

VITA
Spa®

DUET

IMPORTANT SAFETY WARNINGS

SAVE THESE INSTRUCTIONS.

WARNING:

Children should not use spas or hot tubs without adult supervision.

WARNING:

Do not use spas or hot tubs unless all suction guards are installed to prevent body and hair entrapment.

WARNING:

People using medications and/or having an adverse medical history should consult a physician before using a spa or hot tub.

WARNING:

People with infectious diseases should not use a spa or hot tub.

WARNING:

To avoid injury, exercise care when entering or exiting the spa or hot tub.

WARNING:

Do not use drugs or alcohol before or during the use of a spa or hot tub to avoid unconsciousness and possible drowning.

WARNING:

Pregnant, or possibly pregnant, women should consult a physician before using a spa or hot tub.

WARNING:

Water temperature in excess of 104° F or 40° C may be injurious to your health.

WARNING:

Before entering the spa or hot tub measure the water temperature with an accurate thermometer.

WARNING:

Do not use a spa or hot tub immediately following strenuous exercise.

WARNING:

Prolonged immersion in a spa or hot tub may be injurious to your health.

WARNING:

Do not permit electric appliances (such as a light, telephone, radio, or television) within 1.5m of the spa or hot tub.

WARNING:

Maintain water chemistry in accordance with manufacturer's instruction.

WARNING:

The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

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IMPORTANT SAFETY INSTRUCTIONS

1. READ AND FOLLOW ALL INSTRUCTIONS

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

3. A wire connector is provided on this unit to connect a minimum 6 AWG (5.15 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.

4. (For cord-connected/convertible units)

DANGER - Risk of injury.

- a. Replace damaged cord immediately.
- b. Do not bury cord.
- c. Connect to a grounded, ground-in type receptacle only.

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

6. **DANGER** - Risk of injury. The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible.

Never operate spa if the suction fittings

are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.

7. **DANGER** - Risk of Electric Shock. Install at least 5 feet (1.5m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum 6 AWG (5.15 mm²) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.

8. **DANGER** - Risk of Electric Shock. Do not permit any electric appliance, such as a light, telephone, radio, or television, within 5 feet (1.5m) of a spa.

9. **WARNING** - To reduce the risk of injury:

- a. The water in a spa should never exceed 40°C (104°F). Water temperatures between 38°C (100°F) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
- b. Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 38°C (100°F).
- c. Before entering a spa the user should measure the water temperature since the tolerance of water temperature-regulating devices varies.
- d. The use of alcohol, drugs, or medica-

tion before or during spa use may lead to unconsciousness with the possibility of drowning.


e. Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.

10. SAVE THESE INSTRUCTIONS

NOTE: Check with your state/local code enforcement officer to determine electrical code requirements and compliance. Use a qualified licensed electrician to complete all spa final electric connections.

**Caution: Risk of electrical shock.
Read and follow all instructions.**

TO AVOID RISK OF ELECTRICAL SHOCK:

1. A green colored terminal or a terminal marked G, GR, Ground, Grounding, or the international symbol  is located on the side of the supply terminal box or compartment. This terminal must be connected to the grounding means provided in the electric supply service panel, using a continuous copper wire equivalent in size to the circuit conductors supplying this equipment.
**IEC Publication 417, Symbol 5019.*
2. At least two lugs marked "BONDING LUGS" are provided on the external surface or on the inside of the supply terminal box or compartment. Connect the local common bonding grid (house-hold ground) in the area of the hot tub or spa to these terminals, using an insulated or bare copper conductor not smaller than No. 6 AWG.
3. All field-installed metal components such as rails, ladders, drains or similar hardware located within 5 ft. of the spa or hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG.
4. **Never** connect unit to a power supply with a load controller.
5. Install to provide drainage of compartment for electrical components.
6. The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors. This disconnecting means must be readily accessible for operation but installed at least 6 ft (1.8m) from the spa. All electrical connections should comply with local regulations.

Do's and Don'ts

For years of spa enjoyment:

Do:

- **Save these instructions!**
- Replace the cover immediately after use.
- Keep the cover locked when spa is not in use.
- Be aware of the dangers of a wet and slippery surface. Use caution when entering and exiting your spa.
- Have a licensed electrician make all final electrical connections.
- Replace worn, frayed or broken electrical cords.
- Keep the water chemistry correctly balanced. Untreated spa water will cause problems with your spa and equipment as well as being a health risk.
- Clean the spa filter monthly or as needed.
- Position the spa so that all sides remain

accessible for maintenance.

- Use a bathing cap for long hair.
- Refer to information on hyperthermia, next page.
- Use only authorized spa care products for the best performance and to keep the water properly balanced.

Don't:

- Use the spa at 104°F (40°C) for long periods of time (more than 30 minutes).
See Hyperthermia, below.
- Use an extension cord to power your spa.
- Allow anyone to stand on the spa cover. It is not designed to support weight.
- Power the spa unless it is filled with water to 1/8" below the top of the Weir door.
- Operate the pump on high speed for extended periods of time with the cover in place. Extended operation can cause heat build-up and interfere with spa operation.

Hyperthermia

The causes, symptoms, and effects of hyperthermia may be described 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 an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting. The effects of hyperthermia include:

- a. Failure to perceive heat
- b. Failure to recognize the need to exit spa or hot tub
- c. Unawareness of impending hazard
- d. Fetal damage in pregnant women
- e. Physical inability to exit the spa or hot tub, and
- f. Unconsciousness resulting in the danger of drowning.

WARNING - The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia.

SPA INSTALLATION

Danger: Electrical shock risk. Install at least 1.5m from all metal surfaces.

The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code ANSI/NFPA70-2008. The disconnecting means must be readily accessible but installed at least 6 feet (1.8 meters) from the spa water. All electrical connections should comply with article 680-IV of the NEC.

Site and Positioning

Locate the spa on solid, level foundation or flooring, keeping in mind the weight of the filled spa [in excess of 4,000 bls. (1.800 kg.) on some models]. If you have any doubts about the load bearing ability of your chosen site, contact an architect or a building contractor. The entire perimeter of the spa cabinet and the spa bottom must be evenly supported. If your spa is installed outdoors, we recommend that you provide a concrete pad for the spa to rest on 8ft x 8ft x 4in (2,5m x 2,5m x 10cm level pad). **Failure to provide a flat level surface could structurally damage your spa and void the warranty.** The spa must be installed to allow access for service and maintenance on all four sides; therefore, below grade level installation is not recommended.

Outdoor Installation

The following considerations apply when installing your spa outdoors:

1. Local codes pertaining to fencing.
2. Local electrical and plumbing codes.
3. View from your house.
4. Wind direction.
5. Exposure to sunlight.
6. Location relationship to trees (twigs, leaves and shade).
7. Dressing and bathroom location.
8. Storage area for maintenance equipment and chemicals.
9. Location to facilitate adult supervision.
10. Landscaping and nighttime lighting.
11. Accessibility to equipment.
12. Power supply location and foot traffic.

