExx**, with "xx" representing the ending time in hour. Use **Up** or **Down** key to change setting.



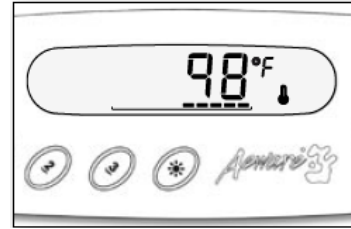
## S & SE Series Controls in.k450

### Cool down

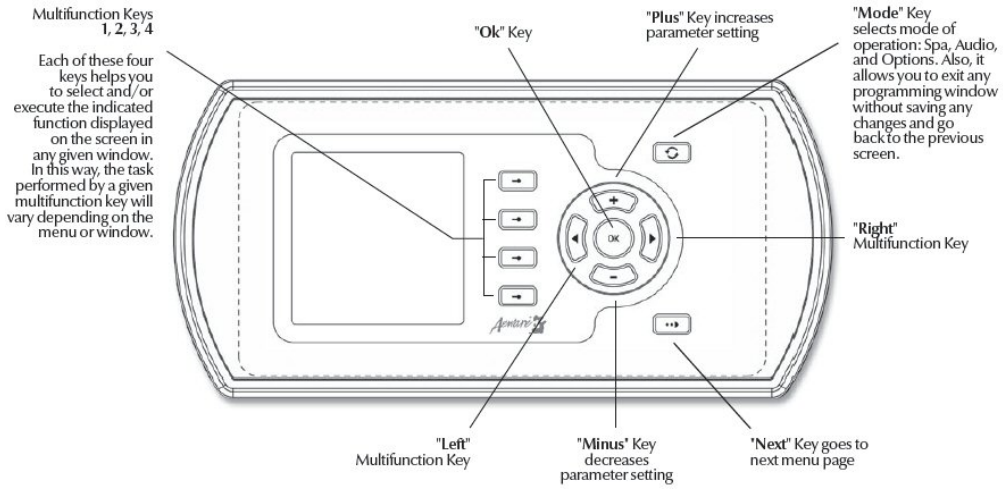
While performing these tasks, the heater is not allowed to turn on and its icon flashes. The heater is not allowed also to come on throughout the cool down period of the heater element.

### Smart Winter Mode

Our Smart Winter Mode protects your system from the cold by turning pumps on several times a day to prevent water from freezing in pipes.










## SEL Series Controls in.k600













## SEL Series Controls in.k600

Icon	Description
	<b>Heater icon</b> The "Heater" icon becomes animated when the heater is on.
	<b>Progress bar</b> A visual indication of the time remaining before an equipment is turned off or before the end of the standby mode.
	<b>Set Point icon</b> The "Set Point" icon automatically turns on when set point setting menu is activated. (SP message on display). It flashes when: 1- there is a call for heat and heater has not started yet, 2- heater has just turned off and element is cooling down or 3- if system is performing a check flow.
	<b>Standby icon</b> The Standby icon flashes when the standby mode is on.
	<b>Navigation icon</b> The navigation icon indicates the available active keys to navigate between options or screens within a given menu i.e.: +, -, Ok, Right or Left keys.
	<b>Lock icon</b> When the keypad is locked, the lock icon is displayed.
	<b>Hourglass icon</b> The Hourglass icon is displayed on the keypad screen when it asks you to wait.

## SEL Series Controls in.k600

Icon	Description
	<b>Light icon</b> The "Light" icon becomes animated when the light is on. The icon animation speed is proportional to the light intensity.
	<b>Pumps icons</b> The "Pump" indicator numbers light up and their icons become fast animated when pumps are in high speed, slow animated icons when pumps are in low speed.
	<b>Blower icon</b> The "Blower" indicator icon becomes animated when blower is on.
	<b>Service icon</b> A problem has been detected. Do not enter the water! Spa service is required.
	<b>Smart winter mode icon</b> The "SWM" icon automatically turns on when Smart winter mode is enabled. It blinks while performing a freeze protection purge.
	<b>Economy mode icon</b> The "Economy" icon flashes when Economy mode is on.
	<b>Filter Cycle icon</b> The "Filter Cycle" icon becomes animated when filter cycle is on. It flashes when filtering is suspended.
	<b>Waterfalls icon</b> The "Waterfalls" icon becomes animated when waterfall is on

## SEL Series Controls in.k600

### Main Modes

These menus allow access and control of the main devices controlled by the in.k600 keypad.

### Spa Mode

This menu allows control of the pumps and light as well as activation of diverse programming modes. Various icons become animated to let you know the present spa status.

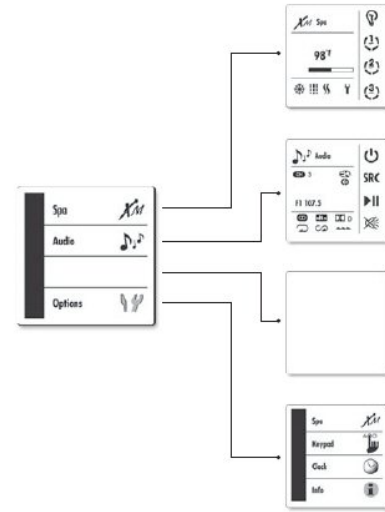
### Audio

This menu allows you to activate and control audio functions.

Future Release Features (To Be Determined)

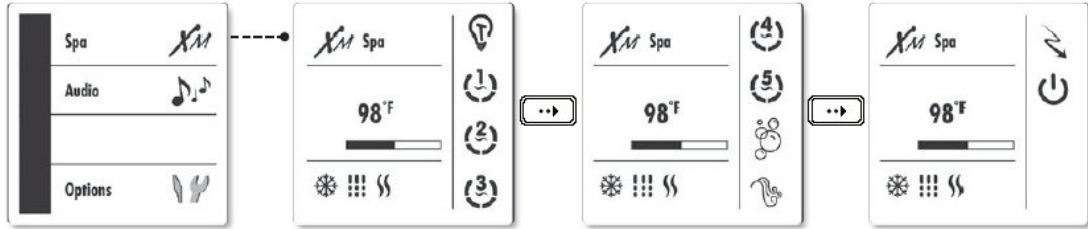
### Options Mode

This menu allows you to personalize operating settings of your spa equipment such as programming spa and keypad settings, setting the clock and finally, viewing software information.



## SEL Series Controls in.k600

### Spa Mode Sub-Menus



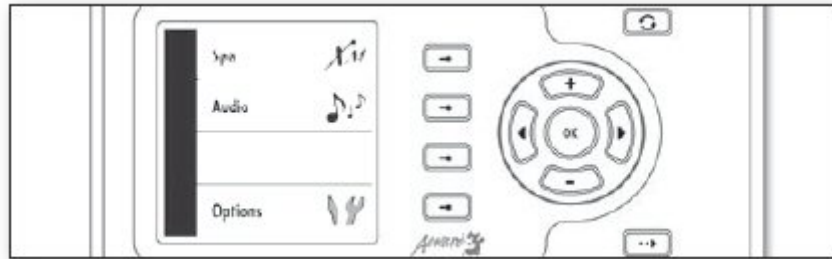
## SEL Series Controls in.k600

### Spa Mode

This menu allows control of all pumps, blower, waterfalls, spa light, as well as the activation of the Economy and Standby modes.

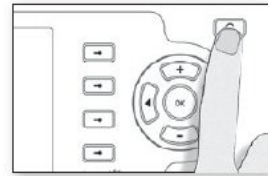
As a convenient feature, every time a

device is on, its icon becomes animated to see its activation status. If you want to stop all motor activity at once, activate the Standby mode.



## SEL Series Controls in.k600

- Press Mode key to display the mode selection window.



- Select Spa to view Spa menu.

### Starting Pump 1

- Select Pump 1 to turn Pump 1 on.
- Select Pump 1 repeatedly to control Pump 1 speeds.



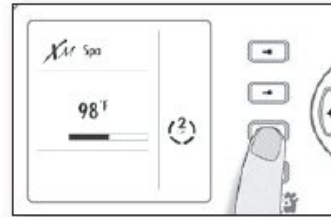
The pump icon becomes animated when Pump 1 is running. A built-in timer turns Pump 1 off after a certain period of time unless manually activated first.



## SEL Series Controls in.k600

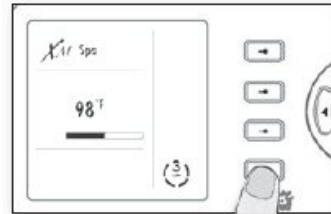
### Starting Pump 2

- Select Pump 2 to turn Pump 2 on.
- Select Pump 2 repeatedly to control Pump 2 speeds. The pump icon becomes animated when Pump 2 is running. A built-in timer turns Pump 2 off after a certain period of time unless manually deactivated first.



### Starting Pump 3

- Select Pump 3 to turn Pump 3 on.
- Select Pump 3 again to turn Pump 3 off. The pump icon becomes animated when Pump 3 is running. A built-in timer turns Pump 3 off after a certain period of time unless manually deactivated first.



## SEL Series Controls in.k600

### Starting Light

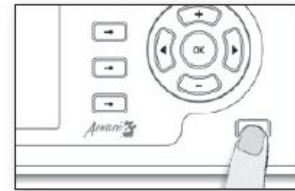
- Select Light key to turn light on.
- Select Light key again to turn light off.

Light icon becomes animated when light is on. A built-in timer automatically turns light off after a Certain period of time unless manually deactivated first.



### Next menu page

- Press Next key to display the next page in the spa menu. This page allows you to select and control the following optional features: Pump 4, Pump 5, Waterfalls and Blower.





## SEL Series Controls in.k600

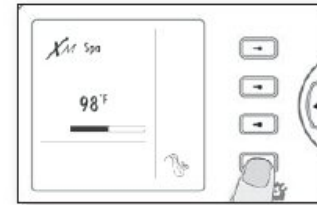
### \*Starting Blower

- Select Blower to turn blower on.
  - Select Blower again to turn blower off.
- Blower icon is animated when blower is on.  
A built-in timer automatically turns blower off after a certain period of time unless manually deactivated first.



### \*Starting waterfalls

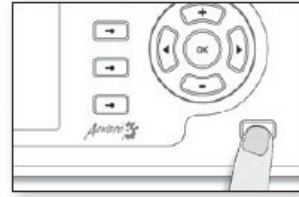
- Select Waterfalls to turn waterfalls on.
  - Select Waterfalls again to turn it off.
- Waterfalls icon is animated when waterfalls is on. A built-in timer automatically turns waterfalls off after a certain period of time unless manually deactivated first.



## SEL Series Controls in.k600

### Next menu page

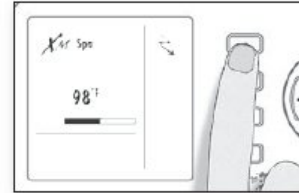
- Press Next key to display the next page in the spa menu. This page allows you to select and control the following: Economy mode and the Standby mode.



### Turning Economy on

The Economy mode allows you to lower the temperature set point of the spa by 11°C (20°F) during a certain period of the day. When in Economy mode, the “Economy Mode” icon flashes.

- Select Economy to activate the economy mode.
- Select Economy again to override economy programming (see spa setup section)

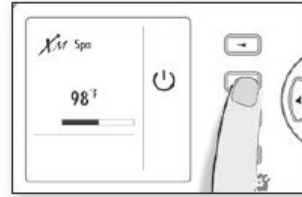


## SEL Series Controls in.k600

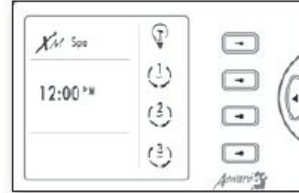
### Standby Mode

When this feature is activated it allows you to stop all pumps at once by a simple click of a button! (light and audio features will remain active).

- Select Standby to activate this mode.
- Select Standby again to resume normal operations.



Please note that the system automatically returns to Normal mode after a certain period of time, unless the Standby mode has been reactivated. In order to warn the user, the spa light will flash for a few seconds before exiting the Standby mode and the restart of all pumps by the system. The "Standby" message is also displayed during Standby mode



\* Pump will stay turned on if there is a request for more heat.

## SEL Series Controls in.k600

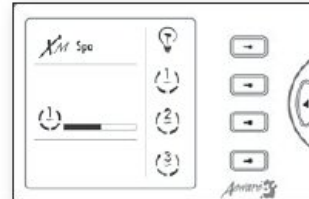
### Displaying time

- Press Ok key to display the time.
- Press Ok key a second time to go back to water temperature display.

### Viewing active progress bars

A progress bar is a visual indicator of the time remaining before a device is turned off or before the end of the Standby mode. Only one bar is displayed at the time.

- Use Left or Right keys to visualize the progress bar of each activated device.



## SEL Series Controls in.k600

### Options sub-menus

#### Spa settings

This menu allows you to personalize operating settings of your spa such as filtration, economy as well as reminder (active maintenance) and warning messages.

#### Keypad settings

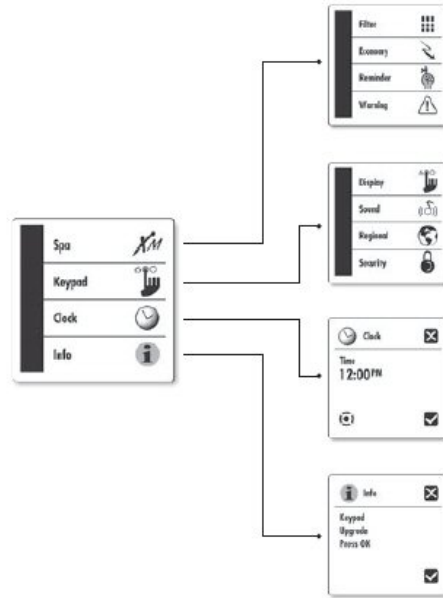
This menu allows you to activate keypad functions.

#### Clock settings

This menu allows you to set the clock.

#### Info settings

This menu allows you to access spa equipment information on the spa controller, heater and keypad software updates.



## SEL Series Controls in.k600

### Setting filter cycles

To program the filter cycle, you must enter these parameters: the start time, duration and frequency. During a filter cycle, pumps run for one minute to purge the plumbing, then Pump 1 runs for the programmed number of hours.

- Press Mode key
- Select Options menu
- Select Spa sub-menu
- Select Filter option



### Setting filter cycle start time

The display will show the starting hour previously set. • Use + or – key to set new hour setting.



## SEL Series Controls in.k600

- Use Right key to set minutes.
- Use + or - key to change minutes setting.
- Select Next arrow on screen menu to go to the next parameter: filter cycle duration.

