

OWNER'S MANUAL

J-400™ Series



J - 460
J - 465
J - 470
J - 480

2530-442U Rev. A



ADDENDUM

Jacuzzi J-400 Series Owners Manual, #2530-442U

Your new hot tub includes one of two stereo remote styles. Both remotes function 100% identically and contain only minor cosmetic differences outlined below:

Style A



Style B



Cosmetic Differences Between Remotes

1. The hand held remote provides you the ability to select the light system color mode. Remote Style A includes a light “MODE” Button. Remote Style B replaces this button with an “AIR” button that is illustrated by three rows of circles. Both buttons select the light system color mode. Refer to section 9.6 in the supplied Owner’s Manual for light system operation details.
2. Remote Style A has a “Zone 2” Up and Down Button. Remote Style B replaces these buttons with a single “AMP SOURCE” Button. **Be advised, these buttons are inactive and are not used on either remote. Refer to section 20.11 in your supplied Owner’s Manual for additional information.**

Attention New Spa Owner!

Congratulations on the purchase of your new Jacuzzi® spa! The following is a list of automated functions performed by your spa. These functions are listed below in an attempt to suppress any operational concerns you may have during the first 24 hours of ownership! Also listed below are important maintenance recommendations you should observe on a regular basis to protect your new investment.

Automated Spa Operations

Your new spa is equipped with an automated “clean-up” cycle that clears all plumbing lines daily to promote maximum water sanitation. Each day at 12:00 PM (noon), each pump will activate and run for one minute. If either pump has just finished a 20 minute time out, it will not automatically activate for the clean-up cycle. Be aware, the factory programmed clean-up cycle cannot be canceled or altered!

Maintain Healthy Spa Water

Always maintain your spa’s water chemistry within the following parameters as defined by the Association of Pool And Spa Professionals/ USA:

pH	7.4-7.6
Free chlorine	3.0-4.0 ppm
Free bromine	2.0-4.0 ppm
Total Alkalinity	100-120 ppm
Calcium Hardness	150-250 ppm

 **TO DECREASE RISK OF INFECTION OR DISEASE!** Always maintain your spa filter as outlined below to ensure healthy spa water. Refer to pages 49-50 (sec. 14.0) for additional information.

Required Filter Maintenance

Your new spa is equipped with an advanced water filtration system that provides unsurpassed water quality! To ensure maximum water quality at all times, you should clean the skimming filter cartridge every three months, or as necessary. See pages 43-45 (sec. 13.0) for detailed filter cartridge cleaning instructions.

Required Water Replacement

 **TO DECREASE RISK OF INFECTION OR DISEASE!** You should replace the spa’s water every 3 months. The frequency depends on a number of variables including frequency of use, number of users and attention paid to water quality maintenance. You will know it is time for a change when you cannot control sudsing and/or you can no longer get the normal feel or sparkle to the water, even though the key water balance measurements are all within the proper parameters. See pages 49-50 (sec. 14.0) for additional information.

Table of Contents

1.0	Important Spa Owner Information	1
2.0	FCC Notice	1
2.1	Industry Canada (IC) Information	1
3.0	Important Safety Instructions for all Spa Owners	2
3.1	Entrapment Risk	6
3.2	Hyperthermia	7
3.3	Important CSA safety instructions (Canada only)	8
4.0	Choosing a Location	8
4.1	Outdoor Location	9
4.2	Indoor Location	10
5.0	General Electrical Safety Instructions	11
6.0	Electrical Installation Instructions (240V Service)	11
7.0	Power Requirements	14
8.0	Spa Fill Up Procedure	15
9.0	Control Functions	20
9.1	Control Panel	20
9.2	LCD Display	21
9.3	J-480 Spa Features	22
9.4	J-470 Spa Features	23
9.5	J-465 Spa Features	24
9.6	J-460 Spa Features	25
10.0	Operating Instructions	26
10.1	View Button	26
10.2	Activate Jets Pump 1	26
10.3	Activate Jets Pump 2	26
10.4	Selecting the Desired Massage Action	26
10.5	Light On/Off Button	26
10.6	Light Mode Button	27
10.7	Adjusting Individual Jet Flow	27
10.8	Adjusting PowerPro™ MX2 Jets	27
10.9	Adjusting RX Jets	27
10.10	WaterColour™ Waterfall Control	28
10.11	Air Controls	28
10.12	Optional J-1000™ Jacuzzi Audio System	28
10.13	J-480 Massage/Waterfall Selector Diagram	29
10.14	J-480 Air Controls Diagram	30
10.15	J-470 Massage/Waterfall Selector Diagram	31
10.16	J-470 Air Controls Diagram	32
10.17	J-465 Massage/Waterfall Selector Diagram	33
10.18	J-465 Air Controls Diagram	34
10.19	J-460 Massage/Waterfall Selector Diagram	35
10.20	J-460 Air Controls Diagram	36

11.0	Heating Modes	37
11.1	Standard Mode (Factory Default)	37
11.2	Economy Mode.....	37
11.3	Selecting Standard or Economy Mode	37
11.4	Clean-Up “Blow-Out” Cycle	37
12.0	Programming Instructions	38
12.1	Programming Filter/Circulation Pump Run Time	38
12.2	Programming Economy Heating Cycles	38
12.3	Adjusting Time of Day.....	40
12.4	Main Control Panel Lock	40
12.5	Locking Filter Cycles	41
12.6	Temperature Setting Lock.....	41
12.7	Programming the Change Filter Reminder.....	41
13.0	Spa Maintenance	43
13.1	Cleaning the Filter Cartridges.....	43
13.2	Draining and Refilling	45
13.3	Cleaning the Spa Interior.....	46
13.4	Pillow Care	46
13.5	Maintaining the Synthetic Cabinet.....	46
13.6	Maintaining the Cover.....	46
13.7	Winterizing.....	47
13.8	Restarting Your Spa in Cold Weather.....	48
14.0	Water Quality Maintenance	49
14.1	pH Control	49
14.2	Sanitizing.....	49
14.3	Other Additives	50
14.4	Ozone Water Maintenance System	50
15.0	Troubleshooting - Display Messages	51
16.0	Troubleshooting - Procedures	53
17.0	North American 60 Hz J-460/J-465/J-470/J-480 Wiring Diagram	55
18.0	Export 50 Hz J-460/J-465/J-470/J-480 Wiring Diagram	56
19.0	Typical Spa Wiring Diagrams A-B (North American 60Hz Models Only)	57
20.0	Optional Jacuzzi J-1000 Audio System™ Stereo System Features	58
20.1	Sound System Controls.....	58
20.2	Sound System Operation	59
20.3	J-1000™ Audio System Radio Operation.....	61
20.4	J-1000™ Audio System CD Player Operation.....	62
20.5	J-1000™ Audio System USB & NAND Operation	63
20.6	J-1000™ Audio System iPod Operation	65
20.7	Docking your iPod Music Player.....	66
20.8	Generic MP3 Player Operation.....	67
20.9	J-1000™ Audio System Stereo Troubleshooting.....	67
20.10	J-1000™ Audio System Stereo Specifications	68
20.11	Standard Wireless Remote Control	69
20.12	Wireless Remote Battery Replacement Procedure	71

1.0 Important Spa Owner Information

Your Jacuzzi® spa is constructed to the highest standards and is capable of providing many years of trouble-free use. However, because heat retentive materials are utilized to insulate the spa for efficient operation, an uncovered spa surface directly exposed to sunlight and high temperatures for an extended period is subject to permanent damage. Damage caused by exposing the spa to this abuse is not covered under warranty. We recommend that you always keep the spa full of water when it is exposed to direct sunlight and that you keep the Jacuzzi insulating cover in place at all times when the spa is not in use. Read and carefully follow the requirements for your spa's support base found in the section 4.0 titled, "Choosing a Location" (page 8).

Jacuzzi® spas constantly strives to offer the finest spas available, therefore, modifications and enhancements may be made which affect the specifications, illustrations and/or instructions contained herein.

2.0 FCC Notice

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Rearrange or relocate the receiving antenna;
2. Increase the separation between the equipment and receiver;
3. Connect the equipment into an outlet on a circuit different from the circuit connected;
4. Consult the dealer or an experienced radio/TV technician for help. (Changes or modifications not expressly approved by the party responsible for FCC compliance could void the user's authority to operate this equipment.)

2.1 Industry Canada (IC) Information

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website: www.hc-sc.gc.ca/rpb.

3.0 Important Safety Instructions for all Spa Owners

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY!

This spa was manufactured to meet the standards and specifications outlined in the “Virginia Graeme Baker Pool and Spa Safety Act” (VGB Safety Act). When installing and using this spa, basic safety precautions should always be followed, including:

1.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!**
 - Extreme caution must be exercised to prevent unauthorized access by children.
 - To avoid accidents, ensure that children do not use this spa unless supervised at all times. Adult supervision is a critical safety factor in preventing children from drowning.
 - Use the straps and clip tie downs to secure the spa cover when not in use. This will help discourage unsupervised children from entering the spa. Keep the spa cover secure in high-wind conditions.
 - There is no representation that the cover, clip tie-downs, or actual locks will prevent access to the spa.

2.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!**
 - Keep hair, loose articles of clothing or hanging jewelry away from suction fittings, rotating jets or other moving components to avoid entrapment that could lead to drowning or severe injury.
 - Never use the spa unless all suction guards, filter, filter lid, or skimmer assembly are installed to prevent body and/or hair entrapment.
 - Never operate or use the spa if the filter, filter lid, or skimmer assembly are broken or any part of the skimmer assembly is missing. Please contact your dealer or nearest service center for service.
 - The suction fittings and suction covers in this spa are sized to match the specific water flow created by the pump(s). If it is necessary to replace the suction fittings, suction covers or pump(s), be sure that the flow rates are compatible and are in compliance with the VGB Safety Act.
 - Never replace a suction fitting or suction cover with one rated less than the flow rate marked on the original suction fitting. Using improper suction fittings or suction covers can create a body or hair suction entrapment hazard that may lead to drowning or severe injury.

3.  **DANGER: RISK OF SEVERE INJURY FROM ELECTRIC SHOCK OR DEATH FROM ELECTROCUTION!**
 - Install the spa 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 mm²) solid copper conductor attached to the wire connector

on the grounding lug, inside the equipment compartment on the equipment box.

- A grounding wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4 mm²) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit.
- Never 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.
- Never bring any electrical appliances into or near the spa.
- Never operate any electrical appliances from inside the spa or when you are wet.
- The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with section 422-20 of the National Electrical Code/USA, ANSI/NFPA 70. The disconnecting means must be readily accessible and visible to the spa occupant but installed at least 5 feet (1.5m), from the spa.
- The electrical circuit supplied for the hot tub must include a suitable ground fault circuit interrupter (GFCI) as required by NEC Article 680-42.

4.  **WARNING: RISK OF SEVERE INJURY OR DEATH!**

- Extreme caution must be exercised to prevent diving or jumping into the spa or slipping and falling, which could result in unconsciousness, drowning, or serious injury. Remember that wet surfaces can be very slippery.
- Never stand, walk or sit on the top railing of the spa.

5.  **WARNING: RISK OF HYPERTHERMIA (OVER-HEATING) CAUSING SEVERE INJURY, BURNS, WELTS OR DEATH!**

- Water temperature in excess of 104°F (40°F) may be injurious to your health.
- Refer to section 3.2 Hyperthermia for specific causes and symptoms of this condition.
- The water in the 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 (children are especially sensitive to hot water) and when spa use may exceed 10 minutes.
- The Consumer Products Safety Commission/USA has stated that the water temperature in a spa should not exceed 104°F (40°C).
- Always test the spa water temperature 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 as much as +/- 5°F (2°C).

6.  **WARNING: RISK OF SEVERE INJURY OR DEATH!**
- Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, if pregnant or possibly pregnant, consult your physician before using a spa.
 - Pregnant or possibly pregnant women should limit spa water temperatures to 100°F (38°C).
 - Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, diabetes, infectious diseases or immune deficiency syndromes should consult a physician before using a spa.
 - If you experience breathing difficulties in association with using or operating your spa, discontinue use and consult your physician.
 - 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.
 - Persons suffering from any condition requiring medical treatment, the elderly, or infants should consult with a physician before using a spa.
 - The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.
7.  **WARNING: RISK OF SEVERE INJURY OR DEATH!**
- Prolonged immersion in a spa may be injurious to your health.
 - Observe a reasonable time limit when using the spa. Exposures at higher temperatures can cause high body temperature (over-heating). Symptoms may include dizziness, nausea, fainting, drowsiness, and reduced awareness. These effects could possibly result in drowning or serious injury.
 - Never use a spa immediately following strenuous exercise. Enter and exit the spa slowly. Wet surfaces can be slippery.
8.  **WARNING: TO DECREASE RISK OF INFECTION OR DISEASE!**
- To reduce the risk of contracting a waterborne illness (e.g. an infection, bacteria or virus) and/or respiratory ailments, maintain water chemistry within the parameters listed on the inside cover of this manual and consult with a licensed engineer regarding proper ventilation if installed indoors or in an enclosed area.
 - People with infectious diseases should not use a spa to avoid water contamination, which could result in spreading infections to others.
 - Always shower before and after using your spa. Maintain water chemistry in accordance with manufacturer's instructions. Failure to do so may result in contracting a waterborne illness (e.g. an infection, bacteria or virus).

9. CAUTION: TO DECREASE RISK OF PRODUCT DAMAGE.

- Maintain water chemistry in accordance with manufacturer's instructions.
- Proper chemical maintenance of spa water is necessary to maintain safe water and prevent possible damage to spa components.

10. NOTE:

This spa is not intended nor designed to be used in a commercial or public application. The spa buyer shall determine whether there are any code restrictions on the use or installation of this spa since local code requirements vary from one locality to another.

Hot Tub Safety Literature

To ensure you have a safe and enjoyable hot tub experience, learn all you can about hot tub safety and emergency procedures. Especially useful are the brochures listed below:

- [Children Aren't Waterproof](#)
- [Pool and Spa Emergency Procedures For Infants and Children](#)
- [Layers of Protection](#)
- [The Sensible Way to Enjoy Your Spa or Hot Tub](#)

The Association of Pool and Spa Professionals publishes these brochures. To acquire a brochure:

- Ask your hot tub dealer (they may have copies)
- Go to <http://apsp.org>
- Conduct your own search on the internet
- Write to the following address:

The Association of Pool and Spa Professionals
2111 Eisenhower Avenue
Alexandria VA 22314
703.838.0083

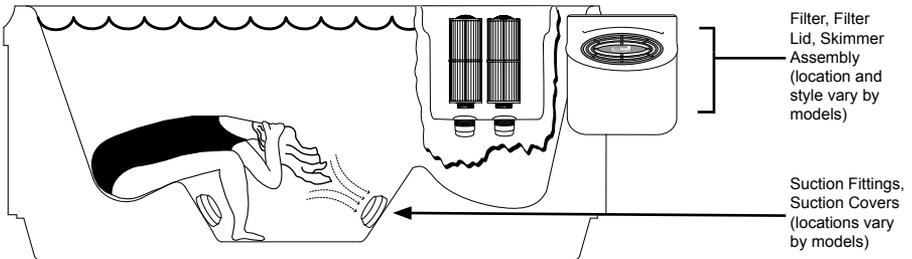
3.1 Entrapment Risk

The Consumer Products Safety Commission/USA has reported that users of pools and spas have become entrapped (stuck) to drain and/or suction fittings causing death, drowning, or serious injury (see diagram below). This spa was manufactured to meet the standards and specifications outlined in the "Virginia Graeme Baker Pool and Spa Safety Act" (VGB Safety Act). Entrapment risk can be minimized if proper precautions are taken.



DANGER: RISK OF PERSONAL INJURY OR DEATH!

Never operate the spa if a suction fitting, suction cover, filter, filter lid or skimmer assembly are broken, damaged or missing.



- 1.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!****

Hair entrapment: May occur if hair is entangled, knotted or snagged in a drain suction or skimmer assembly. This has been reported in persons who when submerge themselves underwater, allowing hair to come close and/or within the reach of the suction fittings, suction covers or skimmer assembly.

 - Keep hair away from suction fittings, suction covers, filter, filter lid or skimmer assembly.
 - Children are at risk for hair entrapment if swimming under water.
 - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.
- 2.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!****

Limb entrapment: May occur when a limb becomes entrapped, inserted or sucked into a suction or outlet opening.

 - Always keep suction fittings, suction covers, filter, filter lid or skimmer assembly in place when operating to avoid limb entrapment.
 - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.

3.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!**
Body entrapment: May occur when part of the torso becomes entrapped, inserted or sucked into a suction or outlet opening.
- Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.
4.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!**
Evisceration (disembowelment) entrapment: May occur when the buttocks becomes entrapped, inserted or sucked into a suction or outlet opening.
- Never sit on suction fittings, suction covers, filter, filter lid or skimmer assembly.
 - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.
5.  **DANGER: RISK OF SEVERE INJURY OR DROWNING!**
Mechanical entrapment: May occur when jewelry, swimsuit, or hair accessories become entangled, knotted or snagged in a drain suction or skimmer assembly.
- Never allow your jewelry, swimsuit, or hair accessories to come close to the suction fittings, suction covers or skimmer assembly.
 - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.