Indoor Installation

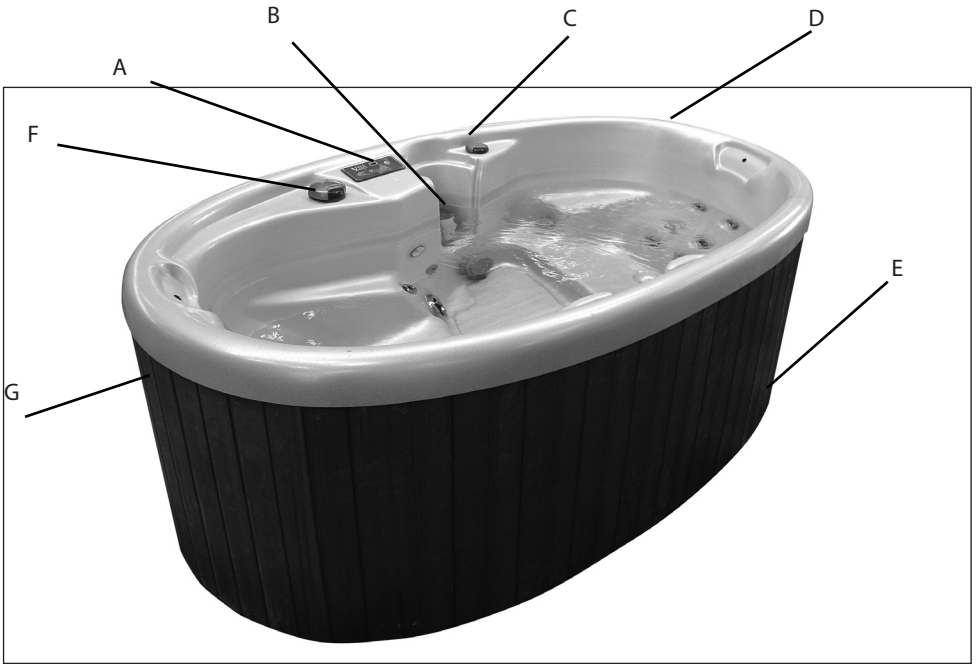
The following considerations apply when installing your spa indoors:

1. Indoor spas promote high humidity. Using either ventilation fans or commercial grade de-humidifiers will help to reduce the humidity. Consult your dealer for details.
2. **Floor drains must be provided near the spa to drain off water that may cause falls and /or water damage.**
3. Floor area should be flat with a non-skid finish. Carpeting is not recommended.
4. Walls, ceilings, woodwork should be made of materials capable of withstanding high humidity (redwood, cedar).
5. Be sure floor load bearing capacities are adequate to support the concentrated spa weight.
6. Spas should be double checked for leaks before installing to avoid possible water damage. Dealer installation may include this service.

7. Indoor sun rooms are capable of maintaining high ambient temperatures which may effect the spa water temperature. It is NOT recommended that you operate your filter cycles for longer than 4 hours per day under these conditions.

SEE THERMAL CREEP: page 24

SPA SYSTEM COMPONENTS



A. Topside Control Panel: Used to control temperature setting, pump for jets, and light.

B. Filter Skimmer/Weir Door: Removes floating debris from the water surface, provides a water return path to equipment, and houses water filter element. (not shown)

C. Air Controls: Increases or decreases air entering the jets. Close during heating for maximum efficiency.

D. Equipment Pack Service Panel (no user serviceable parts): Spa support system consisting of pump, heater, and associated electrical controls (not shown).

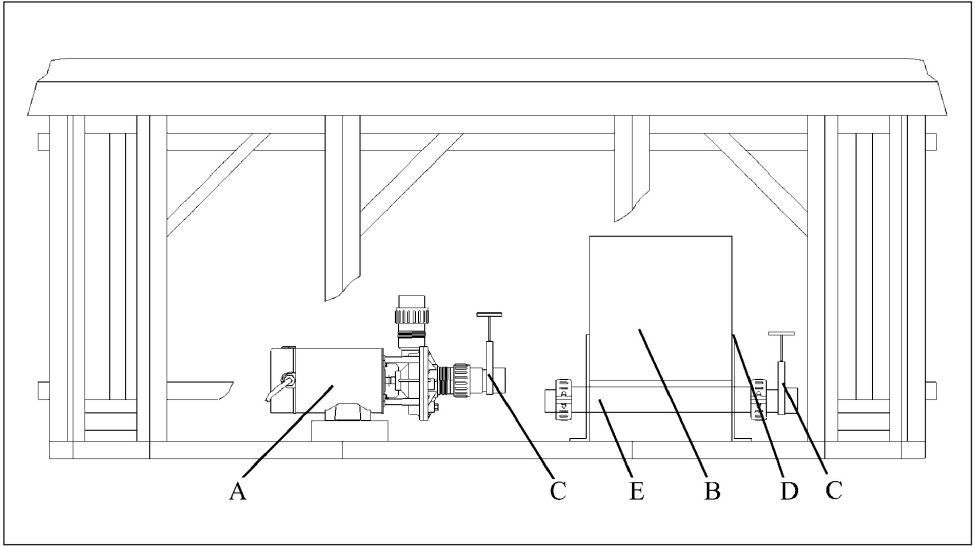
E. Drain Access: (Adjacent to the equipment service panel) Spa drain faucets. (not shown)

F. Diverter Valve: Diverts water from one set of jets to another.

G. Manufacturer's Identification Label: Contains identification information for warranty service (serial number, model number, etc.) and electrical information (ampere rating and ampere requirements) (not shown).

SPA COMPONENTS

Reference only. Equipment is not always as shown



A. Pumps : Low speed for efficient water circulation during filtration and heating; high speed for maximum action of the jets. The pump functions are activated by topside controls

B. Warning and Installation Label: Contains important safety information and installation instructions.

C. Slice Valve: Used to shut off water flow from the spa to the equipment while servicing. Quantity will vary depending on model. All should be open during normal operations.

D. Spa Pack: Houses the electronic circuit board. All equipment and incoming power connections are made here .

E. Heater Assembly: Thermostatically controlled and equipped with an overheat safety shut-off.

Note: No consumer serviceable parts. Do NOT attempt to service any of these components yourself. Contact your dealer for assistance.

JETS, AIR CONTROLS & VALVES

Jets

All spa jets are individually engineered to provide a unique hydro-massage. Depending on the model, your spa will have a combination of the following jets:

Directional Therapeutic

(200, 300, and 400 Series Wave Style):

Positioned to focus on large muscle groups, these jets deliver a concentrated, high volume stream of water for a deep massage. Each jet is fully adjustable, allowing users to set the water flow to the most comfortable setting. The nozzle can be rotated to target sore muscle areas.

Rotational or Spinning Jets

(200, 300, and 400 Series Wave Style):

Positioned to focus on muscle tension zones, these jets deliver a spinning water stream for a gentle, pulsating massage. Each jet is fully adjustable, allowing users to set the water flow to the most comfortable setting.

Swim Jet(non-adjustable):

Positioned to create overall water circulation, this multi-purpose, high volume jet provides whirlpool action throughout the entire spa.

Euro Jets:

Positioned in the foot well or shoulder areas of the spa, these jets deliver a penetrating massage to dissolve tension. This jet may be the entry point for ozone produced during the automatic filtration cycles, and, as such, is not adjustable.

Note: Ozone production is activated when the low speed pump is activated.

Many full sized jets are adjustable from a fully open to closed position. It is very important that you **NEVER SHUT ALL FULL SIZED JETS OFF AT ONE TIME!** WHEN EXITING THE SPA, OPEN ALL CLOSED JETS.

Cleaning or Replacing Jets

Hard water can cause calcium/mineral buildup that can restrict or bind the jets. A jet consists of a face plate and a nozzle. Rotate these parts weekly and remove/clean monthly to ensure free movement.

NOTE: It is not necessary to drain the spa to clean or remove the jets.

Rotating the jet face plate and nozzle

- Rotate the jet face left and right (open and closed).
- Return the face plate to the full open position.
- Turn the jets on to high speed.
- Twist the nozzle left and right.
- Rotate the nozzle in the socket.

NOTE: If the jet insert disengages from the spa housing, see steps to reinstall below.

Cleaning the jets

To remove the jet insert, use the palm of your hand to exert pressure on the face of the jet. Turn counterclockwise until the jet 'clicks'. Gently pull the jet assembly from the housing.