### Setting filter cycle duration

Here we set a value for the filter cycle duration, in hours and minutes.

- Use + or - key to change hour setting.
- Use Right key to set minutes.
- Use + or - key to change minutes setting.
- Select Next arrow on screen menu to go to the next parameter: filter cycle frequency.



## SEL Series Controls in.k600

### Setting filter cycle frequency

Here we set the number of filtering cycles that the system will perform per day.

- Use or key to change the frequency setting.
- Select Enter option on screen menu to save changes and go back to options main menu.



### Setting Economy mode

To program the Economy mode, you must enter these parameters: the start time and stop time.

- Press Mode key.
- Select Options menu.
- Select Spa sub-menu.
- Select Economy mode.





## SEL Series Controls in.k600

You can use the economy setting to lower the spa temperature automatically if you are away for extended periods.

### Setting Economy start time

- Use + or - key to set hour setting.
- Use Right key to access minutes option.
- Use + or - key to set minutes.
- Select Next arrow on screen menu to go to the next parameter: Stop time.



### Setting Economy stop time

- Use + or - key to set hour setting.
- Use Right key to access minutes option.
- Use + or - key to set minutes.
- Select Enter option on screen menu to save changes and go back to options main menu.



## SEL Series Controls in.k600

### Setting maintenance reminder prompts

Periodically, the system will indicate that it's time for your spa check-up or to perform various maintenance tasks on your spa, ie: clean filter. This menu allows you to activate/deactivate or simply reset the maintenance reminder prompts.

- Press Mode key
- Select Options menu
- Select Reminder option



### Turning reminders on/off

- Use + or - key to activate or deactivate prompt(s).
- Select Next arrow on screen menu to go to the next menu screen.



## SEL Series Controls in.k600

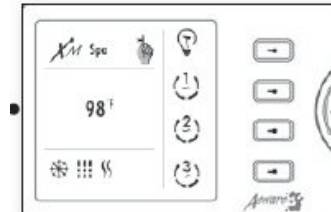
### Resetting prompt messages

- Select Enter option on screen menu to reset message and go back to the main menu. Thus indicating that a maintenance task is done.
- Select the option to close the window and go back to the main menu, should you want to postpone the indicated task. The reminder message will return at a later time.



### Viewing spa reminders

The reminder icon will show up to prompt you to review active maintenance messages.

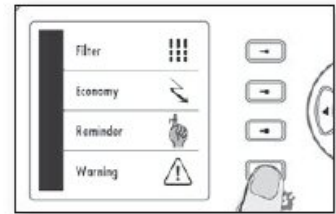


## SEL Series Controls in.k600

### Spa warnings

This menu allows you to view all active warning messages eg:  
Hot water.

- Press Mode key
- Select Options menu
- Select Warning option
- Press Mode key again to go back to the main menu.



### Viewing spa warnings

The warning icon shows up to prompt you to review active warning messages.



## SEL Series Controls in.k600

### Postponing spa warnings

- Select the option to close the window and go back to the main menu. The warning message will return at a later time.



### Setting keypad display options

This sub-menu is used to set keypad display settings such as: contrast, backlight, normal or reverse display and finally inverted display.

- Press Mode key
- Select Options menu
- Select Keypad sub-menu
- Select Display options



## SEL Series Controls in.k600

### Adjusting contrast

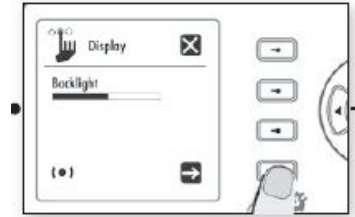
Contrast should be set for comfortable viewing.

- Use Left or Right keys to adjust desired level of contrast.
- Select Next arrow on display to go to next screen menu.

### Adjusting backlight

Adjust screen brightness when use in low-light conditions.

- Use Left or Right keys to adjust backlight brightness.
- Select Next arrow on display to go to next screen menu.

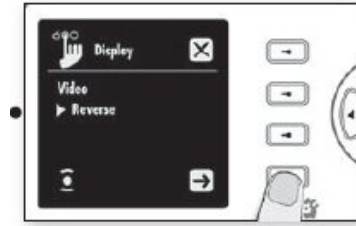


## SEL Series Controls in.k600

### Normal/Reverse display

Also known as negative display, this option enables you to reverse the appearance of text to white letters on a black background. Thus, reducing glare for many users.

- Use + or - key to activate or deactivate reverse display.
- Select Next arrow on display to go to next screen menu.

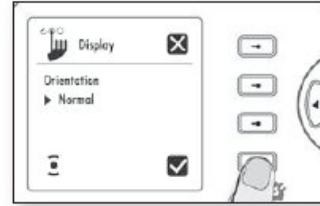


## SEL Series Controls in.k600

### Display orientation

This feature inverts the display to make it readable from inside or outside the spa. To invert display:

- Use the key to activate or deactivate reverse display.
- Select Enter option on screen menu to save changes and go back to the main menu.



### Setting keypad audio options

This sub-menu is used to set keypad audible options setting such as: keypad on/off (key beep), and alarm on/off.

- Press Mode key
- Select Options menu
- Select Keypad sub-menu
- Select Sound options



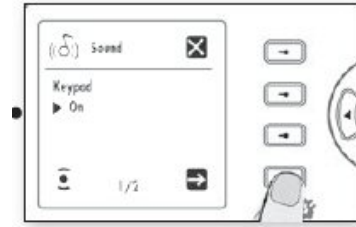


## SEL Series Controls in.k600

### Keypad on/off

To enable/disable key beep:

- Use + or - key to activate or deactivate key beep.
- Select Next arrow on display to go to next screen menu.



### Alarm on/off

This feature alerts you when an error condition has occurred.

- Use + or - key to activate or deactivate alarm sound.
- Select Enter option on screen menu to save changes and go back to the main menu.



## SEL Series Controls in.k600

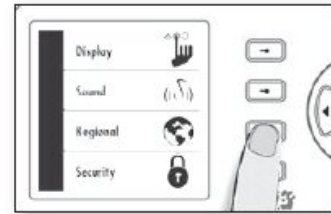
### Setting regional settings

This sub-menu is used to set keypad regional settings such as: language (choose from English, Francais, Español or Deutsch), select temperature display units and choose a format for time display.

- Press Mode key
- Select Options menu
- Select Keypad sub-menu
- Select Regional options

### Setting language

- Use or key to select from: English, Francais, Español or Deutsch.
- Select Next arrow on display to go to the next screen menu.



## SEL Series Controls in.k600

### Temperature units

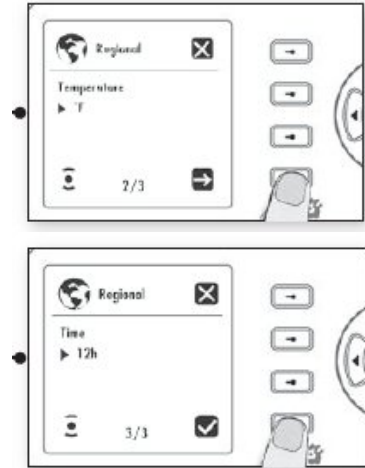
Water temperature can be displayed in °F or °C.

- Use or key to change setting.
- Select Next arrow on display to go to the next screen menu.

### Selecting time format

This feature allows time display in either standard 12 hour or military24 hour time format.

- Use or key to change setting.
- Select Enter option on screen menu to save changes and go back to keypad main menu.



## SEL Series Controls in.k600

### Security options

This sub-menu allows you to lockout your keypad to prevent unauthorized parameter setting of the unit. You may choose between partial lock or full keypad lock. Partial keypad lock: the basic functions of the spa remain accessible (pump and light outputs) but it's impossible to change the temperature Set Point, or to enter the Programming mode.



**Full lock: all keys are disabled.** When the keypad is locked, the icon will be displayed.

- Press Mode key
- Select Options menu
- Select Keypad sub-menu
- Select Security options

## SEL Series Controls in.k600

### Partial keypad lockout

- Use **or** key to select "Partial".
  - Select Enter option on screen menu to go back to spa main menu.
- To unlock the keypad, select and hold Options menu soft key for 5 seconds.



### Full keypad lockout

- Use **or** key to select "Full".
  - Select Enter option on screen menu to back to spa main menu.
- To unlock the keypad, press and hold Light key for 5 seconds.



## SEL Series Controls in.k600

### Setting the time

- Press Mode key
  - Select Options menu
  - Select Keypad sub-menu
  - Select Clock setting
- 
- Use “or” key to set hour setting.
  - Use Right key to access minutes option.
  - Use “or” key to set minutes.
  - Select Enter option on screen menu to save changes and go back to keypad main menu.



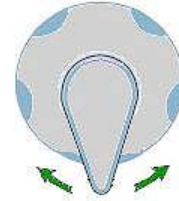
## Standard Components

### Silent Air Controls with Heated Intake

This is not a user serviceable part.



Lo-Pro silent air controls are designed to deliver immediate bubble action, with minimal noise. To open – turn counter-clockwise, and adjust according to personal massage preference. When the jet pump is on, the air control draws in the heat created by the motor and helps further reduce operation costs. The air control should remain closed when the spa is not in use in



order to maximize heater efficiency. In all **Pacific Spas models** (1, 2 or 3 pump system) each jet system has its own air controls, which allow changing the power of the jets (water pressure) by regulating the amount of air that is mixed with the water.

### Knife Valve



This is not a user serviceable part.

All circulation pumps are equipped with knife valves. The valves prevent water from entering your spa equipment. They allow for servicing of the spa without draining. Leave the knife valve in the “open” position at all times, except as required for servicing.

## Standard Components

### Hose Bibb/Drain Tap

This is not a user serviceable part.



All spas are equipped with a hose bibb (drain tap) to make the process of draining your spa easy. Just attach your ordinary garden hose to the tap and gravity will do the rest of the work.

### Floor Drain / Safety Suction

This is not a user serviceable part.



**Care must be taken not to cover the floor drain. Do not attempt to lift or remove this cover.** Your Pacific Spa has been equipped with a suction fitting that draws water in the event your skim filter becomes restricted and allows adequate water flow to your equipment.



## Standard Components

### Top Load – Skim Filter



This system comes with a floating skimmer and basket to catch hair or other debris that may enter the spa. The design of this skimmer allows the user to easily remove the cartridge filter for cleaning, which should be done on a regular basis.

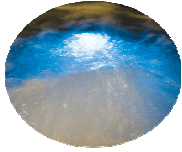


To remove the basket for access to the filter cartridge, turn the basket and lift (see Spa Maintenance). The anti-vortex skimmer is the skimmer closest to the keypad and has more holes to allow for a smoother flow of water. The vortex skimmer skims the surface of the spa.



### Underwater Safety Light

This is a user serviceable part.



All Pacific Spas come equipped with an underwater safety light.



## Standard Components

### S & SE SERIES EQUIPMENT PACK

This is not a user serviceable part.

The Spa Pack is the electronic nerve center of your spa. The XN.XE Equipment pack is designed to provide worry-free operation of your spa for years to come.



## Standard Components

### SEL SERIES EQUIPMENT PACK

This is not a user serviceable part.  
The Spa Pack is the electronic nerve center of your spa. The XM Equipment pack is designed to provide worry-free operation of your spa for years to come.



### SEL Series in.therm Heater

This is not a user serviceable part.



The **in.therm heater** is the most advanced heater in the spa industry (intelligent remote water heating system designed to be totally maintenance free). Separated from the pack, in.therm is an intelligent 4kw remote heater that integrates electronics in its power box.

## Standard Components

It includes a built-in temperature probe and a new water flow detection feature that eliminates the need of a pressure switch. In.therm controls multiple power levels on a single element extending its lifetime by heating at high power only when needed. With no moving parts and no adjustments, in.therm is hassle free and defines new levels of reliability.

### Spa Cover

This is a user serviceable part



A vinyl cleaner should be used regularly on your thermal cover. This will help guard against the sun's damaging ultraviolet rays and help to prevent mildew stains. We recommend a periodic treatment of non-silicone spray for outdoor covers to help repel rainwater.

We also recommend that every six months you should remove the cover inserts to allow them to air out. Do not allow snow to build up on the cover. Never allow anyone to stand or sit on the cover, and avoid dragging it across rough surfaces.



## Standard Components

The underside of your spa cover is a good reflection of the condition of your water. Poor water balance will quickly change the colour and texture of the cover's underside. It can also minimize the life expectancy of your spa cover. Please take steps to correct any water chemistry problems quickly to avoid serious damage to your cover. Even with perfect water balance, it is recommended that you wash the inside of your cover on a monthly basis to remove any chemical residue.

**Note:** When adding more than the normal daily amount of disinfectant (i.e.: shock treatment) leave the spa cover off for a minimum of 1 hour. **Failure to do so could damage the under side of the cover and void the warranty.**

Generally, the greatest amount of damage and wear to the cover comes in the removing and reinstalling of the cover during use. During hot weather, the vinyl becomes very susceptible to cutting and tearing along the seams. The use of a cover removal device is recommended to reduce much of this damage.

**Note:** It is normal to expect some fading or discolouration to occur over time.

## Standard Components

Inside the vinyl cover are two insulating cores. These cores are accessed by folding the cover in half and unzipping the side. Care must be taken in removing the cores so as not to damage the vinyl casing. Over time, it is expected that the cores will become saturated and heavy. In this case, replacement insert cores can be ordered from your Pacific Spas Dealer.

**Note:** Use caution when installing cover lifters. Ensure the screw holes are pre-drilled and the supporting panels are adequately braced with a 2x4 before mounting the cover lifter to avoid damage to the panel. When the panel has been removed, look for any plumbing lines that may be affected by the bracing screws to avoid potential leaks caused by the screws penetrating the plumbing. Do not allow the cover lifter to fall under its own weight as this may damage the side panel. Carefully brace the cover lifter when opening or closing the cover lifter.



**Any damage caused by a cover lifter is not covered by warranty.**

## Optional Components

### Serenity Fountain

This is not a user serviceable part.



Turn this feature on by activating the jet pump - pressing the "1" button on your topside panel. It can be used in low or high speed and can be adjusted by turning the "On/Off" valve located on the lip of your spa. See your dealer for Serenity Fountain cleaning instructions.



### Rainbow Falls

This is not a user serviceable part.



Turn this feature on by activating the jet pump - pressing the "1" button on your topside panel. It can be used in low or high speed and can be adjusted by turning the "On/Off" valve located on the lip of your spa.

## Optional Components

### Power Dome

This is not a user serviceable part.



