

# Platinum II



## Owners Manual



# Introduction

Your choice of Platinum II spa indicates that you are devoted to excellence. The manufacturer appreciates your patronage and takes pride in the tradition of quality spas that our company represents.

In order to get the most out of your spa, we strongly suggest that you take time to read through this manual before you hook up and operate your spa. This will acquaint you with the operating features, hook up procedures, maintenance, safety procedures, ensuring an enjoyable experience right from the start. Manufacturer has tried to anticipate all of your needs and desires; however, if you need any addition information, feel free to call manufacturer.

**WARNING!!** This manual was written to ensure the proper use and installation your spa. Any modifications to the procedures outlined in this manual may result in your warranty being voided. Please take the time to read this manual to avoid any unnecessary problems with your brand new spa and equipment.

**THIS MANUAL AND ITS CONTENTS ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALTHOUGH WE HAVE PREPARED THIS MANUAL AS ACCURATE AND PRECISE AS POSSIBLE, WE WILL NOT BE LIABLE FOR LOSS, INJURY OR DAMAGES CAUSED BY IMPROPER INSTALLATION OR USE OF SPA (IMPROPER OR OTHERWISE).**

## This Manual Covers The Following Model



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

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

Dealer Name: \_\_\_\_\_

Spa Model and Serial Number: \_\_\_\_\_

**1 - 8 0 0 - 7 4 9 - 8 0 0 3**

Part No. 7890 - revised Aug. 06

**MANUFACTURE RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.**

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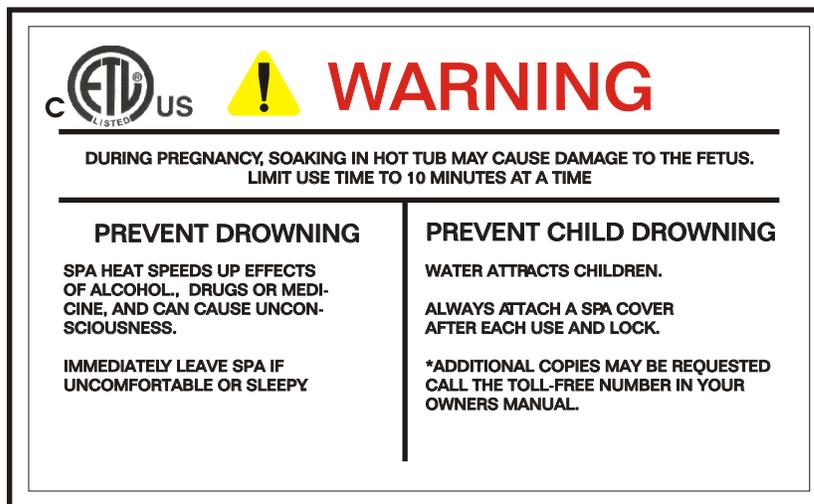
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**1 - 8 0 0 - 7 4 9 - 8 0 0 3**

# IMPORTANT SAFETY INSTRUCTIONS

When installing your spa and using this equipment, basic safety precautions should always be followed, to include the following:

- **READ AND FOLLOW ALL INSTRUCTIONS!** The following instructions are required by UL 1563 standard to be printed as a condition of their listing this product. They contain important safety information we strongly urge you to read and apply.
- **DANGER - TO REDUCE THE RISK OF INJURY:** Do not permit children to use spa unless they are closely supervised at all times.



## WARNING SIGN MUST BE POSTED

The **WARNING** sign (RED) above is packed with your new Elite Platinum II Spa. This sign must be posted in a prominent place in close proximity to the spa installation site immediately upon completion of spa installation.

- **WARNING SIGN** - It is extremely important that this sign be permanently placed in clear view of any persons using the spa. Occasional spa users may not be aware of some of the dangers hot water poses to pregnant women, small children, and people under the influence of alcohol. If you did not receive a warning sign or your sign has become damaged, please contact your spa dealer or manufacturer.
- **DANGER** - A wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4mm<sup>2</sup>) solid copper conductor between unit and any metal equipment, metal inclosures of electrical equipment, metal water pipe, or conduit, if that item is located within 5 feet (1.5m) of the unit.
- **DANGER - RISK OF ACCIDENTAL DROWNING:** Extreme Caution must be exercised at all times, to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use spa unless they are supervised at all times. Cover spa and use safety locks to prevent accidents.
- **DANGER - TO REDUCE THE RISK OF INJURY:** The suction fittings in the spa are sized to match the specific water flow created by the pump/pumps. Should the need arise to replace the suction fittings or the pump/pumps, be sure that the flow rates are compatible.
- **DANGER - RISK OF ELECTRICAL SHOCK:** Install at least 5 feet (1.5m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet (1.5m) of metal surfaces if each metal surface is permanently connected by a minimum No. 8 AWG (8.4mm<sup>2</sup>) solid copper conductor to the wire connector on the terminal box that is proved for this purpose. Do not permit any electrical appliance, such as a light, telephone, radio or television within 5 feet (1.5m) of the spa, unless factory installed.
- Position spa to provide proper drainage, accessibility of electrical compartments.
- For floor recessed spas, install to permit access for servicing from above or below floor.
- **NEVER USE AN EXTENSION CORD!**
- Consideration should be taken for water splash out. Water can ruin wood floors and some finishes.
- **DO NOT** use a wall switch, ground fault circuit interrupter, circuit breaker, fuse, or plugging and unplugging the spa as a means of turning on or off your spa for normal everyday use.
- **DO NOT** block access door.
- Set the spa on a firm level (flat) surface. **DO NOT** set spa on blocks as structural damage may occur to spa.
- **WARNING** - To reduce the risk of injury. The water in a spa should never exceed 40° C (104° F). Water temperatures between 38° C (100° F) and 40° C (104° F) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.

# IMPORTANT SAFETY INSTRUCTIONS

- Since excessive water temperatures have a high potential for causing fetal damage during early pregnancy, pregnant or possible pregnant women should limit water temperatures to 38° C (100° F). Before entering a spa, the user should test the water temperature with an accurate thermometer. The tolerances of water temperature-regulating devices vary. The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning. Persons suffering from obesity, medical history or heart disease, low/high blood pressure, circulatory system problems, or diabetes, should consult a physician before using a spa. Persons using medication should consult a physician before using a spa because some medications induce drowsiness while others may affect heart rate, blood pressure and circulation.
- Your spa is equipped with audio.

### **Caution - Risk of Electric Shock.**

Do not leave audio compartment door and cover open.

### **Caution - Risk of Electric Shock**

Replace audio components only with identical components.

### **Warning - Prevent Electrocutation**

Do not connect any auxiliary components. For example, cable, additional speakers, head phones, etc. to the system.

## **HYPERTHERMIA**

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

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6° F (37° C). 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.

## **CHOOSING A LOCATION**

**IMPORTANT:** Because of the combined weight of the spa, water and users, it is extremely important that the base upon which the spa rests be smooth, flat, level and capable of uniformly supporting this weight, without shifting or settling, for the entire time the spa is in place. If the spa is placed on a surface which does not meet these requirements, damage to the skirt and/or the spa shell may result. Damage caused by improper support is not covered under warranty. It is the responsibility of the spa owner to assure the integrity of the support at all times. It is strongly recommended that a qualified licenced contractor prepare foundation for your spa. Manufacturer recommends a poured, reinforced concrete slab with a minimum thickness of 4 inches (10cm). Wood decking is also acceptable provided it is constructed so that it meets the requirements outlined above. The spa must be installed in such a manner as to provide drainage away from the spa. Placing the spa in a depression without provisions for proper drainage could allow rain, overflow and other casual water to flood the equipment and create a wet deck. Install so as to permit access to the equipment, either from above or below, for servicing. Make certain that there are no obstructions which would prevent removal of the cabinet side panels and access to the jets components, especially on the side with the equipment bay doors.

### **Outdoor Location**

In selecting the ideal outdoor location for your spa, we suggest that you take into consideration:

1. The proximity to changing area and shelter (especially in colder weather conditions).
2. The pathway to and from the spa (free of debris, dirt, leaves as not to be tracked into spa).
3. The closeness to trees and shrubbery (leaves and birds could create extra work).
4. A sheltered environment (less wind, weather exposure resulting in lowered operation and maintenance costs).
5. The overall enhancement of your environment. It is preferable not to place the spa under an unuttered roof overhang since run-off water will shorten the life expectancy of spa cover.

### **Indoor Location**

Be sure your spa will fit into the space you have chosen. Proper access into the home is needed to move the spa into place. Ventilation may be needed because of the humidity from the spa. In most cases, a spa cover is sufficient. Be sure to check the load carrying capabilities of the floor you will be installing your spa, as most homes meet the requirement of 80lbs per square foot (manufacturer not responsible). Insure you have proper drainage in the event of a leak or water spill due to over load of spa with people causing water damage (manufacturer not responsible.) Encase of maintenance problems, leave enough room around the spa to work. Choose proper flooring area for spa.