3.2 Hyperthermia

Prolonged immersion in hot water may induce hyperthermia (overheating). The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in spas. 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 (fatigue), and an increase in the internal temperature of the body (feeling of being too hot). 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.

A Warning Sign is provided in your warranty packet. Please install at a location near your spa, where it is visible to users of the spa. For additional or replacement Warning Signs please contact your local Jacuzzi dealer and reference item number #6530-082.

3.3 Important CSA safety instructions (Canada only)

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 a terminal marked G, Gr, Ground, Grounding or the \oplus symbol* is located inside the supply terminal box or compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors that supply this equipment. *IEC Publication 417, Symbol 5019.
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 spa to these terminals with an insulated or bare copper conductor not smaller than No. 6 AWG (10 mm²).
4. All field-installed metal components such as rails, ladders, drains or other similar hardware within 10 feet (3m) of the spa shall be bonded to the equipment grounding buss with copper conductors not smaller than No. 6 AWG (10 mm²).
5. **SAVE THESE INSTRUCTIONS.**

4.0 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. We recommend a poured, reinforced concrete slab with a minimum thickness of 4 inches (10 cm). Wood decking is also acceptable provided it is constructed so that it meets the requirements outlined above.



WARNING: For spas that are to rest on balconies, roofs or other platforms not specifically tied into main structural support, consult a professional Structural Engineer with experience in this type of application.

The spa must be installed in such a manner as to provide drainage away from it. 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 condition in which it would sit in. For spas which will be recessed into a floor or 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 all side cabinet side panels and access to the jet components, especially on the side with the equipment bay.



CAUTION: If the spa is indoors or located in an enclosed area, proper ventilation should be discussed with an Engineer or authority competent enough to understand the necessary provisions needed to vent moist or heated air and air associated with chemical odors outdoors. **When the spa is in use considerable amounts of moisture will escape potentially causing mold and mildew. This can cause health risk.** Over time, this can damage certain surfaces, surroundings, and equipment.

4.1 Outdoor Location

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

- The proximity to changing area and shelter (especially in colder weather).
- The pathway to and from your spa (this should be free of debris so that dirt and leaves are not easily tracked into the spa).
- The closeness to trees and shrubbery (remember that leaves and birds could create extra work in keeping the spa clean).
- A sheltered environment (less wind and weather exposure can result in lowered operation and maintenance costs).
- The overall enhancement of your environment. It is preferable not to place the spa under an unguttered roof overhang since run-off water will shorten the life expectancy of the spa cover.
- For spas that are to rest on balconies, roofs or other platforms not specifically tied into main structural support, consult a professional Structural Engineer with experience in this type of application.

4.2 Indoor Location

For indoor installations many factors need to be considered before installing a spa indoors.

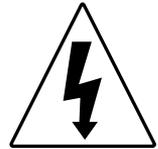
- **Proper Foundation:** Consult a Structural Engineer when considering a foundation that will adequately support the spa the entire time it is in place. Proper support is critical especially if the spa is to rest on a second story or higher. For spas that are to rest on balconies, roofs or other platforms not specifically tied into the main structural support, you should consult a professional Structural Engineer with experience in this type of application.
- **Proper Drainage:** It is extremely important to have in place measures to sufficiently handle excessive water spillage. Be sure the flooring in which the spa rests on has adequate drainage and can handle the entire contents of the spa. Be sure to make provisions for ceilings and other structures that may be below the spas installation. Areas around your spa can become wet or moist so all flooring and subsequent furniture, walls and adjacent structures should be able to withstand or resist water and moisture.
- **Proper Ventilation:** Proper ventilation should be discussed with an Engineer or authority competent enough to understand the necessary provisions needed to vent moist or heated air and air associated with chemical odors outdoors. When the spa is in use considerable amounts of moisture will escape, potentially causing mold and mildew over time which can damage certain surfaces and/or surroundings.
- **Sufficient Access:** In the unlikely event that you should ever need to access or gain entry to any portion of the spa for servicing, it is highly recommended that you plan your indoor installation to provide full access to the entire spa.
- **Warranty:** Damage caused by not following these guidelines or any improper installation not in accordance to local codes or authorities is not covered under the spas warranty. Please consult your local state or city building ordinances.



WARNING: In addition to maintenance of filters and water chemistry, proper ventilation is recommended to reduce the risk of contracting a waterborne illness (e.g. an infection, bacteria or virus) and/or respiratory ailments that could be present in the air or water. Consult a licensed architect or building contractor to determine your specific needs if installing your hot tub indoors.

5.0 General Electrical Safety Instructions

Your new Jacuzzi® spa is equipped with the J-1000™ system. It contains the most advanced safety and self-protective equipment in the industry. Nonetheless, this spa must be installed properly to ensure dependable usage.



Please contact your local Jacuzzi dealer or local building department should you have any questions regarding your installation. Proper grounding is extremely important. Jacuzzi spas are equipped with a current collector system. A pressure wire connector is provided on the surface of the control box, located inside the equipment door (Figure B, page 13) to permit connection of a bonding wire between this point and any ground metal equipment, metal water pipe or conduit within 5 feet (1.5m) of the spa, or copper clad grounding rod buried within 5 feet (1.5m) of the spa. Bonding wire must be at least No. 8 AWG (8.4 mm²) solid copper wire. This is a most important safety assurance feature.

Before installing your spa, check with your local building department to ensure installation conforms to local building codes.

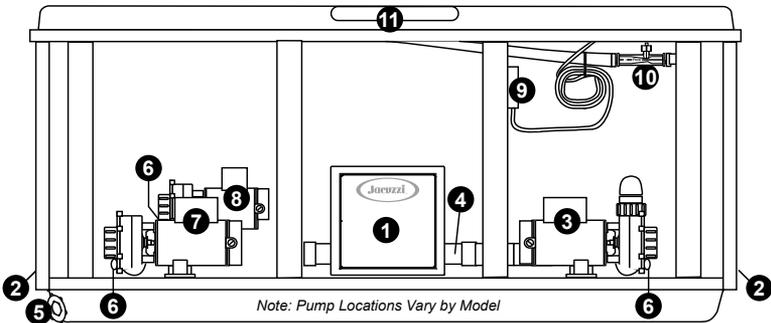
6.0 Electrical Installation Instructions (240V Service)

IMPORTANT NOTICE: The electrical wiring of this spa must meet the requirements of the National Electrical Code/USA (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.  **DANGER: TO DECREASE THE RISK OF SHOCK, PRODUCT DAMAGE OR ELECTRICAL FIRE.**
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, voltage and wire size required, refer to section 7.0 "Power Requirements" (page 14) for your specific spa model.
 - Wire size must be appropriate per NEC and/or local codes.
 - We recommend type THHN wire.

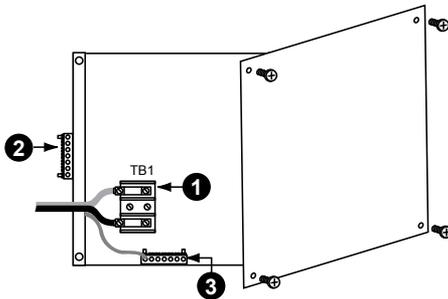
- All wiring must be copper to ensure proper connections. **Do not use aluminum wire.**
 - When using wire larger than #6 (10 mm²), add a junction box near the spa and reduce to short lengths of #8 (8.4 mm²) wire to connect to the spa.
4. The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code/USA, ANSI/NFPA 70. The disconnecting means must be readily accessible to the spa's occupant but installed at least 5 feet (1.5m) from spa water.
 5. The electrical circuit supplied for the spa must include a suitable ground fault circuit interrupter (GFCI) as required by NEC Article 680-42/USA.
 6. To gain access to the spa's power terminal block, remove the four screws securing the center cabinet panel on the side of the spa under the controls. Then remove the four control box door screws and door (Figure A).
 7. Select the power supply entrance you want to use (Figure A) and remove the short cabinet panel from the front of the spa. Then, feed the cable through the large opening provided in the bottom of the control box.
 8. Connect wires, color to color, on terminal blocks TB1 and TB3 (Figure C-D, page 14). **TIGHTEN SECURELY!** All wires must be hooked up securely or damage could result.
 9. Install control box door and reinstall the cabinet side panels.

**Figure A
Equipment Area**



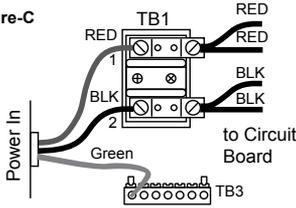
- | | |
|-----------------------------|--|
| 1. Control Box | 7. Jets Pump #2 |
| 2. Power Supply Entrance(s) | 8. Filter/Circulation Pump |
| 3. Jet Pump #1 | 9. Optional CD Ozonator
(Purchase Separately) |
| 4. Heater | 10. Factory Installed Ozone Injector |
| 5. Spa Drain Valve | 11. Control Panel |
| 6. Pump Drain Plugs(s) | |

**Figure B
Control Box**



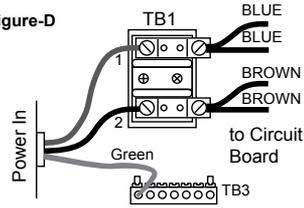
1. Terminal Block
2. Bonding Lug
3. Grounding Terminal

Figure-C



All North American 240V Models:
240 VAC, 3-Wire Connection 60 Hz

Figure-D



All Export Models:
230 VAC, 3-Wire Connection 50 Hz

7.0 Power Requirements

Jacuzzi® spas are designed to provide optimum performance and flexibility of use when connected to their maximum electrical service. They are configured at the factory. The most common electrical connections are listed below:

- All North American 60Hz Models: 240VAC/50A**
- All Export 50Hz Models: 230VAC/30A**

If you prefer, your qualified technician can perform a minor circuit board modification that allows the hot tub to operate on a different electrical service (see table footnotes below).

North American J-460/J-465/J-470/J-480 Models (60Hz)

Voltage:	240 VAC	240 VAC	240 VAC
Max. Current Draw:	23A	36A	45A
Frequency:	60 Hz	60 Hz	60 Hz
Number of Wires:	3	3	3
Circuit Breaker (2-Pole):	30A*	50A**	60A***

* In 30A configuration, the heater **will not operate** while either jets pump is running.

** In 50A configuration, the heater **will not operate** while both jets pumps are running. This is the factory setting.

*** In 60A configuration the heater **will operate** while both jets pumps are running.

Export J-460/J-465/J-470/J-480 Models (50Hz)

Voltage:	230 VAC	230 VAC	230 VAC
Max. Current Draw:	16A	21A	29A
Frequency:	50 Hz	50 Hz	50 Hz
Number of Wires:	3	3	3
Circuit Breaker (2-Pole):	20A*	30A**	40A***

- * In 20A configuration, the heater **will not operate** while either jets pump is running.
- ** In 30A configuration, the heater **will not operate** while both jets pumps are running. ***This is the factory setting.***
- *** In 40A configuration the heater **will operate** while both jets pumps are running.

8.0 Spa Fill Up Procedure

FOR BEST RESULTS, READ EACH STEP IN ITS ENTIRETY BEFORE PROCEEDING WITH THIS PROCEDURE.

1. Prepare The Spa For Filling

- Clear all debris from the spa. (Although the spa shell has been polished at the factory, you may want to treat it with a specially formulated spa cleaner. Consult your authorized Jacuzzi dealer for additional information prior to filling spa.
- Remove both ProClear™ Plus skimmer and polishing filter lids and filters as illustrated in section 13.1 (page 43).

2. Fill Spa

- Place the end of your garden hose into empty skimming filter bucket (filter bucket on your left) as you stand next to the spa. Fill spa half way, then place the garden hose into the opposite filter bucket (filter bucket on your right) while adding the remaining fill water.

CAUTION: TO DECREASE BUILD UP ON COMPONENTS AND MINIMIZE ACRYLIC DAMAGE.

Never fill with water from a water softener. If your water is extremely “hard”, it is preferable to fill half-way with hard water and the rest of the way with softened water. You may fill entirely with hard water if you use a special water additive available from your Jacuzzi dealer.

-  **WARNING: TO DECREASE RISK OF INFECTION OR DISEASE.**

Fill hot tub with clean tap water from garden hose, to reduce risk of contracting a waterborne illness (e.g. an infection, bacteria or virus) and/or respiratory ailments. Fill until water covers all jets but does not touch the bottom of the lowest headrest. (DO NOT OVERFILL!)

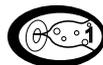
IMPORTANT: Always fill your spa through both filter buckets after draining. Failure to do so may cause air to be trapped in either pump, preventing the pump from circulating water. Remove the hose and replace both filter cartridges as illustrated in section 13.1 (page 43).

3. **Turn On Power**

Turn on power to spa at the home's circuit breaker. The heater and filter/circulation pump will automatically activate. If the control panel LCD flashes water temperature and "COOL" or "ICE", this is normal. Refer to pages 51-52 for additional information.

4. **Activate Jets Pumps**

Turn on all jets(s) pumps when adding chemicals in step 5.



5. **Add Start-Up Chemicals**

Add the spa water chemicals as recommended by your authorized Jacuzzi spa dealer. See section titled "Water Quality Maintenance" (page 49) for general guidance.



WARNING: RISK OF POISONING OR DEATH.

Never leave chemicals opened and accessible to anyone. Use chemicals according to the vendors instructions. Always store chemicals in a safe and/or locked location. Keep away from and out of reach of children.

6. **Establish A Stable Sanitizer Reading**

Establish a stable sanitizer reading between 3.0-4.0 ppm chlorine or 2.0-4.0 ppm bromine. To ensure healthy water conditions, always maintain a constant sanitizer reading within the levels recommended by the Association of Pool And Spa Professionals/USA printed on the inside cover of this manual. If sanitizer levels cannot be stabilized, perform the Decontamination Procedures on the following page.

Note: The "Decontamination Procedure" should also be used after the spa has been "Winterized" (sec. 13.7, page 47) or has been sitting without power for an extended period.

7. Set Spa To Heat

To warm spa water to a comfortable temperature, follow these steps:

- The LCD display on the control panel displays the actual temperature of the spa water. Press either the **COOLER**  or **WARMER**  button once to display the “set” temperature for 5 seconds. If you want the water to heat to a different temperature, simply press **COOLER**  or **WARMER**  within 5 seconds. The set temperature increases or decreases by one degree each time either buttons is pressed.
- The heater will turn off 1 degree above set temperature and turn on 1 degree below set temperature.



Important Heater Details:

- The maximum temperature for which the spa can be set is 104°F (40°C) and the minimum is 80°F (27°C).
- For North American spas powered by a service of 30 amps, turn off jets pumps to operate heater. With a 40 amp or 50 amp, turn off both jets pumps to operate heater. With a 60 amp, the heater will operate with both jets pumps on.
- Setting the thermostat at maximum will not accelerate the heating process. This will only result in a higher ultimate temperature.
- The heater operates until the water reaches 1 degree above the programmed “set temperature”, then turns off. The heater will reactivate after the water cools to approximately 1 degree below the “set temperature.”

8. Place Cover On Spa

- Keeping the insulating cover in place anytime the spa is not in use will reduce the time required for heating, thereby minimizing operating costs.
- The time required for initial heat-up will vary depending on the starting water temperature.



DANGER: RISK OF PERSONAL INJURY.

Check water temperature carefully before entering hot tub! Excessive water temperature can cause burns, welts and body temperature to rise, hyperthermia (over-heating).

Decontamination Procedure

Steps 1-7 below are only required when sanitizer levels are unstable after performing Spa Fill Up Procedures steps 1-6. Disregard Decontamination Procedure below if sanitizer levels remain stable at 3.0-4.0 chlorine or 2.0-4.0 bromine ppm after performing Spa Fill Up Procedures steps 1-6.

1. Add 2.5 ounces of sodium dichlor for every 100 gallons of water. Refer to the table below for approximate water fill volume by model.



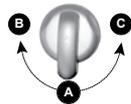
CAUTION: RISK OF PERSONAL INJURY OR SPA DAMAGE!

Never add chlorine tablets (trichlor) or acid to your hot tub for any reason! These chemical may damage components within your hot tub, burn or irritate your skin, create a rash, and void the manufacturer warranty for your spa.

Water Fill Volume by Model

Spa Model	Approximate Fill Volume	Sodium Dichlor
J-460	409 US Gallons (1,548 Liters)	10 oz.
J-465	480 US Gallons (1,817 Liters)	12 oz.
J-470	535 US Gallons (2,025 Liters)	13 oz.
J-480	570 US Gallons (2,158 Liters)	14 oz.

2. Leave spa cover open during this step to allow excessive chemical vapors to exit spa, protecting pillows and plastic knobs from chemical attack. If spa is indoors, open doors and windows for proper ventilation. Turn on all spa jet pumps for one hour, open all air controls, and place all massage selector knob(s) in their center “combo” position as shown.



Note: You will need to activate the jet pumps every 20 minutes since these functions have an automatic 20 minute time-out that turns them off.



WARNING: RISK OF PERSONAL INJURY!