To **clean** the jet insert and housing, use a pressurized hose and spray the inside of the jet housing. Soak the jet in a diluted spa cleaning solution, rinse. Wipe the inside of the housing to remove any debris.

To **reinstall** the jet, line up the tab on the backside of the barrel with the groove in the body. Use the palm of your hand to gently tap the jet until it snaps into position.

Air Control

The intensity of the jet action can be controlled by altering the amount of air injected with water through the jets. Your spa has 1 air control located on the lip of the spa. Each control activates air to specific jets in the spa allowing you to create various combinations and levels of jet action to suit individual preferences. Turn the control counter- clockwise to turn the air off and clockwise to turn air on.

NOTE: Air controls should be closed during heating cycles for maximum energy efficiency.

Diverter Valve: Diverts water from one set of jets to another. The diverter valve should be tested weekly to clean the lines and to help prevent debris from building up.

NOTE: The diverter valve should be cleaned regularly. Remove the handle by pulling upward and rocking it back and forth, unscrew the cap and pull the valve stem out. To **clean** the valve stem and housing, use a pressurized hose and spray the inside of the valve housing. Soak the valve stem in a diluted spa cleaning solution, rinse. Wipe the inside of the housing to remove any debris.

ELECTRICAL INFORMATION

Caution: Risk of electrical shock.
Read and follow all instructions.

Important Safety Instructions

All electrical connections to this spa package MUST be accomplished by a qualified licensed electrician in accordance with National Electrical Code (NEC) and with state/local electrical codes in effect at the time of installation.

NOTE: Prior to performing any service to the spa equipment, turn OFF all primary electrical power at the main circuit breaker or disconnect panel.

To make spa electrical connections, remove the exterior equipment pack service panel, locate the electrical control box, remove the control box cover and follow the wiring diagram on the inside of the control box cover. Connections should be made using copper conductors **only**. Connecting wires, circuit breakers, or fuses must all be sized to accommodate the Total Ampere load as specified on the equipment label. This equipment is designed to operate on 60Hz alternating current only, at 120 volts.

NOTE: All unions must be hand-tight and all slice valves must be locked in the OPEN position before filling or refilling spa! A clip is provided to help keep the slice valve open. Run spa and check for union water leaks before reinstalling exterior panel.

Ground-Fault Circuit Interrupter

A qualified licensed electrician shall connect the spa to a circuit protected by a GFCI. This is a requirement by the National Electric Code, article 680-42 and 680-43, and is also in compliance with Underwriter's Laboratories, Inc.

Installation Options

A hole will need to be drilled in the pedestal or base to bring the electrical conduit into the spa cabinet.

Refer to the manufactures's nameplate located on the kick plate to determine your spa's ampere requirements.

The Model Duet comes factory set for 120 volt service.

Electrical Requirements:

120 Volt Installation

- **120 volt, 60 Hz, single phase, 15 amp., 3-wire service (line 1, neutral, and ground)**

The heater can only be activated with the pump on low speed. Only the spa light can be operating at the same time without disabling the heater.

ELECTRICAL INFORMATION

Caution: Risk of electrical shock.
Read and follow all instructions.

REQUIREMENTS

The spa must be connected to a dedicated 120 volt, 15 amp, grounded circuit.

The term “dedicated” means the electrical circuit is not being used or shared for any other electrical items (patio lights, appliances, garage circuits, etc.). If the spa is connected to a non-dedicated circuit, overloading may result in “nuisance tripping” at the main panel.

CORD CONNECT

The Vita Spa Duet Model comes with a power cord which contains the GFCI breaker. All electrical connections from the control pack to the outlet should be done by a qualified electrician.

For your safety, when the electrician is installing the 15 amp single electrical outlet and waterproof cover, the outlet should be no closer than 6 feet (1.83 meters) and no farther than 10 feet from the spa [reference N.E.C. Article 680 and all local codes]

The Ground Fault Circuit Interrupter (GFCI) is located on the power cord. This device is for your protection. It is very important to protect it along with the moisture resistant cover from damage. Test once a month, with the plug connected to the power supply.

NEVER CONNECT THE SPA TO AN EXTENSION CORD!

A pressure wire connector is provided on the exterior surface of the control box, inside the spa. This is to permit the connection of a ground bonding wire between this point and any metal equipment, enclosures, reinforced concrete pad, pipe, or conduit within 5 feet of the spa (if needed to comply with local building code requirements). The bonding wire must be at least a #10 AWG solid copper wire.

Bond the spa to all exposed metal equipment or fixtures, handrails, and concrete pad per N.E.C. Article 680 and all local codes.

1. Push the “TEST” button on the GFCI breaker. The spa should stop operating and the GFCI power indicator will go out.
 2. Wait 30 seconds, then push the “RESET” button. Power will be restored to the spa and the GFCI power indicator will turn on.
- If the GFCI fails to operate in this manner, your spa may have an electrical malfunction, and you may be risking electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

WARNING: Removal of the GFCI from the spa’s power cord will result in an unprotected spa and will void the spa’s warranty.

IMPORTANT: Should you ever find the need to move or relocate your Vita Spa, it is essential that you understand and apply these installation requirements. Your Vita Spa has been carefully engineered to provide maximum safety against electric shock.

START UP PROCEDURES

Follow recommendations for site location and electrical connection. The water line on the weir door is the level at which the water should be maintained.

1. Fill the spa through the filter hole to 1/8" below the top of the Weir door. with tap water. **Never use 'softened' water in your spa.** Softened water can impact the chemical balance of the water and lead to degradation of metal plumbing fittings.
2. Turn power on to unit at circuit breaker or disconnect panel.
3. Open the air controls, located on the top lip, and cycle the jets from high to low. Water should come from the therapy jets. If water flow is not established, turn off jets and see Priming Your Spa (this page).
4. Add chemicals. Ask your dealer for additional information.on start up or getting the water balanced.

Follow Operating Instructions for your particular model to set heat to the desired temperature. Initially, you may find that the spa requires 12 to 14 hours on 120 Volt installations to reach temperature. Keep your thermal cover on the unit and close the air control to help the heating process.

Priming Your Spa

When filling your spa for the first time or, after draining and refilling the spa, you may need to bleed air from the system. Should you experience an air-lock on Pump 1, remove the filter cover, insert a garden hose through the center hole that holds the filter as far as possible without using force. Hold the hose in place and turn on the water. Cycle pump 1 from low to high several times, this forces water into the pump and forces the air out. If this does not work , remove the side panel and locate the pump. Slowly loosen the discharge (top) pump union until water starts to trickle out. Once water is trickling out, hand tighten the union (do not over tighten as this could cause the union to crack) and replace the side panel

Pr - This is Not an Error Message

The Spa has just been powered up and is in Priming Mode for up to 4 Minutes. Pumps can be turned ON and OFF to remove any air from the plumbing lines and the Heater. Cycle the pumps on and off to verify good water flow and wait 4 minutes or press any temp related button to exit Priming Mode.

Important: Do not operate the spa without full water flow.

POWERWORKS® 300 CONTROL

Duet



Your Topside Control looks like this, your spa has the following features:

- Internal Light
- 1 Dual Speed Pump




The 300 Series Powerworks™ Controls offer you the ultimate in spa control. The backlit, Liquid Crystal Display (LCD) displays current temperature, set water temperature, and operating mode settings. Each feature is actuated through the control panel pad. Touch the appropriate button to activate the desired function.

At start up, when power is supplied to the spa, the controls will operate properly and safely under the factory settings. The spa will be in **Standard** mode, have a temperature setting of 100°F (38°C), and a filtration cycle duration of 1 hour. To fully utilize the unique capabilities of the control system, it is important to know how to set the temperature, operate the pumps, operate the light, adjust the mode setting, and change the filtration cycle.