# POWER REQUIREMENTS

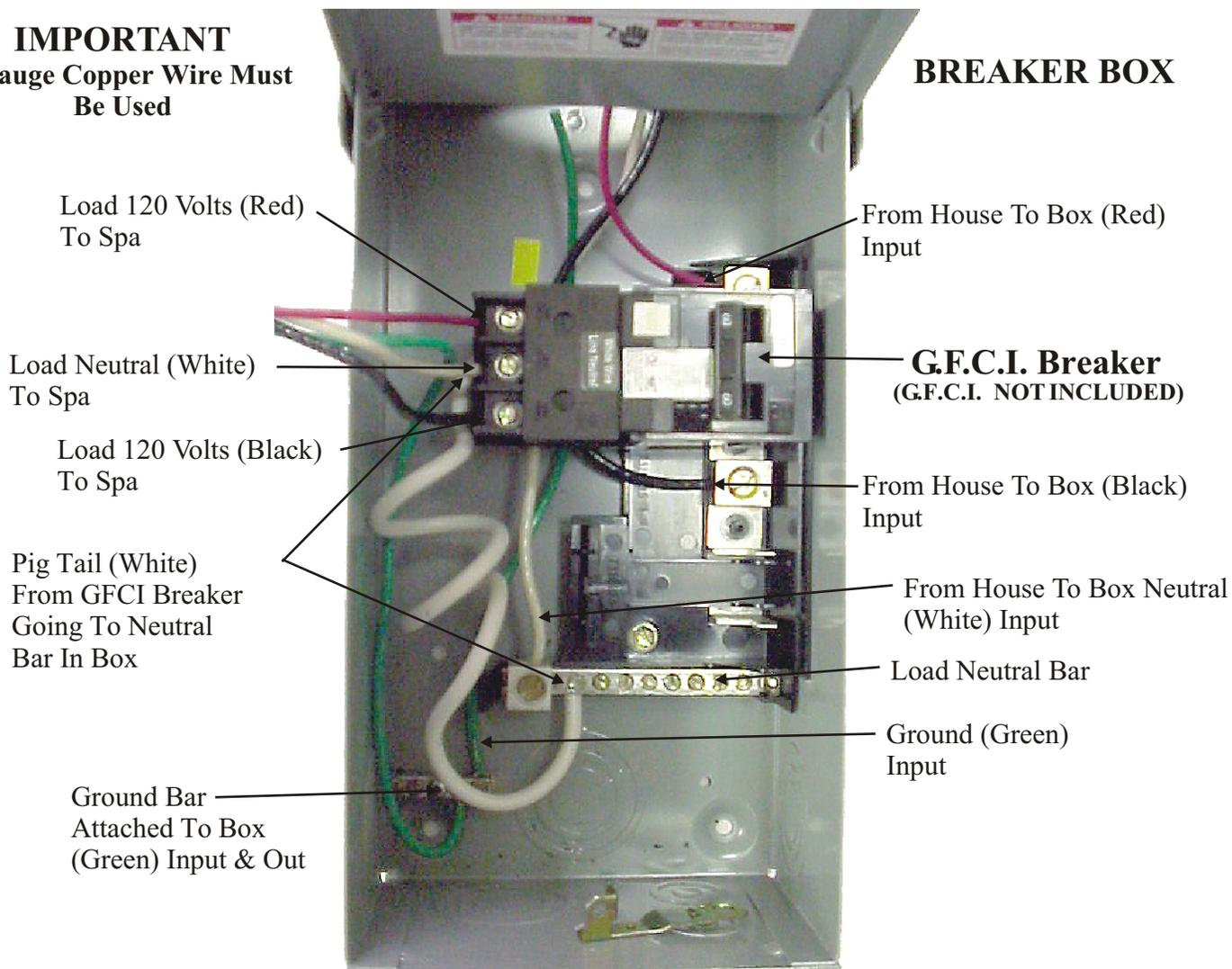
| MODEL       | VOLTS | AMPS | AMP LOAD | MARKING           | APPLICATION |
|-------------|-------|------|----------|-------------------|-------------|
| PLATINUM II | 240   | 50   | 40       | 3 Wire #6 + Grd 3 | HS200VS     |

**WARNING - ALWAYS USE A CERTIFIED ELECTRICIAN WHEN HOOKING UP YOUR NEW SPA.**

**Figure 1**

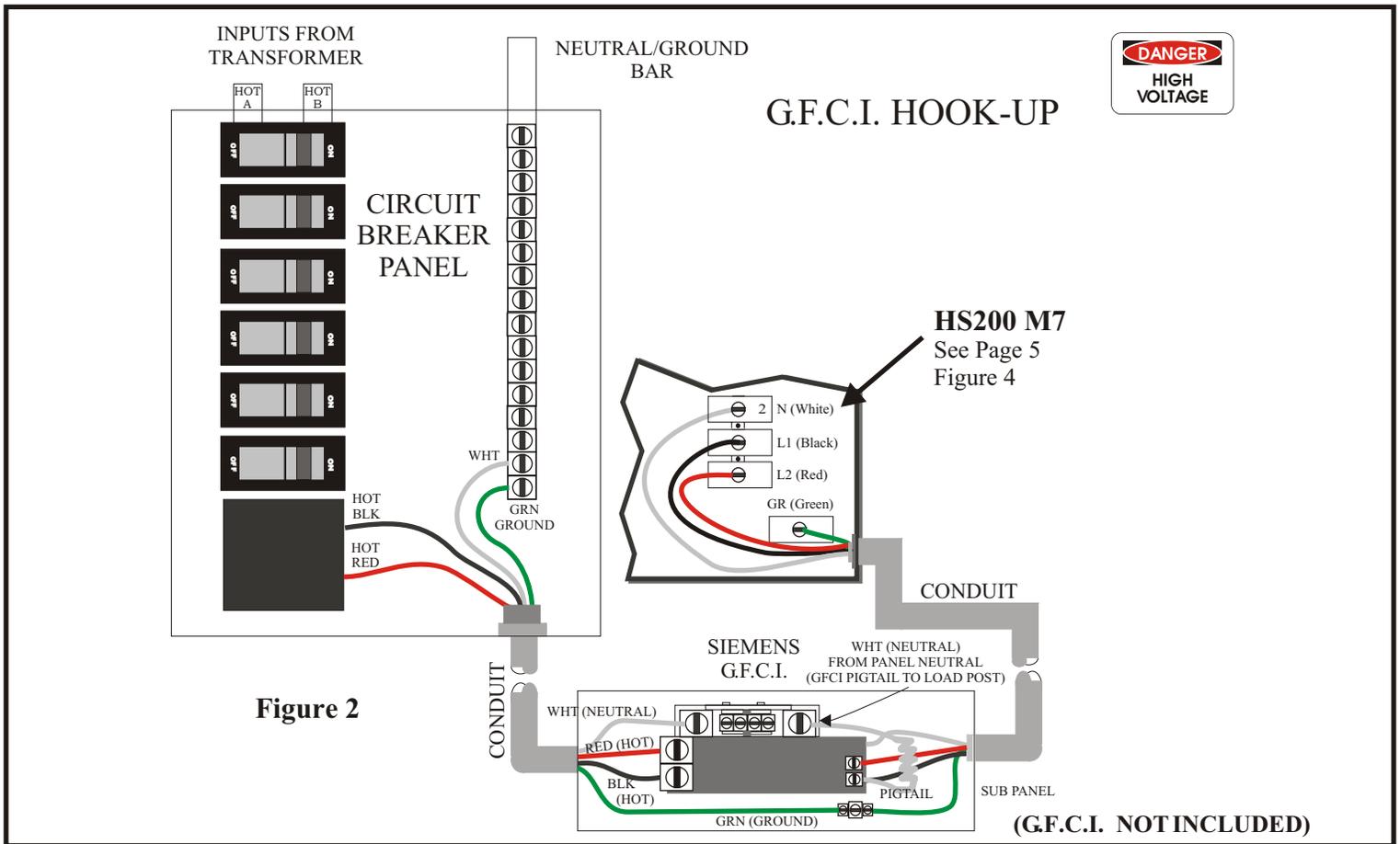
**IMPORTANT**  
6 Gauge Copper Wire Must Be Used

**BREAKER BOX**



**NOTE: The White Neutral Wire from the GFCI MUST be connected to an incoming Line Neutral. The internal mechanism of the GFCI requires this Neutral connection. The GFCI WILL NOT WORK WITHOUT IT.**

# POWER REQUIREMENTS



An illustration showing the proper electrical connections for 240 volt service has been provided for you (figure 2). Be sure to follow these and all other instructions carefully. Be sure that all connections are tight before switching on the circuit breaker.

**CAUTION!** Failure to abide by the specifications listed may result in damage to equipment and may void the warranty. **IF THE SPA IS WIRED INCORRECTLY, YOUR WARRANTY WILL BE VOID ON ANY BURNED OUT ELECTRICAL EQUIPMENT.**

## G.F.C.I (Ground Fault Circuit Interrupter)

### IMPORTANT

This service must be single phase. High voltage can seriously injure or kill. **Always use a certified electrician when hooking up your new spa.**

The National Electrical Code states that a service disconnect breaker box (a G.F.C.I. can be used for this purpose) must be located at least 5 feet away from the spa and should be conveniently located near the equipment bay. If it is not in plain sight, keep the disconnect padlocked when in the off position.

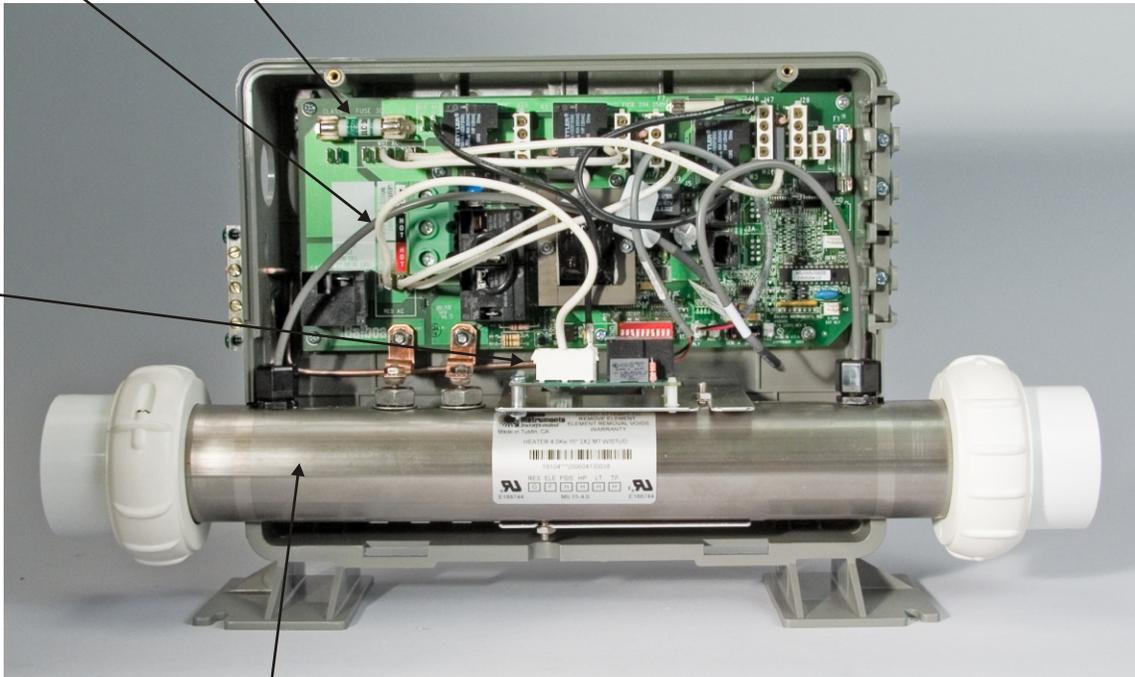
Remember, high voltage is still accessible in the housebreaker box even though you have turned off the spa breaker.