- To decrease the risk of injury, drowning or entrapment, never leave your hot tub unattended for any reason while the cover is open and accessible, especially to small children and animals!
- Precautions should be taken to minimize your exposure to chemical vapors (that could cause lung, brain, or skin damage).

3. Turn off power to the spa at the circuit breaker, then drain tub as outlined in section 13.2 (page 45).
4. Refill spa with clean tap water from garden hose until water covers all jets but does not touch the bottom of the lowest headrest with all headrests in their lowest position (DO NOT OVERFILL!)

CAUTION: TO DECREASE BUILD UP ON COMPONENTS AND MINIMIZE ACRYLIC DAMAGE.

Never fill with water from a water softener. If your water is extremely "hard", it is preferable to fill half-way with hard water and the rest of the way with softened water. You may fill entirely with hard water if you use a special water additive available from your Jacuzzi dealer.

5. Consult your authorized Jacuzzi dealer for chemical recommendations, then add chemicals to spa water to achieve a constant sanitizer reading within the levels recommended by the Association of Pool and Spa Professionals/USA printed on the inside cover of this manual.
6. Turn on all jet pumps when adding chemicals to ensure proper mixing and leave your spa cover open until the sanitizer level falls below 4.0 ppm to protect pillows and plastic knobs from chemical attack.

**WARNING: RISK OF PERSONAL INJURY!**

- To decrease the risk of injury, drowning or entrapment, never leave your hot tub unattended for any reason while the cover is open and accessible, especially to small children and animals!
- Precautions should be taken to minimize your exposure to chemical vapors (that could cause lung, brain, or skin damage).

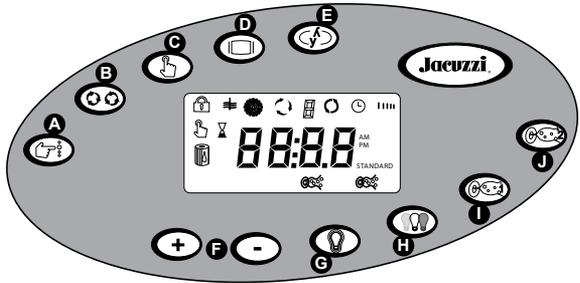
7. Establish a sanitizer reading between 3.0-4.0 ppm chlorine or 2.0-4.0 ppm bromine, then allow the spa to set undisturbed for 8 hours. Retest water after 8 hours to determine if sanitizer levels are stable. If sanitizer levels are stable, your spa is ready for use. To ensure healthy water conditions, always maintain a constant sanitizer reading within the levels recommended by the Association of Pool and Spa Professionals/USA printed on the inside cover of this manual. If sanitizer levels are not stable at this time, it will be necessary to repeat this procedure in its entirety until stable sanitizer readings are achieved.
8. After adequate sanitizer levels are achieved, close all spa air controls to maximize heat retention when spa is not in use.

9.0 Control Functions

9.1 Control Panel

A. Select

Button: Filter cycle programming features. Pressing the select button also allows you to turn on/off the circulation pump, when it is in an off state. If the circulation pump was turned on automatically, it cannot be manually turned off.



Display shown for example purposes only, actual water temperature will vary.

B. Cycle

Button: Accesses filter cycle program mode and next cycle.

C. Mode

Button: Switches between standard and economy filtration/heating modes sections.

D. Display

Button: Displays time of day and initiates time setting and locking functions.

E. Invert

Button: Inverts the main 4-digit LCD display.

F. Warmer

and Cooler  Buttons: Press these to display, increase or decrease the temperature. They also display other programmable features.

G. Light On/Off

Button: Turns waterfall, footwell and logo lights on in unison. Press once for high intensity; press a second time for medium intensity; press a third time for low intensity; press a fourth time to turn off. The displayed color is changed using the light mode button (H) below.

H. Light Mode

Button: Selects one of 4 color modes for waterfall, footwell, and logo lights. See page 27 for additional information.

I. JETS 1

Button: Controls jets pump #1 (On, Off).

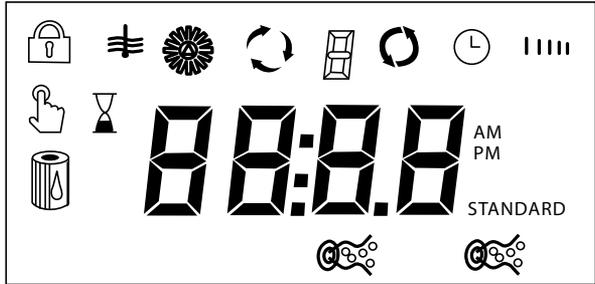
J. JETS 2

Button: Controls jets pump #2 (On, Off).

9.2 LCD Display

 = **Lock:** Indicates panel, set temperature, or filter cycle programming is locked.

 = **Heat:** Indicates heater is on.



 = **Ozone:** Indicates optional CD ozonator is on.

 = **Adjust Filter Cycle:** Indicates filter cycle programming feature is accessed.

 = **Filter Cycle Number:** Indicates which programmed filter cycle is running.

 = **Filter Cycle:** Indicates programmed filter cycle is running.

 = **Filter Cycle Start Time:** Indicates filter cycle start time programming is accessed.

 = **Filter Cycle Duration:** Indicates filter cycle duration programming is accessed.

 = **Set Temperature:** Indicates the current set temperature is displayed.

 = **Set Time:** Indicates current time is displayed.

 = **Filter Annunciator:** Indicates filter cleaning and/or replacement.

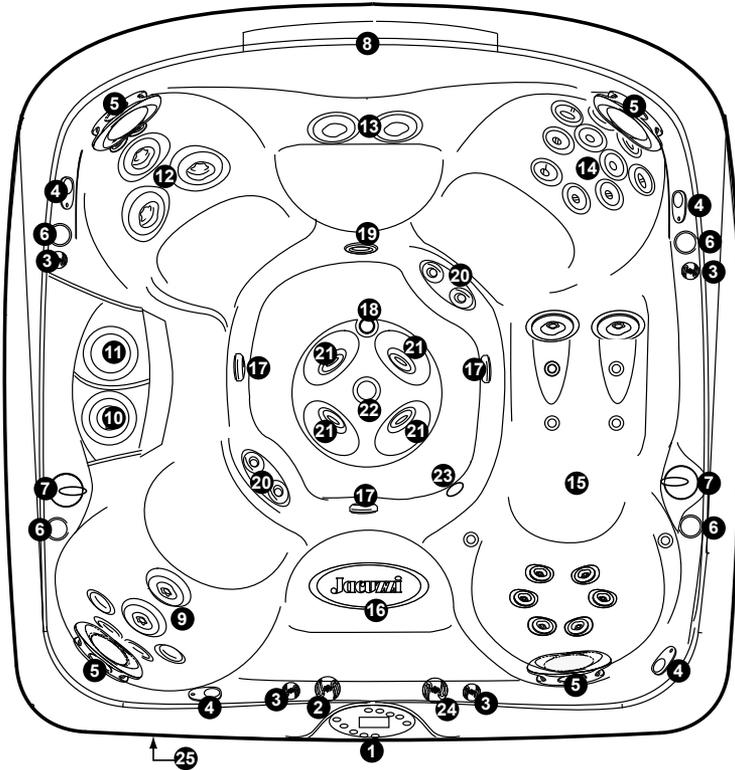
 = **Jets 1:** Indicates jets pump 1 is on.

 = **Jets 2:** Indicates jets pump 2 is on.

STANDARD = **Mode:** Indicates selected filter mode.

Note: No icon means Economy mode is selected.

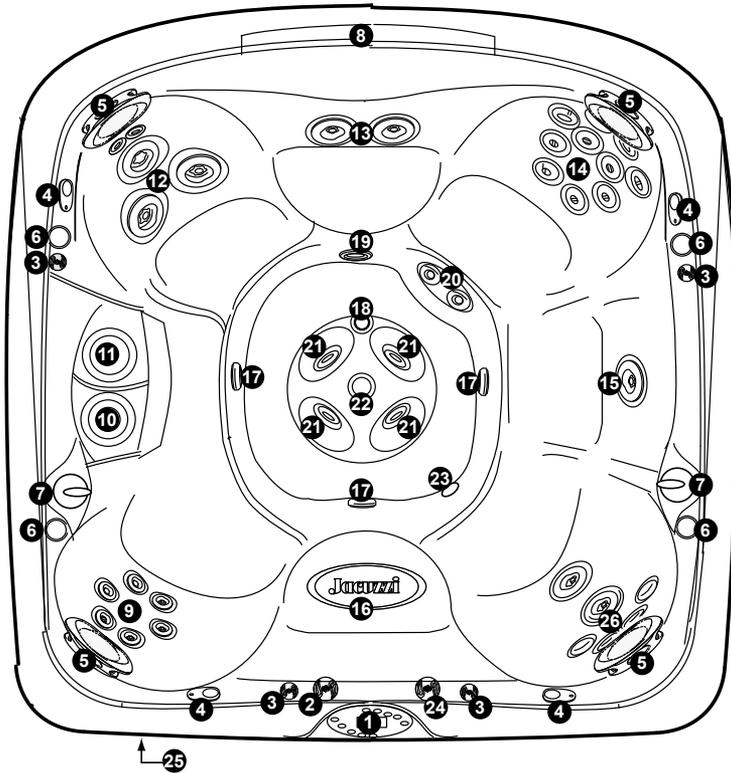
9.3 J-480 Spa Features



Spa features subject to change without notice.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Control Panel 2. Waterfall Control Valve 3. Air Control Valves (4 ea.) Introduce Air to Specified Jet Groups (Page 30) 4. Optional Audio System Speakers (4 ea.) 5. Adjustable Pillows (4 ea.) 6. Lighted Cup Holders (4 ea.) 7. Massage Selectors (2 ea.) Controls Specified Jet Groups (Page 29) 8. Waterfalls (2 ea.) 9. FX Jets (4 ea.) And FX2 Jets (2 ea.) 10. ProClear™ Plus Polishing Filter Bag and Filter 11. ProClear™ Floating Skimmer And Filter Cartridge with Integrated Chemical Dispenser. 12. NX Jets (2 ea.) And MX2 Jets (3 ea.) 13. FX2 Jets (2 ea.) | <ol style="list-style-type: none"> 14. NX Jets (2 ea.) And RX Jets (10 ea.) 15. Lounge Jets:
FX Back Jets (6 ea.)
SX2 Jet for Wrists And Calves (6 ea.) 16. Lighted Seat Logo 17. Footwell Filter Suction Covers (3 ea.) 18. Bottom Filter Suction Cover 19. Waterfall Filtration Return 20. FX Calf Jets (4 ea.) 21. FX Footwell Jets (4 ea.) 22. Lighted IX Mass Aspiration Jet 23. Gravity Drain/Heater Input/Optional Ozone Return Fitting 24. Lighted Mass Aspiration Jet Flow Control Valve 25. Optional Audio System Receiver |
|--|--|

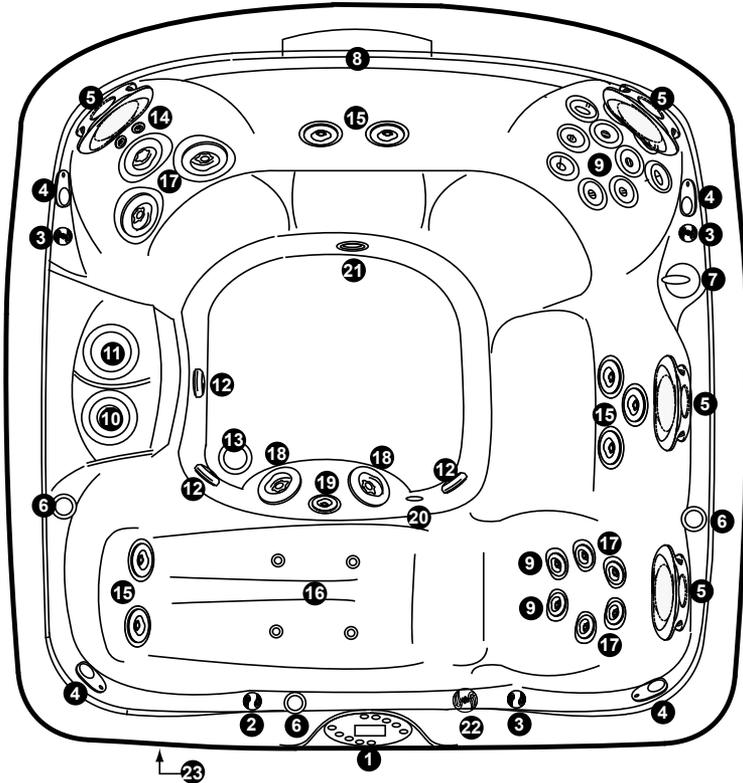
9.4 J-470 Spa Features



Spa features subject to change without notice.

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Control Panel 2. Waterfall Control Valve 3. Air Control Valves (4 ea.) Introduce Air to Specified Jet Groups (Page 32) 4. Optional Audio System Speakers (4 ea.) 5. Adjustable Pillows (4 ea.) 6. Lighted Cup Holders (4 ea.) 7. Massage Selectors (2 ea.) Controls Specified Jet Groups (Page 31). 8. Waterfalls (2 ea.) 9. FX Jets (6 ea.) 10. ProClear™ Plus Polishing Filter Bag 11. ProClear™ Floating Skimmer And Filter Cartridge with Integrated Chemical Dispenser. 12. NX Jets (2 ea.) And MX2 Jets (3 ea.) 13. FX2 Jets (2 ea.) | <ol style="list-style-type: none"> 14. NX Jets (2 ea.) And RX Jets (10 ea.) 15. FX2 Jet 16. Lighted Seat Logo 17. Footwell Filter Suction Covers (3 ea.) 18. Bottom Filter Suction Cover 19. Waterfall Filtration Return 20. FX Calf Jets (2 ea.) 21. FX Footwell Jets (4 ea.) 22. Lighted IX Mass Aspiration Jet 23. Gravity Drain/Heater Input/Optional Ozone Return Fitting 24. Lighted Mass Aspiration Jet Flow Control Valve 25. Optional Audio System Receiver 26. FX Jets (4 ea.) and FX2 Jets (2 ea.) |
|---|--|

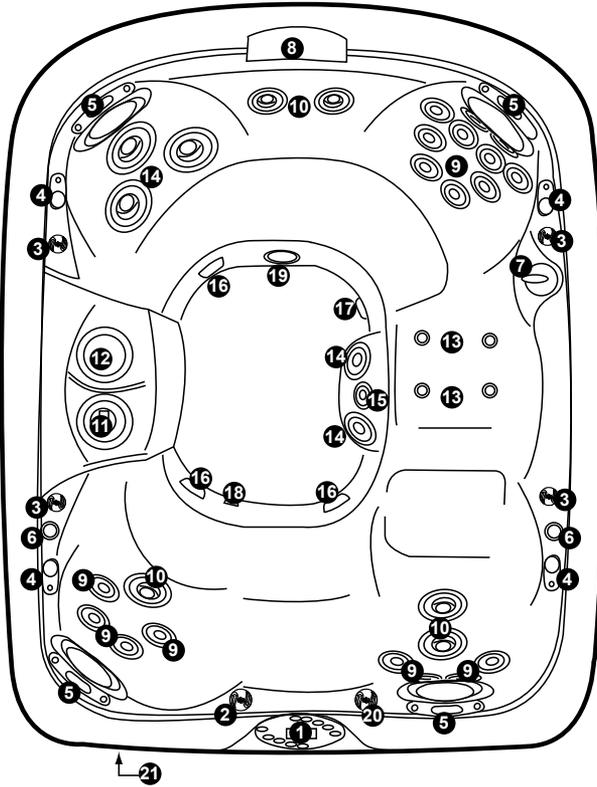
9.5 J-465 Spa Features



Spa features subject to change without notice.

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Control Panel 2. Waterfall Control Valve 3. Air Control Valves (3 ea.) Introduce Air to Specified Jet Groups (Page 34) 4. Optional Audio System Speakers (4 ea.) 5. Adjustable Pillows (4 ea.) 6. Lighted Cup Holders (3 ea.) 7. Massage Selectors (1 ea.) Controls Specified Jet Groups (Page 33). 8. Waterfall 9. FX Jets (14 ea.) 10. ProClear™ Plus Polishing Filter Bag 11. ProClear™ Floating Skimmer And Filter Cartridge with Integrated Chemical Dispenser. | <ol style="list-style-type: none"> 12. Footwell Filter Suction Covers (3 ea.) 13. Bottom Filter Suction Cover 14. NX Jets (2 ea.) 15. FX2 Jets (7 ea.) 16. SX2 Jets (4 ea.) 17. RX Jets (4 ea.) 18. MX Jets (5 ea.) 19. Lighted IX Mass Aspiration Jet 20. Gravity Drain/Heater Input/Optional Ozone Return Fitting 21. Waterfall Filtration Return 22. Lighted Mass Aspiration Jet Flow Control Valve 23. Optional Audio System Receiver |
|---|---|

9.6 J-460 Spa Features



Spa features subject to change without notice.