Note: In event of a power outage or failure, the 300 Series Control System may retain settings. If settings are lost, re-program per the instructions in this manual.

User's Pads

User's Pads are the buttons located on the topside control panel and are used to program various spa functions (i.e., turn on spa light, set temperature, etc.). The following table defines the buttons:

Pad	Use
 Temp	<ul style="list-style-type: none"> • Decrease temperature • Increase temperature • Switch modes • Change filter cycle durations
 Lght	<ul style="list-style-type: none"> • Turn internal spa light on or off • Switch modes
 Jets	<ul style="list-style-type: none"> • Activate therapy pump • Set duration of filter cycles

Temperature

The maximum set temperature is 104°F (40°C) and the minimum set temperature is 80°F (26°C). The current water temperature or, if the pump has not been running, two dashes, will show on the display. If dashes are displayed, you must first start the pump by pressing the **PUMP 1** pad. Wait until the water temperature is displayed (approximately 1 minute).

The set temperature of your spa may easily be increased or decreased at any time using the 'TEMP' pad. Press the 'TEMP' pad; the set temperature will be displayed in the LCD window. The next touch of 'TEMP' will change the set temperature either up or down 1°F (0,5°C). If you want to increase the temperature and the displayed indicates the temperature was increased by 1°F (0,5°C), continue to press the 'TEMP' pad until the desired set temperature is reached.

If you want to decrease the set temperature and the LCD indicates that the temperature is increasing, **STOP**. Wait a few seconds until the actual temperature is displayed. Then press the 'TEMP' pad again. The set temperature will be displayed. Press it again and the set temperature will decrease by 1°F (0,5°C). Continue pressing the 'TEMP' pad until the desired set temperature is reached.

If the spa is set in Standard mode or in a filtration cycle, increasing the set temperature may result in activating the heater. Decreasing the set temperature will turn the heater off. When the heater is operating, the LED below the 'HEAT' icon will be lit.

Pump 1

Touch the 'JETS' pad to activate the primary

filtration pump. The sequence of the jet action is:

- 1 touch = Low therapy jets
- 2 touches = High therapy jets
- 3 touches = Off

The low speed operation of Pump 1 is timed to automatically turn off after two hours of operation. The high speed operation of Pump 1 is timed to automatically turn off after 15 minutes of operation.

NOTE: With the standard configuration, pump 1 will automatically operate in low speed whenever the spa calls for a filtration cycle or heat. When this automatic activation occurs, the low speed of Pump 1 cannot be turned off; however, all other control functions can be activated.

MODES OF OPERATION:

In the standard configuration your spa can be switched among **Standard, Economy, and Sleep modes** by touching the 'TEMP' pad and then the 'LIGHT' pad.

If your spa is in the

Standard mode,

the low speed of Pump 1 and the heater will come on automatically to maintain the set temperature of the water. The pump will circulate for approximately one minute several times throughout the day to sample water temperature. If your spa is set in the

Economy mode,

the heater will operate **ONLY** during the filtration cycles. If your spa is set in the

Sleep mode,

The spa will heat to within 20°F (11°C) of the set temperature only during filter cycles.

The pump will operate either during a normal filtration cycle or, the heater and pump will be activated when the heater housing

temperature drops below 45°F (7.2°C). The selected mode will be displayed in the LCD window of the control panel.

When in **Standard mode**, the letters 'ST' are displayed briefly, followed by the water temperature. When in **Economy mode**, the letters 'EC' are displayed alternately with the water temperature.

When in **Sleep mode**, the letters 'SL' are displayed alternately with the water temperature.

Setting the Time and Filtration Cycles

You can decide when your filter cycles start and you also have choices on how long they run.

Preset Filter Cycles. The spa control system is designed with two filter cycles. The first filter cycle turns on 6 minutes after power is supplied to the spa. The second filter cycle turns on 12 hours later. Filter cycles are pre-set for a two hour duration.

Note: To properly clean and maintain spa, a total filter time of at least two hours per day is recommended. If an ozonator is installed, 4 hours is recommended.

Changing Filter Cycle Start Time

The start/stop times of the filter cycle begin 6 minutes after the spa set time is established. Set time is based on the time of day that the spa is powered up. Set time may only be changed by disconnecting power from the spa and re-connecting it at the desired start time. For example, if you want the filter cycle to begin at **9:00 PM**, turn off the spa breaker and turn it back on at **8:54 PM** (remember

the 6 minute wait period). The cycle will begin at **9:00 PM** and will repeat beginning at **9:00 AM**. Each cycle will run for the prescribed number of hours.

Changing Filter Cycle Duration

The duration of a filter cycle can be set in one hour increments of 1- 8. For example, a 2 hour cycle will complete once every 12 hours for a total of 4 hours per day. The amount of time needed to filter you spa will depend on usage and ambient conditions.

You will need to program you filter cycles based upon your personal use.

To change the duration of the filter cycles touch the 'TEMP' pad and then touch the 'JETS' pad. Touch the 'TEMP' pad to adjust the cycle duration to the desired setting. After each press, the duration of the cycle will be displayed in the LCD window as follows:

- F1** 1 Hours for each cycle, 2 hours per day
- F2** 2 Hours for each cycle, 4 hours per day
- F3** 3 Hours for each cycle, 6 hours per day
- F4** 4 hours for each cycle, 8 hours per day
- F5** 5 hours for each cycle, 10 hours per day
- F6** 6 Hours for each cycle, 12 hours per day
- F7** 7 Hours for each cycle, 14 hours per day
- F8** 8 Hours for each cycle, 16 hours per day

To exit the filter-set procedure, touch 'JETS'.

The LCD window will display the current water temperature.

If a change is made to the duration while the spa is in a filtration cycle, it will take effect immediately. If the change is made outside a filtration cycle, it will take effect at the start of the next scheduled cycle.

NOTE: When power to the spa is denied (disconnect, power outage), the controls may revert to the default factory settings.

Any adjustments to set temperature or filter cycle duration may need to be reprogrammed.

THERMAL CREEP: see page 24
OZONE OPTION: see page 20

Light

Touch the 'LIGHT' pad to turn all lights on and off. The lights will automatically turn off after 4 hours of operation.

Automatic Time Outs

Your Vita Spa is equipped with an automatic Time Out feature designed to protect both the equipment and the user. To reduce unnecessary use of the pumps and lights, the Time Out feature turns selected accessories off automatically.

Accessory	Mode	Shuts off in...
Pump 1	Low	2 hours
Pump 1	High	15 minutes
Light		4 hours

MODEL	GALLONS	LITERS
DUET	103	390

MAINTENANCE

Water Chemistry

Water chemistry is critical in a spa system. Chemicals are used to sanitize the water and control the pH balance. The combination of high water temperature and small water volume means that the chemical balance must be watched carefully. It is recommended that you purchase a chemical start up kit, and the additional chemicals needed to maintain the proper/optimum chemical balance, from your dealer.

Sanitizing

Sanitizing the water destroys harmful organisms and keeps your spa healthy and safe. Three commonly used spa sanitizer or oxidizing agents are bromine, chlorine and ozone. Chlorine or bromine are chemicals that you add to the water. Ozone is a gas that is produced by an ozonator and injected into the water. It is important that a residual of sanitizer remain in your water. High water temperature, aeration and use will increase the need for sanitizer.

In addition to maintaining a residual, it is important to 'shock' your spa water periodically and after heavy use. This addition of substantial amounts of sanitizer super-chlorinates the water and oxidizes non-filterable organic residue. Allow the sanitizer level to drop back to the residual amount before using. Also use your Clean Up Cycle after heavy use for additional filtration. Tests should be done daily with your test kit to keep a chlorine or bromine residual of 3.0 to 5.0 ppm.

pH Level

pH is the balance of acidity and alkalinity in the water. Maintaining proper pH is important for the effectiveness of your sanitizer, for user comfort, and to prevent corrosion of the spa equipment.