This option is available on select models only. The side storm jets are interchangeable with other storm jet types. The power dome can be adjusted using the 2" diverter with pump number two operating. The water flow can be changed at each jet by turning the outside face of the jet – clockwise to reduce flow, counter clockwise to return to full flow. 2 speed systems must leave at least one jet open to ensure adequate flow to the heater.



## Optional Components

### 2" Diverter Valve



- **Pacific Spas** are designed to provide full water flow to all jets at optimum pressure when the diverter valves are in the “middle” position (12 o’ clock). You may increase the pressure of the jets to selected seat by rotating the diverter in left (9 o’clock) / right (3 o’clock) position.

### 1" Diverter Valve



**Some models** may be equipped with calf jets controlled by **1" diverter**. To increase the pressure to the calf jets turn the diverter counter clock wise.



## Optional Components

### On/Off valve

This is not a user serviceable part.



Your **Pacific Spa** may be equipped with the **Rainbow Falls, Waterfalls** or **Serenity Fountain** features. Turning on jet pump no.1 in low or high speed activates these water features. The water flow is controlled by turning the **on/off valve** in desired direction (increase the pressure if the valve is turning counter clock wise).



## Optional Components

### Infinity Bluetooth Stereo System



This is not a user serviceable part. Relax and listen to your I-pod, Mp-3 or radio all at the touch of a button. The audio system designed for Pacific Spas offers unparalleled audio performance and durability. For complete operating instructions, please refer to your **Infinity user's manual**.

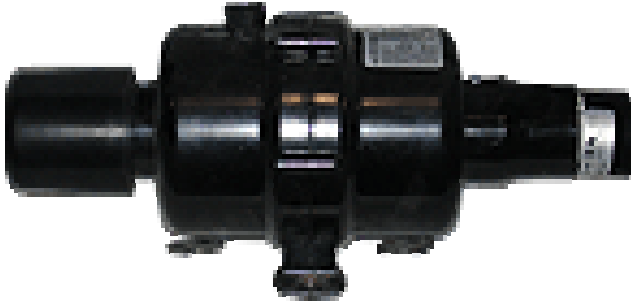


**Your Pacific Spas audio system is a great addition to any model.** Our specially designed speaker system provides personalized sound in conjunction with the stereo and sub woofer.

## Optional Components

### The Spa Energizer

This is not a user serviceable part.



Heated air is blown through the jet lines to create an energetic air massage that can be used on its own or to compliment the jet action created by your jet pump. To activate, press the "3" button or the blower button on your topside panel. If left on, this feature will turn off by itself after 20 minutes. The air controls and the jets must remain in the OPEN position when using the blower or the blower will overheat and shut down temporarily to cool down.

## Optional Components

### Spa Solar Eclipse

This is not a serviceable part.



APG-U OZONE TECHNOLOGY COMBINED WITH UV-C STERILIZATION. The APG-U Ozone system sanitizes the spa water while the UV sterilizes the water.

### Advanced Plasma Gap (APG) Technology

This is not a user serviceable part.



DEL Ozone systems have been third-party validated to kill up to 99.99% of microorganisms typically found in spas. Ozone sanitizes the water quickly and effectively without the undesirable by-products created by traditional chlorine and bromine chemicals.

### Corona Discharge Ozonator

This is not a user serviceable part.

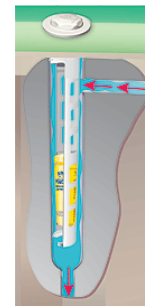


The ozonator constantly oxidizes the water inline, performing a large part in keeping your spa water crystal clear. If your spa is equipped with a Quiet Energy system with 24 hour circulation, the ozonator operates 24 hours per day. If your spa uses a two speed jet pump for circulation, the ozonator operates only during the spa's filtration cycles. The chip will need to be replaced yearly. Check the purple light on the ozonator to know when to put a new chip and call your dealer.

### The Spa Frog

This is not a user serviceable part

This is an in-line brominating system that makes it convenient and easy to sanitize your spa with adjustable output settings based on bather load. The unique Spa Frog cartridges automatically deliver Bromine to your spa. To use this system, please refer to your **Spa Frog** instruction manual.



## Optional Components

### **in.watch in-house spa monitoring system**

**& weather station** - This is a user serviceable part



in.watch not only displays indoor and outdoor temperatures, it keeps an eye on your spa system condition and reads its water temperature. Please refer to your user manual for further details.

### **UV Sterilizer**

This is not a user serviceable part

The UV Unit is designed for use in spas to sanitize the water as it passes over the UV light bulb. Ultraviolet light has been used for over 60 years as a reliable means of disinfecting water. The UV system is located in the corner of the spa. Contact your dealer for maintenance and/or service needs.



## Optional Components

### **in.clear bromine sanitization system**

This is not a user serviceable part.



The in.clear bromine sanitization system sanitizes the spa water and regenerates the bromine, allowing for up to nine months between spa water drain & refills. For complete operating instructions, please refer to your in.clear owner's manual. See your dealer for salt and settings recommendations.

## Spa Maintenance

Your Pacific Spa is manufactured from the highest quality materials available. The spa care and maintenance program you develop will ultimately determine how long your spa and its individual components will last. Regular maintenance following the advice in this section will help you to protect your investment.



### Spa Shell

Your Pacific Spa has a fiberglass reinforced, acrylic shell. Stains and dirt generally will not adhere to your spa's surface. A soft cloth or sponge should easily remove most dirt. Most household chemicals are harmful to your spa's shell. It is important that you do not use any abrasive cleaners or strong chemicals. Sodium bicarbonate (baking soda) or vinegar can also be used for minor surface cleaning. Always thoroughly rinse off any spa shell-cleaning agent with fresh water.



## Spa Maintenance

Your Pacific Spa dealer will be able to supply you with the proper cleaning solution for your spa. After cleaning, make sure all residues are removed prior to filling the spa. This will help prevent sudsing and improper chemical balance.

### Filtration System

As with any water filtering system, the filter cartridge may become clogged, resulting in reduced water flow. It is important to maintain a clean, unobstructed filter system.

### Filter Cartridge Removal and Installation

1. Shut the spa down or set spa to standby.
2. Remove and set aside the filter cover.
3. Remove the filter basket by rotating the top outside ring counterclockwise and lifting.
4. Remove the filter cartridge.
5. Clean any debris out of the skimmer basket.
6. Rinse and soak cartridge.
7. To reinstall the filter cartridge, reverse the order of steps in which it was removed.



## Spa Maintenance

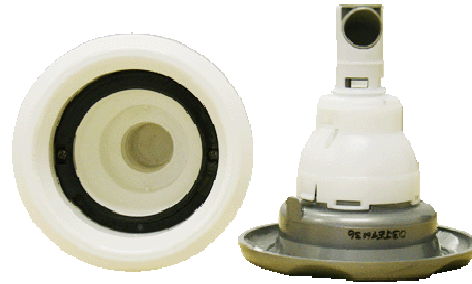
### Jets

Your jets should be taken out and cleaned when you drain your spa. This is to clean the sand and grit from the bearings and remove any blockage from the entrance port. Cleaning should be done in hot soapy water or dishwashing detergent. Make sure that the jet is moving freely before reinserting it. **You can turn the jet on or off by rotating the jet face clockwise or counterclockwise.**

#### To remove the jet inserts:

- Turn the jet to the off position until it stops.
- Turn the jet past the stop point.
- Pull jet insert away from the spa.

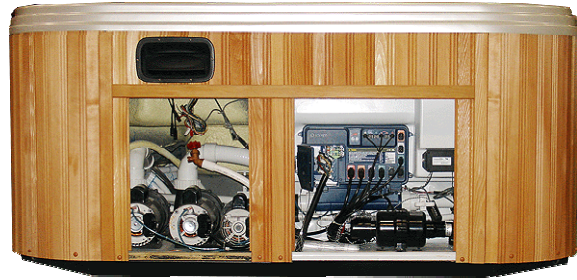
When inserting a jet, match the opening on the jet housing wall to the U shaped cut out on the end of the diffuser and push the jet in flush until resistance is felt, then continue to push the jet flush and forward until it snaps into place. Using this procedure will reduce the wear on your jets and increase their longevity.



## Spa Maintenance

### Skirting

**Wood skirting** will lose its like-new appearance with time. Once a year, it is recommended to re-stain the spa's skirting with a water-based sealant to keep the cedar skirting looking its best. Lightly sand the skirting surfaces to remove any dirt and to smooth rough surfaces. Do not use varnishes, shellacs or surface sealants. Contact your dealer to obtain an approved stain. Three screws at the base of the panel fasten each panel in place. The screws holes are slightly oversized to allow the panel to adjust to the weight of the water in a filled spa. If an adjustment is needed the screws can be loosened and the panel will adjust to the weight of the water. **Over tightening or failure to adjust the screws may cause the skirting to buckle or warp.** You can use a flat head screwdriver to remove the screw cap covers. The door will open with an Allen key.





## Spa Maintenance

**Cedarlite synthetic wood skirting** consists of a rigid polymer which combines the durability of plastic, with the beauty of wood. Cedarlite won't crack, peel, blister, or delaminate even after prolonged exposure to the elements. Cleaning of Cedarlite consists of simply spraying the cabinet with a mild soap and water solution to remove any stains and residue. Three screws at the base of the panel fasten each panel in place. The screws holes are slightly oversized to allow the panel to adjust to the weight of the water in a filled spa. If an adjustment is needed the screws can be loosened and the panel will adjust to the weight of the water. **Over tightening or failure to adjust the screws may cause the skirting to buckle.** You can use a screwdriver to remove the screw cap covers.

**Note:** Use caution when installing cover lifters. Ensure that the screw holes are pre-drilled and the supporting panels are adequately braced before mounting the cover lifter to avoid damage to the panel. When the panel has been removed, look for any plumbing lines that may be affected by the bracing screws to avoid potential leaks caused by the screws penetrating the plumbing. Do not allow the cover lifter to fall under it's own weight as this may damage the side panel. Carefully brace the cover lifter when opening or closing the cover lifter. **Any damage caused by a cover lifter is not covered by warranty.**



## Spa Maintenance

### Care of Spa Pillows

To extend the pillow's life, whenever the spa shell is being cleaned, they should be removed and cleaned. Body oils can be removed with a mild soap and water solution. ALWAYS rinse off the spa pillows thoroughly to remove any soap residue. Remove the pillows from the spa for extended periods of non-use.

1. Do not sit on pillows.
2. Do not pull on pillows.
3. Proper water chemistry must be maintained.
4. Pillows should be washed when you drain your spa with a mild soap.
5. When you shock your spa, remove your cover, pillows and filter lid for a minimum of thirty minutes so excess gases may escape out of spa.

### Pump Seal

Your jet pump is built using a "wet end" pump, and a "dry end" motor, with a seal in the middle. Depending on use and chemical balance, this seal will eventually need replacing. Check your motor monthly to ensure that there is no water leaking from the motor area. If you detect any signs of leakage, contact your dealer immediately.

## Winterizing

PACIFIC SPAS ARE DESIGNED FOR ALL SEASON USE. IF YOU WOULD LIKE TO SHUT DOWN YOUR SPA FOR THE WINTER, CALL YOUR DEALER. FOR A MINIMAL CHARGE THEY WILL WINTERIZE THE EQUIPMENT AND PLUMBING TO PREVENT DAMAGE TO THE INTERNAL PARTS OF YOUR SPA. SEVERE DAMAGE THAT IS NOT COVERED BY THE WARRANTY CAN OCCUR IF WINTERIZING IS NOT DONE BY A QUALIFIED TECHNICIAN.

Note: Do not drain spa during below freezing conditions. If draining is required during below freezing outside weather conditions, contact dealer for proper procedures.

In many areas of the country, the temperature drops below 32°F/0°C.





## Winterizing

We recommend that you always have your spa full of water and running at normal spa temperatures (80°F/27°C to 100°F/38°C). This will help reduce the risk of freezing in your spa and your spa's equipment.

**WARNING: FREEZE DAMAGE WILL VOID THE WARRANTY COVERAGE.**

1. Shut the power off to the system and make sure that it cannot be accidentally turned back on.
2. Open all filter covers.
3. Remove the filter baskets and filters.
4. Drain your spa completely.
5. Remove drain plugs from the front of the pumps.
6. Disconnect the unions from both sides of the pump.
7. Use a wet/dry vacuum to blow any remaining water out of the jets and equipment area.
8. Replace drain plugs from the front of the pumps.
9. Reconnect the unions from both sides of the pump



## Winterizing

10. Using a long funnel, begin pouring non-toxic swimming pool or recreational vehicle water system antifreeze into the filter canister fittings, bleeder valve fittings and jet fittings of your system. Continue adding antifreeze until it comes out of the drain fittings or from the opening you are pouring it into. You must complete this task for every jet fitting in the system as well as the pumps and the bottom drain.
11. Cover your spa with a good spa cover and an all-weather tarp or spa bag to ensure that neither rain or snow enter the spa.

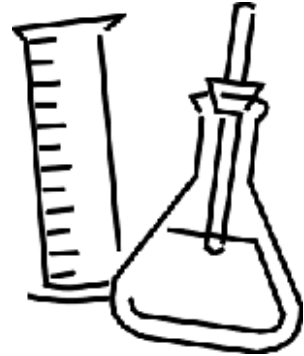
**EMERGENCY SITUATIONS:** To eliminate freezing in the event of equipment failure, use a small heater with temperature control via extension cord and place it in the equipment area, keeping it away from plumbing lines. This will help for a short period of time until proper service can be arranged. You can also add hot water to the spa (when full only) while using the heater to help keep the smaller plumbing lines from freezing.



## Basic Chemical Safety

It is essential when using chemicals that container labels are read and the directions are followed carefully. The following guidelines must be observed:

- KEEP ALL CHEMICALS OUT OF THE REACH OF CHILDREN.
- Chemicals may be corrosive, so handle with care. Store in a cool, dark place
- Do not inhale fumes or allow chemicals to come in contact with face or eyes. Wash hands after use.
- Ensure any spilled chemicals are carefully cleaned up. They may be corrosive and may cause damage or bodily harm.
- Never smoke near chemicals, some are highly flammable.
- If chemicals are swallowed or come in contact with your eyes or irritation occurs, follow the emergency instructions on the container.





## Basic Chemical Safety

- Accurately measure and use exact quantities specified – never more than what is recommended.
- Never add concentrated chemicals directly into the spa. Dilute with water in a large plastic pail.
- Always add chemicals to water and never water to chemicals.
- Do not mix chemicals with each other before adding to the spa. Add only one chemical at a time.
- Make sure the jet pump is in high speed while adding chemicals to the spa. Leave the jet pump running for at least 15 minutes to properly disperse the chemicals.
- When “shocking” or super-chlorinating the spa, leave the spa cover off for 20 minutes to allow oxidizer gas to vent. Discoloration or damage due to chemicals is not covered under the limited warranty.