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Control Panel 2. Waterfall Control Valve 3. Air Control Valves (4 ea.) Introduce Air to Specified Jet Groups (Page 36) 4. Optional Audio System Speakers (4 ea.) 5. Adjustable Pillows (4 ea.) 6. Lighted Cup Holders (2 ea.) 7. Massage Selector (1 ea.) Controls Specified Jet Groups (Page 35). 8. Waterfall 9. FX Jets (18 ea.) 10. FX2 Jets (5 ea.) 11. ProClear™ Plus Polishing Filter Bag | <ol style="list-style-type: none"> 12. ProClear™ Floating Skimmer And Filter Cartridge with Integrated Chemical Dispenser. 13. SX2 Jets (4 ea.) 14. MX2 Jets (5 ea.) 15. Lighted IX Mass Aspiration Jet 16. Footwell Filter Suction Covers (3 ea.) 17. Bottom Filter Suction Cover 18. Gravity Drain/Heater Input/Optional Ozone Return Fitting 19. Waterfall Filtration Return 20. Lighted Mass Aspiration Jet Flow Control Valve 21. Optional Audio System Receiver |
|---|---|

10.0 Operating Instructions

Your Jacuzzi® spa has a touch-sensitive control panel, massage selectors, and air control knobs located on the top rim of the spa (pages 22-25). These controls let you operate many of the special functions of your Jacuzzi spa. By familiarizing yourself with the following information, you will be able to gain the full benefit from using your spa .

10.1 View Button

Pressing this button inverts the main four-digit display on the command center's LCD screen to allow easy reading from either inside or outside the spa.



10.2 Activate Jets Pump 1

The button labeled JETS 1 controls jets pump #1. Pressing this button cycles jets pump #1 on and off.



10.3 Activate Jets Pump 2

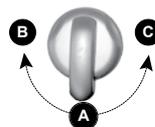
The button labeled JETS 2 controls jets pump #2. Pressing this button cycles jets pump #2 on and off.



Auto Turn Off — Anytime a pump has been manually turned on, it will automatically turn off after approximately 20 minutes. If at this time you desire more jet operation you may simply turn the pump(s) back on.

10.4 Selecting the Desired Massage Action

Your Jacuzzi spa is equipped to allow you to customize the massage action you desire. Each model incorporates a massage selector that allow you to customize the massage and performance by diverting water between various jet systems. Simply turn massage selector to position A (Combo), B, or C to divert water pressure to various jet groups.



Note: The massage selector valve(s) is designed to operate in positions A (Combo), B, and C for optimum performance. It is considered normal for sound levels within the valve to vary between positions due to the large amounts of water flowing through it. For optimum filtration benefits, leave the valve in position A when spa is covered. Select position B or C for maximum jet performance during spa use.

10.5 Light On/Off Button

Pressing this button activates the logo, footwell IX Jet light, waterfall lights, cupholders and optional exterior lights in sequence as follows: high - medium - low - off.

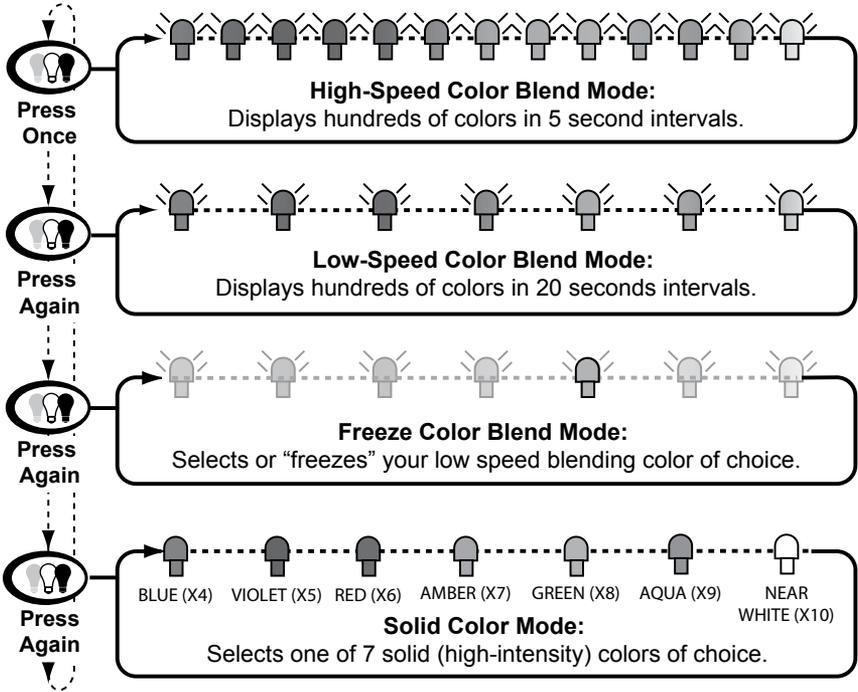


Note: Interior lights automatically turn off after 2 hours.

10.6 Light Mode Button



This button offers 4 light modes for your enjoyment. Press this button to select your favorite lighting effect as follows:



10.7 Adjusting Individual Jet Flow

The water flow to certain jets in your spa can be increased or decreased by rotating the outside jet face.

Note: Always keep at least 6 adjustable jets open at all times.



10.8 Adjusting PowerPro™ MX2 Jets

Tilt PowerPro MX2 Jet nozzle to angle of choice as desired. Rotate nozzle clockwise to reduce flow volume from jet or rotate counterclockwise to increase flow volume.

Note: Always keep at least 6 adjustable jets open at all times.



10.9 Adjusting RX Jets

Turn center jet adjustment knob clockwise to decrease or shut off water flow. Turn center jet adjustment knob counterclockwise to turn on or increase water flow.

Note: Always keep at least 6 adjustable jets open at all times.



10.10 WaterColour™ Waterfall Control

Turn waterfall control valve (pages 29-36) counterclockwise to increase waterfall output. Turn control valve clockwise to decrease or turn off waterfalls.



10.11 Air Controls

Certain jet systems have their own air control. Each control introduces air into the water lines that supply that specific jet group (pages 29-36). Simply rotate any air control clockwise to open or rotate counterclockwise to close. To minimize heat loss, all air controls should be closed when the spa is not in use.

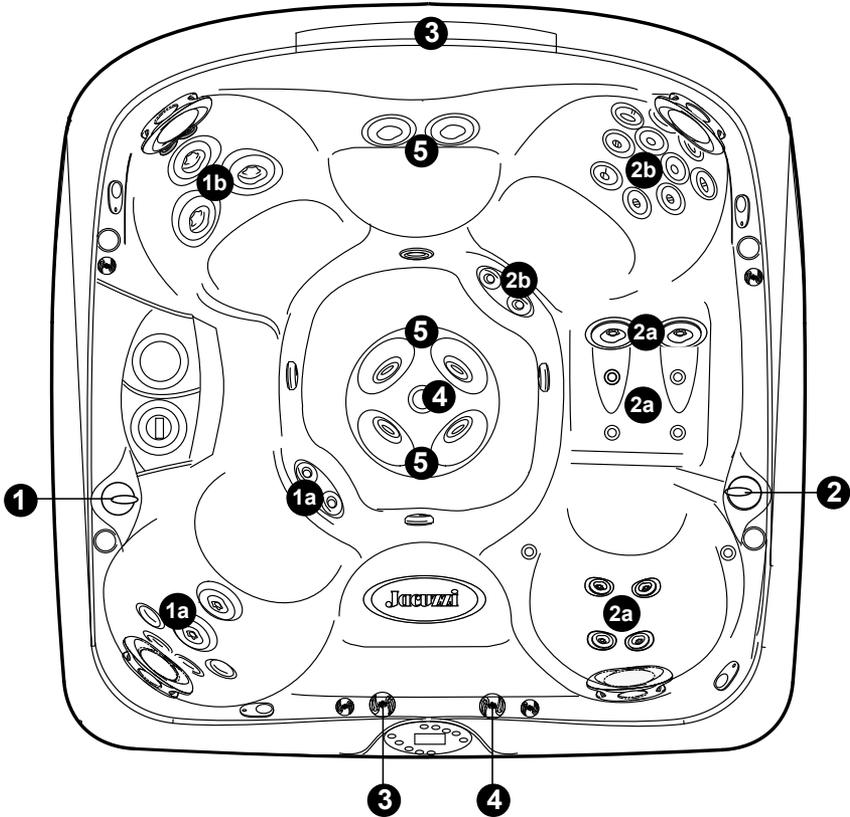


10.12 Optional J-1000™ Jacuzzi Audio System

Jacuzzi models equipped with the optional audio system offer enhanced hot tub enjoyment by offering an integrated state-of-the-art audio system. These models include an integrated AM/FM/CD/MP3/iPod/USB, and NAND (internal hard-drive) Player receiver, four high-quality spa engineered speakers for unsurpassed sound quality and long-life, and an integrated subwoofer for an enhanced acoustical experience.



10.13 J-480 Massage/Waterfall Selector Diagram



Spa operation subject to change without notice.

Massage Selectors (1-2)

- Massage selector 1 diverts pump 2 output between jets groups 1a-1b.
- Massage selector 2 diverts pump 1 output between jet groups 2a-2b.

Waterfall Selector (3)

- Waterfall selector 3 controls circulation pump output to waterfalls.

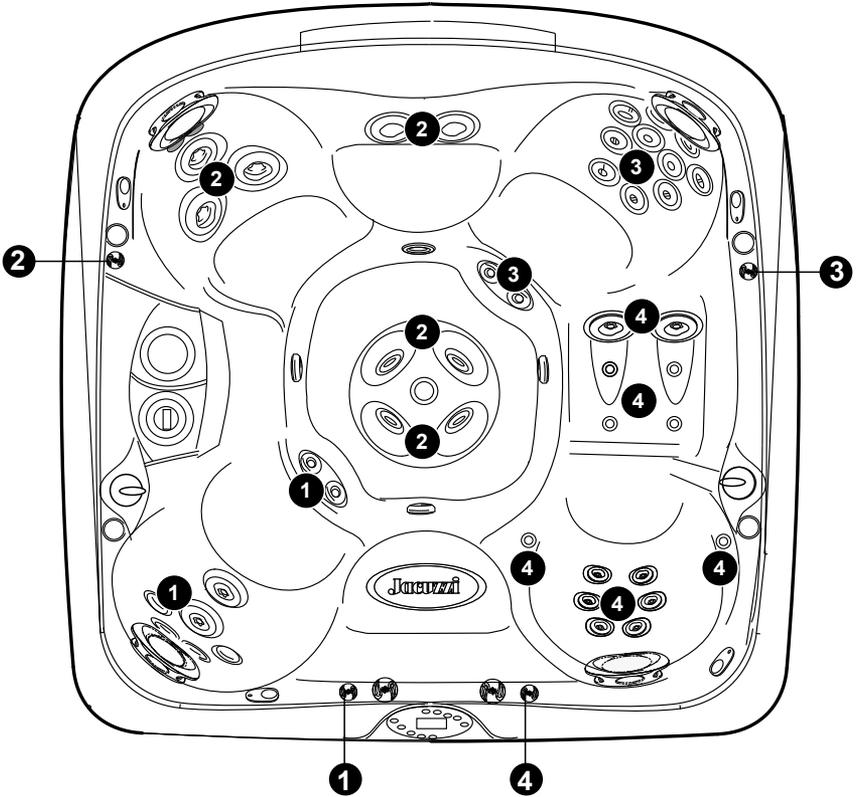
Massage Selector (4)

- Massage selector 4 controls pump 1 output to footwell IX Jet.

Jets Without Massage Selector Controls (5)

- Jets 5 are always on when jets pump 2 is running.

10.14 J-480 Air Controls Diagram

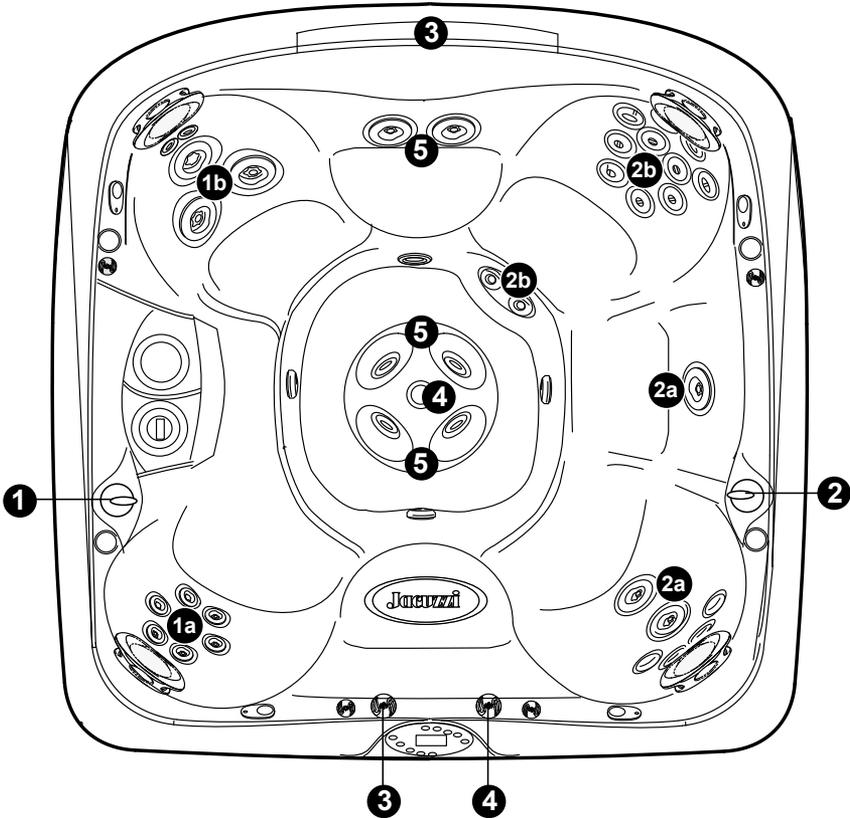


Spa operation subject to change without notice.

Air Controls Operation

- Rotate air controls 1-4 to add air to designated jet groups.
- Center footwell IX Jet draws air at all times when jets pump 1 is running. This jet has no air control.

10.15 J-470 Massage/Waterfall Selector Diagram



Spa operation subject to change without notice.

Massage Selectors (1-2)

- Massage selector 1 diverts pump 2 output between jets groups 1a-1b.
- Massage selector 2 diverts pump 1 output between jet groups 2a-2b.

Waterfall Selector (3)

- Waterfall selector 3 controls circulation pump output to waterfalls.

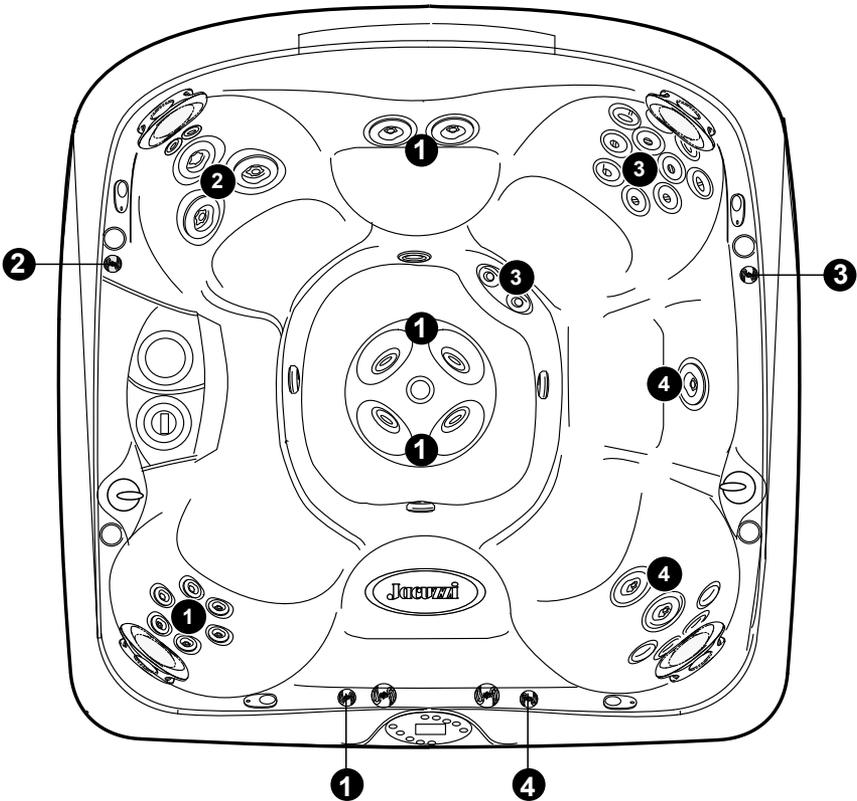
Massage Selector (4)

- Massage selector 4 controls pump 1 output to footwell IX Jet.

Jets Without Massage Selector Controls (5)

- Jets 5 are always on when jets pump 2 is running.