Caution: Never mix two chemicals together.

Caution: Never store chemicals in the equipment compartment.

Caution: Do not use muriatic acid to balance pH as it will damage your spa surface and equipment.

Recommended Levels

pH:	7.2–7.6 (Ideal 7.4–7.6)
Sanitizer Residual:	3.5–5.0 ppm
Total Dissolved Solids:	100–200 ppm
Free Available Sanitizer:	3.0–5.0 ppm
Total Alkalinity:	80–100 ppm ideal for dichlor, trichlor, and bromine

NOTE: Make sure you use fresh test kit strips/chemicals. Test kits and test chemicals should be stored in a cool, dry location. Check the manufacturer's instructions to determine shelf life and expiration date.

Ozone:

Equipping your spa with the Powerworks™ Ozonator is a smart decision. The use of ozone in conjunction with spa sanitizing and water balancing chemicals helps to provide you with a cleaner, healthier spa and reduces chemical usage.

Sanitizing with Ozone

Spas vary in size, as well as frequency and conditions of use. For this reason you will need to establish your sanitizing program based upon your own personal use. When using ozone, you should start by balancing your water chemistry as you normally would. The Duet model spa should run and be ozonated a minimum of 4 hours per day. If your spa is heavily used, this time should be increased. Your spa produces ozone during the filtration and heating cycles. The amount of a residual sanitizer (chlorine or bromine) that you maintain in the water will also vary depending on use. It is recommended that you maintain a residual of 3.0-5.0 ppm. Periodically, and after periods of heavy use, it is necessary to 'shock' your spa with large amounts of sanitizer.

NOTE: The ozonator is programed to turn on anytime the low speed pump is on.

NOTE: Extra filtration can be provided by manually starting a clean-up cycle. Turn Pump 1 on in low speed. The pump will operate for 2 hours and then automatically turn off.

Specialty Chemicals

While ozone may significantly reduce the usage of specialty chemicals it is not a substitute for these chemicals. All chemicals should continue to be monitored, especially during periods of heavy usage and when changing or replenishing the spa water.

Draining your Spa

NOTE: Always turn the circuit breaker off when you drain your spa. Do not turn the spa heater back on until you have full flow coming from the jets for several minutes.. Changing your spa water, cleaning the spa

surface and filter are necessary because high concentrations of impurities caused by water evaporation, body oils, perfumes, and other contaminants may accumulate in the spa that cannot be filtered out.

NOTE: It is advisable to drain your spa and refill it with fresh water every six to eight weeks or more often, depending on the amount of use.

All spas are equipped with both external and internal drains. The external drain is used for draining the spa. The internal drain(s) are used to remove water from internal hoses when winterizing your spa (See pg. 21) or if the water is severely contaminated.

NOTE: Use a standard garden hose to direct the water to an appropriate disposal area.

The **external** drain valve is located in a compartment on the front panel. Open the compartment, pull the valve out, remove the outer black cap and connect a garden hose to the fitting. Turn the ring on the back of the valve counter-clockwise until it stops, then pull out to open the valve. Water will begin to flow. When flow stops, push in the valve, turn ring clockwise until it stops, remove hose and replace the cap.

The **internal** drain hose(s) is (are) located behind the front access panel. Remove the access panel screws and the access panel. Locate the drain hose(s). For each hose drain valve, remove the cap, attach the garden hose, and turn the valve body 90° counter-clockwise. Water will begin to flow. When all water has been evacuated, turn the valve handle clockwise until it stops. Remove

garden hose and replace the cap. Repeat for each internal drain hose.

NOTE: Do NOT attempt to use the pump to drain the spa.

NOTE: Close all drain valves and replace caps prior to refilling the spa.

NOTE: When refilling the spa, you may need to bleed air from the system. Refer to Priming Your Spa, pg. 14 for instructions.

Filter Maintenance

NOTE: It is not necessary to drain the spa in order to clean the filter.

The removable filter cartridges are located in the filter canister behind the weir door. The filter should be inspected / cleaned monthly during normal use, and more often when spa use is heavy.

Keep the filter cartridge clean! Clean the filter cartridge at least once every 90 days. A clogged filter decreases performance and degrades water quality.

To clean the filter cartridge:

1. Turn the pump off.
2. Remove skimmer lid on top of spa.
4. Remove filter cartridge from the filter canister by grasping the top and unscrew counter-clockwise while lifting upwards.
5. Soak filter in a commercial filter cleaner/ degreaser, available from your Vita Spa dealer, per manufacturer's instructions. Hose out filter cartridge or replace with new cartridge, if needed.
6. Place filter cartridge back into filter canister,

screw in clockwise DO NOT OVER TIGHTEN.

7. Replace the skimmer lid.

8. Turn the pump ON.

Replacing the filter cartridge annually is recommended to maintain optimum performance. Filter maintenance depends on usage.

Winterizing

In cold climates where freezing temperatures occur, special care is required to prevent the possibility of damage to the spa and equipment due to freezing. If you plan on using your spa during cold months, be sure your pump and heater are in good working order. The spa shell has been insulated to provide efficient operation in cold weather areas.

NOTE: If you elect not to drain your spa and the temperature is going to be below freezing for extended periods of time, it is best to operate the spa in the standard mode with the temperature set at the maximum high temperature of 104°F (40°C), especially if there is a power outage threat. This will help keep the spa water from freezing if you have a power failure.

If you do not intend to use your spa during the winter months and there is danger of freezing, use the following steps to winterize your spa: Winterizing a spa if done properly is a

complicated procedure. **When at all possible this should be done by a spa service center.** A freeze damaged spa can be expensive to fix. With that in mind here are some basic winterizing tips that will help you remove enough of the water and add enough RV Antifreeze to keep your plumbing from freezing.

What you will need;

1. A wet /dry (shop vac) vacuum.
 2. 1 to 3 gallons or RV antifreeze (nontoxic, used in Recreational Vehicles water tanks)
 3. Channel lock pliers (16" works best for most tubs)
 4. A funnel
 5. Time, expect two to three hours.
- Now that you have those things,
- Drain the spa
 - Vacuum all of the jets and injectors, until there is no more water coming out.
 - Remove your filter and vacuum at the filter plumbing.
 - If you have an air injectors, turn power on , and make sure the pump(s) are NOT running and the heater is not firing; (generally this can only be accomplished by unplugging the pumps from the control box and removing the connections from the heater) then turn your air blower on until water no longer comes out of air holes. Then turn the power back off.
 - Loosen the plumbing connections at your pump and at your heater and remove the freeze plugs on the front face of the pump(s). Vacuum up any water that comes out.
 - Reconnect the plumbing to the heater, the freeze plugs and the lower of the two connections on your pumps.
 - Add RV antifreeze to the pump using your funnel. Most pumps will take approx. 4 oz.

- Reattach your pump unions.
- Add approximately 1oz. of RV anti-freeze to each of the jets. (use funnel)
- Add RV anti-freeze to the plumbing that is attached to your filter until it runs out of the intakes in the foot well of the spa. (This is not possible in all spas)
- Add anti-freeze to the air injectors, this can be tedious but is worth the effort.

In climates that get heavy snows it is a good idea to place some plywood over your cover to help reinforce it.

Then cover the spa with a tarp, and strap the tarp down, this will help keep winter winds from getting to your cover.

In the spring, or when you are ready to start the tub back up.

- Make sure that all fittings are tight.
- Fill with cool water
- Turn the power on.
- Run the jets on high speed for 30 minutes.
- Several times during the 30 minutes that you are running your pump, turn your air blower on and off. This will purge the air lines.
- Drain the spa through all drain lines supplied
- Put your filter in the spa.
- Refill and treat chemically like you would during a water change.