# CONTROLLER HS200 M7 - INSIDE VIEW

Wiring Connections

Fuses

Figure 3



Ground Lug

Heater Tube  
Heater Element Inside Tube

Figure 4

White  
Neutral

Black

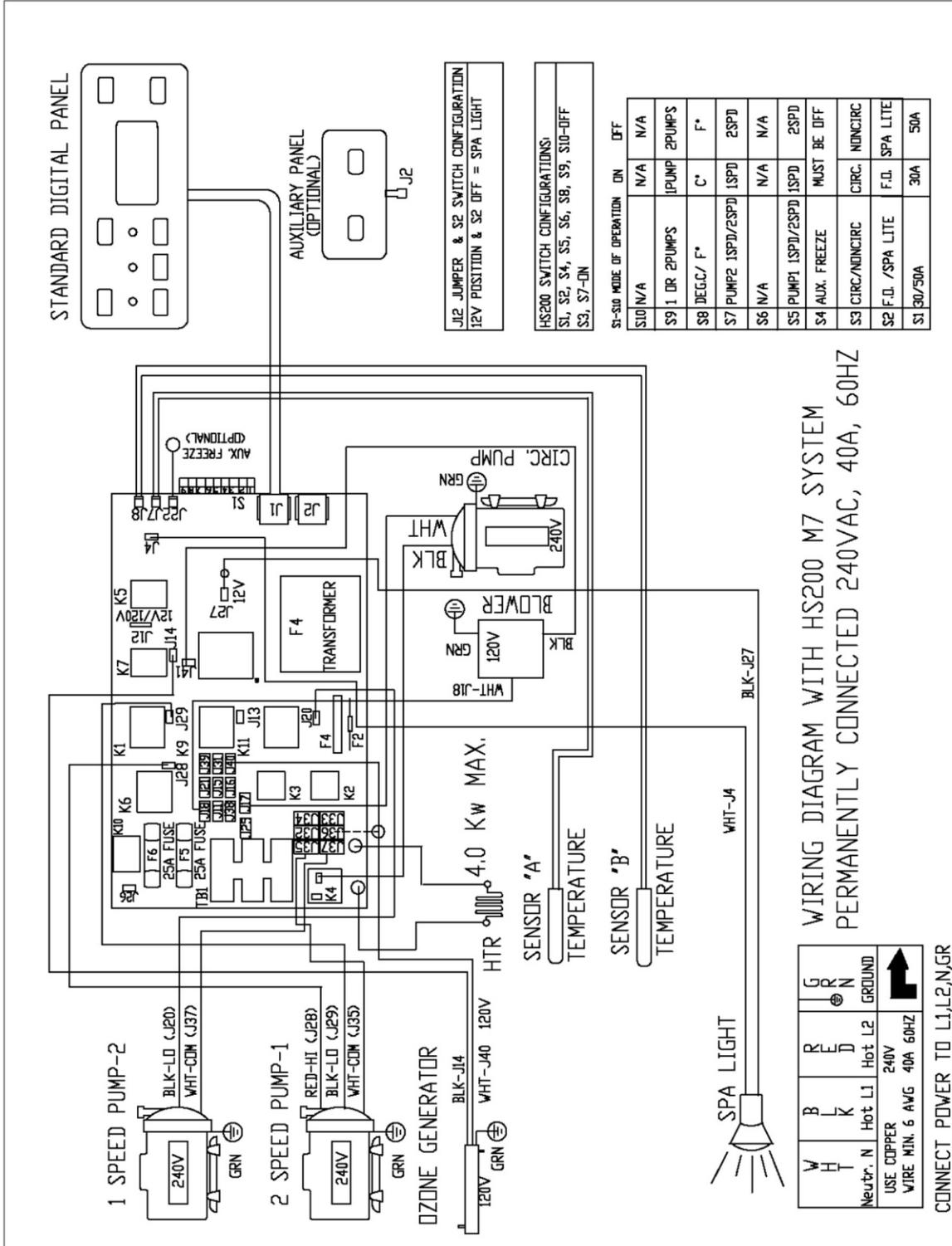
Red

Green  
Ground  
Lug



Control Box Wiring  
(HS200VS)

# WIRING DIAGRAM



J12 JUMPER & S2 SWITCH CONFIGURATION  
12V POSITION & S2 OFF = SPA LIGHT

HS200 SWITCH CONFIGURATIONS  
S1, S2, S4, S5, S6, S8, S9, S10-OFF  
S3, S7-DN

| SI-SIO MODE OF OPERATION | ON              | OFF           |
|--------------------------|-----------------|---------------|
| S10                      | N/A             | N/A           |
| S9                       | DR 2PUMPS       | 1PUMP 2PUMPS  |
| S8                       | DEGC/ F*        | C* F*         |
| S7                       | PUMP2 1SPD/2SPD | 1SPD 2SPD     |
| S6                       | N/A             | N/A           |
| S5                       | PUMP1 1SPD/2SPD | 1SPD 2SPD     |
| S4                       | AUX. FREEZE     | MUST BE OFF   |
| S3                       | CIRC/NDNCIRC    | CIRC NDNCIRC  |
| S2                       | F.D. /SPA LITE  | F.D. SPA LITE |
| S1                       | 30/50A          | 30A 50A       |

WIRING DIAGRAM WITH HS200 M7 SYSTEM  
PERMANENTLY CONNECTED 240VAC, 40A, 60HZ

|   |        |        |        |
|---|--------|--------|--------|
| W | B      | R      | G      |
| H | L      | E      | R      |
| T | k      | D      | N      |
|   | Hot L1 | Hot L2 | GROUND |

USE COPPER  
WIRE MIN. 6 AWG 60HZ

CONNECT POWER TO L1,L2,N,GR

# SPEC SHEET

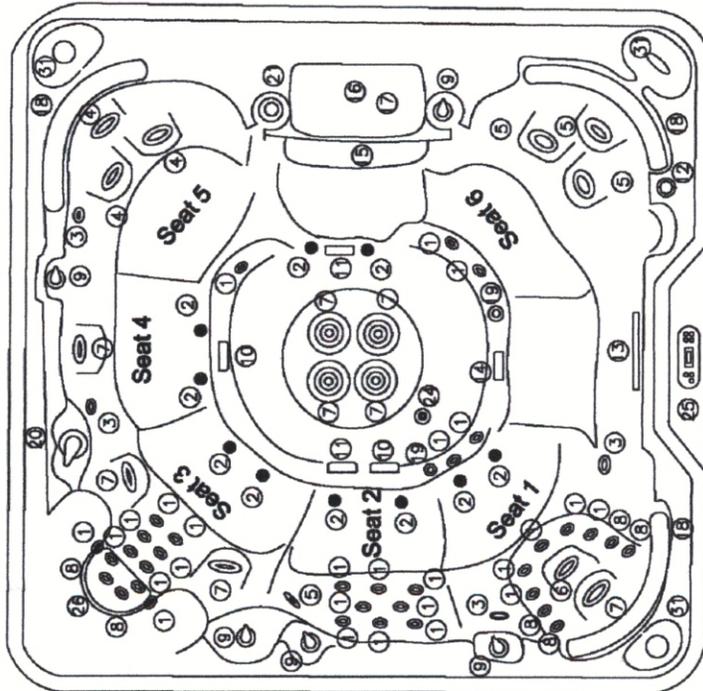
## INTERIOR & PLUMBING PARTS

| REF. # | ITEM DESCRIPTION                                 | HYDRO SPA PART #                         | Q-TY        | NOTES                |
|--------|--|--|-------------|----------------------|
| 1      | ADJ. CLUSTER STORM JET (DIR)                     | 212-1690G, 218-616D, 212-1690DSG         | 26          |                      |
| 2      | AIR INJECTOR JET                                 | 7822                                     | 10          |                      |
| 3      | NON ADJ. CLUSTER JET                             | 212-1500G, 218-615D, 212-1499            | 4           |                      |
| 4      | POWER STORM JET (MASSAGE)                        | 212-0400G, 218-668D, 212-7748DSG         | 3           |                      |
| 5      | POLY STORM TWIN ROTO JETS (LARGE FACE)           | 212-0400G, 218-4010, 212-6178DSG         | 4           |                      |
| 6      | POWER STORM JET (ROTO)                           | 212-0400G, 218-668D, 212-7600DSG         | 1           |                      |
| 7      | POWER STORM JET (DIR)                            | 212-0400G, 218-668D, 212-7638DSG         | 8           |                      |
| 8      | ADJ. CLUSTER STORM JET (PULLS.)                  | 212-1690G, 218-616D, 212-1690DSG         | 6           |                      |
| 9      | AIR CONTROL                                      | 660-3660DSG                              | 5           |                      |
| 10     | HI-FLO SUCTION ELBOW (200GPM)                    | 640-3680DSG                              | 2           |                      |
| 11     | HI-FLO SUCTION STRAIGHT (200GPM)                 | 640-3680DSG                              | 2           |                      |
| 12     | WATERFALL VALVE                                  | 600-4389 DSG                             | 1           |                      |
| 13     | WATERFALL 6"                                     | 675-4000DSG                              | 1           |                      |
| 14     | LIGHT ASS. W. LED                                | 282-4200G, 7096                          | 1           |                      |
| 15     | WEIR DOOR FILTER                                 | H85601068                                | 1           |                      |
| 16     | FILTER LID                                       | H8519-0209-DSG                           | 1           |                      |
| 17     | 50 SQ. FT. FILTER CARTRIDGE                      | 6136                                     | 2           |                      |
| 18     | PILLOW   | 3091                                     | 3           |                      |
| 19     | WALL FITTING                                     | 7818                                     | 1           |                      |
| 20     | DIVERTER CONTROL                                 | 600-3048DSG S                            | 1           |                      |
| 21     | AROMATHERAPY INJECTOR, AROMA GARDENIA            | 7620, 230-40-600                         | 1/1         |                      |
| 22     | POWER SUPPLY 119V/AC/12V/DC/18A                  | 6151                                     | 1           |                      |
| 23     | ACRYLIC 100" X 100"                              | 7801                                     | 1           |                      |
| 24     | SPA FLOOR DRAIN WITH VALVE/OZONE FITTING         | 640-448 DSG, 7379                        | 1/1         | VL700S(OVAL)         |
| 25     | SPA SIDE CONTROL                                 | 63866                                    | 1           |                      |
| 26     | PILLOW (SMALL)                                   | 3032                                     | 1           |                      |
| 27     | SPA COVER (BROWN), SPA COVER LIFT                | 7638, 7315                               | 1/1         | 67" X 67" X 10RC H22 |
| 28     | SPA PANELS (CORNER RT XSF, GAP LAP TRIM SF)      | 77267729                                 | 9/6         | RED OAK              |
| 29     | SPA PANELS (SIDING 8" X 32", 3" X 27", 6" X 27") | 77277734/7735                            | 66/68/4     | RED OAK              |
| 30     | RADIO/CD, ANT. BEZEL, REMOTE, SPEAKERS, SUB W    | 6148, 6153, 6149, 6150, 675-031DSG, 6152 | 1/1/1/1/2/4 |                      |