10.16 J-470 Air Controls Diagram

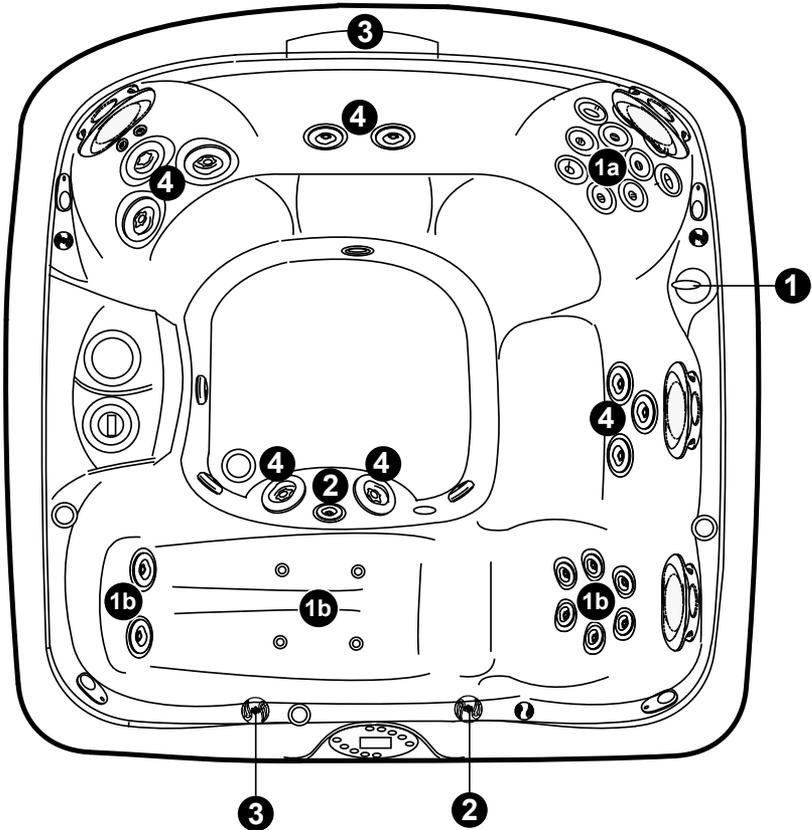


Spa operation subject to change without notice.

Air Controls Operation

- Rotate air controls 1-4 to add air to designated jet groups.
- Center footwell IX Jet draws air at all times when jets pump 1 is running. This jet has no air control.

10.17 J-465 Massage/Waterfall Selector Diagram



Spa operation subject to change without notice.

Massage Selectors (1)

- Massage selector 1 diverts pump 1 output between jets groups 1a-1b.

Massage Selector (2)

- Massage selector 2 controls pump 1 output to footwell IX Jet.

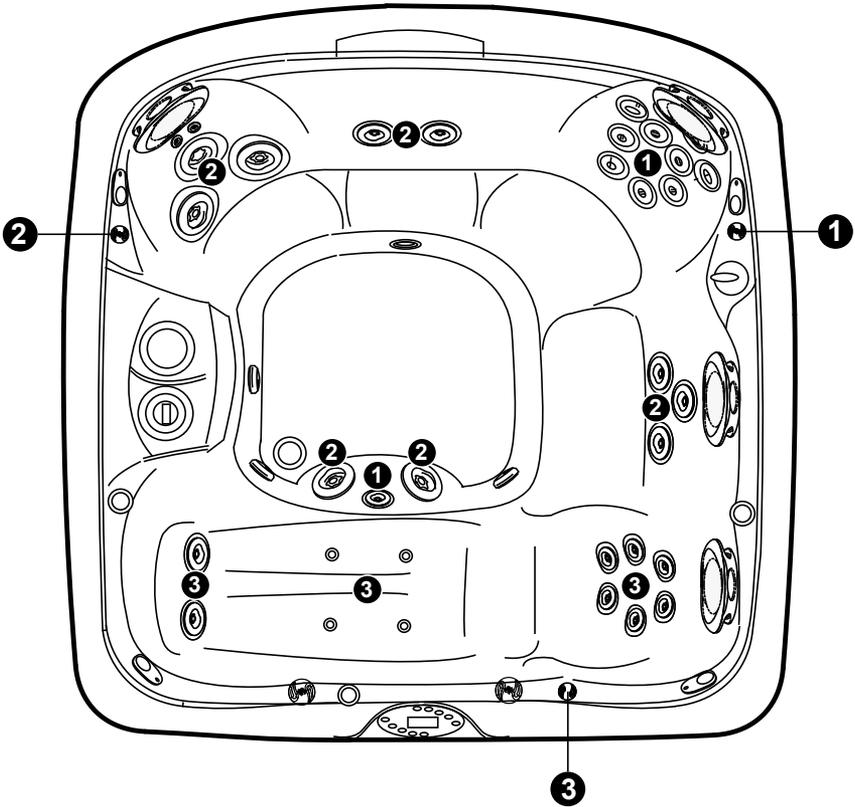
Waterfall Selector (3)

- Waterfall selector 3 controls circulation pump output to waterfall.

Jets Without Massage Selector Controls (4)

- Jets 4 are always on when jets pump 2 is running.

10.18 J-465 Air Controls Diagram

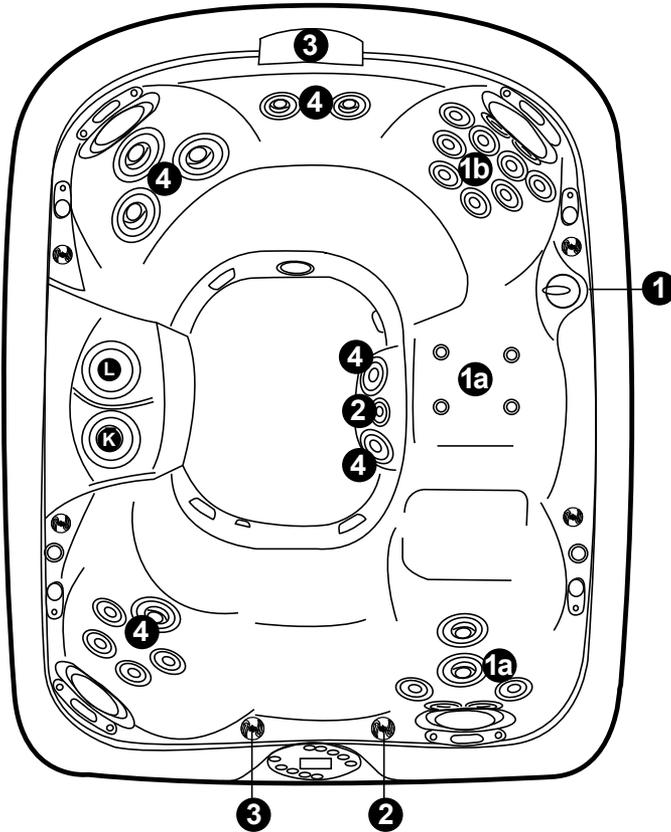


Spa operation subject to change without notice.

Air Controls Operation

- Rotate air controls 1-3 to add air to designated jet groups.

10.19 J-460 Massage/Waterfall Selector Diagram



Spa operation subject to change without notice.

Massage Selector (1)

- Massage selector 1 diverts pump 1 output between jets groups 1a-1b.

Massage Selector (2)

- Massage selector 2 controls pump 1 output to footwell IX Jet.

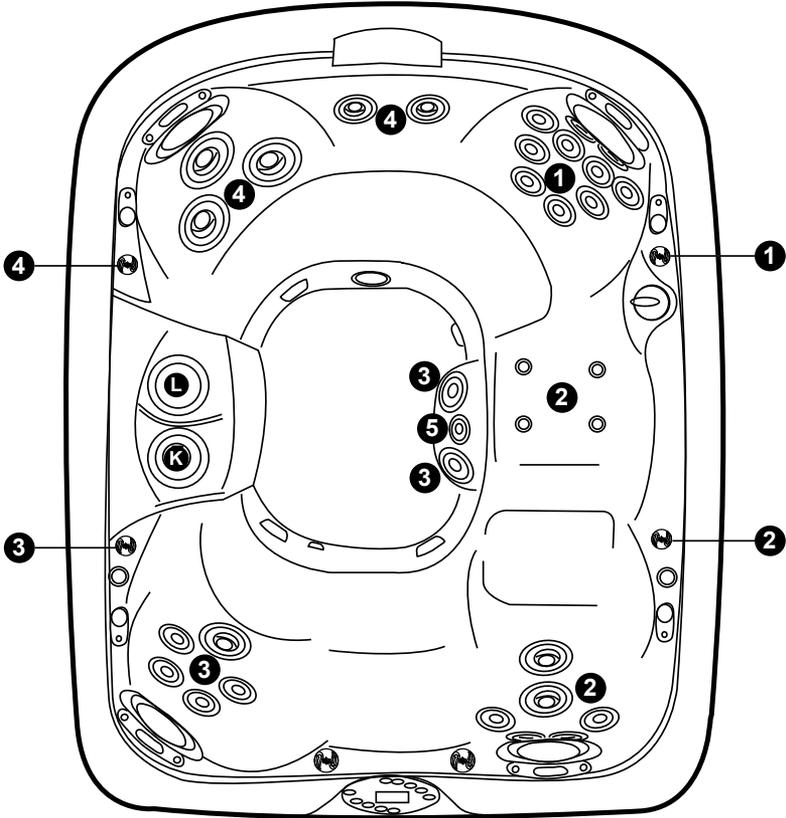
Waterfall Selector (3)

- Waterfall selector 3 controls circulation pump output to waterfall.

Jets Without Massage Selector Controls (4)

- Jets 4 are always on when jets pump 2 is running.

10.20 J-460 Air Controls Diagram



Spa operation subject to change without notice.

Air Controls Operation

- Rotate air controls 1-4 to add air to designated jet groups.
- Center footwell IX Jet (5) draws air at all times when jets pump 1 is running. This jet has no air control.

11.0 Heating Modes

The control system in your spa activates a programmable “standard” or “economy” mode which effects when the heater operates. Refer to sections 11.1 and 11.2 below for additional information.

11.1 Standard Mode (Factory Default)

Standard mode is typically selected by customers in cold climates where heat up times are extended due to lower ambient temperatures. In this mode, water temperature is regulated by the set temperature which activates the heater automatically as needed.

11.2 Economy Mode

Economy mode is typically selected by customers in warm climates where heat up times are minimized due to higher ambient temperatures. In this mode, the water temperature is regulated by the set temperature only when a programmed filter cycle is running, unless in summer logic (page 39).

11.3 Selecting Standard or Economy Mode

Press the **MODE**  button to select either “Standard” or “Economy” mode. The control panel’s indicator on the right side of the LCD changes to indicate which mode is selected.

11.4 Clean-Up “Blow-Out” Cycle

The clean-up cycle is once per day in both Standard and Economy modes at 12:00 (noon) for two minutes. This is not user programmable. Jets pump 2 activates for one minute to circulate any water in the plumbing. After 1 minute, jets pump 2 shuts off and jets pump 1 turns on, runs for 1 minute, then shuts off.

12.0 Programming Instructions

12.1 Programming Filter/Circulation Pump Run Time

The Sentry control system allows you to easily adjust two separate aspects of filter/circulation pump operation:

1. The time of day (start time) the filter/circulation pump turns on.
2. The length of time (duration) the filter/circulation pump operates.

The factory default start time is 12:00AM (Midnight). The default duration is 24 hours. To make adjustments, press the **CYCLE**  button to enter the filter/circulation pump programming mode. "Circ" appears on the LCD. Now, the system is ready to accept your changes:

- Press the **SELECT**  button once. The previously programmed start time appears on the LCD display. 
- Press **WARMER**  or **COOLER**  buttons to adjust the start time in 30-minute increments.
- Press the **SELECT**  buttons to program duration.
- Press **WARMER**  or **COOLER**  buttons to program the duration time in 1 hour increments. 
- Press **DISPLAY**  button to save changes and recall the main water temperature display.

Note:

- If no button is pressed within 30 seconds, all changes are recorded and the screen automatically returns to the standard water temperature display.
- When the standard mode is selected (sec. 11.1, page 37), the filter/circulation pump automatically turns on for a heat call regardless of the pump's programmed start time and duration.

12.2 Programming Economy Heating Cycles

When in Economy Mode, your spa comes with four 30-minute economy heating cycles which activate the filter/circulation pump. These cycles are factory programmed to start at 6:00 am, 12:00 p.m., 6:00 p.m., and 12:00 a.m. The control system allows you to easily adjust two separate aspects of each cycle: 1) the time of day at which it begins; 2) the duration of the cycle.

Note: When "Standard" mode is selected (sec. 11.1, page 37) and the filter/circulation pump is set to the factory default duration of 24 hours (sec. 12.1), the four 30-minute cycles will not be available to program.

When in a Summer Logic condition is active (see note below), the filter/circulation pump will turn on for all programmed filter cycles.

Summer Logic: In warm weather, the water temperature in the spa may exceed the set temperature. This condition may occur due to heat transference from the filter/circulation pump and jets pumps. If the water temperature is higher than 95°F (35°C) and rises two degrees above the set temperature, a “Summer Logic” condition occurs that deactivates the filter/circulation pump and ozonator (if equipped). This safety feature cannot be altered! The filter/circulation pump and ozonator will remain off until the water temperature cools to the set temperature (except between 9:00 - 11:00 AM when the filter/circulation pump runs for its mandatory 2-hour cycle). To help prevent a “Summer Logic” condition, it may be necessary to reduce filter/circulation pump cycles run times in warm weather.

Programming Economy Heating Cycles

To make adjustments, first press the CYCLE  button to enter the filter cycle programming mode. The LCD screen will display the following in the upper right corner:



*Note: Number will vary according to which filter cycle is being programmed.

This means the system is ready to accept your changes to the start time for cycle number one. Simultaneously, the large four-digit display in the center of the screen displays the currently programmed start time for that cycle. At this point, you have four options. You may:

1. Press **WARMER**  or **COOLER**  button to adjust the start time in increments of 30 minutes.
2. Press **CYCLE**  button to display and adjust each subsequent cycles start time. With each press, the currently programmed status will be shown in the large four digit display. To adjust any displayed value, simply press the **WARMER**  or **COOLER**  button.
3. Press **SELECT**  button to move down the menu from Start Time to Duration, with each press, the currently programmed duration will be shown in the large four-digit display. Press **WARMER**  or **COOLER**  button to adjust the duration in increments of 15 minutes.
4. Press **DISPLAY**  button to save changes and recall the main water temperature display.

Note: If no button is pressed within 30 seconds, all changes are recorded and the screen automatically returns to the standard water temperature display.

When a programmed filter/heating cycle activates, the LCD screen displays the following message:



*Note: Number will vary according to which filter cycle is being programmed.

At any time, you may check the programming of any aspect of any filter/heating cycle by first pressing **CYCLE**  button then moving through the menu by pressing either **CYCLE**  or **SELECT**  button. The programming is changed only by pressing **WARMER**  or **COOLER**  buttons during this process.

12.3 Adjusting Time of Day

The Sentry control system remembers the time of day even in the event of a prolonged power outage. However, it may occasionally be necessary to reset the time of day. For example: if you are not in the Pacific Time Zone you will want to reset the time for your own time zone. (The system will automatically adjust to and from daylight savings time.) To accomplish this, press **DISPLAY** , **MODE**  and **DISPLAY**  buttons within five seconds each. A number representing the hour will be displayed, followed by AM or PM. The hour will advance or decrease each time **WARMER**  or **COOLER**  button is pressed within five seconds. Then, press **DISPLAY**  button again to display the minutes. Adjust the minutes as necessary by pressing **WARMER**  or **COOLER**  button. After 5 seconds, the display will return to normal and save your settings.

12.4 Main Control Panel Lock

To help prevent unauthorized use of your spa, the Sentry controls incorporate a unique panel locking system which disables the controls on the panel.

- To Lock The Main Control Panel: Press **DISPLAY** , **MODE** , and **WARMER**  buttons within five seconds each. A padlock symbol will appear on the LCD screen. With the panel locked, all components are disabled from modifications and the only settings that can be adjusted are the standard and economy filter/heating modes and time of day. All automatic spa functions will operate normally. 
- To Unlock Main Control Panel: Press **DISPLAY** , **MODE** , and **COOLER**  buttons within five seconds. The "lock" symbol will disappear. All buttons are now active. 

12.5 Locking Filter Cycles

You may keep all filter cycle programs from being inadvertently altered by electronically “locking” them.

- To Lock All Filter Cycles: Press **CYCLE** , then within 30 seconds, press **DISPLAY** , **MODE**  and **WARMER**  buttons within five seconds each. A padlock symbol will appear on the screen. In this state, the status of the cycle program may be checked, but may not be altered. 

- To Unlock Filter Cycles: Press **DISPLAY** , **MODE**  and **COOLER**  buttons within five seconds each. 

12.6 Temperature Setting Lock

The spa's temperature setting can be locked to prevent unauthorized changes. When locked, all other spa buttons and functions remain undisturbed.

- To Lock Temperature Setting: Press **WARMER**  or **COOLER**  button to display temperature setting, then immediately press the **DISPLAY** , **MODE** , and **WARMER**  buttons within five seconds each. A padlock symbol will appear on the screen. 

- To Unlock Temperature Setting: Press **WARMER**  or **COOLER**  button to display temperature setting, then immediately press the **DISPLAY** , **MODE** , and **COOLER**  buttons within five seconds each. 