Spa Cabinet Care:

The cabinets are made of Excel-X™, a high quality alternative to wood that is virtually maintenance free, requiring no staining, sealing, or waxing.

To clean the spa cabinet, rinse dirt and dust regularly with clear water. To remove stubborn dirt, grime, and mild discoloration, wash with a mild detergent and warm water.

Protect spa finish - always keep cover on the spa when not in use.

Spa Surface Care and Cleaning

Your spa shell surface is made of acrylic. A minimum amount of care and cleaning will keep your spa looking new for years. Use a spa cleaner for residue and lime build-up at the water level of the spa surface. If you are cleaning the scum line without draining the spa completely it may be necessary to lower the water level 5-7 cm before cleaning to avoid polluting the spa. Cleaner can be applied to the acrylic surface with a soft cloth and wiped clean. Use a non-abrasive household cleaner to clean your spa shell or use a mild dishwashing detergent. Rinse well and dry with a clean cloth.

Never use abrasive cleaners.

NOTE: Do not allow the acrylic surface to come in to contact with products such as acetone (nail polish remover), nail polish, dry cleaning solution, lacquer thinners, gasoline, pine oil, solvents, etc.

Remove dust and dry dirt with a soft, damp cloth. Avoid using razor blades or other sharp

instruments that might scratch the surface.

Light Bulbs / LED Lights

The Spa light bulb / LED lights are serviceable from inside the spa cabinet. Remove the side panel and insulation closest to the light; locate the bracket that holds the bulb. Turn the black bulb holder 90 degrees counter-clockwise; remove from bracket. Pull bulb straight out and replace. Insert bulb holder back into bracket and turn 90 degrees clock-wise to secure.

Spa Cover Care:

Proper care is easy: Once a month, clean and condition the cover according to the maintenance instructions that came with your cover

Even if you don't condition your top vinyl every month, we recommend you give one good treatment just before snow or ice. If possible, treat during the winter too. After every snow fall or ice storm, use a soft broom to remove the accumulation from your Spa cover — this will help preserve your foam cores, and a broom won't damage the vinyl. Handle tie-down straps and handles with care, because in really cold climates, vinyl can crack, since it will not stretch.

For added security in windy and storm conditions, consider using additional tie down straps which lock down tight.

Remove foam cores from the vinyl encasement. Mix two gallons of water, a teaspoon of mild dishwashing soap and one cup of bleach. With a soft bristle brush, scrub the inside of the encasement thoroughly. Then take a wash cloth and wipe down each foam core. Rinse both well. Place the

encasement in the sun and foam cores in the shade to dry. (Do not put foam cores in the sun – they will melt!)

Once everything is dry, spray the cores and inside the encasement with a mildew inhibitor like Pine Sol®. Allow all to dry completely, and then reassemble. The key here is to maintain proper water chemistry to avoid mildew.

If you are using WD-40 to free the Sure-Locs, try using a Q-tip to keep the WD-40 away from your cabinet. (It can damage the finish.)

Thermal Creep

Your Vita spa is manufactured with energy-efficient components and systems that capture heat generated by the equipment, then transfer that heat back to the spa water. In warmer climates or in situations with extended run times, “Thermal Creep” may occur. Thermal Creep is a condition whereby the actual water temperature is higher than the set temperature.

To manage “Thermal Creep” you may:

- ☒ Vent your cover
- ☒ Open the air control
- ☒ Set your filtration cycles to run during the cooler times of the day or at night
- ☒ Reduce the length of your filter cycles
- ☒ Visit your local Vita Spa distributor for additional guidance

Thermal Creep only occurs in well-insulated hot tubs. It is not an indication that something is wrong with your spa or its equipment

COMMON PANEL MESSAGES

Message...	What it is...	What it means...
Pr	Priming mode	Spa is in normal Priming Mode operation
SL	Sleep mode	Spa is in normal Sleep Mode operation
EC	Economy mode	Spa is in normal Economy Mode operation
ST	Standard mode	Spa is in normal Standard Mode operation
IC	Freeze condition	Heater will come on to keep water above 45°F
--	Water temperature	Current water temperature not measured

Message	Meaning	What Happens...	Possible Causes	Action Required
	No message on Display Power has been cut off to the spa			Verify power going to spa. Check for tripped breaker or blown fuse. The control panel will be disabled until power returns. Spa setting will be preserved until the next power up.
HH	“Overheat” - *One of the sensors has detected 118F / 47.8C at the heater	The spa will shut down and will automatically reset once the water temperature has cooled to 108F (42C)	~ Low Water Flow ~ Faulty Equipment	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. ~ Verify all slice valves are locked open ~ Verify Actual water temperature with a digital Thermometer ~ Verify normal operation of pump 1 ~ Verify all spa jets are open. Once the heater has cooled, reset by pushing any button. If the spa does not reset, shut off the power to the spa and call your dealer or service organization.

* - Even when the spa is shut down, some equipment will turn on if freeze protection is needed.

Message	Meaning	What Happens...	Possible Causes	Action Required
OH	<p>"Overheat" - The spa has shut down.</p> <p>* One of the sensors has detected that the spa water is 110F / 43.5C</p>	<p>The spa will shut down and will automatically reset once the water temperature has cooled to 108F (42C)</p>	<p>~ Low Water Flow</p> <p>~ Faulty Equipment</p> <p>~ Extended Filtration Cycles FC - or Continious Filtration</p> <p>~ Thermal Creep</p>	<p>DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 107F / 41.7C, the spa should automatically reset. ~ Verify all slice valves are locked open ~ Verify Actual water temperature with a digital Thermomiter ~ Verify normal operation of pump 1 ~ Verify all spa jets are open This condition can be caused by "thermal creep", additional information on ways to manage and prevent thermal creep are located in this manual. If the spa does not reset, shut off the power to the spa and call your dealer or service organization.</p>
SA	<p>Spa is shut down. *The sensor that is plugged into the "A" jack is not working</p>	<p>The spa will shut down</p>	<p>~ Disconnected or defective sensor</p>	<p>If the problem persists, contact your dealer or service organization. May appear temporarily in an over heat or freeze condition</p>
Sb	<p>Spa is shut down. *The sensor that is plugged into the Sensor "B" jack is not working</p>	<p>The spa will shut down</p>	<p>~ Disconnected or defective sensor</p>	<p>If the problem persists, contact your dealer or service organization. May appear temporarily in an over heat or freeze condition</p>

Message	Meaning	What Happens...	Possible Causes	Action Required
Sn	Sensors are out of balance.	If alternating with spa temperature, it may just be a temporary condition. If flashing by itself, spa is shut down*	May appear temporarily in an over heat or freeze condition	If the problem persists, contact your dealer or service organization. May appear temporarily in an over heat or freeze condition
HL	A significant difference between temperature sensors has been detected. This could indicate a flow problem	Heater will shut down while spa continues to function normally	~ Low water level ~ Dirty spa filter(s) ~ Closed spa jets	Verify water level is within 1/8" from top of weir door - make sure all jets are open, all pumps are operating normally and the spa filter(s) are clean. If the problem persists contact your dealer or service organization
LF	Persistent low flow problems. (Displays on the fifth occurrence of HL message within 24 hours) Heater is shut down, but other spa functions continue to run normally	Heater will shut down while spa continues to function normally	~ Low water level ~ Dirty spa filter(s) ~ Closed spa jets	Follow action required for HL message. Heating capability of the spa will not reset automatically; you may press any button to reset.
dr	Lack of water flowing through the heater	Spa is shut down for 15 minutes	Low water Level, poor flow, or air bubbles detected in the heater.	Verify water level is within 1/8" from top of weir door - make sure all jets are open, all pumps are operating normally and the spa filter(s) are clean. Spa will reset in 15 minutes, if the problem persists contact your dealer or service organization

Message	Meaning	What Happens...	Possible Causes	Action Required
dy	Inadequate water detected in the heater (Displays on the third occurrence of dr message) Spa is shut down.*	Spa is shut down.	Possible inadequate water, poor flow, or air bubbles detected in the heater.	Verify water level is within 1/8" from top of weir door - make sure all jets are open and all pumps are operating normally - verify all jets are open and the spa filter(s) are clean. Spa will not automatically reset, press any button to reset manually. If the problem persists contact your dealer or service organization
IC	"ICE" - Potential freeze condition detected	All Pumps and Blower are ON for at least 4 Minutes After Temp is 45°F (7.2°C) or Above You will not have control of the components during freeze protection. If you spa is configured for "low" amperage your heater may not activate until the freeze condition has cleared.	Cold water - common at start up when the water temperature is below 45°F (7.2°C)	No action required. All equipment will automatically activate regardless of spa status.