## EQUIPMENT ASS. & MANUAL

| REF. # | ITEM DESCRIPTION                             | Q-TY | NOTES  |
|--------|--|------|--|
| N/A    | ELECTRICAL CONTROL (PACK)                    | 1    | 55088 (63893 before 7/24/03)<br>(Canada Spa use 66088 since 4/10/06) |
| N/A    | PUMP 1 ASS. (MOTOR, COORD, WETEND, P. UNION) | 1    | 7196, 6023, 310-17694-S, 400-6660                                    |
| N/A    | PUMP 2 ASS. (MOTOR, COORD, WETEND, P. UNION) | 1    | 7196, 6024, 310-17694-S, 400-6660                                    |
| N/A    | CIRCULATION PUMP ASS.                        | 1    | 7042 with part 60388<br>6147 with part 63963                         |
| N/A    | BLOWER                                       | 1    | 3601   |
| N/A    | OZONE GENERATOR                              | 1    | 7096   |
| N/A    | OWNER'S MANUAL                               | 1    | 7660   |

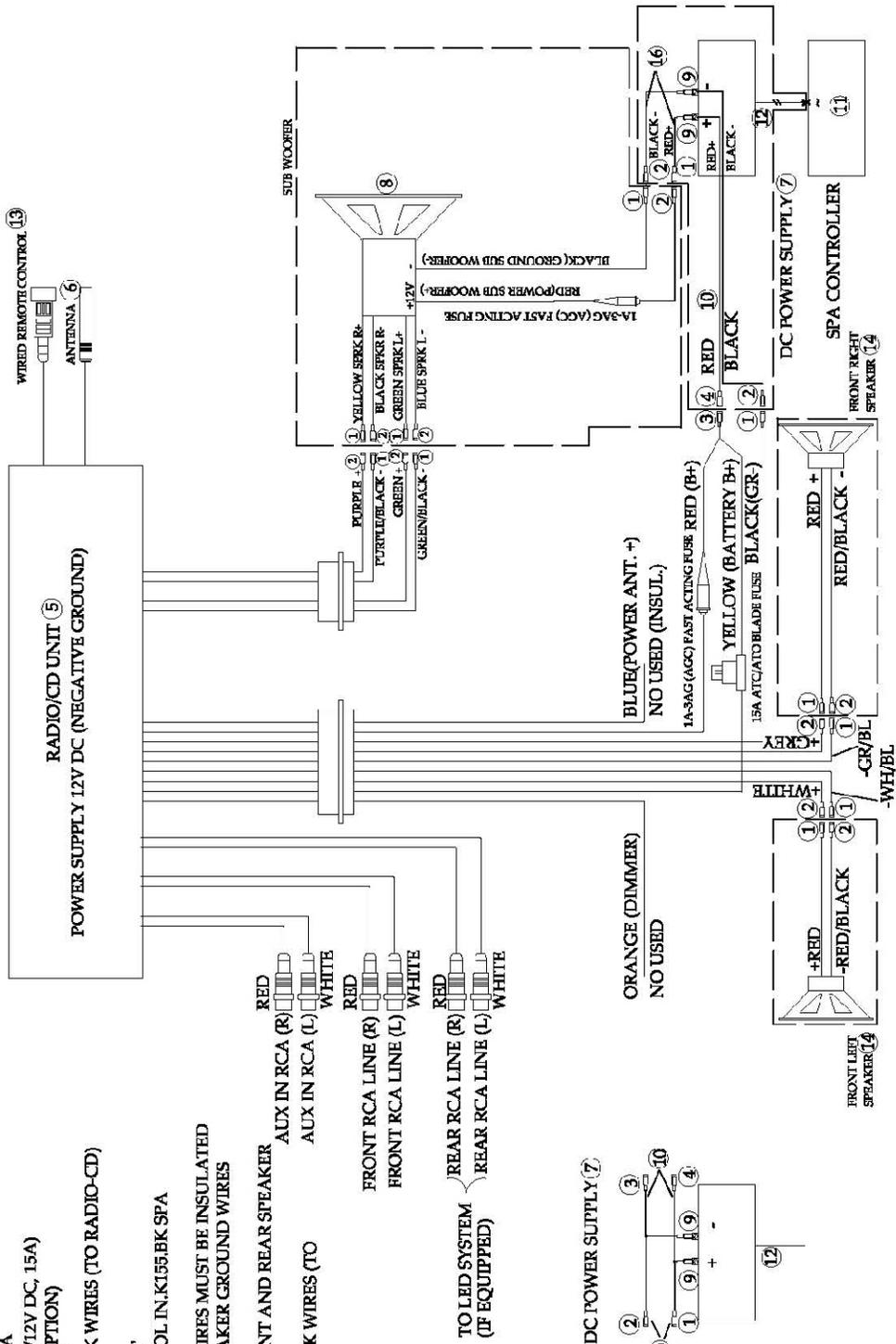
|                                |                         |
|--------------------------------|-------------------------|
| SPA MODEL                      | 2010 PLATINUM           |
| SPA DIMENSION                  | 68-1/2" x 85 1/2" x 37" |
| NUMBER SEATS                   | 6 ADULTS + 1 CHILD      |
| WATER JETS                     | 66                      |
| AIR JETS                       | 10                      |
| WATER CAPACITY (LBS)           | 325                     |
| DRY WEIGHT (LBS/KG)            | 900/409                 |
| FILLED WEIGHT (LBS/KG)         | 2810/1637               |
| ELECTRICAL RATING (VAC/AMP/Hz) | 240V/60                 |
| GFCI (AMP)                     | 50                      |



# AUDIO SYSTEM CONNECTON DIAGRAM

**NOTES:**

1. FEMALE TABS: PART # DNF18-250FIB-3K
2. MALE TABS: PART # DNF18-250FIM-2K
3. MALE TABS: PART # DNF14-250FIM-2K
4. FEMALE TABS: PART # DNF14-250FIB-3K
5. IN. TUNE.100.BK CD PLAYER
6. AM/FM DITOLE ANTENNA
7. POWER SUPPLY (115V AC/12V DC, 15A)
8. 8" SUB WOOFER, BBX-8 (OPTION)
9. TERMINAL KING PY18-8F
10. AWG 14-36" RED & BLACK WIRES (TO RADIO-CD)
11. SPA CONTROLLER
12. AC POWER CORD 18/3-48"
13. WIRED REMOTE CONTROL IN.K155.BK SPA
14. SPEAKERS
15. ANY UNCONNECTED WIRES MUST BE INSULATED  
DO NOT CONNECT SPEAKER GROUND WIRES TOGETHER  
DO NOT CONNECT FRONT AND REAR SPEAKER WIRES TOGETHER
16. AWG 18-36" RED & BLACK WIRES (TO SUB WOOFER)



AUDIO SYSTEM CONNECTION DIAGRAM

# ELECTRICAL WIRING INSTRUCTIONS

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

1. This spa must be permanently connected (hard-wired) to the power supply. No plug-in connections or extension cords are to be used in conjunction with the operation of this spa. Supplying power to the spa which is not in accordance with these instructions will void both the independent testing agency listing and the manufacturer's warranty.
2. The power supplied to this spa must be a dedicated circuit with no other appliances or lights sharing the power provided by the circuit.
3. To determine the current and voltage and wire size required, refer to section "Power Requirements" (Pages 3,4).

Wire size must be appropriate per NEC and/or local codes.

We recommend type THHN wire

All wiring must be copper to ensure proper connections. Do not use aluminum wire.

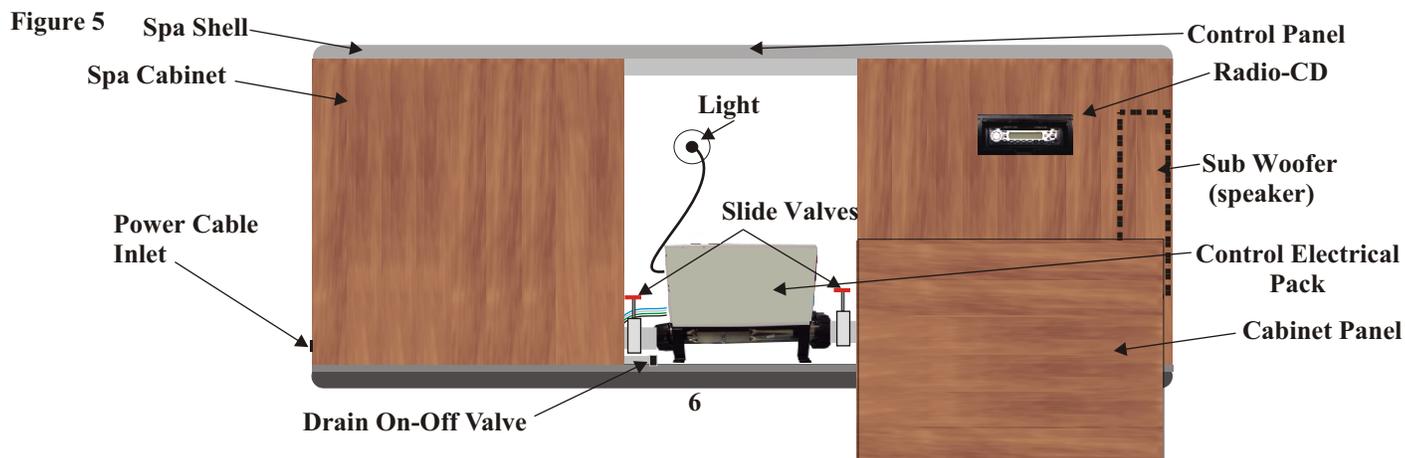
When using wire larger than #6 (10mm<sup>2</sup>), add a junction box near the spa and reduce to short lengths of #6 (10mm<sup>2</sup>) wire to connect to spa.

4. The electrical supply for this product must include a suitably rated circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code., ANSI/NFPA 70. The disconnecting means shall be accessible, located within sight from spa equipment, and shall be located at least 5 ft (1.52m) horizontally from the inside walls of the spa.
5. The electrical circuit supplied for the spa must include a suitable ground fault circuit interrupter (GFCI) as required by NEC Article 680-42. **(GFCI NOT INCLUDED)**
6. To gain access to the spa's power terminal block, remove the screws and cabinet panel on the side of the spa under control panel, then remove the two screws from the control pack.
7. A cable inlet (grommet) is located on the left and right sides of the spa cabinet approximately 4" - 6" from the front of the spa. Feed the power supply cable through a cable inlet and conduit on the left side of the control box.
8. Connect wires, color to color, on terminal block. **TIGHTEN SECURELY!** All wires must be hooked up securely or damage could result.
9. Secure the control box door panel with screws, then re-install the cabinet panel under the control panel. Electrical installation is now completed.

## IMPORTANT CANADA SAFETY INSTRUCTIONS

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

1. Read and follow all instructions
2. A green colored terminal or terminal marked G,Gr, Ground, Grounding or the ground symbol is located inside the power 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 continuous copper wire equivalent in size to the circuit conductors that supply this equipment.
3. At least two lugs marked "Bonding Lugs" are provided on the external surface or on the inside of the supply terminal box/compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the hot tub to these terminals with an insulated or bare copper conductor not smaller than No. 6 AWG.
4. All field-installed metal components such as rails, ladders, drains or other similar hardware within 10 feet (3m) of the hot tub shall be bonded to the equipment grounding buss with copper conductors not smaller than No. 6 AWG.