12.7 Programming the Change Filter Reminder

Your new spa is equipped with a programmable “Change Filter” reminder icon that flashes on the control panel display after a specified number of days. It is designed to remind you to clean the skimmer filter cartridge on a regular basis but does not affect spa operation in any way. The “Change Filter” reminder must be reset at each filter cleaning interval. It offers a selectable range from 10-120 days or can be disabled (turned off). We recommend an initial setting of 60 days (2 months) to remind you to check your filters after your first 2 months of operation. At this time, you can easily determine whether you need to change this interval by visually inspecting the filter cartridge an polishing bag. 

Note: This reminder must be reset at each filter cleaning interval. Refer to section 13.1 for filter cleaning instructions.

Programming Instructions

1. Press the **CYCLE**  button 2 times. The main display reads "FIL" indicating the "Change Filter" display program has been accessed.
2. Press **SELECT**  button once to display the currently programmed duration or to view days elapsed since last filter cleaning interval.
3. Press **WARMER**  or **COOLER**  button to change duration setting as follows:
0 - 10 - 20 - 30 - 40 - 50 - 60 - 70 - 80 - 90 - 100 - 110 - 120 - OFF

Note: Selecting 0 in step 3 forces the change filter reminder icon to remain on indefinitely.

4. Press **DISPLAY**  button once to save changes and return to the standard water temperature display.

Note: If no button is pressed within 30 seconds, all changes are recorded and the screen automatically returns to the standard water temperature display.

13.0 Spa Maintenance

Proper and regular maintenance of your spa will help it retain its beauty and performance. Your authorized Jacuzzi dealer can supply you with all the information, supplies, and accessory products you will need to accomplish this.



DANGER: RISK OF SEVERE INJURY OR DROWNING BY ENTRAPMENT!

- Keep hair, loose articles of clothing or hanging jewelry away from suction fittings, rotating jets or other moving components to avoid entrapment that could lead to drowning or severe injury.
- Never use the spa unless all suction guards, filter, filter lid, or skimmer assembly are installed to prevent body and/or hair entrapment.
- Never operate or use the spa if the filter, filter lid, or skimmer assembly are broken or any part of the skimmer assembly is missing. Please contact your dealer or nearest service center for service.
- The suction fittings and suction covers in this spa are sized to match the specific water flow created by the pump(s). If it is necessary to replace the suction fittings, suction covers or pump(s), be sure that the flow rates are compatible and are in compliance with the VGB Safety Act page 2.
- Never replace a suction fitting or suction cover with one rated less than the flow rate marked on the original suction fitting. Using improper suction fittings or suction covers can create a body or hair suction entrapment hazard that may lead to drowning or severe injury.
- Owners must alert all spa users to the potential risk of Hair, Limb, Body, Evisceration (disembowelment), and Mechanical Entrapment, page 6.

13.1 Cleaning the Filter Cartridges

A programmable “Change Filter” reminder icon flashes on the control panel display after a specified number days to remind you to clean the skimmer filter and to check the polishing bag filter. This reminder must be reset at each filter cleaning interval. Refer to section 12.7 (page 41) for additional information and programming details. Your new spa is equipped with an advanced 2-stage filtration system. Fine debris are filtered by the circulation pump drawing water through the ProClear™ skimmer and pleated filter cartridge 24 hours (unless programmed otherwise). Large debris are filtered when either jets pump is running when the spa is in use or during a programmed filter cycle. These pumps draw water from footwell suction fitting and through a secondary water polishing bag filter. The exclusive footwell “sweeper” suction fitting enhances filtration in the footwell area by creating a “swirling” water motion to maximize particle agitation and pickup.

To ensure optimum performance, the 24-hour ProClear™ II skimming filter cartridge (A) must be cleaned every three months and replaced once a year. The secondary ProClear™ Plus polishing filter bag (B) should be emptied weekly and replaced every 3 months. The ProClear™ II filter cartridge (C) must be cleaned every three months and replaced once a year. To accomplish this, refer to the following filter cleaning procedure.



Note: Do not attempt to wash the polishing filter bag (B) or it will come apart!

DANGER: TURN POWER TO SPA OFF! TO DECREASE RISK OF DEATH, DROWNING, OR ENTRAPMENT, NEVER OPERATE SPA WHEN FILTER IS NOT PROPERLY INSTALLED OR IF WEIR ASSEMBLY IS DAMAGED OR ALTERED!



1. Remove power to the hot tub before removing the skimmer (A) or filter bag cover (B).
2. Remove the polishing bag lid (B) by rotating it counterclockwise approximately 5 degrees until you feel it unlatch.
3. Remove the polishing bag by reaching into the filter bucket and gently pulling upward on the blue filter ring (empty filter bag weekly or install a new bag every three months.) Located below the bag is a small Proclear filter. Remove the filter by rotating it counterclockwise. For cleaning procedures see step 6 below. Once the filter has been cleaned or replaced, reinstall it into the skimmer below the polishing bag. Replace bag, then install filter lid by rotating it clockwise until you feel it latch in place. **DO NOT FORCE LID! FINGER TIGHT ONLY!**
4. Remove the ProClear skimmer assembly (A) by gently lifting upward from the filter bucket.
5. Remove the ProClear filter cartridge by rotating it counterclockwise to unthread it, then remove the center cap and chemical dispenser from the filter cartridge as shown (right).



- Clean the ProClear filter cartridges with a garden hose and high pressure nozzle. Rinse debris from the filter pleats beginning at the top and working your way downward. Continue, one section at a time until you have cleaned all debris from the filter pleats. When replacing the filter cartridge, make sure you remove the center cap and chemical dispenser for use with the new cartridge. Replacement filter cartridges may be purchased from your authorized Jacuzzi dealer.

13.2 Draining and Refilling

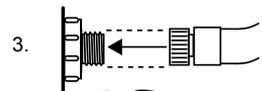
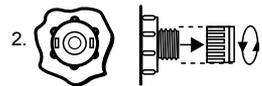
About every 3 to 6 months, you will want to replace the spa's water. The frequency depends on a number of variables including the amount of use, number of users, attention paid to water quality maintenance, etc. You will know it is time for a change when you cannot control sudsing and/or you can no longer get the normal feel or sparkle to the water even though the key water balance measurements are all within the proper parameters.

CAUTION! READ THIS BEFORE DRAINING: To reduce risk of damage to the spas components, turn off power to the spa at the circuit breaker before draining it. Do not turn the power back on until your spa has been refilled.

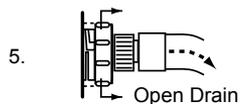
CAUTION: There are certain precautions to keep in mind when draining your spa. If it is extremely cold, and the spa is outdoors, freezing could occur in the lines or the equipment (see "WINTERIZING", page 47). On the other hand, if it is hot outdoors, do not leave the spa's surface exposed to direct sunlight.

To drain your spa, perform the following steps:

- Turn off power to spa at breaker.
- Locate the drain valve located on the front left corner on the black plastic pan. Hold the larger (rear) drain valve body to prevent it from turning, then loosen and remove the front cap to expose the underlying male hose threads.
- Attach a garden hose to the exposed threads.
- Gently rotate the larger (rear) valve body 1/3 turn counterclockwise to unlock the drain valve.



5. Pull the larger (rear) body outward as shown to open drain.



6. After the spa drains, perform steps 2-5 in reverse order to close the drain prior to refilling spa.

After refilling, turn on power to the spa and follow the steps listed under “Spa Fill Up Procedures.” (page 15). Always fill your spa through both filter buckets.

13.3 Cleaning the Spa Interior

To preserve the sheen of your spa’s surface, it is crucial that you avoid using abrasive cleaners or cleaners which have adverse chemical effect on the surface. If you are not certain as to the suitability of a particular cleanser, consult your authorized Jacuzzi dealer. Regardless of the cleanser used, use extreme care to assure that no soap residue is left on the surface. This could cause severe sudsing when the spa is refilled.

13.4 Pillow Care

Clean the four headrests in your spa as needed by wiping them with a cloth with soapy water. It is not necessary to remove the headrests for cleaning.

To remove headrests for long term storage or replacement, grasp both ends of each headrest and gently pull inward towards the center of the spa. To reinstall, over mounting strip and press down until headrest mounting bracket emits a “click” sound. Then adjust headrest height by simply moving up or down as desired.

13.5 Maintaining the Synthetic Cabinet

The synthetic cabinet requires little or no maintenance of any kind. To clean, simply wipe cabinet with mild detergent soap solution and a clean towel.



CAUTION: Never spray cabinet with a high pressure garden hose for any reason since this action may induce an electrical short in the spa’s electrical equipment.

13.6 Maintaining the Cover

Using the Jacuzzi insulating spa cover anytime the spa is not in use will significantly reduce your operating costs, heat-up time, and maintenance requirements. To prolong the life of the cover, handle it with care and clean it regularly using mild soap and water. Periodic treatments with a special conditioner developed for Jacuzzi spa covers will help protect

against deterioration caused by UV rays from the sun. Never allow anyone to stand or sit on the cover, and avoid dragging it across rough surfaces.

13.7 Winterizing

Your Jacuzzi spa is designed to automatically protect itself against freezing when operating properly. During periods of severe freezing temperatures, you should check periodically to be certain that the electrical supply to the spa has not been interrupted. In extreme, bitter cold weather (less than -20°F) verify standard mode is set for 24-hour operation (sec. 12.1 Programming Filter/Circulation Pump Run Time, page 38) and that standard mode is selected (sec. 11.3 Selecting Standard or Economy Mode, page 37) to protect against damage to the spa.

If you do not intend to use your spa, or if there is a prolonged power outage during periods of severe freezing temperatures, it is important that all water be removed from the spa and equipment to protect against damage from freezing.

For expert winterization of your spa, contact your authorized Jacuzzi dealer. In emergency situations, damage can be minimized by taking the following steps:

CAUTION: TURN OFF POWER TO SPA.
--

1. Follow the directions on page 45 for draining the spa.
2. As the water level drops below the seats, use whatever means necessary to get the water out of the recessed seating areas and into the footwell.
3. When the water level ceases to drop, use whatever means available to remove any remaining water from the footwell.
4. Remove the equipment-side cabinet panels and locate the drain plugs in the front of each pump (Figure A, page 13). Remove these plugs to allow the water to drain out of the pumps and heater.

Note: Approximately one to two gallons will be released during this procedure. Use a wet/dry vacuum or other means to keep this from flooding the equipment compartment. Replace the drain plugs.

5. Loosen hose clamp at bottom of heater (Figure A, page 13) and pull hose off of heater fitting (twist the hose back and forth while pulling downward). Tip hose down and allow to drain, then reinstall hose and clamp.
6. Re-install cabinet side panels and cover spa so that no casual moisture can enter into it.

Consult your Jacuzzi dealer if you have any questions regarding winter use or winterizing.

13.8 Restarting Your Spa in Cold Weather

If you want to start up your spa after it has sat empty for a time in freezing temperatures, be aware that the water remaining in certain sections of the piping may still be frozen. This situation will block water flow preventing the spa from operating properly and possibly damaging the equipment. We recommend you consult your dealer for guidance before attempting to restart your spa under these conditions.

14.0 Water Quality Maintenance

To decrease the risk of contracting a waterborne illness (e.g. an infection, bacteria or virus) and/or respiratory ailments, maintain water quality within specified limits. This will enhance your enjoyment and prolong the life of the hot tub's equipment. Doing so requires regular attention because the water chemistry involved is a balance of several factors. Procrastination in regard to water maintenance will result in poor and potentially unhealthful conditions for soaking and even damage to your hot tub investment. For specific guidance on maintaining water quality, consult your Authorized Jacuzzi dealer who can recommend appropriate chemical products for sanitizing and maintaining your hot tub.



WARNING: FAILURE TO MAINTAIN WATER QUALITY WILL:

- Increase risk of contracting a waterborne illness (e.g. an infection bacteria or virus) and/or respiratory ailments.
- Damage the equipment, components and spa shell, which are not covered under the hot tub's warranty.

CAUTION: Never store hot tub chemicals inside the hot tub's equipment bay. The equipment bay may reach elevated temperatures, this is where high voltage electronic devices are located. This area is not intended for storage of any kind.

14.1 pH Control

pH is a measure of relative acidity or alkalinity of water and is measured on a scale of 0 to 14. The midpoint of 7 is said to be neutral, above which is alkaline and below which is acidic. In spa water, it is very important to maintain a slightly alkaline condition of 7.4 to 7.6. Problems become proportionately severe the further outside of this range the water gets. A low pH will be corrosive to metals in the spa equipment. A high pH will cause minerals to deposit on the interior surface (scaling). In addition, the ability of the sanitation agents to keep the spa clean is severely affected as the pH moves beyond the ideal range. That is why almost all spa water test kits contain a measure for pH as well as sanitizer.

14.2 Sanitizing

To destroy bacteria and organic compounds in the spa water, a sanitizer must be used regularly. Chlorine and bromine are the two most popular sanitizers used to date. The "Proclear" Mineral Spa Clarifier" designed especially for your hot tub is a beneficial product for water maintenance. Many other additives are available for your spa. Some are necessary to compensate for out-of-balance water; some aid in cosmetic water treatment and others simply alter the feel or smell of the water. Your authorized Jacuzzi dealer can advise you on the use of these additives.

When adding spa shock (chlorine or non-chlorine) or pH balancing chemicals activate the jets pump(s) and leave the spa cover open for a minimum of 20 minutes. By doing this you will allow excessive chemical vapors to exit the spa, protecting pillows and plastic knobs from chemical attack.



WARNING: RISK OF PERSONAL INJURY, DROWNING OR ENTRAPMENT!

Never leave your hot tub unattended for any reason while the cover is open and accessible, especially to small children and animals!

CAUTION: RISK OF PERSONAL INJURY OR SPA DAMAGE!

Never add chlorine tablets (trichlor) or acid to your hot tub for any reason! These chemical may damage components within your hot tub, burn or irritate your skin, create a rash and void the manufacturer warranty for your spa.

14.3 Other Additives

Many other additives are available for your spa. Some are necessary to compensate for out-of-balance water, some aid in cosmetic water treatment and others simply alter the feel or smell of the water. Your Authorized Jacuzzi dealer can advise you on the use of these additives.

14.4 Ozone Water Maintenance System

This system is optional on North American models and standard equipment on export 50 Hz models. If your spa is equipped with the Jacuzzi CD ozone water purification system you will find that your water stays fresh and clear with significantly less chemical usage. You will probably be able to go longer between complete spa drainings.

Note: The ozone only runs when the circulation pump is running and shuts off when either jets pump is manually activated during spa use. The ozone reacts 5 minutes after the jets pump turns off.

15.0 Troubleshooting - Display Messages

There are a number of unique functions designed into your Jacuzzi spa to protect it from damage and/or to aid in troubleshooting. Following is a listing of all the possible messages along with their meanings:

MESSAGE

MEANING

OH

Overheat Protection (Heater is deactivated, filter/circulation pump is activated).



**WARNING: RISK OF HYPERTHERMIA (OVER-HEATING)
CAUSING SEVERE INJURY, BURNS, OR WELTS.**

Water temperature is above acceptable limits. Do not enter the water! Remove spa cover to speed cooling. See “Water Is Too Hot” on page 54. If condition persists, contact your dealer or authorized service center.

COOL

If the spa water is more than 20°F/6°C cooler than the temperature set point, jets pump #1 and heater will automatically activate to provide freeze protection. The spa will stay in this mode until the water temperature reaches 15 degrees below the set temperature. No corrective action is necessary.

FLO

FLOW SWITCH (Heater is deactivated. The filter/circulation may also be deactivated). Proper flow of water is inhibited or a flow switch has malfunctioned. Check for proper water level and for clogged filter (page 43). Contact your dealer or service organization.

Note: This message can also appear if the pump has not regained prime after the spa has been drained and refilled. If you suspect that this is the case, see the instructions on page 53 under “pump does not operate but icon does.

HOT

Circuit board temperature has exceeded acceptable limit. This message will disappear when the circuit board temperature drops below acceptable limit. If condition persists, provide shade for equipment side of spa.

ICE

FREEZE PROTECTION

A potential freeze condition has been detected. No action is required. Jets pump(s) operate until the spa is out of danger. It is possible to manually turn off pump 1 and pump 2, but if after 2 hours ICE is still detected, pumps will automatically turn back on.

Note: This error commonly occurs when the spa is first filled because tap water is often very cold.

PnL

Communication between the control panel and/or remote control panel and circuit board is faulty. Contact your dealer or service organization.

“WATCHDOG” (spa is deactivated)



WARNING: RISK OF HYPERTHERMIA (OVER-HEATING) CAUSING SEVERE INJURY, BURNS, OR WELTS.

A problem has been detected which could cause damage to the spa or its components. Contact your dealer or service organization.

Sn1

OPEN SENSOR (heater disabled) OR SHORTED SENSOR (spa is deactivated) The high-limit temperature sensor is non-functional. This must be repaired only by a dealer or qualified service organization.

Sn3

OPEN OR SHORTED SENSOR (heater disabled) The main sensor is non-functional. This must be repaired only by a dealer or qualified service organization.