**Note:** See your dealer for regular water tests and information on keeping your spa water balanced.



## Start Up Chemicals and General Supplies

Here is a basic list of chemicals and supplies needed before you jump in to your spa. **The availability of certain chemicals may vary from place to place. See your dealer for these items and directions on how to properly use them.**

### Chemicals

- **Stain & scale inhibitor** – neutralizes metals, clarifies water, and helps prevent scaling.
- **Alkalinity increaser** – raises total alkalinity, buffers against erratic pH fluctuation.
- **PH up** – raises the pH of the spa water.
- **PH down** – lowers pH of the spa water.
- **Calcium hardness increaser** – protects against the effects of soft water, which can cause corrosion to some components in your spa.
- **Spa shock** - oxidizes organic compounds, clarifies water.



## Start Up Chemicals and General Supplies

- **Spa sanitizer** – Bromine or chlorine tablets are the main source of chemical sanitation. If your spa is equipped with the **SPA FROG** or **IN.CLEAR**, please refer to the separate operating manuals enclosed for these systems.
- **Filter cleaner** – for soaking and cleaning dirty filter cartridges

### Chemical balance chart for recommended levels

	Effective Range
Total Alkalinity (TA)	125-150 ppm
pH Level	7.4 - 7.8
Calcium Hardness (CH)	80 - 100 ppm
Total Dissolved Solids (TDS)	<1500 ppm
Sanitizer	Chlorine/Bromine 3 - 5 ppm



## Start Up Chemicals and General Supplies

### Additional Supplies

- **Floating thermometer** – although your spa has a digital read-out on the top-side control, this is a secondary device to make sure it's safe to enter the spa.
- **Test kit or test strips** – meant for quick, easy check of the water's chemical balance. This should not take the place of regular trips to your dealer for more accurate testing.
- **Replacement filters** – makes it convenient to change out clogged or dirty filter cartridges.

**Note;** See your dealer for regular water tests and information on keeping your spa water balanced.



## Chemical Maintenance

**If using Spa Frog or in.clear, please refer to the instruction manual that came with the system.**

### **DAILY MAINTENANCE**

- Operate filter for at least 4 hours per day
- Test pH and adjust to between 7.4 and 7.8.
- Test chlorine or bromine level and adjust.
- Re-test again each day for one week if the spa has just been refilled.

### **WEEKLY TREATMENT:**

- Super chlorinate (or shock) the water as per instructions.
- Clean any oil and grease from water level line, if present.
- Remove and clean filter (if necessary) by spraying with garden hose
- Depending on use, Filter Clean may be required.

**MONTHLY MAINTENANCE Cleaning the Filter:** Filtering is done by pumping water through the fine polyester mesh of the filter. As water flows through the filter, suspended particles become trapped on its surface.



## Chemical Maintenance

It is necessary to remove the filter and clean the cartridge surface, generally every 4 weeks, depending on usage and water quality. Cleaning is accomplished by washing all the entrapped dirt from the filter with a garden hose with a high-pressure nozzle.

Occasionally, the cartridge will need a more thorough cleaning to remove oils and grime from its surface. Turn power to the spa off before removing the cartridge. Clean with a medium-pressure nozzle, then place the cartridge in a container, soaking the cartridge 3 to 6 hours or overnight in filter-cleaning solution or a similar filter-cleaning product. The average life expectancy of the filter cartridge is approximately 1 to 2 years with proper care and water quality maintenance.

**EVERY 2 TO 3 MONTHS Draining the Spa:** Attach a garden hose to the drain tap/hose bib located in the equipment cabinet of your spa. Open the drain tap/hose bib and let the water drain (this will take approximately 2 to 4 hours depending on the size of your spa) and clean the inside surface of your spa. Do not use any soap products or abrasive cleansers. Refill spa with fresh water, refer to start-up instructions. Obtain a water sample and have it tested. At this time your water must be rebalanced to protect your investment.

**Note:** Chlorine and Bromine test strips are not interchangeable.



## Chemical Maintenance

\*If your spa is equipped with the in.clear water treatment system, refer to the "in.clear Instruction Manual" before draining the spa.

**Note:** See your dealer for regular water tests and information on keeping your spa water balanced.





<b>SPA WATER MAINTENANCE TROUBLESHOOTING GUIDE</b>		
<b>Problem</b>	<b>Possible cause</b>	<b>Solutions</b>
Cloudy Water	<ul style="list-style-type: none"> <li>• Inadequate filtration or dirty filter</li> <li>• Dirty filters</li> <li>• Excessive oils or organics</li> <li>• Improper sanitization</li> <li>• Suspended particles or organics</li> <li>• Unfiltered particles</li> <li>• Chemically saturated water</li> <li>• Overused or old water</li> <li>• Water is not balanced</li> </ul>	<ul style="list-style-type: none"> <li>• Clean filters/ Change filters</li> <li>• Shock spa with sanitizer</li> <li>• Test water with a Water Test Strip</li> <li>• Adjust pH and alkalinity</li> <li>• Run jet pumps and clean filters</li> <li>• Drain and refill the spa</li> <li>• Use Water Clarifier to combine particles</li> </ul>
Water Odor	<ul style="list-style-type: none"> <li>• Excessive organics in water</li> <li>• Improper sanitization</li> <li>• Low pH</li> </ul>	<ul style="list-style-type: none"> <li>• Shock spa with sanitizer</li> <li>• Add sanitizer</li> <li>• Adjust pH to recommended range</li> </ul>
Chemical (Chlorine/ Bromine ) Odor	<ul style="list-style-type: none"> <li>• chloramines/ bromamines level too high</li> <li>• Low pH</li> </ul>	<ul style="list-style-type: none"> <li>• Shock spa with sanitizer</li> <li>• Adjust pH</li> </ul>

<b>SPA WATER MAINTENANCE TROUBLESHOOTING GUIDE</b>		
<b>Problem</b>	<b>Possible cause</b>	<b>Solutions</b>
Scum line (ring) around spa Organic buildup	<ul style="list-style-type: none"> <li>• Body oils and dirt.</li> <li>• Excessive organics in water</li> </ul>	<ul style="list-style-type: none"> <li>• Drain the spa, use a spa surface cleaner to remove the scum, and refill the spa</li> <li>• Clean filters/ Change filters</li> </ul>
Green Water/ Algae Growth	<ul style="list-style-type: none"> <li>• High pH</li> <li>• Low sanitizer level</li> </ul>	<ul style="list-style-type: none"> <li>• Shock spa with sanitizer and adjust pH</li> <li>• Shock spa with sanitizer and maintain sanitizer level</li> </ul>
Eye Irritation	<ul style="list-style-type: none"> <li>• Low pH</li> <li>• Low sanitizer level</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust pH</li> <li>• Shock spa with sanitizer and maintain sanitizer level</li> </ul>
Skin Irritation / Rash	<ul style="list-style-type: none"> <li>• Unsanitary water</li> <li>• Free chlorine level above 5 ppm</li> </ul>	<ul style="list-style-type: none"> <li>• Shock spa with sanitizer and maintain sanitizer level</li> <li>• Allow free chlorine/ bromine level to drop below 5 ppm</li> </ul>
Stains	<ul style="list-style-type: none"> <li>• Total alkalinity and/or pH too low</li> <li>• High iron or copper in source water</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust total alkalinity and/or pH</li> <li>• Use a metal deposit inhibitor</li> <li>• Use a Stain inhibitor</li> </ul>



<b>SPA WATER MAINTENANCE TROUBLESHOOTING GUIDE</b>		
<b>Problem</b>	<b>Possible cause</b>	<b>Solutions</b>
Scale	<ul style="list-style-type: none"> <li>• High calcium content in water</li> <li>• Total alkalinity and pH too high</li> </ul>	<ul style="list-style-type: none"> <li>• Drain the spa, clean the scale, refill the spa use a scale inhibitor and balance the water</li> <li>• Adjust total alkalinity and pH</li> </ul>
Yellow water	<ul style="list-style-type: none"> <li>• Low pH</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust pH with pH and Alkalinity Up</li> </ul>
Foaming	<ul style="list-style-type: none"> <li>• High concentration of body oils, lotions, or soaps</li> <li>• High temperatures and excessive contaminants</li> </ul>	<ul style="list-style-type: none"> <li>• Use Spa Defoamer and adjust pH and sanitizer levels as needed</li> </ul>
Erratic pH Test Colour	<ul style="list-style-type: none"> <li>• Sanitizer level is too high.</li> </ul>	<ul style="list-style-type: none"> <li>• Test pH again when sanitizer level is below 5 ppm.</li> </ul>



## Glossary of Chemical Terms

**Bromamines:** Compounds formed when bromine combines with nitrogen from body oils, urine, perspiration, etc. Unlike chloramines, bromamines have no pungent odor and are effective sanitizers.

**Bromine:** A halogen sanitizer (in the same chemical family as chlorine). Bromine is commonly used in stick, tablet, or granular form.

**Calcium Hardness:** The amount of dissolved calcium in the spa water. This should be approximately 80-100 ppm. High levels of calcium can cause cloudy water and scaling. Low levels can cause harm to the spa equipment.

**Chloramines:** Compounds formed when chlorine combines with nitrogen from body oils, urine, perspiration, etc.

**Chlorine:** An efficient sanitizing chemical for spas.

**Chlorine (or Bromine) Residual:** The amount of chlorine or bromine remaining after chlorine or bromine demand has been satisfied. The residual is, therefore, the amount of sanitizer which is chemically available to kill bacteria, viruses and algae.



## Glossary of Chemical Terms

**Corrosion:** The gradual wearing away of metal spa parts, usually caused by chemical action.

**Halogen:** Any one of these five elements: fluorine, chlorine, bromine, iodine and astatine.

**Oxidizer:** The use of an oxidizing chemical is to prevent the buildup of contaminants, maximize sanitizer efficiency, minimize combined chlorine, and improve water clarity.

**Pathogen:** A microorganism such as bacterium that cause disease.

**pH:** The measure of the spa water's acidity and alkalinity. The recommended pH for the spa water is 7.4 to 7.8. Below 7.0 (considered neutral), the spa water is too acidic and can damage the heating system. Above 7.8, the water is too alkaline and can result in cloudy water and scale formation on the shell and heater.

**ppm:** The abbreviation of "parts per million", the standard measurement of chemical concentration in water. Identical to mg/l (milligrams per liter).

**Reagent:** A chemical material in liquid, powder, or tablet form for use in chemical testing.



## Glossary of Chemical Terms

**Sanitizer:** Sanitizers are added and maintained at recommended residuals to protect bathers against pathogenic organisms which can cause disease and infection in spa water.

**Scale:** Rough calcium-bearing deposits that can coat spa surfaces, heaters, plumbing lines and clog filters.

**Shock Treatment:** Also known as "super-chlorination" when chlorine is used. Shock treatment is a process of adding significant doses of a quick dissolving sanitizer (sodium dichlor is recommended) to oxidize non-filterable organic waste and to remove chloramines and bromamines.

**Total Alkalinity:** The amount of bicarbonates, carbonates, and hydroxides present in spa water. Proper total alkalinity is important for pH control. If the TA is too high, the pH is difficult to adjust. If the TA is too low, the pH will be difficult to hold at the proper level. The desired range of TA in spa water is 100 to 150 ppm.



<b>GENERAL OPERATION TROUBLESHOOTING GUIDE</b>		
<b>Problem</b>	<b>Possible cause</b>	<b>Solutions</b>
Inoperative spa	<ul style="list-style-type: none"> <li>• Power failure</li> <li>• GFCI tripped</li> <li>• Spa lock activated</li> </ul>	<ul style="list-style-type: none"> <li>• Check power source</li> <li>• Reset GFCI; call for service if it will not reset</li> <li>• Turn off breaker for at least 1 minute. If tripping continues, call for service.</li> <li>• Deactivate spa lock</li> </ul>
Not heating; jets and light operate (Local Spa pack display shows <b>Ok</b> and green LED on)	<ul style="list-style-type: none"> <li>• Circulation pump thermal cut-off tripped</li> <li>• Water temperature 2 F over set point</li> <li>• Integrated pressure switch failure (replace the heater)</li> <li>• heater is not connected (see if on the local display appears: <b>rH/ nF</b>)</li> <li>• The “wrench” symbol appears on the panel display</li> </ul>	<ul style="list-style-type: none"> <li>• Check for clogged filters.</li> <li>• Check for air locks in plumbing.</li> <li>• Disconnect power to the spa, allow circulation pump to cool.</li> <li>• Circulation pump thermal cut-off will reset when pump has cooled and power is reapplied. Call for service if circulation pump thermal cut-off trips frequently.</li> <li>• Circulation pump is cut-off when water temperature reaches 2F over set point.</li> <li>• Call for service if the heater trips frequently.</li> <li>• A hardware problem occurs. Call your dealer.</li> </ul>



<b>GENERAL OPERATION TROUBLESHOOTING GUIDE</b>		
<b>Problem</b>	<b>Possible cause</b>	<b>Solutions</b>
Jets weak or surging	<ul style="list-style-type: none"> <li>• Spa water level too low</li> <li>• Filters clogged</li> <li>• Air Controls closed</li> </ul>	<ul style="list-style-type: none"> <li>• Add water</li> <li>• Clean filters</li> <li>• Open Air Controls</li> </ul>
Light inoperative	<ul style="list-style-type: none"> <li>• Spa lock activated</li> <li>• Light wiring or assembly is faulty</li> </ul>	<ul style="list-style-type: none"> <li>- Deactivate spa lock (ink.600 only)</li> <li>• Replace light assembly</li> </ul>
Pump not functioning	<ul style="list-style-type: none"> <li>• Pump overload condition</li> <li>• Top Side Control switches failure if jet symbol does not come on.</li> </ul>	<ul style="list-style-type: none"> <li>• Let cool for one hour. Pump (motor) overload will reset automatically. If Problem persists, contact your Pacific dealer</li> <li>• Turn off breaker and contact your Pacific dealer</li> </ul>