# START-UP INSTRUCTIONS

**FOR BEST RESULTS, READ EACH STEP IN ITS ENTIRELY BEFORE PROCEEDING WITH STEP.**

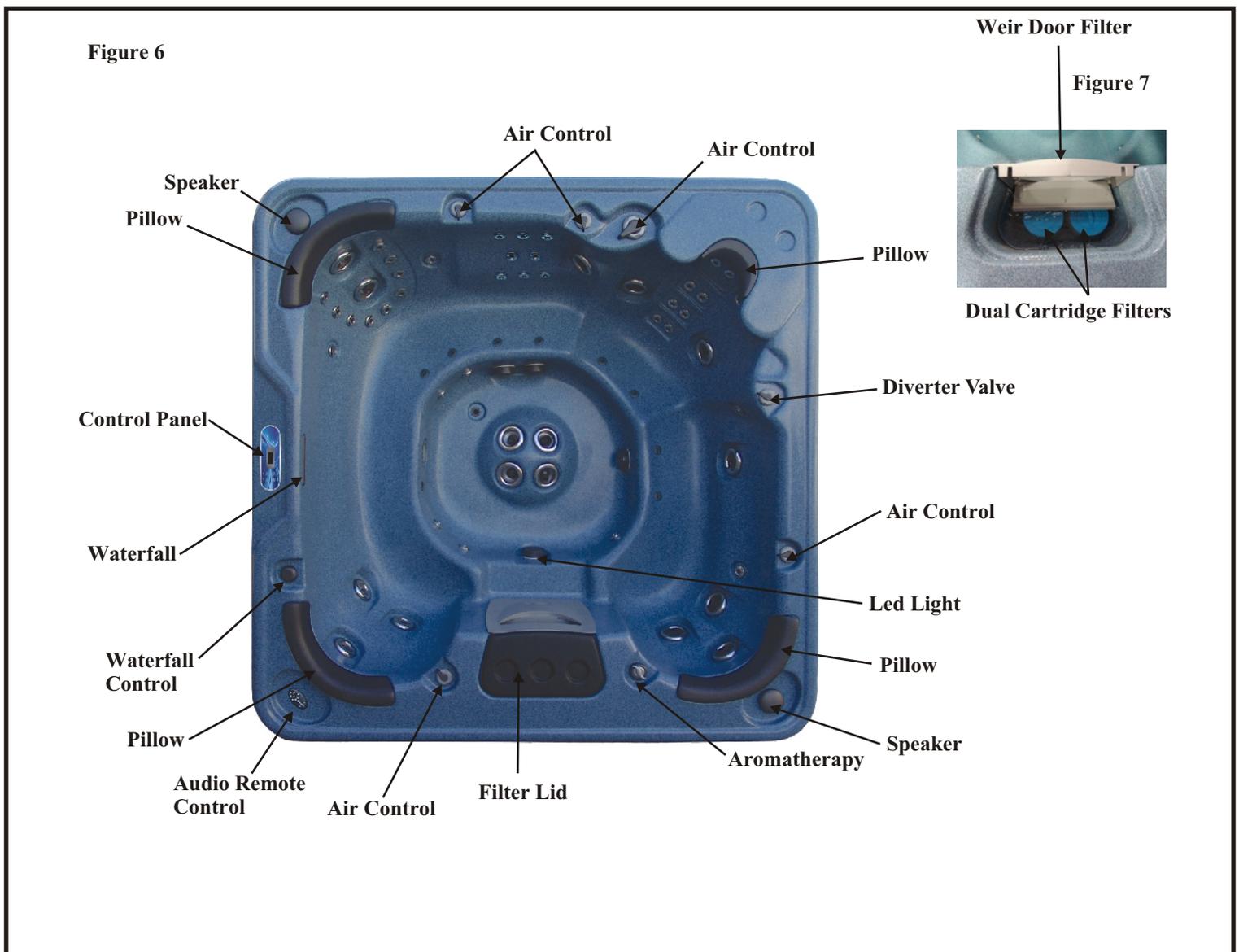
## FILLING THE SPA

Clear all debris from the inside of the spa. At the factory your spa shell was cleaned and polished, but you may want to treat it with a specially formulated spa cleaner available by phone 1-800-749-8003. Make sure the spa has been installed correctly, including electrical wiring connections as specified in the wiring diagram, and the spa is level.

**Do Not Over Fill.** Never fill your spa with water from a water softener, or use hot water while filling. Ensure that your spa drain is shut off. Remove your filter lid. Place your garden hose into the filter housing and begin filling with clean water. Continue filling spa until the water level is 2 inches above the highest water jet. Remember every person entering a spa displaces a given volume of water, so **adjust water level to number of people who will be entering spa.** If your water is extremely “hard”, it is preferable to fill halfway with hard water and the rest of the way with softened water. Or, you may fill the entire spa with hard water if you use a special water additive available by phone 1-800-749-8803.

Always refill spa through one filter housing to purge any trapped air from pump intakes. Failure to do so may cause air to be trapped in the circulation pumps intake creating an air lock, preventing the pump from circulating water. Ensure both side valves are fully open see figure 5 (Page 6). Make sure filter cartridge is clean before installing. See “Cleaning the Filter” for specific cleaning procedures (see page 13).

Remove the hose and re-install filter lid. (Figure 6)



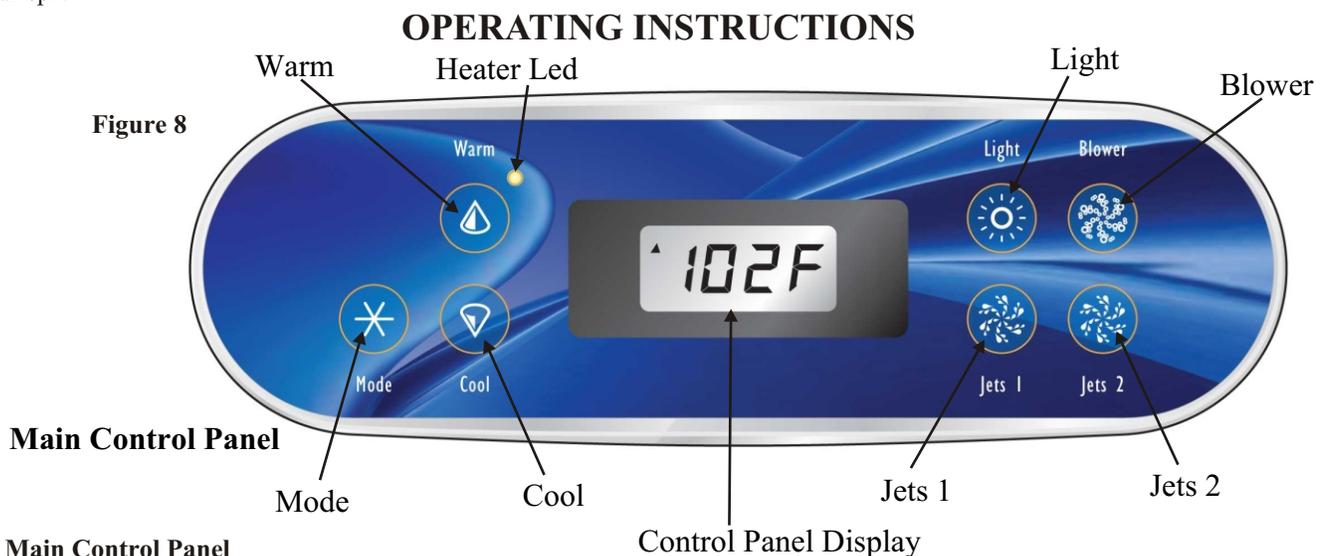
# START-UP INSTRUCTIONS

- Turn on power to hot tub at the home circuit breaker. The GFCI circuit breaker must be tested before each use of the spa. Press the "Test" button on the breaker and the circuit breaker should go to the tripped position. Reset the GFCI and ensure it stays on. The circulation pump will automatically activate. Circ pump is turned on at power up and doesn't turn off unless detected temperature gets 3 degrees above set temperature (outside filter cycle only; never turns off inside filter cycle). The Display goes through specific sequences. At first the Display will show a series of four numbers. The first three numbers in combination are called the software ID. Following the software ID will either 12 or 24, indicating the heater wattage the software is configured for. After any power-up, the spa first goes into Priming mode indicated by "Pr". During this mode heating is disabled. All other pumps/blowers can be turned on to any available speeds (as needed for priming) from the front panel. To exit Priming mode and begin normal spa operation, press any set temperature button Up/Down. As soon as "Pr" is indicated on the top side panel, push Jets 1 and Aux. buttons to start the pumps. Push buttons until both pumps (if equipped) are on high speed. If the pumps have not primed after two minutes, and water is not flowing from jets in the spa, do not allow the pumps to continue to run. Turn the power off at main panel and vent air from the pumps. Do this by loosening the union nuts on the discharge side of pumps. Turn the power back on at main panel. This will initiate a new pump priming mode. Sometimes momentarily turning pump off and on will help to prime. Do not do this more than five times. Check and adjust if necessary water and air flow of every jets. See Air Volume control and Adjusting Jets sections for details. Priming mode will time out after 4 minutes. Ozone generator will turn on. After 6 minutes the actual water temperature will be displayed and heater will turn on if heats required. The blower (if equipped) purges all air lines for 30 seconds and pump 1 (low) and pump 2 (high) will purge all water lines for 5 minutes.
- Set Hot Tub To Heat - To warm hot water tub to a comfortable temperature, follow these steps: To adjust your spa water temperature press the WARM or COOL button pad. Default setting is 100F. The set temperature advances or decreases by one degree each time one of these buttons is pressed. The heater will turn off when the temperature corresponding to the thermostat setting is achieved. The heater will reactivate after the water cools to approximately 1F below the set temperature. Setting the thermostat at maximum position will not accelerate the heating process. This will only result in a higher ultimate temperature. Heater indicator light is on when the heater is activated.

Add Start-Up Chemical as recommended by your dealer. Refer to Page 14 for general guidance.

- Place Spa Cover On Hot Tub
- Keeping the insulating cover in place anytime the hot tub is not in use will reduce the time for heating, thereby minimizing operating costs.
- The time required for initial heat-up will vary depending on the starting water temperature and ambient condition..

Your spa is equipped with a Topside control panel, air control knobs, on-off waterfall valve, aromatherapy canister and diverter valve. All controls are located on the top rail of the spa. These controls let you operate many of the special functions on your spa. The main control panel controls all of the spa functions and uses indicator LED light, LCD display to aid the user to determining the status of the spa. By familiarizing yourself with following information, you will be able to gain the full benefit afforded by the various features of your spa.