FL02
ICE2

CLOSED OR SHORTED FLOW SWITCH ON SYSTEM STARTUP (system disabled) Flow switch is non-functional. This must be repaired only by an authorized dealer or qualified service organization.

16.0 Troubleshooting - Procedures

In the unlikely event your spa is not working the way you believe it should, please first review all the installation and operating instructions in this manual and check the message on the panel display; second, if you are still not satisfied it is working properly, please follow the appropriate troubleshooting instructions.

PROBLEM	PROCEDURE
<p>NONE OF THE COMPONENTS OPERATE (i.e. pump light)</p>	<p>Check the control panel lights.</p> <ol style="list-style-type: none"> 1. If there are letters or symbols displayed on the screen, refer to the previous section to determine the meaning and action required. 2. If nothing appears on the screen: <ol style="list-style-type: none"> A. Check the household circuit breaker B. Contact you dealer or authorized service center
<p>PUMP DOES NOT OPERATE AND ICON DOES</p>	<p>Depress "JETS" button.</p> <ol style="list-style-type: none"> 1. If no sound is detected or if a "buzzing" sound and icon does is detected, turn off power to the spa and contact your dealer or service center. 2. If motor operates but no water flows to jets: <ol style="list-style-type: none"> A. Pump may not be properly primed. See instructions below. B. Contact dealer or authorized service center.

Pump Priming Instructions:

1. Turn off power to the spa.
2. Remove the handle from the massage selector supplied by the pump you are priming.
3. Loosen the massage selector's cap slightly (counterclockwise), listening for the air to seep out.
4. Tighten the cap finger-tight, replace the handle and turn the hot tub's power back on.

Note: This method must be used for the jet's pumps because these pumps are not connected to the main filter system in any way.

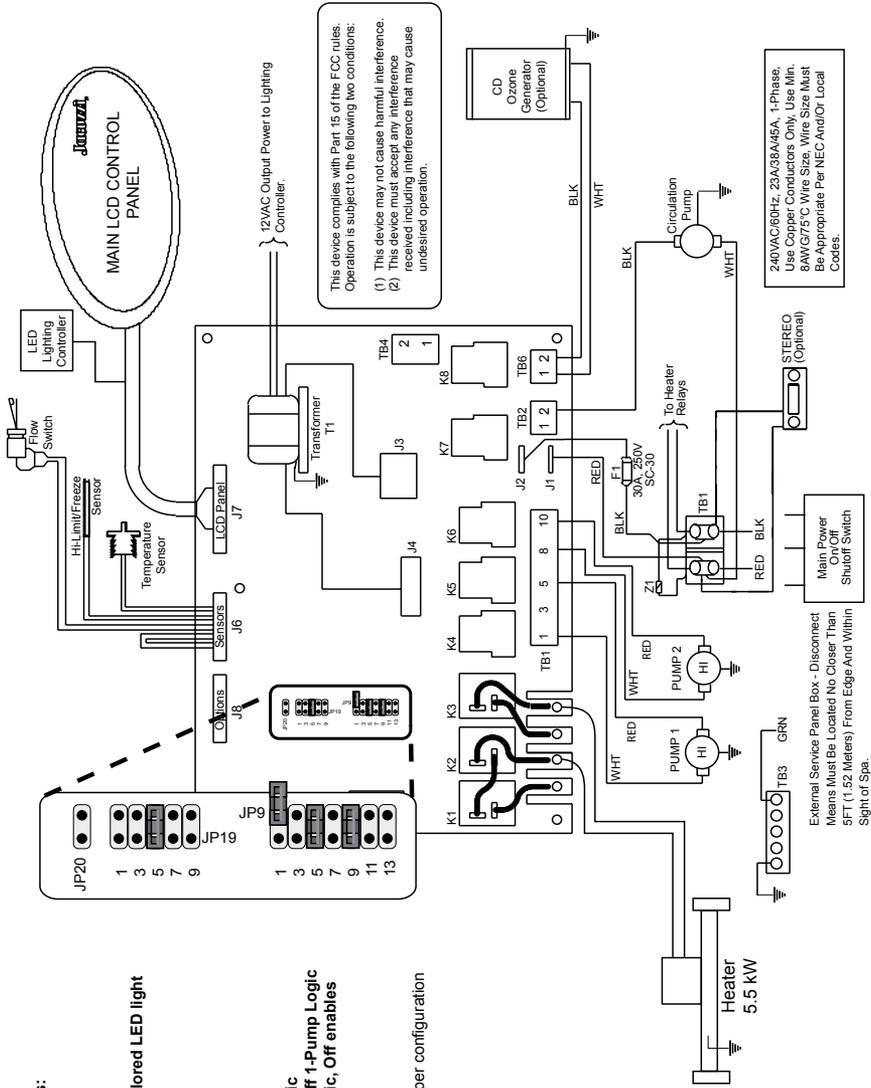
CAUTION: If freezing conditions exist and pump is not operational, take measures to protect the system from freeze damage. See section titled "Winterizing" (page 47).

- POOR JET ACTION** (see page 29-36)
1. Make certain the jets pump is turned on.
 2. Check position of massage selectors.
 3. Open air control for selected jet system.
 4. Check for adequate water level.
 5. Check for dirty filter (page 43).
- WATER IS TOO HOT**
1. Reduce thermostat setting (page 17).
 2. Switch hot tub to “Economy” mode to turn heater on only during programmed filter cycles (page 37).
- NO HEAT**
1. Check thermostat setting.
 2. Keep the cover in place while heating.
 3. If “heater on” indicator is lit (page 21), but no temperature rise is experienced after a reasonable period of time, contact your dealer or authorized service center.
- FILTER/CIRCULATION PUMP OFF**
1. Verify filter/circulation pump is programmed to run 24 hours a day (page 38).
 2. Filter/circulation pump cycle canceled by power interruption. Wait 24 hours for hot tub to reset.
 3. Hot tub water is warmer than 95°F (35°C) and two degrees warmer than the set temperature. The “Summer Logic” safety feature has activated. See note on page 39 for details.

Jacuzzi builds the best spas in the industry. Nonetheless, we are always striving to improve the quality and features of our products. Your input as a Jacuzzi spa owner is a cherished part of this process. If you have any comments or suggestions, or if you wish to be informed on any new products for your spa, please write to us.

CONGRATULATIONS on your good taste and welcome to the happiest and most relaxed family in the world!

17.0 North American 60 Hz J-460/J-465/J-470/J-480 Wiring Diagram



- Circuit Board Jumper Settings:**
- JP20-1: Not Used
 - JP19-1: On C, Off F°
 - JP19-3: Not Used
 - JP19-5: On enables Multi-Colored LED light kit
 - JP19-7: Not Used
 - JP19-9: Not Used
 - JP9-1: Not Used
 - JP9-3: Not Used
 - JP9-5: Not Used
 - JP9-7: On enables 60A Logic
 - JP9-8: On 2-Pump Logic, Off 1-Pump Logic
 - JP9-11: On enables 30A Logic, Off enables 50A or 60A Logic
 - JP9-13: Not used

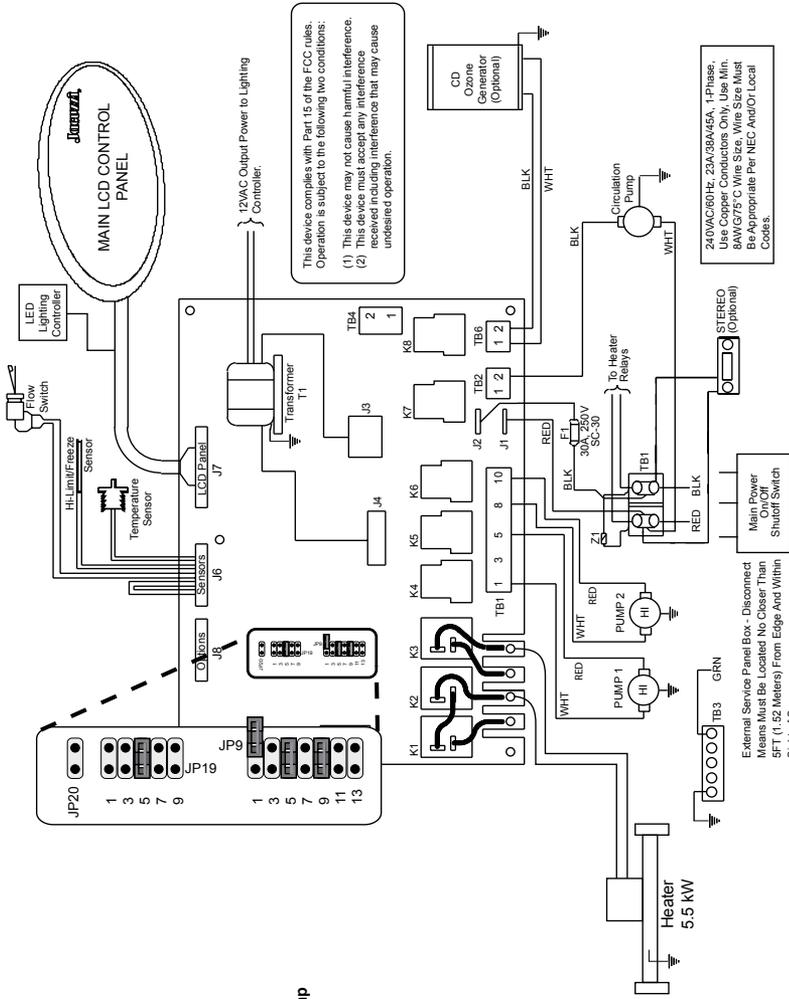
See Section 7.0, page 14 for jumper configuration pump operation.

⚠ DANGER
RISK OF SHOCK OR ELECTROCUTION!



Turn power off before servicing. This task should only be performed by a qualified technician.

18.0 Export 50 Hz J-460/J-465/J-470/J-480 Wiring Diagram



- Circuit Board Jumper Settings:**
- JP20-1: Not Used
 - JP19-1: On C, Off F^s
 - JP19-3: On 50Hz, Off 60Hz
 - JP19-5: On enables Multi-Colored LED light kit
 - JP19-7: Not Used
 - JP19-9: Not Used
 - JP9-1: Not Used
 - JP9-3: Not Used
 - JP9-5: Not Used
 - JP9-7: On enables 40A Logic
 - JP9-9: On 2-Pump Logic, Off 1-Pump Logic
 - JP9-11: On enables 20A Logic, Off enables 30A or 40A Logic
 - JP9-13: Not Used

See Section 7.0, page 14 for jumper configuration pump operation.

⚠ DANGER
RISK OF SHOCK OR ELECTROCUTION!



Turn power off before servicing. This task should only be performed by a qualified technician.

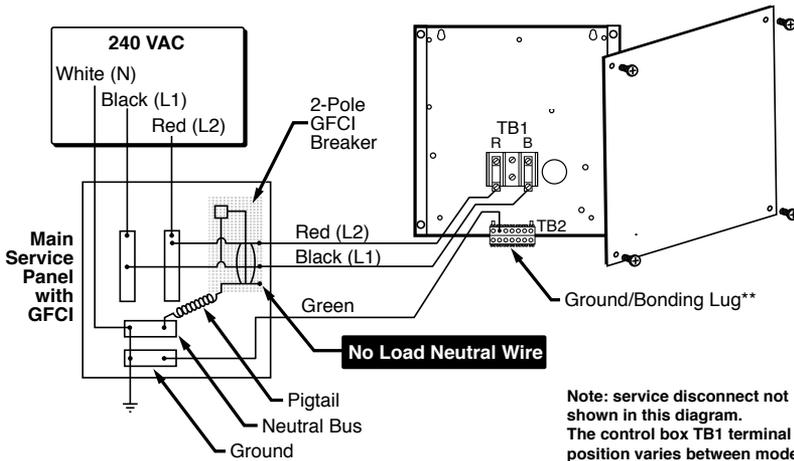
19.0 Typical Spa Wiring Diagrams A-B (North American 60Hz Models Only)

⚠ DANGER
RISK OF SHOCK OR
ELECTROCUTION!

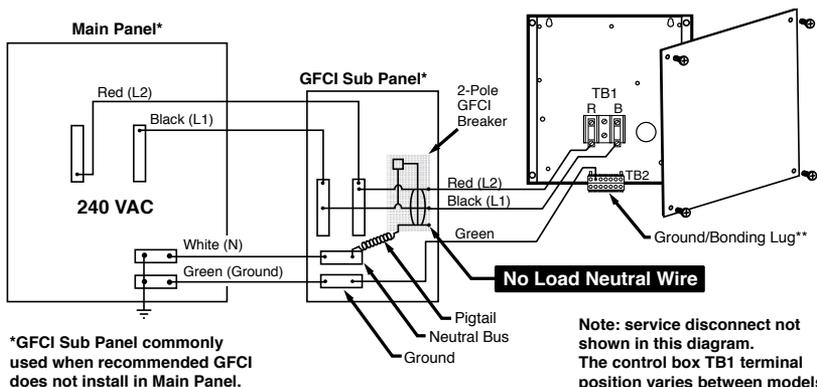


Turn power off before servicing. This task should only be performed by a qualified technician.

A 2-Pole Circuit Breaker with 2-Wire Grounded Load Connection (3 Wires to Hot Tub, 2-Hot (L1-L2), 1-Ground)



B Main Panel with Secondary GFCI Shut-Off Box Using a 2-Pole GFCI Breaker with 2-Wire Grounded Connection (3 Wires to Hot Tub, 2-Hot (L1-L2), 1-Ground)



20.0 Optional Jacuzzi J-1000 Audio System™ Stereo System Features

20.1 Sound System Controls



- | | |
|-----------------------------|--------------------------------|
| 1. Power On/Off Button | 11. AUX Input Jack |
| 2. Tune/Seek Up/Down Button | 12. iPod Docking Station |
| 3. Volume Up/Down Button | 13. Disc Eject Button |
| 4. Mode Button | 14. CD Installation Slot |
| 5. SEL/EQ Button | 15. Front Panel Release Button |
| 6. AS/PS Button | 16. Front Panel |
| 7. MUTE Button | 17. Function Display |
| 8. BAND/RPT Button | |
| 9. ENT/SH/RDM Button | |
| 10. USB Docking Station | |

20.2 Sound System Operation

1. Power On and Off

Press power button (1) once to turn on stereo system. Press a second time to turn off.

2. Adjusting Volume

Press VOL Up/Down button (3) to increase or decrease volume. Current volume setting is briefly displayed (0 to 45).

3. Mute

In Radio or AUX mode, press mute button (7) once to mute audio output ("MUTE" appears on display). To restore audio output, press button (7) a second time, or press volume up or down button. In CDP, USB, NAND and iPod mode, press button (7) to pause playback. Press again to resume playback.

4. Program Selection

Press MODE button (4) to cycle through available program sources as follows: Radio --> CDP --> USB --> NAND --> IPOD --> AUX --> Radio. If a CD or iPod is unavailable, that source will not appear on the display (17).

5. Adjusting Bass Level

Press EQ button (5) repeatedly until display reads "BASS". Press VOL Up/Down button (3) to choose desired setting. A display of "BASS 0" indicates center, -1 to -7 indicates bass cut, and +1 to +7 indicates bass boost.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.

6. Adjusting Treble Level

Press EQ button (5) repeatedly until display reads "TREBLE." Press VOL Up/Down button (3) to choose desired setting. A display of "TREBLE 0" indicates center, -1 to -7 indicates treble cut, +1 to +7 indicates treble boost.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.

7. Adjusting Balance Level

Press EQ button (5) repeatedly until display reads "BALANCE." Press VOL Up/Down button (3) to choose desired setting. A display of "BALANCE R-L" indicates center, L01 to 15 indicates left balance, R01 to 15 indicates right balance.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.



8. Adjusting Fader Level

Press EQ button (5) repeatedly until display reads “FADER.” Press VOL Up/Down button (3) to choose desired setting. A display of “FADER F-R” indicates center, R01 to 15 indicates rear fade, F01 to 15 indicates front fade.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.

9. Adjusting Beep Level

Press and hold down EQ button (5) for about 2 seconds until display reads “BEEP 2ND”, then release. Press VOL Up/Down button (3) to select either Beep 2ND or Beep on option.

- Select Beep on, you can hear “beep” sound when you press all buttons.
- Select Been 2ND, you can hear “beep” sound when you press the button over 1.5 secs.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.

10. Adjusting I-VOL Level

Press and hold the EQ button (5) for about 2 seconds, then repeatedly press until display reads “I-VOL” (Initial Volume Level Adjustment). Press VOL Up/Down button (3) to choose desired setting (0 to 45) and the I-VOL will be set automatically. This feature regulates the max volume level during power up. If the volume level is higher than the initial volume setting when audio unit is turned off, once the audio unit is switched back on again, the audio unit will keep the volume adjusted to the preset level. If the volume level is lower than the initial volume setting when audio unit is turned off, it will remember the lower level and resume volume at that level when unit is turned on again.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.

11. Adjusting Area

In Radio mode, press and hold the EQ button (5) for about 2 seconds, then repeatedly press until display reads “AREA USA” or “AREA EUR”. Press VOL Up/Down button (3) to choose desired setting, then press and hold the BND button (8) for 2 seconds to confirm selection.