<b>GENERAL OPERATION TROUBLESHOOTING GUIDE</b>		
<b>Problem</b>	<b>Possible cause</b>	<b>Solutions</b>
Noisy pump	<ul style="list-style-type: none"> <li>• Low water level</li> <li>• Defective pump</li> </ul>	<ul style="list-style-type: none"> <li>• Add water to normal level (min. 1 inch above highest jet)</li> <li>• Turn off breaker and contact your Pacific dealer</li> </ul>
Pump runs, but low or no water/ jet pressure	<ul style="list-style-type: none"> <li>• Low water level</li> <li>• Air control valve closed or blocked</li> <li>• Air line clogged or blocked</li> <li>• Dirty filter cartridge</li> <li>• Jet blocked</li> <li>• Clogged suction or skimmer basket</li> <li>• Closed gate valve (if present)</li> </ul>	<ul style="list-style-type: none"> <li>• Add water to normal level (min. 1 inch above highest jet)</li> <li>• Open or clean air valve</li> <li>• Clean filter cartridge</li> <li>• Remove jet face and clean orifice</li> <li>• Clean suction cover or skimmer basket</li> <li>• Open gate valves</li> </ul>
Diverter valves, on/off valves are difficult to turn	<ul style="list-style-type: none"> <li>• Sand or debris inside valves</li> </ul>	<ul style="list-style-type: none"> <li>• Clean and lubricate valves</li> <li>• Clean filters/ Change filters</li> </ul>



## Spa Specifications

Model	Dimensions	Weight lbs/kg	Volume	Seating	Jets	
					Base	Max
Juno	64"x 83" x 37"	Dry 400 lbs / 181 kg	Wet 2525 lbs / 1112 kg	255 gal / 966L	3	24 38
Solara	80"x 86" x 40"	Dry 582 lbs / 265 kg	Wet 3889 lbs / 1768 kg	375 gal / 1420 L	5	21 32
Saturna	80"x 86" x 40"	Dry 575 lbs / 261 kg	Wet 3882 lbs / 1760 kg	396 gal / 1500L	6	21 31
Sparta	84"x 84" x 40"	Dry 590 lbs / 268 kg	Wet 3810 lbs / 1728 kg	385 gal / 1460L	5	25 52
Eclipse	80"x 86" x 38"	Dry 565 lbs / 257 kg	Wet 3195 lbs / 1149 kg	315 gal / 1190L	6	25 28
Atlantis	84"x 84" x 40"	Dry 597 lbs / 270 kg	Wet 3990 lbs / 1810 kg	407 gal / 1540L	6	25 52
Oceana	90"x 90" x 40"	Dry 790 lbs / 358 kg	Wet 4317 lbs / 1958 kg	422 gal / 1600L	6	30 57
Calypso	90"x 90" x 40"	Dry 800 lbs / 362 kg	Wet 4545 lbs / 2062 kg	450 gal / 1700L	7	30 58
Endeavour	93"x 93" x 41"	Dry 892 lbs / 405 kg	Wet 5485 lbs / 2488 kg	550 gal / 2085L	8	60 82

**Specifications are subject to change without notice**

## Electrical Connection

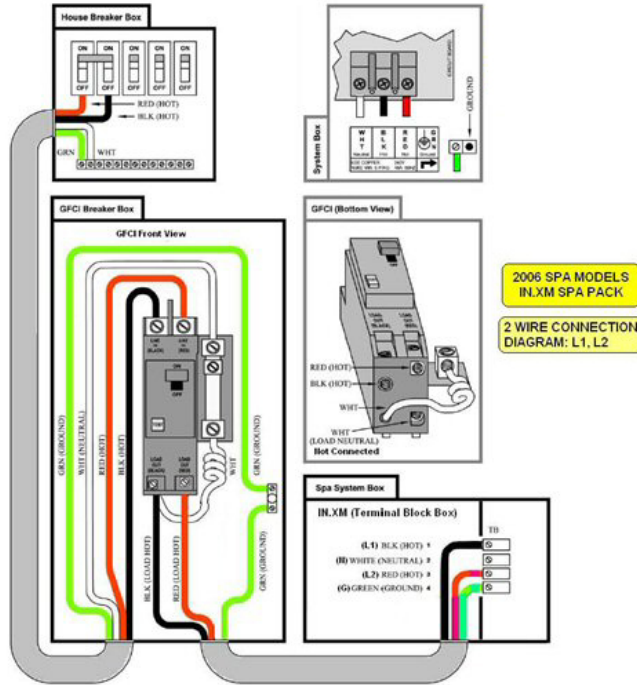
**The following information is intended for your licensed electrician during the installation your spa. If after having read this section they have further questions, please direct them to your Pacific Spas dealer or to Pacific Spas. Your Spa must be installed by a licensed electrician or you risk voiding your warranty.**

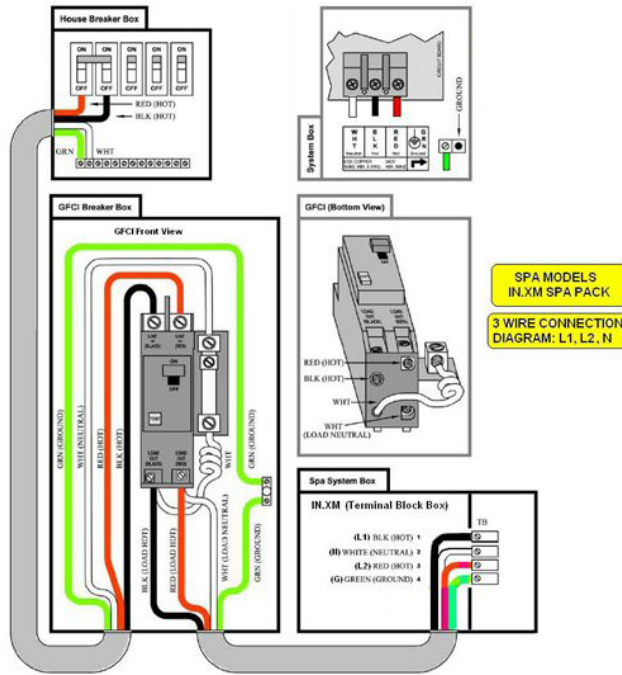
Pacific Spas have been designed to meet the maximum safety requirements to prevent electrical shock. Improper wiring may cause electrocution, risk of fire, risks of injuries, and damages to the equipment etc. Please read carefully and follow the electrical installation requirements and instructions for your spa completely!

Pacific Spas are equipped with the "state-of-the-art", advanced safety, self-protective and performance electronic equipment system. Please contact your dealer or local building department should you have any questions regarding your installation.



**high voltage**







## Electrical Connection

### ***1. 230/ 240 VOLT PERMANENTLY CONNECTED***

**PACIFIC SPAS MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE LOCAL ELECTRICAL CODES AND ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A LICENSED ELECTRICIAN.**

1. Install a ground fault circuit interrupter (GFCI) in the power supply panel. It is mandatory that your spa and equipment be protected by a GFCI of not less than 40 amp for one pump system and 50 A for 2 or 3 pump system, double pole. An electrical sub panel containing the GFCI breaker is recommended to connect the spa. This sub panel requires a 40/ 50 amp, single phase, 230 volt, two wire electrical services (two lines, and one ground). The ground wire must never be less than #6 AWG (CAN/CSA-C22.2 No. 218.1-M89) or #8 AWG (UL 1563). Use NEC and local codes for more information.

Mount the sub panel in the vicinity of the spa, but not within five feet, in accordance with local codes.

**Note: For 2 or 3 Pump systems it is possible to use a 40 A GFCI, but when the 2/ 3 pump system is in high speed the heater will turn off.**



## Electrical Connection

### CONTACT YOUR ELECTRICIAN FOR PROPER WIRE SIZING AND BREAKER SETTINGS

2. Run the appropriate wire from the main power supply panel/ sub panel in the approved conduit to the spa. Your Pacific spa pack requires a two wire electrical service, plus ground, (Line 1-black, Line 2-red, Ground-green). The wire should not be less than #6/3, wired directly into a GFCI in the main electrical panel box or in a sub panel box close to the main panel.

3. Attach the power wires to the terminal block inside the spa pack. Refer to the wiring diagram inside the spa equipment enclosure.

**Note: A connector marked "Ground" is provided within the control box. To reduce the risk of electrical shock, connect this connector to the grounding terminal of the electrical service panel/ sub panel with a continuous copper wire, equivalent in size to the conductors supplying this equipment. Bonding lugs are also provided on the equipment pack to connect a minimum No. 6 AWG solid copper conductor between the spa and any metal surfaces that are closer than 1.5 m (5ft.) to the spa.**



## Electrical Connection

### ***II. INSTALLATION INSTRUCTIONS***

1. To connect the electrical service, first remove the screws from the equipment compartment door (they are two Allen head stainless bolts), then pull the door one inch in the front and remove the door.

2. Locate the spa control system (blue box in the middle of the equipment enclosure). Remove the two Philips screws on the front of the control box and open the control box cover (from the right side to the left side). See the pictures below.

3. Route the electrical service from the sub panel into the spa equipment compartment. There are 2 conduits on the left and right side of the spa- below the cabinet corners.

**NOTE:** The sub panel must be placed in sight of the spa, no closer than five feet.

4. Connect wire to the lower left-hand corner of control box.



## Electrical Connection – SEL Series

### 1. Spa Electronic Control System

1. Identify the terminal block (**TB**), located inside the control box at the lower left-hand corner.
2. Connect the #6 AWG (BLACK wire) from the sub panel 40/ 50 amp breaker, terminal **L1** to **L1-TB01** (spa pack terminal 1)
3. Connect the #6 AWG (RED wire) from the sub panel 40/ 50 amp breaker, terminal **L2** to **L2- TB03**, (spa pack terminal 3)
4. Connect the # 6 AWG, (GREEN wire) from the sub panel **GROUND** bar to **G- TB04**, system ground terminal.



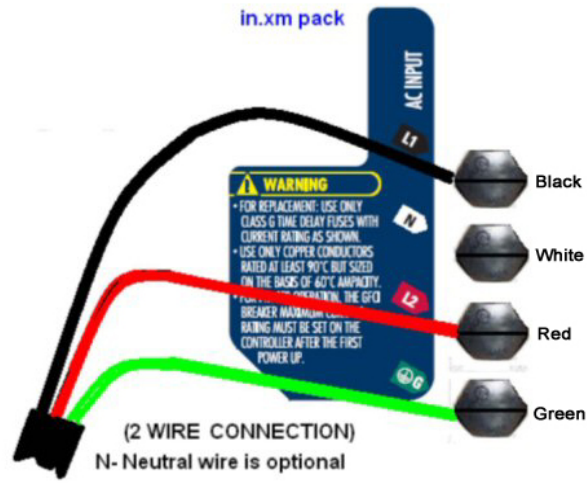
(Front view, cover closed)



(Front view, cover open)

### ELECTRICAL WIRING INSTRUCTIONS

240 VAC CONNECTION DIAGRAM





## Electrical Connection – SEL Series

**NOTE:** The **WHITE** neutral wire isn't required but may be connected to the spa pack; the system is working in 240 VAC only (needs 2 wires cable- 2 wires for lines plus ground wire). If a neutral wire (white) is present (old installation), that should be connected to the N- TB02 (spa pack terminal 2) for safety reason.

5. Close the control box cover and securely tighten the fastening screws. Close and secure the equipment compartment door as follows:

- Place top of door or panel directly below bar top against the frame of the spa.
- Push bottom of door or panel against the spa frame.
- Slide door or panel upward (pushing in on center of door) and left- right until screw holes line up.
- If door remains against the spa then replace the screws.
- If the door does not lock into position, repeat the previous steps.

**WARNING: FILL THE SPA WITH WATER BEFORE TURNING ON THE POWER! (See STARTUP AND REFILL PROCEDURES).**

Once the spa has been filled with water, turn it on and test all of the circuit breakers.



## Electrical Connection – SEL Series

**NOTE:** If breaker immediately trips, verify that the breaker amperage is set up correctly.

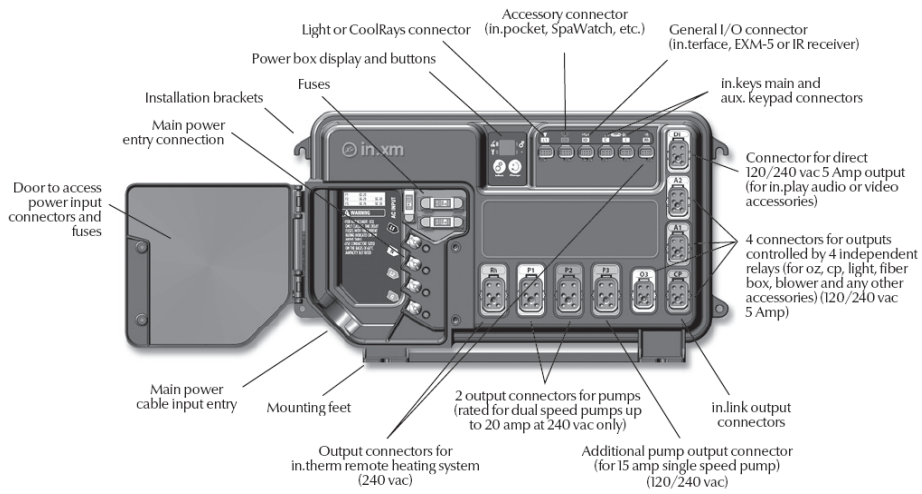
The breaker should be tested prior to each use:

1. Push the "TEST" button on each GFCI breaker, and observe it click OFF.
2. Wait 10 seconds, then push the breaker switch to the OFF (down) position (to ensure that it has completely disengaged), then push the breaker switch to the ON (up) position. If you don't wait 10 seconds, the spa's control system may be not completely reset – try again.

If any of the GFCI breakers fails to operate in this manner, your spa may have an electrical malfunction, and you may be at risk of electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

**SERVICE NOTE:** All **Pacific** spas have diagnostic functions that are displayed on the control panel and on the local display (Situating on the front middle up of the pack). For more details see the "**display section**".

## Electrical Connection – SEL Series



## Electrical Connection – SEL Series

### 2. Electronic Control Settings (Current Rating of GFCI)



Make sure all accessories are all bounded to the bounding connector and connected to pack.

Make sure the spa pack door is closed.

Turn on the breaker.

Press select button to change breaker setting.

The in.scan display will show the breaker setting menu.

It is important to specify the current rating of the GFCI used to insure a safe and efficient current management (and no GFCI trippings).

Use Change button to set the current breaker rating then press Select button.

All receptacles will match the corresponding female connection on the spa pack. No connectors should remain unconnected. Use blank plugs to fill unused connectors.