## 1. Main Control Panel

The main control panel provides quick visual check on the spa's status, and allows the user to adjust the temperature set, activate the pumps, blower, light, control of the spa status. The control panel activates functions at the touch of a button. The panel will also display diagnostic messages which enable you to easily operate your spa and the spa's condition. See "Display Message for details"

# OPERATING INSTRUCTIONS

## Temperature Adjustment

To adjust your spa temperature by pressing the WARM or COOL button pad. When the pad is pressed, the display will show the set temperature. Pressing the WARM button will cause the set temperature to increase or pressing the COOL button pad to decrease. The temperature adjustment range is 80°F-104°F. Default setting is 100°F. Any interruption of power will cause the unit to reset, however persistent memory saves filter settings, heat mode, and set temperature.

## Jets 1 Control

Your spa is equipped with a two speed motor on pump 1. Depress the JETS1 pad to turn on pump 1 (low speed), depress the JETS1 pad second time to turn on pump 1 (high), and depress the JETS1 pad again to turn pump 1 off. Corresponding spa jets will operate when pump 1 is on (low or high). Anytime Pump 1 has been manually turned on, it will automatically turn off after approximately 15 minutes on high speed and 4 hours for low speed.

## Jets 2 Control (if spa equipped with pump 2)

If your spa is equipped with a two speed motor on pump 2, depress the Jets 2 pad to turn on pump 2, depress the Jets 2 pad a second time to turn pump 2 off. Corresponding spa jets will operate when pump 2 is on. Anytime Pump 2 has been manually turned on, it will automatically turn off after approximately 15 minutes on high speed or low speed.

## Blower control (if equipped with Air blower)

If your spa is equipped with an Air Blower depress the BLOWER pad to turn on the Blower. Depress the BLOWER pad a second time to turn the Blower off. Corresponding air jets will operate when the Blower is on. Anytime the Blower has been manually turned on, it will automatically turn off after approximately 15 minutes.

## Mood Light Control

If your spa equipped with a Mood Light, depress the LIGHT pad to turn on the Light. Depress the LIGHT pad a second time to turn the Light off. The spa mood is light preprogrammed with assortment of lighting effects. When you turn the Light off, and turn on within 5 seconds it advances to the next effect. When you turn the Light off for more than 5 seconds, it remembers that last effect you selected. The next time you turn on the Light, it will display the same effect. The Light will automatically turn off after approximately 4 hours. For Standard Light application every time you depress the LIGHT pad the Light will turn on and off.

## Spa Mode Selection

Depressing the MODE pad will allow you to select either "Standard" or "Economy" or "Sleep" mode. In Standard mode the water temperature is held to the set temperature all the time. After the set temperature is reached, the heater turns off and the 24 hour circulation pump and ozone generator continue to operate to oxidize and sanitize the spa water. In Economy mode the 24 hour circulation pump and ozone generator continues to operate and heater will turn off only during a programmed filter cycles. The heater in Economy mode will operate when actual water temperature of the spa is below the set point temperature and spa is in filtration cycle. Default setting of filtration cycle is 2 hours, twice per day. At the start of every cycle, blower (if equipped) purges for 30 sec and pump 1, pump 2 purges for five minutes. In Sleep mode the 24 hour circulation pump and ozone generator continues to operate and heater will turn on only during a filtration cycle and the water temperature in spa is 20F below the set temperature.

## Circulation Pump

Your system is equipped with a 24-hour circulation pump which provides 24 hours continuous water circulation and filtration. The spa's entire contents is completely filtered 70-120 times each day. It works like this: a dedicated, energy efficient, quiet circulation pump constantly draws water from the spa, runs it through the filters and the heater (heating only when necessary), then back through return jets to the spa. The ozone output is on whenever the circulation pump is running.

# OPERATING INSTRUCTIONS

## **Heater**

Your spa is equipped with an electrical heater. By setting your thermostat to the desired temperature, your heater will automatically turn on and off as needed. The temperature set point (set temperature) can be adjusted from 80°F to 104°F/26°C-40°C). To raise the set temperature press the “Warm” button. To lower the set temperature, press the “Cool” button. The start up temperature is set at 100°F/37.5°C. Heater LED is on when the heater is on.

## **"Simplified freeze protection"**

If a freeze condition is detected (temperature of heater enclosure is less than 44° F, the pump(s) are automatically activated until the temperature of the heater enclosure reaches 45° F. The freeze protection is enabled regardless of the spa mode.

## **2. Air Volume Control**

Your spa is equipped with Air Volume Controls. Each jet system has its own air control. These controls allow you to regulate the amount of air which is mixed with the water entering through the jets. Counterclockwise rotation adds more air and clockwise rotation reduces air flow. To minimize heat loss, these controls should be closed when the hot tub is not in use.

## **3. Waterfall control**

Turn the waterfall valve clockwise to decrease or turn off waterfall output. It takes four full revolutions to change the waterfall from full off to a full on flow rate.

## **4. Adjusting Jets**

All jets in your new spa can be adjusted for high and low impact massage, providing an ultimate massage. Each jet has its own water volume and directional or oscillating flow adjustment.

To adjust jets: Turn outer dial counterclockwise to increase water volume. Turn outer dial clockwise to decrease water volume or to shut jet off. For adjustment of the directional jets move the nozzle of jet to any angle.

## **5. Aromatherapy**

Simply remove the Aromatherapy injector cap, drop in the injector basket of your favorite scented beads. When the Air blower is activated, the scent will be released into the spa vapor through the air injectors. See your dealer for replacement of scented beads.

## **Diverter Valve**

This control allows you to regulate the amount of water distributed by pump 2 from seat to seat.

## **Audio System**

Spa equipped with audio system offer enhanced spa enjoyment. This model includes a high quality AM/FM/CD stereo receiver with two high quality speakers and a sub woofer for unsurpassed sound quality and long life.

Two speakers located on spa corners and designed for manual exposure and retraction. To expose each speaker for audio playback, simply press down on each enclosure to unlatch it's pop-up mechanism, then release. To retract each speaker before covering spa, gently press downward on each enclosure you will feel a slight “click”, then release. Sub woofer is located inside cabinet in right corner figure 5 page 6.

Caution: Never step or sit on speaker enclosure. Always retract speakers prior to covering spa.

For details see Stereo Receiver Operational Manual for Users, and Audio connection diagram. (See page 5c)

## DISPLAY MESSAGES

| Message    | Meaning  | Action Required  |
|------------|--|--|
|            | No message on display. Power has been cut off to spa.  | The control panel will be disabled until power returns. The system reset the time of day on each power up. Spa settings are preserved.   |
| OHH        | "Overheat"- The spa has shut down. One of the sensors detected 118 degree F (approximately 47.8 degree C) at the heater.   | Do not enter the water. Remove the spa cover and allow the water to cool. Once the heater has cooled, reset by pushing any button. If the spa does not reset, shut off the power to the spa and call your dealer or service.   |
| OHS        | "Overheat"- The spa has shut down. One of the sensors detected that the spa water is 110 degree F (approximately 43.3 degree C).   | Do not enter the water. Remove the spa cover and allow the water to cool. At 107 degree F (approximately 41.7 degree F), the spa should automatically reset. If the spa does not reset, shut off the power to the spa and call your dealer or service.                                 |
| ICE        | "Ice" - Potential freeze condition detected.   | No action required. The pumps and the blower will automatically activate regardless of the spa status.   |
| SnA        | Spa is shut down. The sensor that is plugged into the "Sensor A" jack is not working correctly.  | Check the sensor "A" plug connection to circuit board. If the problem persists, contact your dealer or service. (The problem may appear temporarily in an overheat situation and disappear when the heater cools).   |
| Snb        | Spa is shut down. The sensor that is plugged into the "Sensor B" jack is not working correctly.  | Check the sensor "B" plug connection to circuit board. If the problem persists, contact your dealer or service. (The problem may appear temporarily in an overheat situation and disappear when the heater cools).   |
| Sns        | Sensors are out of balance. If this is alternating with temperature, it may just be temporary condition. If the display shows only this message (periodically blinking), the spa is shut down. | If the problem persists, contact your dealer or service.   |
| HFL        | A substantial difference between sensors was detected. This could indicate a flow problem.   | Check water level in spa. Add water if necessary. Be sure that slide-valves are open. Make sure the circulation pump have been primed and has power.   |
| LF         | Persistent low flow problems. Displays on the fifth occurrence of the "HFL" message within 24 hours. Heater is shut down, but other spa functions to run normally.                             | Follow actions required for "HFL" message. Heating capacity of the spa will not reset automatically; you may press any button to reset or cycle the power off and on.  |
| Dr         | Inadequate water detected in heater. Displays on third occurrence of "dr" message. Spa is shut down for 15 minutes.  | Check water level in spa. Add water if necessary. Be sure that slide-valves are open. Make sure the circulation pump have been primed and has power. On the third consecutive occurrence of the dr message (without a successful heating cycle in between) the panel will display dr4. |
| Dr4        | Inadequate water detected in heater. Displays on third occurrence of "dr" message. Spa is shut down and will not reset in 15 minutes.  | Check water level in spa. Add water if necessary. Be sure that slide-valves are open. Make sure the circulation pump have been primed and has power. Press any button to reset.  |
| Pr         | When your spa is first activated, it will go into Priming mode.  | See the 24 hour circulation pump operation. The Priming mode will last for up to four minutes and then the spa will begin to heat and maintain the water temperature in Standard mode.   |
| - F<br>- C | Temperature unknown<br>Temperature unknown   | After 6minutes Pr mode, the temperature will be displayed.<br>After 6minutes Pr mode, the temperature will be displayed  |

## SPA CARE AND MAINTENANCE

### Draining and Refilling Your spa

#### **WARNING!**

To prevent damage to spa's components, turn off power before draining it. Do not turn the power back on until your spa has been refilled.

To gain access to the spa drain valve, remove the cabinet panel on the side of the spa under the control panel. Fig. 5 Select a safe suitable drainage capable of safely assimilating 325Gallons of water which may contain both unsanitary contaminants and chemical residue that could cause harm to plants and grass.

Locate the drain valve on left side of control box.

Remove the front cap to expose underlying male hose threads.

Attach garden hose to exposed threads.

Gently rotate valve body 1/3 turn counterclockwise to unlock drain valve

Pull the valve body outward to open drain.

After spa drains, perform all steps in reverse order to close drain prior to refilling spa. After refilling spa turn on power to spa and follow the steps under "Start Up Instruction". Always fill your spa through both filter wall fittings.

Filter cleaning and Cartridge Replacement. Turn power off before cleaning filter cartridges.