Note: Unit returns to volume mode if volume control is not operated for 3 seconds.



12. Open/Close Front Panel

Press firmly on the release button (15), then open front panel (16) by gently lifting upward on bottom edge. To close front panel, gently flip panel down, then press firmly on panel directly above release button (15) until you hear an audible “click”. Keep front panel closed at all the times to prevent water intrusion, except when changing discs.



CAUTION: Never insert wet discs into unit or CD player will be damage!

20.3 J-1000™ Audio System Radio Operation

1. Radio Operation.

Press MODE button (4) to select Radio mode. Station frequency is indicated on display.

- To Select Band: Press BAND button (8) repeatedly to scroll through radio mode as follows: FM1 --> FM2 --> FM3 --> AM1 --> AM2 --> FM1. Each radio band stores up to 6 independent stations, for a total of 18 FM and 12 AM presets.
- To Program Station Presets in Radio mode: Press and hold SH button (9) until display reads “SHIFT”. Immediately afterwards, press and hold the Tune up/down button (2) for 2 seconds, then repeatedly press to select preset 1 to 6. At desired preset, press the ENT button (9) to store current frequency into selected preset.

Note: When power to spa is shut off for any reason, all station presets are reset.

2. Automatically Setting Station Presets

Press and hold the AS/PS button (6) for approximately 2 seconds until you hear a beep that confirms the memory function is engaged. The unit will search for six strong stations and automatically store them on the current band. All 18 FM and 12 AM presets can be set sequentially by selecting the next band and continuing the operation during auto programming.

3. Seek/Manual Tune

Press TUN up/down button (2) once to activate manual tuning mode, then press TUN up or down repeatedly to manually increase or decrease displayed frequency. Press and hold either TUN up or down button (2) for at least 2 seconds to activate auto tuning mode. The unit will automatically search and stop at the next higher or lower station with sufficient signal strength.

4. Preset Scan Function

Press AS/PS button (6) once to enter scan mode. Each preset station in the current band will play for 5 seconds while the preset number is flashes on the display (17). At the desired station, press AS/PS button (6) a second time.

5. Accessing Preset Stations

Press and hold ENT/SH button (9) until display reads “SHIFT”. Repeatedly press TUN up or down button (2) to choose preset 1-6, then press ENT/SH button (9) to confirm selection.



20.4 J-1000™ Audio System CD Player Operation

1. Insert, Play, and Eject a CD

Open front panel (16) by pressing firmly on release button (15) and lifting panel upward from bottom edge. Gently insert CD into slot (14) with label facing up. The CD will be drawn inside by the motorized mechanism. **DO NOT FORCE!** Close front panel by folding down, then press firmly on panel directly above release latch (15) until you hear an audible “click”. Keep front panel closed at all the times to prevent water intrusion, except when changing discs. CD playback will automatically begin after CD is loaded. A “S-CDP” icon on the display indicates that a disc is inside the mechanism.

- To Play CD: Press the MODE button (4) to change to CD mode. The CD will play. The display shows current track, play time, and animates a 3-D rotating disc during playback.
- To Remove CD: Open the front panel and press CD eject button (13). Remove CD from drive and close front panel as instructed in step 12 (page 62).

2. Changing CD Tracks and Music Seek

To advance to next track, press TUN up button (2) once to increase track counter one track. When final CD track is reached, play will resume on track #1.

- To fast forward through tracks: Press and hold TUN up button (2) until track counter displays desired track, then release button.
- To rewind current track: Press and hold the TUN down button (2) the track will quickly rewind until you release the button.

Note: It will go back to the beginning of the playing track when you press the Tune/Seek down button once, and it will go back to the previous track when you press the button once again.

3. Random, Repeat

- Random Mode: Press RDM button (9) to play the CD tracks in random order. The left side of the display (17) reads “RDM” when random mode is enabled. Press a second time to deactivate or press RPT button to cancel RDM function.
- Repeat Mode: Press RPT button (8) to repeat current CD track. The left side of the display reads “RPT” when repeat mode is enabled.

Press a second time to deactivate or press RDM button to cancel RPT function.

4. Searching File or Folder in MP3/WMA CD

- To Search File in CDP (MP3/WMA) mode: Press AS/PS button (6) to enter track searching mode. Then press the VOL up/down button (3) to scroll through available tracks. At desired track, press ENT button (9) to confirm selection. Once a track is selected, it will automatically begin to play.
- To Search Folder in CDP (MP3/WMA) mode: Press and hold AS/PS button (6) for 2 or more seconds to enter folder searching mode. Then press VOL up/down button (3) to search through available folders. At desired folder, press ENT button (9) to confirm selection. Once a folder is selected, it will automatically begin to play the first track in the selected folder.

5. Display ID3

While in MP3 or WMA track is playing, you can know its ID3 information by following operation:

- Press and hold ENT button (9) for about 2 seconds until it displays “SHIFT” icon on LCD. Then repeatedly press MODE to display TITLE, FILE, ARTIST, and ALBUM.

Note: The intervals between each push should be less than 4 seconds. Once the “SHIFT” icon disappears from the LCD, it would work as changing mode. After the “SHIFT” icon disappears from the LCD, it would scroll the selected ID3 information on LCD.

20.5 J-1000™ Audio System USB & NAND Operation

1. Play USB or NAND (internal memory)

Open the front panel and plug a USB device into the USB Docking Station (10). The USB device will begin to play automatically. Close the front panel. The “USB” symbol on the display indicates that a USB device is connected.

- To Play connected USB device: Press MODE button (4) to change to USB mode. The USB will play. The display (17) shows the current track, play time, and USB symbol. If no USB device is connected, simply plug a USB device into the USB docking station (10) and the unit will automatically switch to USB mode.
- To Play NAND: Press MODE button (4) to change to NAND mode. The NAND will play. The display shows the current track and play time. The Play/Pause, Repeat, and Random function for USB and NAND are the same as CD Player Operation (pages 62-63).

2. Copying Music Files from USB to NAND (internal memory)

In USB mode, press and hold SEL button (5) for about 2 seconds until "ONE COPY" displays on LCD (17), then press VOL up or down button (3) to choose ONE or ALL. Press ENT button (9) to confirm selection.

- If ONE COPY is selected: The record percent "DOWN LOAD xx%" will display on the LCD (17). After copying is finished, the next track will automatically begin playback.
- If ALL COPY is selected: "The number of total track --> the number of recorded track" will display on LCD (17). After copying is finished, the unit will beep for about 3 seconds, then automatically begin playback of track #1.



Note: In copying process, you can change to other modes. (USB and NAND modes could not be selected.) While in other modes, the screen will default to the downloading process after 3 seconds.

3. Deleting Music Files from NAND (internal memory)

In NAND mode, press and hold SEL button (15) for about 2 seconds until "ONE DEL" displays on LCD (17). Use VOL up or down button (3) to choose ONE or ALL. Press ENT button (9) to confirm selection.

- If ONE DEL is selected: Next track will begin playback after file deletion has finished.
- If ALL COPY is selected: "DELETING" will display on LCD, then "NO FILE" will display after deletion process has finished. After that it would automatically switch to Radio mode.

4. Searching File or Folder in USB/NAND

- To Search File In USB or NAND mode: Press AS/PS button (6) once to enter track searching mode, then press VOL up or down button (3) to scroll through available tracks. At desired track, press ENT button (9) to confirm selection. Once track is selected, it will automatically begin to play.
- To Search Folder in USB or NAND mode: Press AS/PS button (6) to enter folder searching mode. Then press VOL up/down button (3) to scroll through available folders. At desired folder, press ENT button (9) to confirm selection. Then search your desired file as above method.

20.6 J-1000™ Audio System iPod Operation

1. Play iPod

Open front panel (16) and plug a iPod into the iPod Docking Station (12) as shown. Refer to step 12 (page 61) for details. The iPod will begin to play automatically. Close front panel. The “iPod” symbol will display to indicate a iPod is connected.

- To Play connected iPod: Press MODE button (4) to change to iPod mode. The iPod will play. The display shows current track, play time, and iPod symbol to indicate an iPod is connected. Please note after a few seconds the readout will default back to track count and song title.

Note: DRM (Digital Rights Management) Files cannot be played on this deck. Personal files (MP3, WMA, iTunes or AAC) can be played as long as they are not DRM encrypted.

2. Searching File in iPod

To advance to next track, press TUN up button (2) once to increase track counter one track. When final track is reached, play will resume on track #1.

- To fast forward through tracks: Press and hold TUN up button (2) until track counter displays desired track, then release button.
- To rewind current track: Press and hold the TUN down button (2) the track will quickly rewind until you release the button.

Note: It will go back to the beginning of the playing track when you press the Tune/Seek down button once, and it will go back to the previous track when you press the button once again.

3. Searching Folder in iPod

- To select folder in iPod mode: Press AS/PS button (6) to display music and then playlist. Press VOL up/down button (3) to select between Playlist, Artist, Albums, Genres, Songs and Composer (the scroll sequence depends on the iPod that is used). At desired folder, press ENT button (9) to confirm selection and enter into Sub-folder selection. Then press VOL up/down to select again.

Note: At each desired folder/file, you need to press ENT to confirm selection.

4. Notes for iPod mode

- In iPod Mode, the play/pause function works.
- In iPod Mode, the RDM function does not work.
- In iPod Mode, press RPT button only can play the current track repeatedly. If RPT function is activated, press seek up/down button could not select the next or previous track, it could only go back to the beginning of the current track and begin to play again.

20.7 Docking your iPod Music Player

1. Docking Your iPod

The Docking Station for iPod is compatible with all dockable Apple iPod models.

To Install an Apple iPod:

- A. Open Docking Station door (A) as outlined in step 12 (page 61).
- B. Center iPod over Docking Station Interface Port, then gently press downward as shown (B). **DO NOT FORCE!**
- C. Close Docking Station door as shown (C), then press firmly on door directly above door release latch (15) until you hear an audible “click”.



WARNING: RISK OF ELECTRICAL SHOCK HAZARD EXISTS AND EQUIPMENT DAMAGE! Never install or remove iPod while hands are wet or while sitting partially immersed or fully immersed in spa!

CAUTION: Never leave iPod in Docking Station when spa is not in use to prevent damage from outdoor elements! Never spray Docking Station with pressurized water hose for any reason! Damage to iPod or spa stereo system caused by water intrusion is not covered under the manufacturer warranty! Damage to Docking Station port or iPod due to excessive force or improper alignment during installation or removal from Docking Station is not covered under warranty.

2. Setting Up The iPod for Use

- A. Select and play preferred song/album/playlist prior to docking iPod.
- B. Press “MODE” button on stereo receiver or wireless remote until display reads “iPod.”

Note: USB Docking Station is similar to the iPod Docking Station operation.

20.8 Generic MP3 Player Operation

1. Connecting Your MP3 Player

- A. The Audio unit is equipped with an auxiliary audio input jack, that allows the user to listen to external source, such as an MP3 Player.

2. Setting Up The MP3 Player for Use

- A. Select preferred song/album/playlist prior to plugging in MP3 player and start playback.
- B. Press "Mode Button" on stereo receiver until the LCD display reads "AUX".



Note: All external MP3 player playback operations are performed solely by the MP3 Player with the exception of volume control and "Mode Button" selector, which can be controlled via wireless remote or on the stereo receiver.



WARNING: RISK OF ELECTRICAL SHOCK HAZARD EXISTS AND EQUIPMENT DAMAGE!

Never connect, disconnect or operate external MP3 player while hands are wet or while sitting or standing partially or fully immersed in water!

20.9 J-1000™ Audio System Stereo Troubleshooting

1. Unit will not turn-on

Make sure spa power is turned on, then check harness fuse on side of unit making sure they are the proper ratings:

- Yellow memory B+ line (10A fuse).
- When faced with a malfunction during operation, push BND button (8) and EJ button (13) at the same time to reset software.
- Using a thin rod to press the reset button located besides the USB docking station to do a hardware reset.



Note: It will be necessary to re-enter the radio preset memories and other personal settings after performing a reset. After resetting player, always ensure all functions are operating correctly.

2. Fogged CDs and Lens

This condition may occur when it's cold. Wipe fogged CDs with a soft cloth. Fogged optical components inside the unit will return to normal operation after an hour in a heated environment.

20.10 J-1000™ Audio System Stereo Specifications

Tuner

FM usable sensitivity	10dB
FM 50dB quieting sensitivity.	25dB
FM alternate channel selectivity	80dB
FM stereo separation @ 1kHz	30dB
AM usable sensitivity	35dB

CD Player

Sampling frequency (8X oversampling)	44.1kHz
Channel separation @ 1kHz	50dB
Signal-to-noise ratio	60dB
Frequency-to-noise response @ +/-2dB	20-20kHz

Audio

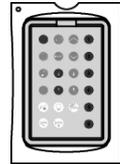
Maximum power output	(45 watts x 4 channel, 4Ω, 1KHz) 180W
Continuous power.	18 watts X 4, 4ohms, THD=1%, 1kHz
Bass boost/cu	100Hz +/- 10dB
Treble boost/cut	10kHz +/-10dB

General

Nominal power supply	14.4 VDC
Allowable power supply	10.8-15.6 VDC
Current consumption	<15mA
Speaker impedance	4-8 Ω

20.11 Standard Wireless Remote Control
 (Included With Optional J-1000 Sound System)

- Usable range 15' (5m)
- Never leave the remote under the spa cover for any reason.
- Battery Replacement: Use Coin Type, CR2025 or equivalent.

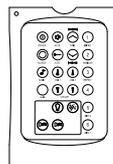


Wireless Remote Control Command Summary			
Button	Operation	Button	Operation
 Power	Power Button: On/Off.	 Intro	Intro/Station 1 Preset Button: <ul style="list-style-type: none"> • In CD mode: Provides a 5 second preview of each track. • In radio mode: Plays preset station 1 or press and hold for 3 seconds to set station 1.
 Mute	Mute Button: On/Off.	 Random	Random/Station 2 Preset Button: <ul style="list-style-type: none"> • In CD mode: Plays CD tracks in a random mode. • In radio mode: Plays preset station 2 or press and hold to set station 2.
 Source	Source Button: Selects Radio, CD or iPod/MP3 Player function.	 Repeat	Repeat/Station 3 Preset Button: <ul style="list-style-type: none"> • In CD mode: Repeats same CD track until the feature is deactivated. • In radio mode: Plays preset station 3 or press and hold to set station 3.

Button	Operation	Button	Operation
 Auto	Auto Button: Scans through preset radio stations.		Station 4 Preset Button: Has no CD/Radio function. Press and hold to set station 4 or pause iPod when docked in Docking Station.
 Audio	Audio Button: Selects treble, bass, fader or balance, audio settings.	 Disc -	Station 5 Preset Button: Has no CD/Radio function. Press and hold to set station 5.
 Band	Band Button: Selects AM or FM band.	 Disc +	Station 6 Preset Button: Has no CD/Radio function. Press and hold to set station 6.
 Zone 1 Zone 2 Volume	Volume Buttons: Zone 1 buttons are used to adjust volume levels. Zone 2 buttons not used.	 Tune	Tune Buttons: <ul style="list-style-type: none"> In CD mode: Advances/Rewinds tracks. In radio mode: Selects radio stations.
 Light	Light Button: Turns spa light on/off (See Sec. 10.5, page 26)		Jets 1 Button: Turns Jets pump 1 On and Off
 Mode	Mode Button: Selects one of four light modes (See Sec. 10.6 page 27) for details.		Jets 2 & 3 Button: Turns Jets pump 2 On and Off

Note: Remote control has no effect on MP3 Player playback if/when the generic MP3 cable output is used. (Sec 20.8 page 67)

B. Use Wireless Remote to Operate iPod



Button	Operation
Press 	Next track
Press  & Hold	Fast forward
Press  x 2	Return to beginning of current track
Press  x 3	Recall previous tracks
Press 	Pause (press again to resume play)

20.12 Wireless Remote Battery Replacement Procedure

1. Start by removing the rubber cover to the remote (Figure A).

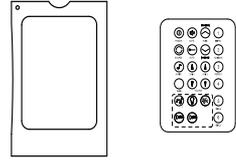


Fig. A

2. Turn the remote unit over and locate the battery door (Figure B).

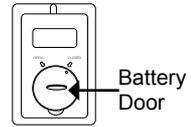


Fig. B

3. Rotate the battery door, with a coin, counterclockwise until the dot aligns with the Open arrow (Figure C).



Fig. C

4. Remove battery door using coin to pry the door upward (Figure D).



Fig. D

5. Replace battery using CR2025 or equivalent (Figure E).

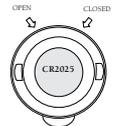


Fig. E

6. Reinstall the battery cover, using the coin to close (Figure F).

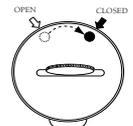


Fig. F

7. Reinstall rubber housing onto remote (Figure G).

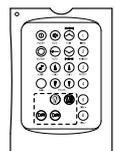


Fig. G

Note: Remote unit is water resistant not waterproof, therefore the unit should never be left in the spa while the cover is on and spa is not in use.

Serial Number: _____

Model Name: _____

Dealer Name: _____

Notes: _____