## Electrical Connection – SEL Series

### A. STANDARD POWER CONFIGURATION ONE PUMP SYSTEM

#### 240VAC/40A 3-Wire (2 Hot Lines & Ground)

Circuit breaker • 40A Dual-pole GFCI (Hard Wired Only)

Number of wires • Three

Current draw • 28- 32 A (depending on the model)

**The spa may be connected to 240V/30A service if the breaker current is set up at 30 A.**

**In 30A configuration the heater will not operate if the jet pump is running in high speed.**

**Note: jets pump runs 2 speeds (low and high speed).**

### B. STANDARD POWER CONFIGURATION TWO PUMP SYSTEM

#### 240VAC/50A 3-Wire (2 Hot Lines & Ground)

Circuit breaker • 50A Dual-pole GFCI (Hard Wired Only)

Number of wires • Three

Current draw • 36- 40 A (depending on the model)

**The spa may be connected to 240V/40A service if breaker current is set up at 40 A.**



## Electrical Connection – SEL Series

In 40A configuration the heater will not operate if both jet pumps are running in high speed. Note: jet pumps run 2 speeds (low and high speed).

### C. STANDARD POWER CONFIGURATION THREE PUMP SYSTEM

#### 240VAC/60A 3-Wire (2 Hot Lines & Ground)

Circuit breaker • 60A Dual-pole GFCI (Hard Wired Only)

Number of wires • Three

Current draw • 48 A (depending on the model)

a. The spa may be connected to 240V/50A service if breaker current is set up at 50 A.

In 50A configuration the heater will not operate if all three jet pumps are running in high speed.

Note: jet pump no. 1 and no. 2 run 2 speeds (low and high speed).

Note: jet pump no. 3 runs only in high speed.

b. The spa may be connected to 240V/40A service if breaker current is set up at 40 A.

In 40A configuration the heater will not operate if more than one jet pump is running in high speed.

Note: jet pump no. 1 and no. 2 run 2 speeds (low and high speed).

Note: jet pump no. 3 runs only in high speed.



## Error Code Definitions – SEL Series

### This section is for qualified spa technicians

When displaying errors codes, both the **device ID** and the **error code** are displayed, alternating between each. If there is more than one active error, the one with highest priority is displayed (following table lists the errors in order of priority, from highest to lowest). If problems are on several devices, the priorities are as follows:

in.xm (spa pack)

in.therm (remote heater)

high voltage devices/accessories

**Note:** The last 25 errors are logged into memory, along with number of days ago and time the error occurred; logs are accessible using ServSoft

### a1.1 in.xm (spa pack) error codes

Device ID displayed: 

Code: 

A hardware error was detected in the in.xm.

*Corrective action:* Restart the spa pack; manually change the status of all pumps and accessories. If problem still persists, replace in.xm.

## Error Code Definitions – SEL Series

**Code:** 

The user tried to set the input current rating *lower* than the total current for each pump.  
*Corrective action:* Increase in.xm current rating (and breaker) or decrease pump size.

**Code:** 

The input voltage is too low. Typically, either there is a problem with the terminal connections, or with the power line.

*Corrective action:*

- (a) Was this error present since 1st power-up of the in.xm? If so, check the input terminal connections to make sure they are correctly wired and tight.
- (b) Otherwise, have a certified electrician verify the power line quality.

**Code:**   

An in.xm fuse is blown.

*Corrective action:*

Replace the blown fuse with an identically rated part (SC-20, SC-25, etc.)

## Error Code Definitions – SEL Series



**Code:**

The in.xm's internal temperature is too high (overheat.)

*Corrective action:* Remove spa door and let system cool down. A system reset may be required to clear error.

### **a 2.2 in.therm (remote heater) error codes**



Device ID displayed:



**Code:**

A hardware error was detected in the in.therm.

*Corrective action:* Restart the spa pack; make sure the heater restarts by changing the set point. If problem still persists, replace in.therm.

## Error Code Definitions – SEL Series

**Code:** 

This error occurs if the in.therm is trying to heat water, but does not detect any temperature rise. This typically occurs in one of the following cases:

- in.therm is not correctly connected
- The contactor inside the in.xm may be open
- The heating element is damaged

*Corrective action:*

- Make sure the in.therm power cord is correctly inserted and seated in the in.xm
- Restart the system
- The system will perform a flow check
- If the error code appears *before* any temperature is displayed, replace the in.therm.

## Error Code Definitions – SEL Series

*Code:* The error code icon consists of the letters "NF" in a red, stylized font, enclosed within a black square border.

This code occurs when a “no flow” condition is detected by the in,therm.

*Corrective action:*

- Make sure that the pump associated to the heater (Pump #1 or Circulating Pump) is running
- Check and clean filters
- Make sure water valves are open
- Make sure there is no air lock condition (or any object obstructing passage of water within in.therm)

## Error Code Definitions – SEL Series

**Code:** 

This code occurs when a communications problem exists between the in.xm and in.therm. This usually occurs due to one of the following:

- Bad connection between in.xm and in.therm (or cable not connected)
- Male connector pins are bent
- Internal failure on in.xm or in.therm

*Corrective action:*

- Make sure remoter heater cable is correctly connected; then reset system
- If condition persists, visually verify male connector pins to make sure they are not bent
- If the above does not solve problem, either in.xm or in.therm may need to be replaced

## Error Code Definitions – SEL Series

**Code:** 

The High Limit hardware circuit tripped. Usually, the Kinetic Heating protection or the current monitoring circuitry will shut down the heater *before* this error can occur. If not, there are typically 2 possible causes:

- The heater was previously stored in a very hot location prior to installation and there is no water yet in the spa to cool it down
- External ambient temperatures are high enough to heat water, even though pumps remain off.

*Corrective action:*

- Add cold water to spa and let heater cool down - Reset spa pack using current breaker

## Error Code Definitions – SEL Series

### *a 2.3 Accessories related error codes*

Device ID displayed is one of the following:

<b>P1</b>	Pump #1	<b>bL</b>	Blower
<b>P2</b>	Pump #2	<b>03</b>	Ozone generator
<b>P3</b>	Pump #3	<b>A1</b>	Device on AUX connector #1 (OUT6)
<b>P4</b>	Pump #4	<b>A2</b>	Device on AUX connector #2 (OUT7)
<b>P5</b>	Pump #5	<b>Fb</b>	Fibre box
<b>CP</b>	Circulating pump	<b>FR</b>	Fan



## Error Code Definitions – SEL Series



**Code:**

The system hasn't detected any current changes when turning on or turning off the device. This usually occurs due to one of the following:

- The device is incorrectly connected - The contactor inside the in.xm may be open
- The device is defective (damaged cable, internal protective device open, permanent damage, etc.)

**Corrective action:**

- Make sure the device is correctly connected (plug is seated)
- If possible, manually change the output status (on/off) of the device and cycle through all possible states (i.e. low and high speeds)
- Reset spa pack
- If error does not clear, problem is probably with the device, it will need to be serviced.

## Error Code Definitions – SEL Series

Code: The error code "Sc Er" is displayed in red on a black background within a rectangular frame.

Every time a low-level option is changed, the system must “relearn” the currents associated to each output/load. During this learning process, the device(s) connected to OUT8 (direct output, no relay) *must* be disconnected (or off.) If not, the system will report his error code. Once the load is correctly disconnected, the user needs to restart the learning process by pressing either Select or Change on the in.scan interface. Once the relearn is finished, the accessories connected to OUT8 may be reconnected.

## Electrical Connection – S & SE Series



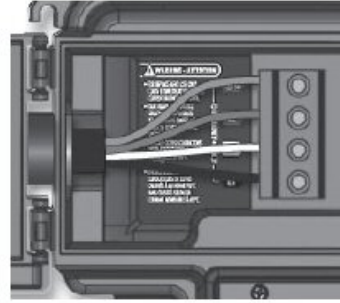
### **Warning!**

"For units for use in other than single-family dwellings, a clearly labeled emergency switch shall be provided as part of the installation. The switch shall be readily accessible to the occupants and shall be installed at least 5 feet (1.52 m) away, adjacent to, and within sight of the unit".

## Electrical Connection – S & SE Series

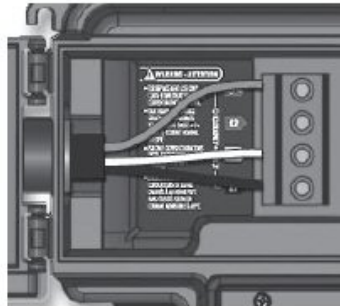
### For 240 VAC (4 wires)

Correct wiring of the electrical service box, GFCI, and pack terminal block is essential. Call an electrician if necessary.

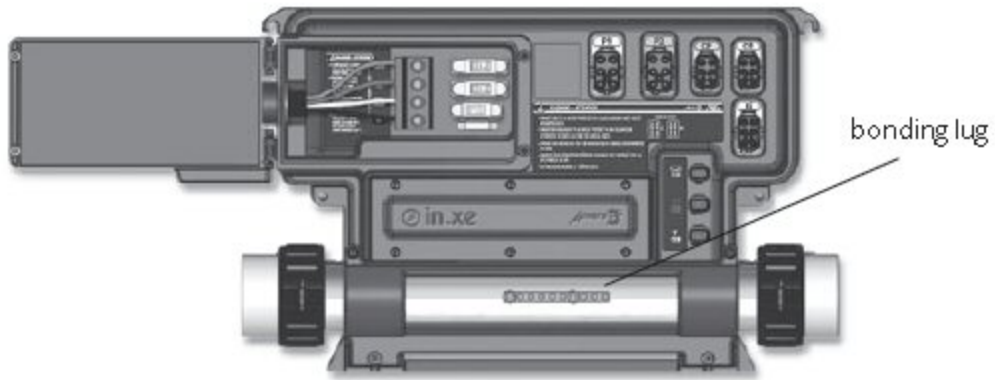


### For 120 VAC (\*3 wires)

\*If connected to a 3 wire system, no 240 VAC component will work.



## Electrical Connection – S & SE Series





## Electrical Connection – S & SE Series

### **Warning!**

This product must always be connected to a circuit protected by a ground fault interrupter. Proper wiring of the electrical service box, GFCI and in.xe terminal block is essential! Check your electrical code for local regulations. Only copper wire should be used, never aluminum.

To install the wiring for the in.xe spa control, you'll need a Phillips screwdriver and a flat screwdriver. Loosen the 2 screws of the spa pack door and open it. Remove 5 1/2" of cable insulation. Strip away 1" of each wire insulation. Pull the cable through the cutout of the box and secure it with a strain relief (1" NTP strain relief; hole diameter: 1.335").

Make sure that only the uncut sheathing is clamped at this opening. Push the color-coded wires into the terminals as indicated on the sticker and use the flat screwdriver to tighten the screws on the terminals.

After making sure wire connections are secure, push them back into the box and close the door. Tighten the 2 screws of the spa pack door.

Connect the bonding conductor to the bonding lug on the front of the in.xe spa pack (a grounded electrode conductor shall be used to connect the equipment grounding conductors).



## Electrical Connection – S & SE Series

**NOTE:** The **WHITE** neutral wire isn't required but may be connected to the spa pack; the system is working in 240 VAC only (needs 2 wires cable- 2 wires for lines plus ground wire). If a neutral wire (white) is present (old installation), that should be connected to the N- TB02 (spa pack terminal 2) for safety reason.

Close the control box cover and securely tighten the fastening screws. Close and secure the equipment compartment door as follows:

- Place top of door or panel directly below bar top against the frame of the spa.
- Push bottom of door or panel against the spa frame.
- Slide door or panel upward (pushing in on center of door) and left- right until screw holes line up.
- If door remains against the spa then replace the screws.
- If the door does not lock into position, repeat the previous steps.

**WARNING: FILL THE SPA WITH WATER BEFORE TURNING ON THE POWER! (See STARTUP AND REFILL PROCEDURES).**

Once the spa has been filled with water, turn it on and test all of the circuit breakers.



## Electrical Connection – S & SE Series

**NOTE:** If breaker immediately trips, verify that the breaker amperage is set up correctly.

The breaker should be tested prior to each use:

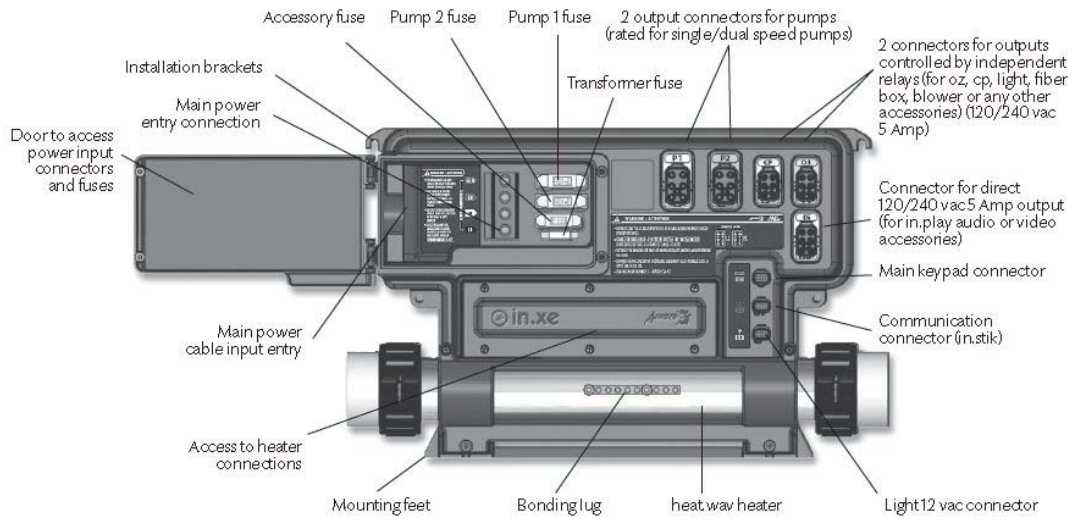
1. Push the "TEST" button on each GFCI breaker, and observe it click OFF.
2. Wait 10 seconds, then push the breaker switch to the OFF (down) position (to ensure that it has completely disengaged), then push the breaker switch to the ON (up) position. If you don't wait 10 seconds, the spa's control system may be not completely reset – try again.

If any of the GFCI breakers fails to operate in this manner, your spa may have an electrical malfunction, and you may be at risk of electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

**SERVICE NOTE:** All **Pacific** spas have diagnostic functions that are displayed on the control panel and on the local display (Situating on the front middle up of the pack). For more details see the "**display section**".