The Filter cartridges should be checked periodically. In normal use, check them at least once a month. Keep them clean. An obstructed filter cartridges reduce water quality and inhibit proper system performance.

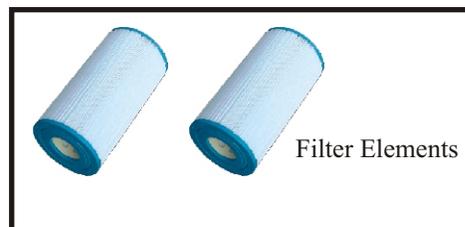
Removable filter cartridges are located inside the filter well. To remove them lift the filter lid, then rotate each filter cartridge counterclockwise to unthread from mating wall fitting.

Remove both cartridges from filter well.

Use a garden hose with straight flow nozzle to wash down the filter element. Work from the top down, holding the nozzle at 45 degree angle, and wash all the pleats with emphasis between pleats.

Rinse until all dirt and debris is gone.

Replacement cartridges may be purchased by phone 1-800-749-8003. Part # 6136.



### Care Of The Exterior

#### **Spa Shell**

Your spa shell is made of acrylic. Stains and dirt generally will not adhere to the surface. Using a soft rag or a nylon scrubber should easily remove most dirt. Most household chemicals are harmful to your spa's shell. See your dealer for the best product to use. The only products which have passed the manufacturer's test are Soft Towel and Windex. Sodium bicarbonate (baking soda) can also be used for minor surface cleaning. Always thoroughly rinse off any spa shell cleaning agent with fresh water.

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

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

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

#### **Maintenance Free Cabinet**

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

#### **Pillow care**

Remove and clean the headrest pillows as needed with soapy water using a cloth or soft-bristle brush. Always remove the pillows when adding chemical shock treatment to the spa water. The pillows can be returned to the spa when sanitizer reading drops below 5ppm. Never attempt to remove the pillows by pulling on them. Grasp pillow with finger tips and gently pry outward from spa shell.

# SPA CARE AND MAINTENANCE

## Care Of Spa Cover

### To clean and condition the vinyl cover:

- Remove the cover from the spa and gently lean it up against a wall or fence.
- Using a garden hose, spray the cover to loosen and rinse away any dirt or debris.
- Using a sponge and/or a soft bristle brush, and using a very mild soap solution (one teaspoon dishwashing liquid with two gallons of water), or baking soda (sodium bicarbonate), scrub the vinyl top in a circular motion. Do not let the vinyl dry with a soap film on it before it can be rinsed clean.
- Scrub the cover's perimeter and side flaps. Rinse clean with water.
- Rinse off the underside of the cover with water only (use no soap), and wipe it clean with a dry rag.
- To condition the cover after cleaning, apply a thin film of vinyl cleaner to the surface and buff to a high luster.

### Important reminders:

- DO NOT walk or stand on top of cover (unless you own a "walk-on-cover").
- DO remove snow buildup to avoid breakage of the foam core from the additional weight of the snow.
- DO lock cover locking straps to secure the cover when the spa is not in use.
- DO NOT drag or lift the spa cover using either of the flaps, or the cover lock straps.

## Vacation Care Of Spa

Following these instructions to ensure that the water quality of your spa is maintained:

### For Short Periods (3 to 5 days)

Adjust the pH

Sanitize the water

Lock cover for safety

### For Long Periods (5 to 14 days)

Set temperature to its lowest level approximate water temperature of 80°F.

Adjust the pH

Sanitize the water

Lock cover for safety

## Return Procedures

Sanitize the water following shock procedures

Return water temperature to original setting

Insure chlorine level had dropped below 5.0 ppm

**NOTE:** If you plan on not using your spa for periods exceeding 14 days, you may ask a family member or neighbor to assist with your spa maintenance, and if not available you will need to drain or winterize spa.

## Winterizing Your Spa

During the cold weather you may not wish to use your spa outside. In this case you may move it to a heated area, or leave it until the weather warms up.

**WARNING:** Allowing your spa water to freeze will cause severe damage to the spa shell, equipment, and plumbing and **WILL VOID WARRANTY.**

### The following steps should protect your spa from freezing:

- Disconnect the spa from the power supply.
- Remove the screws holding your spa excess panel door.
- Open the valve, open the pumps plugs, and the spa will drain by gravity flow.
- Remove the filter cartridge, then clean and store in a dry place.
- Attach a wet/dry shop vac (capable of blowing air as well as vacuuming) into the filter housing.
- Turn blower on and allow it to blow out any water remaining in the plumbing lines. (Should take no more than 5 minutes).
- Reinstall the filter housing.
- Use the shop vac to remove water inside spa blown through jets.
- Use a shop vac and clean towel and remove any remaining water from bottom of spa until dry.
- Leave the drain open.
- Close the spa cover and fasten with tie down safety locks.

# WATER QUALITY AND MAINTENANCE

## Water Quality In Your Spa

The quality of the water in your spa is important and must be kept clean. Your program will vary depending on your water's mineral content, and how often you use your spa, and the amount of people using it.

### Here are our suggested step-by-step procedures:

General Information - The three fundamental areas of water maintenance.

\* Water Filtration      \* Chemical Balance/pH Control      \* Water Sanitation

Water sanitation is the owners responsibility of maintaining clean quality water in your spa, and is achieved through the regular and periodic (daily), if necessary addition of an approved sanitizer. The sanitizer will chemically control the bacteria and viruses present in the fill water or introduced during the use of the spa. Bacteria and viruses can grow quickly in undersanitized spa water.

The water's chemical balance and pH control are also your responsibility. You will have to add chemicals to maintain proper levels of Total Alkalinity (TA), Calcium Hardness (CH) and pH. Proper water balance and pH control will minimize scale buildup and corrosion of metals, extend the life of the spa, and allow the sanitizer to work at maximum efficiency.

## Methods For Testing Spa Water

Accurate water testing and analysis are an important part of effectively maintaining your spa water. You must have the ability to test for:

- Total Alkalinity (TA)
- pH
- Calcium Hardness (CH)
- Sanitizer

### Two types of testing methods are recognized and recommended:

- **Reagent Test Kit** is a method which provides a high level of accuracy. They come in either liquid or tablet form.
- **Test Strips** are a convenient testing method used by many spa owners. Keep in mind that test strips are susceptible to heat and moisture.

## Basic Chemical Safety

When using chemicals, always read the labels carefully and follow directions. Though chemicals protect you and your spa when used correctly, they can be hazardous in concentrated form. Observe the following guidelines:

- Allow only a responsible person to handle spa chemicals **KEEP OUT OF THE REACH OF CHILDREN.**
- Accurately measure the exact quantities specified, never more. Do not overdose your spa.
- Handle all containers with care. Store in a cool, dry well ventilated place.
- Always keep chemical containers closed when not in use. Replace caps on their proper containers.
- Don't inhale fumes, or allow chemicals to come in contact with your eyes, nose, or mouth. Wash your hands immediately after each use.
- Follow the emergency advice on the product label in case of accidental contact, or if the chemical is swallowed. Call a doctor or the local Poison Control Center. If a doctor is needed, take the product container along with you so that the substance can be identified.
- Don't let chemicals get on surrounding surfaces or landscaping. Rinse off with fresh water if spilled.
- Never smoke around chemicals. Some of the fumes can be highly flammable.

### Adding Spa Chemicals:

- Fold back the spa cover. Carefully remove and set aside the filter lid.
- Push the **JETS1** button to turn on the pump 1 to provide high water flow.
- Carefully measure the recommended amount of chemical and slowly pour it into the filter compartment. Use care not to splash chemicals on your hands, eyes, or on the spa shell surface or cabinet.
- Replace filter lid and run spa for 10 minutes on high speed. Re-install spa cover.

**IMPORTANT:** Super Chlorination/Non-Chlorine Shock Treatment - **NOTE:** After administering a super chlorination treatment or non-chlorine shock to your spa, leave the cover open for a minimum of 20 minutes to allow the oxidizer gas to vent. A high concentration of trapped oxidizer gas which may exist as a result of the shock treatment (not daily sanitation) may eventually cause discoloration or vinyl degradation to the bottom of the cover. This type of damage is considered chemical abuse and is not covered

# WATER QUALITY AND MAINTENANCE

## Balancing Total Alkalinity (TA)

- The recommended Total Alkalinity (TA) for your spa water is 125-150 ppm.
- Total Alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is referred to as the water's "pH buffer". It's a measure of the ability of the water to resist changes in pH level.
- If the TA is too low, the pH level will fluctuate widely from high to low. Fluctuations in pH can cause corrosion or scaling of spa components. Low TA can be corrected by adding pH/Alkalinity UP (sodium hydrogen carbonate).
- If the TA is too high, the pH level will tend to be high and may be difficult to bring down. It can be lowered by adding pH/Alkalinity down (sodium bisulfate).
- Once the TA is balanced, it normally remains stable, although the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.
- When the Total Alkalinity is within the recommended range, proceed.

## Balancing Calcium Hardness (CH)

- The recommended Calcium Hardness (CH) level for your spa is 150-200ppm.
- Calcium Hardness is a measure of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of the spa's water. That's why calcium-low water (commonly known as "soft" water) is not recommended. It is very corrosive to the equipment, and can cause staining of the spa shell. If the calcium level is too low, we recommend using Calcium Increaser to bring the calcium hardness level to within the recommended range.
- If the CH is too high (commonly known as "hard" water), formation of scale on the spa's shell surface and equipment can result. CH can be decreased by dilution - a mixture of 75% hard and 25% soft water will be a good starting point. If soft water is not available, or practical for you, a stain and scale control such as Scale Defense should be added to the spa water, according to instructions on its label.
- Once the CH is balanced, it normally remains stable, although the addition of more water with a high or low calcium content will raise or lower the CH reading of the water.
- When the Calcium Hardness is within the recommended range, proceed.

## Balancing The pH

- The recommended pH level for your spa water is 7.4-7.6.
- The pH level is the measure of acidity and alkalinity. Values above 7 are alkaline; those below 7 are acidic.

### Maintaining the proper pH level is extremely important:

- Optimizing the effectiveness of the sanitizer.
- Maintaining water that is comfortable for the user.
- Preventing equipment deterioration.

### If the spa water's pH level is too low, the following may result:

- The sanitizer will dissipate rapidly.
- The water may become irritating to spa users.
- The spa's equipment may corrode.

If the pH level is too low, it can be increased by adding pH/Alkalinity Up (sodium hydrogen carbonate) to the spa water.

### If the pH level is too high, the following may result:

- The sanitizer is less effective.
- Scale will form on the spa shell surface and the equipment.
- The water may become cloudy.
- The filter cartridge pores may become obstructed.

If the pH is too high, it can be decreased by adding pH/Alkalinity Down (Sodium bisulfate) to the spa water.