COMMON WATER PROBLEMS

Problem	Usual Cause	Solution
Cloudy Water	<ul style="list-style-type: none"> - Inadequate filtration/ dirty filter - Excessive oils/organic matter - Improper sanitation/ bacteria - High pH and/or high alkalinity 	<ul style="list-style-type: none"> - Check to make sure the filter is running properly; clean filter with a filter cleaner or degreaser - Shock the spa with a chlorine or bromine sanitizer, or other shock treatment product - Increase sanitizer level to balance water and shock if needed - Adjust pH; add appropriate sodium bisulfate product - Use clarifier <p>NOTE: If using an ozone generator, consult with your dealer before using polymer based clarifiers</p> <ul style="list-style-type: none"> - Depending on the severity, drain the spa completely, clean and refill
Water Odor	<ul style="list-style-type: none"> - Excessive organics or chloramines; insufficient free available sanitizer - Improper sanitation - Inadequate filtration - Low pH 	<ul style="list-style-type: none"> - Shock the spa with a chlorine or bromine sanitizer/shock, or other shock treatment product - Increase sanitizer level to balance water; shock if needed - Check to make sure the filter is running properly; clean filter with a filter cleaner or degreaser - Raise pH with sodium bicarbonate product. If metals are present, add chelating agent.
Chlorine Odor	<ul style="list-style-type: none"> - Too many chloramines/ insufficient free available chlorine - Low pH 	<ul style="list-style-type: none"> - Shock the spa with a chlorine sanitizer/ shock, or non-chlorine shock treatment - Adjust pH; raise pH with sodium bicarbonate product
Bromine Odor/ Yellow Water	<ul style="list-style-type: none"> - Low pH 	<ul style="list-style-type: none"> - Adjust pH; raise pH with sodium bicarbonate product

Problem	Usual Cause	Solution
Musty Odor	- Bacterial or algae growth	- Shock spa with a chlorine or bromine sanitizer/shock, of equivalent shock treatment product. If problem is visible, drain, clean, refill and balance spa
Foaming/ Scum Ring Around the tub	- Build up of body oils, lotion and chemicals resulting from soap or detergent	- Skim foam off using your leaf net or drain and refill
Algae	- pH Imbalance - Low free chlorine or bromine	- Adjust pH - Shock with a chlorine or bromine
Eye Irritation	- Low pH - Insufficient free available chlorine	- Raise pH with sodium bicarbonate product - Shock with a chlorine sanitizer/shock or other shock treatment product
Skin Irritation/ Rash	- Unsanitary/polluted water - Soaking too long - Chemicals not balanced, excessive ozone	- Keep recommended sanitizer residual at all times; superchlorinate or use a non-chlorine shock treatment - Soak for smaller intervals, such as 15 minutes - Correct chemical imbalance
Scale	- Too much calcium dissolved in water - pH and total alkalinity too high	- Add a scale control product. Adjust total alkalinity and pH levels by adding the appropriate sodium bisulfate product; for concentrated scale deposits - Drain spa, scrub the scale off, refill the spa and balance the water
Erratic pH Test Results/Unusual pH Test Color	- Sanitizer level too high - Old pH indicator dye	- Test the pH, when the sanitizer level is below 5 ppm - Replace the pH indicator dye / test strips

Problem	Usual Cause	Solution
Sanitizer Dissipating Too Rapidly	<ul style="list-style-type: none"> - Excessive organics in water - Temperature too high - Low pH - Low calcium hardness - Low total alkalinity 	<ul style="list-style-type: none"> - Increase shock dosage; add sanitizer; shower before entering spa - Reduce temperature - Raise pH with sodium bicarbonate product - Use chelating agent if metals are present. Keep proper pH level (7.2 to 7.6). - Use chelating agent if metals are present. Maintain minimum 150-200 ppm calcium hardness - Use chelating agent if metals are present. Maintain proper alkalinity for type of sanitizer used.

NOTE: If your source water has a high metal or mineral content, a specialty chemical should be used to avoid staining or accumulation of deposits. These guidelines cover the most common water problems. Contact your dealer for further information regarding chemical control issues.

COMMON HARDWARE PROBLEMS

Problem	Usual Cause	Solution
System not operating	<ul style="list-style-type: none"> - House circuit breaker tripped or in OFF position 	<ul style="list-style-type: none"> - Reset circuit breaker on house breaker panel
Heater not operating	<ul style="list-style-type: none"> - Water level too low - Heater mode not selected - No power to heater 	<ul style="list-style-type: none"> - Add water to reach 1/8" below the top of the weir door - Refer to temperature/heater functioning. See Control instructions pg. 20, 26, or 31 - Check house circuit breaker - Contact dealer
Water not clean	<ul style="list-style-type: none"> - Clogged or blocked floor suction or skimmer - Filter clogged (dirty) - Poor water chemistry - Insufficient filtering time - Improper maintenance - High content of solids in water 	<ul style="list-style-type: none"> - Clean floor suction/skimmer. Remove blockage - Clean or replace - See Maintenance section pg. 41 - Run filtration mode longer - Contact dealer - Use clarifier or drain and refill spa
Abnormal water usage	<ul style="list-style-type: none"> - Excessive evaporation and/or splashing 	<ul style="list-style-type: none"> - Use spa cover and refill as necessary
Overheating	<ul style="list-style-type: none"> - High ambient temperature 	<ul style="list-style-type: none"> - Contact dealer
Low water flow from jets	<ul style="list-style-type: none"> - Operating in FILTER mode-low speed - Clogged or blocked suction or skimmer - Dirty filter - Jets in OFF position - Slice valves closed 	<ul style="list-style-type: none"> - Select hi-speed jets - Clean floor suction/skimmer. Remove blockage - Clean or replace - Open jets - Contact dealer
Noisy pump and motor	<ul style="list-style-type: none"> - Clogged floor suction or skimmer - Low water level - Damaged or worn motor bearings 	<ul style="list-style-type: none"> - Clean floor suction/skimmer - Add water to normal water level (15cm below lip) - Contact dealer