## Electrical Connection – S & SE Series





## Electrical Connection – S & SE Series

### STANDARD POWER CONFIGURATION TWO PUMP SYSTEM

#### **240VAC/50A 3-Wire (2 Hot Lines & Ground)**

Circuit breaker • **50A** Dual-pole GFCI (Hard Wired Only)

Number of wires • Three

Current draw • **36- 40 A** (depending on the model)

**The spa may be connected to 240V/40A service if breaker current is set up at 40 A.**

## General Connections – S & SE Series

### Heat.wav heater

In.xe comes with a high performance heat.wav heater. With no pressure switch, it features in.flo integrated dry-fire protection.

A watertight panel protects the heater and probe connectors. Removing the panel gives access to in.flo dry-fire protection and hi-limit/regulation probe connectors, line 1, line 2 and ground power input cables connection ports.



## General Connections – S & SE Series

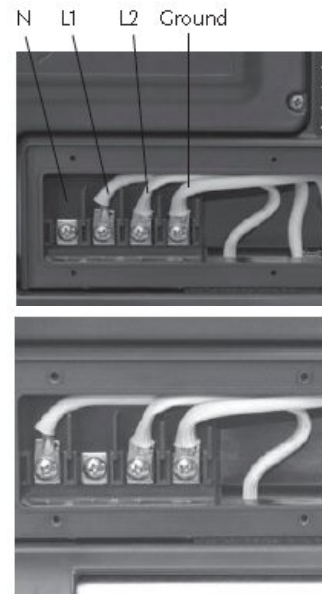
### Connections for 240v heater (4KW or 2 KW)

The heat.wav heater is factory configured 240v /4 kW, but it can be converted to a dedicated 120v / 1kW by a simple switching a cable connection port.

### Connections for 120v heater (1KW)

heat.wav specification summary:

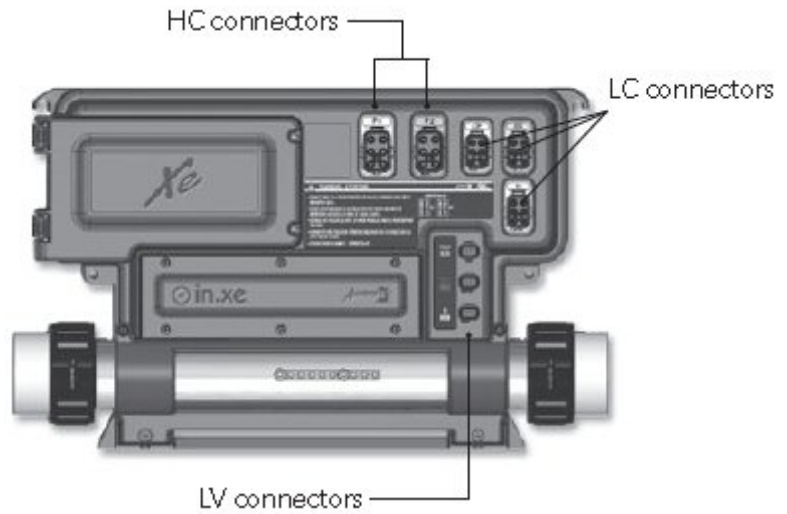
- 17 A resistive (4kW @ 240v)
- 8.7 A resistive (2kW @ 230v)
- 8.5 A resistive (1kW @ 120v)
- Supports 120v or 240v
- Protected by external breaker (not fused)
- Incoloy® heater element  
for greater protection against corrosion



## General Connections – S & SE Series

### in.link connectors

In.xe features in.links connectors with colored and tagged polarizers. This new plug and connector technology has been specifically designed for easy and safe assembly. The tags are interchangeable depending on the output; the polarizers are designed to avoid misconnections. In.link connectors are easily and conveniently accessible from the front of the pack offering a wide range of possible connection configurations. In.link connectors come in 3 sizes (HC, LC and low voltage) for all types of inputs and output devices.





## General Connections – S & SE Series

### In.link output connectors:

#### High-Current - HC connectors:

Output	Typical Device
Out1	Pump 1
Out 2	Pump 2 <b>483x472</b>

#### Low-Current - LC connectors: (relay controlled)

Output	Typical Device
Out 3	Circulation Pump (CP)/Blower
Out 4	Ozonator
Out5	Audio/video (direct to line)

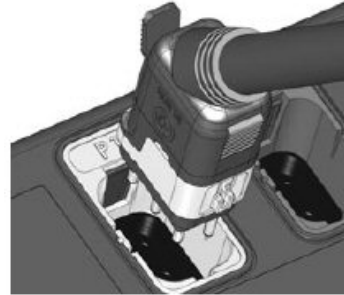
#### Low-Voltage - LV connectors:

Output	Typical Device
C	Main keypad
CO	Comm.connector (in.stik)
L1	Light

## General Connections – S & SE Series

They all include an integrated latch that keeps them safely in place and provides audible and tactile feedback when properly connected.

Finally, colored and tagged polarizers provide a definite advantage in reducing SKU numbers and inventory levels thus giving OEMs and dealers total flexibility to easily configure output devices.



### **in.stik: automated software upload**

In.stik is a pen drive with in.link connector very similar to an USB memory stick. It connects to in.xe and contains data to program or configure the

system. in.xe executes the data upload automatically.


This feature is very useful on production lines to configure pack and in the field for service purposes like software updates.





## Installer Options – S & SE Series

These options are accessible by keeping the Program (or Light, if Program not available) key pressed for 20 seconds. At that point, the 1<sup>st</sup> parameter (*Input Current or Number of phases for a CE system*) will be displayed.

Parameter	Display	Options	Description
<i>Input current</i>		10 to 48 ( <i>on UL/CSA packs</i> ) 10 to 40 ( <i>on CE single-phase packs</i> )** 16 to 20 ( <i>on CE dual-phases packs</i> )**	Available household supply current



## Installer Options – S & SE Series

These options are accessible by keeping the Program (or Light, if Program not available) key pressed for 30 seconds. At that point, the 1<sup>st</sup> parameter (*Pump 1 Config*) will be displayed. Note that **bolded** option values are suggested values.

Parameter	Display	Options	Description
<i>Pump 1 Config</i>	<b>P1-</b>	Single-speed = 1 Dual-speed = 2	Pump #1 configuration
<i>Pump 2 Config</i>	<b>P2-</b>	Not installed = 0 Single-speed = 1 Dual-speed = 2	Pump #2 configuration
<i>Blower Config</i>	<b>bL-</b>	Not installed = 0 Installed = 1	Blower configuration
<i>Circ. Pump Config</i>	<b>CP-</b>	Not installed = 0 Installed = 1 Always on = 2	Circulation Pump configuration

## Installer Options – S & SE Series

Parameter	Display	Options	Description
<i>Ozone Config</i>	<b>oC-</b>	Not installed = 0 During filter cycle = 1 Always on = 2	Ozone generator configuration
<i>Ozone Pump</i>	<b>oP-</b>	Circulation pump = 0 Pump #1 = 1	Pump associated to Ozone generator
<i>Ozone Type</i>	<b>o-</b>	Standard = 0 Timed = 1	Type of Ozone generator
<i>Heater Pump</i>	<b>HP-</b>	Circulation pump = 0 Pump #1 = 1	Pump associated to Heater
<i>Filter Config</i>	<b>FL-</b>	Purge only = 0 With Circ. Pump = 1 With Pump #1, Low speed = 2	Filter cycle configuration
<i>Temp. Units</i>	<b>Un-</b>	°F = 0 °C = 1	Temperature units used on display

## Installer Options – S & SE Series

Parameter	Display	Options	Description
<i>Time Format</i>	CL-	No time display = 0 AM/PM format = 1 24H format = 2	Clock display format
<i>Pump #1 High current</i>	1--	1 to 20 amperes	Pump #1 High speed current
<i>Pump #1 Low current</i>	2--	1 to 15 amperes	Pump #1 Low speed current
<i>Pump #2 High current</i>	3--	1 to 15 amperes	Pump #2 High speed current
<i>Pump #2 Low current</i>	4--	1 to 15 amperes	Pump #2 Low speed current
<i>Blower current</i>	5--	1 to 10 amperes	Blower current



## Installer Options – S & SE Series

Parameter	Display	Options	Description
<i>Circ. Pump current</i>	6--	0 to 5 amperes	Circulation Pump current
<i>Direct current</i>	7--	0 to 5 amperes	Direct accessory output current
<i>Heater current</i>	8--	4 to 17	Heater current
<i>Number of phases</i>	P--	1	Available household supply current
<i>Input current</i>	B--	10 to 48 ( <i>on UL/CSA packs</i> )	Available household supply current

## Error Code Definitions – S & SE Series

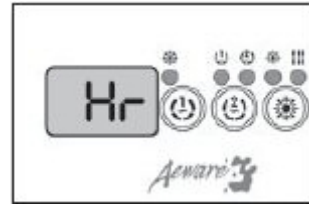
### in.xe error codes

Error codes indicate a failure condition or a problem which needs to be corrected to ensure proper functioning of the system. Both the error code and the water temperature are alternatively displayed.

All errors codes will be displayed on the keypad display.

### Hr

An internal hardware error has been detected in in.xe.



### HL

Water temperature at the heater has reached 119°F.  
Do not enter spa water!



## Error Code Definitions – S & SE Series

### Aoh

Temperature inside the spa skirt is too high, causing the internal temperature in the in.xe to increase above normal limits.



### FLO

The system did not detect any water flow while the main pump was running.



## Error Code Definitions – S & SE Series

### Prr

The Prr error message indicates a problem with regulation probe. The system is constantly verifying if temperature probe reading is within normal limits.



### oh

Water temperature in the spa has reached 108°F. Do not enter spa water!

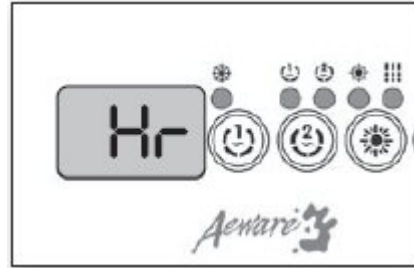


## Corrective Actions – S & SE Series

### Hr

**An internal hardware error has been detected**

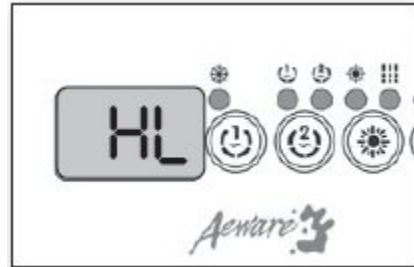
- Restart the spa pack and start & stop all pumps and blower.
- If error reappears, replace in.xe spa pack.



### HL

**Water temperature at the heater has reached 119°F**

- Restart the spa pack.
- If error persists, measure the temperature with a DIGITAL thermometer and compare its reading with temp. on the display. Make sure the temp. reading is lower than 119°F.
- If problem persists, replace pack.



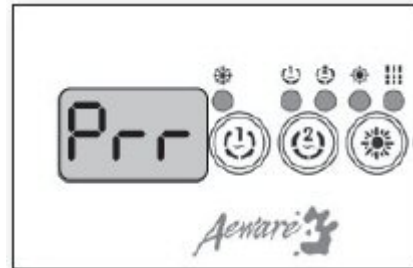


## Corrective Actions – S & SE Series

### Prr

#### Regulation probe issue

- Verify if regulation probe (located above the heater) is properly connected.
- Replace in.xe heater if problem persists.



### Aoh

#### Temperature inside the spa skirt is too high

- Remove spa skirt and let system cool down, until the error clears.



## Corrective Actions – S & SE Series

**oh**

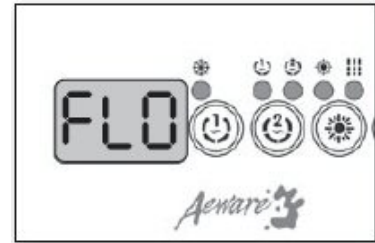
**Water temp. in the spa has reached 108°F**

- Measure the temperature with a DIGITAL thermometer and compare its reading with temp. on the display. If temp. reading is different, replace heater.
- Remove spa cover and let spa cool down.
- Add cold water and lower filter cycles.
- If problem persists replace pack.

**FLO**

**Primary pump is activated but the system doesn't detect any water flow**

- Make sure water valves are open and that water level is high enough.
- Check and remove anything obstructing the filter.
- Make sure there are no air locks (or that no object obstructs the passage of water in the heater channel). Pumps may make strange noises. Follow air lock procedure to clear them.
- Make sure that the pump associated to the heater is running.



## Corrective Actions – S & SE Series

### GFCI Trips

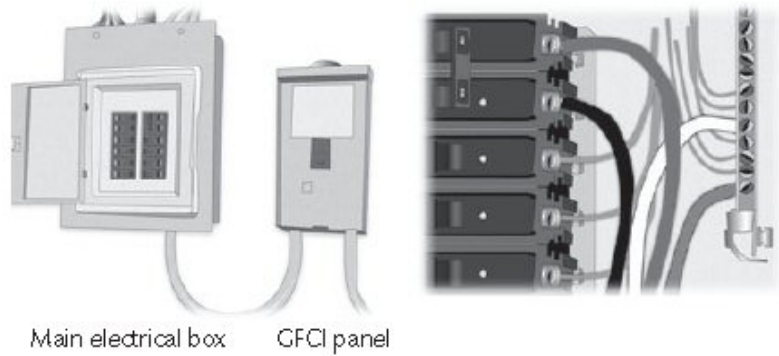
#### Warning!

There are different GFCI models used on the market. See manufacture's instructions that come with the GFCI for specific information. Note that all illustrations are examples only.

Verify if GFCI is properly connected.

If it's not, verify GFCI diagram and reconnect it.

Verify in.xe pack wiring (make sure that the neutral and the ground have not been inverted).



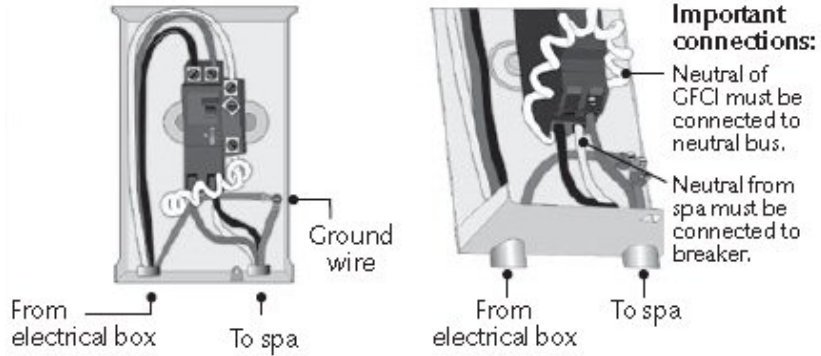
## Corrective Actions – S & SE Series

If the GFCI is properly connected but still tripping, unplug all outputs from the spa pack (pumps, blower, heater, ozonator etc).