**NOTE:** After adding pH/Alkalinity Up (sodium hydrogen carbonate) or pH/Alkalinity Down (sodium bisulfate), wait at least two hours before testing the water for pH. Measurements taken too soon may not be accurate.

- It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water,

# WATER QUALITY AND MAINTENANCE

## Maintaining Sanitizer Level

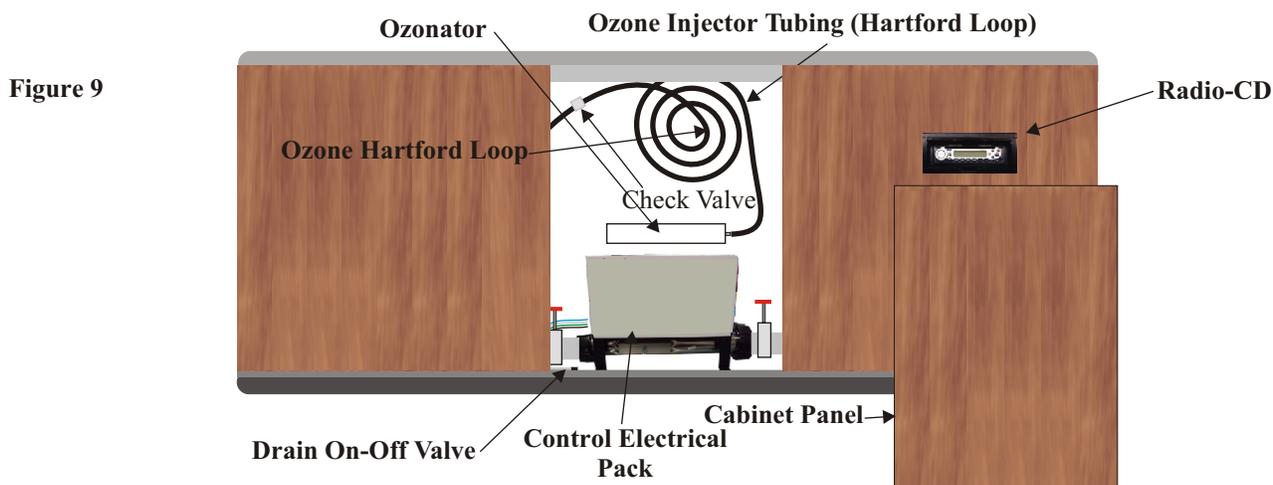
- Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms from growing in the spa. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs, and eyes.
- Always maintain the sanitizer level in your spa at the recommended level for each type of sanitizer.

## Ozone

**Hydro Spa's Ozonation System** drastically reduces the use of chemicals in the water. This also aids in maintenance requiring less attention from harsh chemicals and less frequency with which they are used.

## Replacement Of Ozone Tubing and Ozonator

Call your manufacture to provide you with maintenance service if replacement of ozonator or tubing is required. Remove door panel screws and set door panel aside. The Ozone generator is located above the Control Electrical Equipment Pack shown below or in area. The ozonator plugs into the Control Electrical Equipment Pack. Tubing is mounted above the ozonator and has a Hartford Loop as shown below.



## Water Terminology

**Bromamines:** Compounds formed when bromine combines with nitrogen from body oils, 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 150-220 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. Chloramines can cause eye irritation as well as having a strong odor. Unlike bromamines, chloramines are weaker, slower sanitizers.

**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.

**Corrosion:** The gradual wearing away of metal spa parts, usually caused by chemical action. Generally, corrosion is caused by low pH or by water with levels of TA, CH, pH or sanitizer which are outside the recommended ranges.

**DPD:** The preferred reagent used in test kits to measure the Free Available Chlorine.

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

**MPS:** Monopersulfate is the non-chlorine oxidizer used with the purification system.

**Nitric Acid:** The formulation of nitric acid, a highly corrosive chemical, is a byproduct of the ozone generating process. Nitric acid is produced in very small quantities and is readily dissolved in the water stream with ozone.

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

**Ozone:** Ozone is a powerful oxidizing agent which is produced in nature and artificially by man. Ozone forms no byproducts of chloramines (ozone actually oxidizes chloramines) and will not alter the water's pH.

**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 7.6. 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.

## WATER QUALITY AND MAINTENANCE

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

**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. Generally, scalling is caused by mineral content combined with high pH. Additionally, scale forms more readily at higher water temperatures.

| <b>SPA WATER MAINTENANCE &amp; TROUBLESHOOTING</b> |  |  |
|--|--|--|
| <b>Problem</b>                                     | <b>Probable Causes</b>   | <b>Solutions</b>   |
| Cloudy Water                                       | Dirty Filter/s<br>Excess oils / organic matter<br>Improper sanitization<br>Suspended particles / organic matter<br>Overused or old water | Clean filter or replace.<br>Shock spa with sanitizer.<br>Add sanitizer.<br>Adjust pH and/or alkalinity<br>Run jet pump(s) and clean filter.<br>Drain and refill spa. |
| Water Odor   | Excessive organics in water<br>Improper sanitization<br>Low pH   | Shock spa with sanitizer.<br>Add sanitizer.<br>Adjust pH to recommended range.   |
| Chlorine Odor                                      | Chloramine level too high<br>Low pH  | Shock spa with sanitizer<br>Adjust pH to recommended range.  |
| Musty Odor   | Bacteria or algae growth   | Shock spa with sanitizer - if problem is visible or persistent, drain, clean and refill spa.   |
| Organic buildup / scum ring around spa             | Build-up of oils and dirt  | Wipe off scum with clean rag - if severe, drain the spa, use a spa surface and tile cleaner to remove the scum, and refill spa.                                      |
| Algae Growth                                       | High pH<br>Low sanitizer level   | Shock spa with sanitizer and adjust pH<br>Shock spa with sanitizer and maintain sanitizer level.   |
| Eye Irritation                                     | Low pH<br>Low sanitizer level  | Adjust pH.<br>Shock spa with sanitizer and maintain sanitizer level.   |
| Skin Irritation / Rash                             | Unsanitary water<br>Free chlorine level above 5 ppm  | Shock spa with sanitizer and maintain sanitizer level.<br>Allow free chlorine level to drop below 5 ppm.   |
| Stains   | Total alkalinity and/or pH too low<br>High iron or copper in source water  | Adjust total alkalinity and/or pH.<br>Use a metal deposit inhibitor.   |
| Scale  | High calcium content in water - total alkalinity and pH too high   | Adjust total alkalinity and pH - If scale requires removal, drain the spa, scrub off the scale, refill the spa and balance the water.                                |



# WARRANTY

## Lifetime Spa Structural Warranty

Platinum II Spas warrants the spa shell structure against the loss of water through the fiberglass laminate of the shell caused by defects in materials and workmanship for as long as the original purchaser owns the spa. Contact manufacturer if you have any questions concerning warranty issues.

## 10Year - Platinum Spa Surface Warranty

Platinum II Spas warrants the interior acrylic spa surface against blisters, cracks, or delaminating resulting from a defect in the acrylic surface material for a period of 10 years from the date of purchase, based on the following formula: Retail cost divided by months covered (120), multiplied by months owned = replacement cost.

## Lifetime Manifold Plumbing Warranty

Platinum II Spas warrants the plumbing manifolds, fittings, and parts to be free of defects in materials or workmanship for as long as the spa is owned by the original purchaser.

## Electrical Equipment Warranty

Platinum II Spas warrants electrical equipment and components to be free of defects in materials and workmanship for a period of 2 year from the date of purchase.

## Warranty Performance

In the event of a defect covered under the terms of this Limited Warranty, notify manufacturer. Use all reasonable means to protect the spa from further damage. A service representative will repair the spa subject to the terms and conditions contained in this Limited Warranty. The service representative may assess reasonable travel charges, during inspection or repairs. If we determine that repairs are not feasible due to functional defect, we reserve the right to provide a replacement part or spa in lieu of repair. We will replace with a part of value equal to the original purchase. In such event, reasonable costs for removal of the defective spa and delivery and installation of the replacement spa will be the responsibility of the spa owner. We reserve the right to an on-site inspection by an authorized service representative.

## Limitations and Exclusions

This limited warranty applies to spas sold after January 1, 2005. This limited warranty applies only to the Original Purchaser and terminates with any transfer of ownership. This limited warranty does not apply to a spa used for any commercial, rental, club purposes, or for any spa used outside of the United States. The purchaser must establish the date of purchase by dated sales invoice or delivery receipt.

This limited warranty does not cover damage resulting from abuse, misuse, or neglect including any installation, operation, maintenance, or use of spa other than in accordance with the Owner's Manual of the spa. Damage caused by operation of the spa at water temperatures outside the range of 32 degrees F. and 120 degrees F., damage caused by dirty, clogged, or calcified filter cartridges, damage to the spa surface caused by improper use of chemicals or cleaning agents, allowing undissolved spa sanitizing chemicals to lie on the surface, damage caused by improper pH balance or other improper water chemistry, damaged caused by failure to provide even and sufficient support for the spa, are considered abuses and may invalidate this Limited Warranty. Damage caused by repairs or alterations performed by anyone other than an authorized service representative is not covered. Failure caused by accidents, acts of God, nonstructural normal wear and tear, cosmetic blemishes and other causes beyond our control is excluded.

The warranty is in lieu of all other warranties, expressed or implied, including implied warranties of merchantability and fitness for a particular purpose. In no event shall manufacturer be liable for incidental or consequential damages.

## Disclaimers

The spa owner is required to provide adequate access to the spa for any repair or inspection. Manufacturer shall not be liable for loss of use of the Spa or other incidental or consequential costs, expenses or damages, which may include but are not limited to water damage, or the removal of a permanent deck or other custom fixture. Under no circumstances shall we, or any of our representatives be held liable for injury to any person or damage to any property, however arising. This warranty gives you specific legal rights and you may have other rights. No service company, or other party is authorized to change, modify, or extend the terms of this Limited Warranty in any manner what so ever.

### IMPORTANT WARRANTY INFORMATION

The Warranty Card Must Be Filled Out Completely and Mailed Within Ten (10) Days of Purchase To Validate Warranty.



By signing this warranty card you have read & understand the owners manual in its entirety.

STORE PURCHASED FROM  
ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_

STATE: \_\_\_\_\_

PHONE NUMBER: ( ) - \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

MODEL: \_\_\_\_\_

(8 Digit Number)

SPA SERIAL NO.: \_\_\_\_\_

CUSTOMER NAME: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ Zip: \_\_\_\_\_

CUSTOMER PHONE NO: ( ) - \_\_\_\_\_

E-MAIL ADDRESS: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PLEASE PRINT

# Platinum II

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## Platinum II

STAMP

6101 N. 45th Street  
St. Petersburg, Florida 33714