Reconnect one output at the time until the GFCI trips again.

Replace defective component.

Note: If the neutral of the GFCI is hooked up to the neutral bar, the in.xm spa control will only trip when the 120v outputs are fired (e.g.: the ozonator)

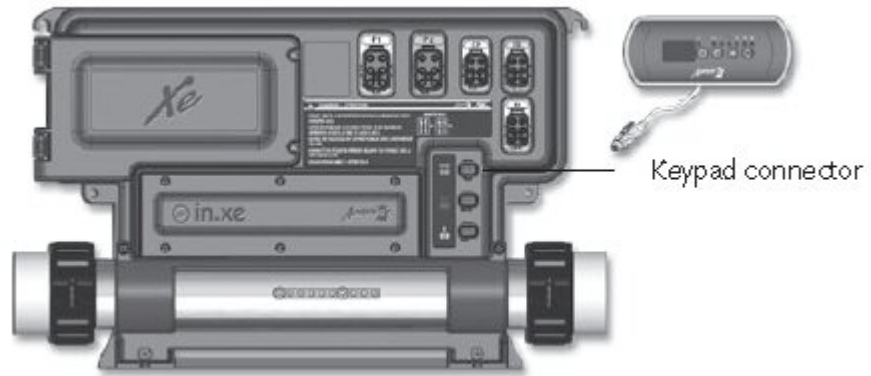


## Corrective Actions – S & SE Series

### Keypad doesn't seem to work!

If a keypad doesn't seem to work:

- Verify keypad connections and try spare keypad.
- Replace keypad if problem is corrected.
- Replace in.xe if problem is not corrected.



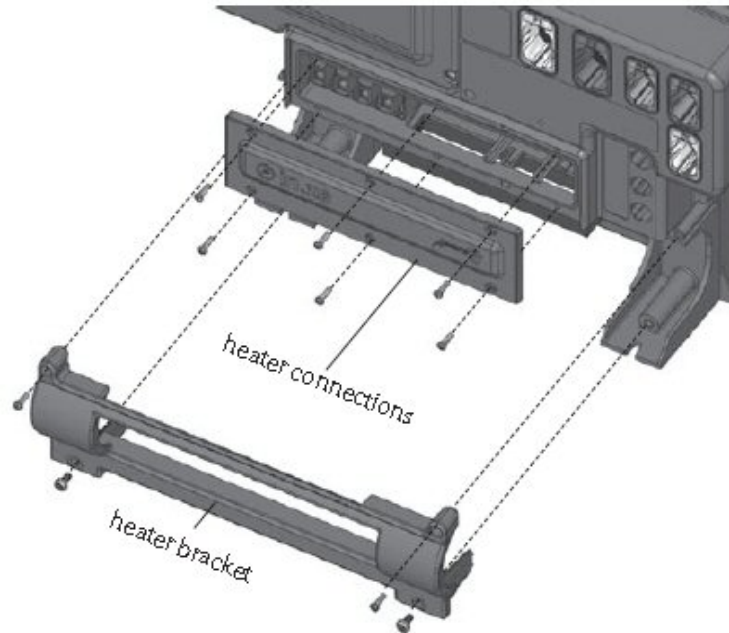
## How to replace the heater – S & SE Series

### Warning!

Before starting removal procedure be sure to:

- Turn off electric power to the the unit.
- Ensure spa water valves are closed (or that the spa is drained).

Using a Phillips screwdriver, loosen the six (6) screws that hold the heater connections door in place. Once the screws are removed, disengage the heater connections door. Loosen and remove the four (4) screws and disengage the heater bracket.



## How to replace the heater – S & SE Series

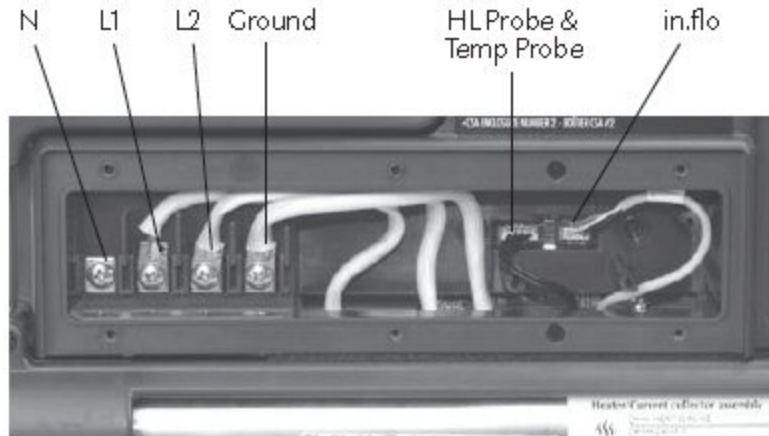
Use a Phillips screwdriver to loosen the terminals and remove all electrical heater connections:

Neutral Line (N), Line 1 (L1), Line 2 (L2) and Ground Line (Ground).

Manually remove the HL probe & Temp. probe connector.

Manually remove in.flo connector.

Be careful not to damage any connector by twisting or pulling too hard.

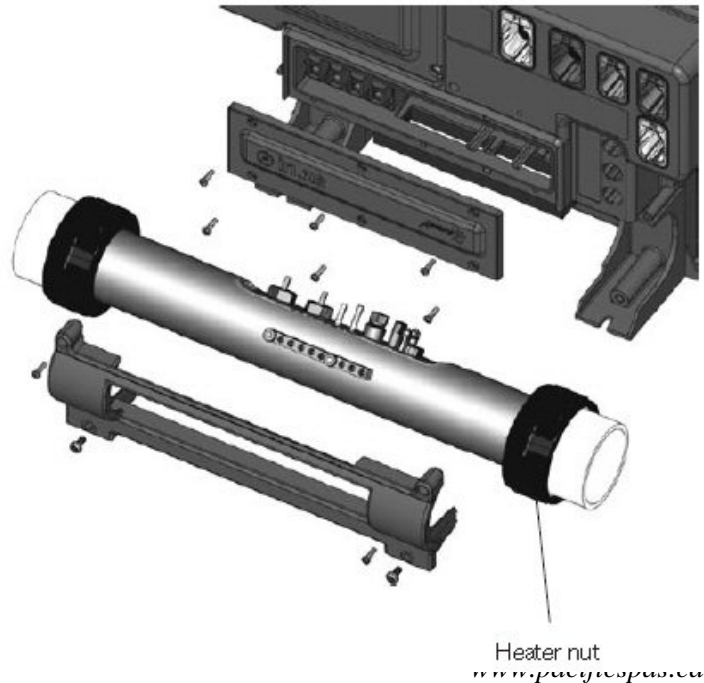


## How to replace the heater – S & SE Series

After disconnecting all electrical heater connections, loosen and remove the two (2) heater nuts retaining the heater.

Disengage heater from in.xe pack by slightly twisting in such way that the bottom of the heater comes out first and pull the heater away from the pack.

Replace the defective heater with a new one, and repeat the same procedure in reverse order to reconnect replacement heater to the in.xe pack.





## Service Calls

Your spa warranty gives you specific coverage. Be sure to read the enclosed warranty sheet carefully. It is your responsibility to be aware of and perform maintenance specific to your spa model and environment. Should you have any questions, please do not hesitate in contacting your Dealer or Pacific Spas. As issues that relate to poor maintenance are not covered under warranty it is very important that you follow the maintenance guidelines in this manual.

Failure to adhere to regular maintenance procedures will lead to improper water balance which will in turn contribute to the failure of the:

- heater element
- pump seal
- coupling seals
- spa pillows
- cover





## Service Calls

For any warranty service required, please call the Certified Pacific Spa dealer where you purchased the spa.

### **BEFORE CONFIRMING A SERVICE APPOINTMENT:**

Have ready the serial # and model of your spa (located on the silver registration plate on the front of the spa), your date of purchase, and store receipt.

It will be necessary to confirm that the electrical installation is in accordance with the Canadian Electric Code Part 1. Please be ready to supply the name and telephone number of the licensed electrician who wired your spa. Please keep your invoice for future reference.

If you need further information, please call 1-780-481-8008, or visit our web site at <http://www.pacificspas.ca>



**2014 LIMITED WARRANTY**

THIS LIMITED WARRANTY IS EXTENDED TO THE ORIGINAL PURCHASER OF A PACIFIC SPA, MANUFACTURED AFTER FEBRUARY 1<sup>ST</sup> 2014, AND INSTALLED IN NORTH AMERICA

	<b>ENDEAVOUR, OCEANA, CALYPSO, SPARTA, ATLANTIS, ECLIPSE, JUNO</b>	<b>SATURNA, SOLARA, ECLIPSE</b>
<b>STRUCTURE</b> - Warranted against defects in the spa shell causing water loss due to defects in workmanship and/or materials	<b>Lifetime</b> from the original date of sale	<b>Lifetime</b> from the original date of sale
<b>SHELL / SURFACE</b> - Warranted against blistering or delaminating of the interior spa surface due to defects in workmanship and/or materials	<b>5 (Five)</b> years for the original date of sale or <b>6 (Six)</b> years from the date of manufacture	<b>3 (Three)</b> years from the original date of sale or an additional 6 months from the date of manufacture
<b>PLUMBING</b> - Plumbing components are warranted against water loss due to defects in workmanship	<b>5 (Five)</b> years for the original date of sale or <b>6 (Six)</b> years from the date of manufacture	<b>3 (Three)</b> years from the original date of sale or an additional 6 months from the date of manufacture
<b>EQUIPMENT</b> - Electrical equipment components (specifically pumps, heater, keypad and control system), are warranted against malfunction due to defects in workmanship and/or materials	<b>5 (Five)</b> years for the original date of sale or <b>6 (Six)</b> years from the date of manufacture Note: Rainbow Lighting System 2 (Two) years.	<b>3 (Three)</b> years from the original date of sale or an additional 6 months from the date of manufacture Note: Rainbow Lighting System 1 (One) year.



**WARRANTIES FOR OTHER COMPONENTS** - The light bulb, light lenses, fuses, all surface finishes, spa base, equipment enclosure and filter cartridge are warranted to be free of defects in materials and/or workmanship at the time of delivery only. Headrests and filter lids are warranted to be free of defects for 90 days component replacement, from the date of sale. Pump seals are warranted for 1 (One) year component and labour replacement. Plastic components, jets, diverter & other external valves are warranted against malfunction due to defects in workmanship and materials for 3 (Three) years component replacement, from the date of sale. Other factory-installed components including but not limited to stereo components (radio, speakers, subwoofer, etc.) UV and ozone systems are warranted against malfunction due to defects in workmanship and materials for 1 (One) year component replacement and 90 days replacement labour. Bromine Generator Systems are warranted for 5 (Five) years component replacement and 1 (One) year labour replacement. Spa Covers are warranted to be free of defects in materials and/or workmanship for 2 (Two) years component repair or replacement. In Watch system is warranted for 1 (One) year component replacement. Wood and Synthetic skirting/cabinets are warranted to maintain their structural integrity for 2 (Two) years component and labour replacement from the original date of sale.

**PERFORMANCE** - To obtain service in the event of a defect covered by this Limited Warranty, notify your Pacific Spa dealer as soon as possible and use all reasonable means to protect the spa from further damage. Sub-zero ambient temperatures require the spa to be inspected at least once every 24 hours. Upon the presentation of a valid proof of purchase, a designated service representative will correct the defect subject to the terms and conditions contained within the Pacific Spas Reimbursement Schedule and this Limited Warranty. Providing access to the spa howsoever occasioned, is fully borne by the spa owner. A reasonable mileage charge may be applicable. Repairs are based on restoring structural integrity and functionality to the spa and may not include aesthetic restoration. If Pacific Spas (The "Manufacturer") determines that repair of the defect is not feasible, it reserves the right to provide a replacement spa instead, equal in value to the purchase price of the original spa, less all applicable depreciation. In the event of replacement, all costs associated with removal of the original spa, shipping, delivery and installation of the replacement spa are borne by the end user. Replacement spas carry the balance of the original spa's warranty.

**WARRANTY LIMITATIONS** - This Limited Warranty is void if: (a) The Manufacturer, or its designated representative, determines that the spa has been subjected to alteration, neglect, misuse or abuse, or freight damage caused by the common carrier. (b) Any repairs have been attempted by anyone other than a designated representative. (c) The failure is caused by accident, "Act of God" or other cause beyond the control of the Manufacturer. Neglect, misuse, and/or abuse include any installation, operation, or maintenance of the spa other than in accordance with the instructions contained in the owner's manual provided with the spa; including but not limited to the FAILURE TO MAINTAIN PROPER WATER CHEMISTRY AND CHEMICAL BALANCE and the use of abrasive or improper cleaners. (d) The spa has not been registered with the Manufacturer within 90 days of the date of purchase. This Limited Warranty does not provide coverage for any item attached to or installed on the spa after the date of manufacture, or for gaining access to any component for repair or replacement. Residential spas used in commercial



applications are excluded from any warranty whatsoever. The spa owner accepts liability for repair work performed by anyone other than the Manufacturer or a designated Pacific Spas representative.

**LIMITATIONS** - The Manufacturer disclaims all warranties, expressed or implied, in fact or in law, to the extent allowed by your State / Province's Law, including the warranty of merchantability and fitness for use, except as stated specifically herein. The Manufacturer or its designated representative must perform all warranty service. No agent, dealer, distributor, service company or other party is authorized to change, modify or extend the terms of this limited warranty in any manner whatsoever. The Manufacturer will not be responsible for any statements or representations made in any form that go beyond, are broader than, or are inconsistent with any authorized literature or specifications furnished by Pacific Spas.

**DISCLAIMERS** - The Manufacturer and its representatives shall not be liable for any injury, loss, cost or other damage, whether incidental or consequential, arising out of any defect covered by this limited warranty, including without limitation, loss of use of the spa and cost for removal of defective product even if the Manufacturer was advised of the possibility of damage. The liability of the Manufacturer under this limited warranty, if any, shall not exceed the original amount paid for the defective product. Coverage under this limited warranty shall commence from the lesser of the original date of sale or an additional year from the date of manufacture and the duration of such coverage shall not extend for any reason whatsoever beyond the stated time periods. These disclaimers shall be equally applicable to any service provided by the Manufacturer and its designated representatives.

**LEGAL RIGHTS** - This Limited Warranty gives you specific legal rights. You may also have other rights that vary from Province / State to Province / State. Some Province / States do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

Pacific Spas Inc. 13025 – 80<sup>th</sup> Avenue  
Surrey, BC Canada V3W 3B1 (800-263-7727)