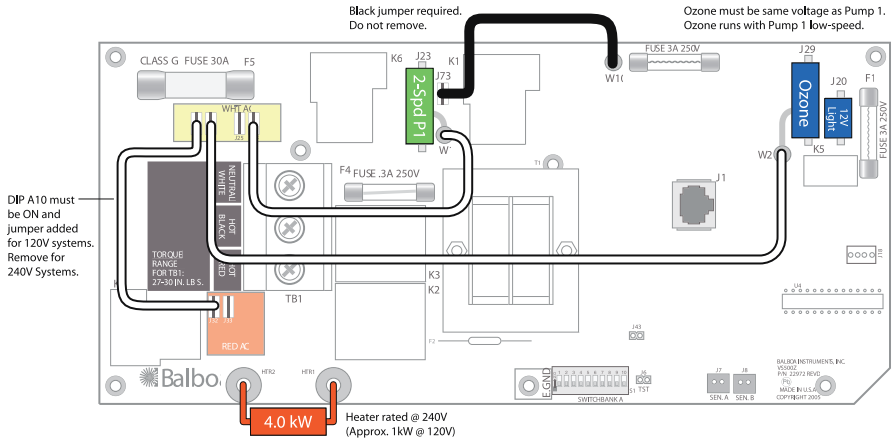
Problem	Usual Cause	Solution
No water flow from jets	<ul style="list-style-type: none"> - Pump not primed - Adjustable jets turned off - House circuit breaker tripped, no power to system - Faulty pump or motor - Pump surges - Slice valves closed 	<ul style="list-style-type: none"> - See Priming section, pg. 16 - Turn on jets - Reset circuit breaker at house panel - Low water. Check level on Weir door - Contact dealer
Water leakage from under spa	<ul style="list-style-type: none"> - Check unions & drain hoses 	<ul style="list-style-type: none"> - Close or tighten as necessary
No air flow from jets	<ul style="list-style-type: none"> - Air control not open - Jet nozzle not seated properly - Jet nozzle missing 	<ul style="list-style-type: none"> - Open control - Check jet nozzles - Inspect jets and replace as needed
Motor will not operate	<ul style="list-style-type: none"> - House circuit breaker tripped or in OFF position - Improper or defective wiring or electrical supply - Thermal Overload Protection switch tripped 	<ul style="list-style-type: none"> - Reset circuit breaker - Contact dealer - Auto reset after motor has cooled. Contact dealer if motor continues to cycle
Black powder film around water line	<ul style="list-style-type: none"> - Wearing in of turbo/blower brushes 	<ul style="list-style-type: none"> - Will disappear after use
The spa will not shut off	<ul style="list-style-type: none"> - Spa trying to heat - Spa is in filter cycle - Spa is in Standard Mode 	<ul style="list-style-type: none"> - Check 'Set Temperature' in Standard Mode - Normal. No need to change - Check mode setting

SPA SOAKING GUIDELINES

1. Persons with heart disease, diabetes, blood pressure or circulatory abnormalities, a serious illness, or pregnant women should not enter a spa without prior consultation with their doctor.
2. People with skin, ear, genital or other body infections, open sores, or wounds should not use the spa because of the possibility of spreading infection.
3. Before entering, look at the water in your spa. If there is cloudiness, foaming, or if a strong chlorine smell is present, the water needs treatment. Properly maintained water will greatly reduce potential skin rash (pseudomonas). Ask your Authorized Vita Spa Dealer for guidance.
4. Shower with soap and water before and after using the spa. Showering before use removes many common skin bacteria, perspiration, lotions, deodorants, creams, etc. that may reduce the effectiveness of the sanitizer and lessen the ability of the filter to work efficiently. Showering after use will help reduce skin irritation that may result from contact with spa chemicals.
5. Enter the spa slowly and cautiously. Be careful of your footing, and allow your body to gradually adjust to the water temperature. Exit slowly to accommodate relaxed leg muscles and possible light-headedness.
6. Soaking for too long may cause some users to feel nauseous, dizzy, or light-headed. If you wish to soak in high temperature water (104°F, 40°C), leave the spa after 15 minutes, shower, cool down and then return for another brief stay. In lower temperatures (e.g. 98.6°F, 37°C, normal body temperature) most people can comfortably and safely soak for longer periods at one sitting. If you have any questions about what's right for you, your family, or other guests, consult your doctor.
7. Be sure you check the water temperature before entering, and while using the spa.
8. Never use the spa while under the influence of alcohol.
9. Consult your doctor about potential harmful effects of using drugs or medications while hot water soaking.
10. **Never use the spa when you are alone.**
11. **Never allow children or elderly adults to use the spa unsupervised.**

300 SERIES SYSTEM WIRING DIAGRAM

Wiring Diagram For Duet

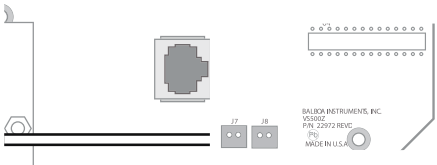
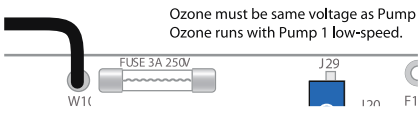
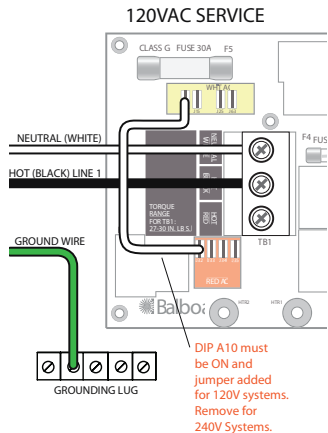


WARNING: Main Power to system should be turned OFF BEFORE adjusting DIP switches.
WARNING: Persistent Memory (J43) must be RESET to allow new DIP switch settings to take effect. (See Persistent Memory page)

SSID #
 100
 59
 41

Switchbank A

A1, Test Mode OFF	A6, 60 Hz
A2, P1, LT, TD, TU	A7, Mode changes allowed
A3, Duplex Panel	A8, Degrees F
A4, N/A (must be OFF)	A9, P1-low timeout, Table 1
A5, P1-high timeout, Table 1	A10, High Amp mode



SAFETY SIGN

The safety sign enclosed with your Owner's Manual should be permanently installed where visible to all users of the spa. This sign is adhesive backed and includes four screws for mounting the sign on rough surfaces. It is very important that you, as a spa owner, review the important safety instructions and warnings before you operate your spa. It is equally important that you instruct all users, even occasional ones, as to the warnings associated with spa use. You may obtain additional signs by contacting :

USA: MAAX Spas Industries Corp.
Customer Service
25605 South Arizona Avenue
Chandler, Arizona 85248
www.maaxspas.com

LIMITED WARRANTY SUMMARY

Please refer to the Warranty Card included with your product for complete warranty information. In order to receive prompt warranty service, you must return your warranty card, completed with model and serial number, to your dealer immediately upon completion of the spa installation. MAAX Spas Industries Corp. provides a limited warranty to our customers. It applies to the spa structure, surface, plumbing, pumps, heater, blower, and controls. The limited warranty does not cover damage resulting from improper maintenance, improper installation, misuse, abuse, neglect,, accident, fire, normal wear and tear, or improper water maintenance. Unauthorized modifications of the spa may void the warranty. Replacement cost associated with transportation, removal and reinstallation are the sole responsibility of the spa owner. This manual refers to only year 2010 Vita model spas. MAAX Spas Industries Corp., reserves the right to make changes in design or material of its products at any time without incurring liability. This limited warranty applies to the first retail purchaser and terminates upon any transfer of ownership.

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Disclaimer:

The information in this manual is accurate to the best of MAAAX Spas Industries Corporations' knowledge. However, MAAAX Spas Industries Corporation assumes no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from use of the information contained herein. Specifications subject to change without notice. Spas shown at percentage of actual size.

Congratulations on your purchase of an Vita Spa from MAAAX® Spas. Your Owner's Manual provides installation, operation and maintenance instructions. Please review it and keep it for future references.

**Save These Instructions
Owner's Record Information**

Date Purchases : _____

Purchased From : _____

Phone Number : _____

Installed By : _____

Serial Number : _____ Model : _____

Your Vita Spa® dealer:



25605 South Arizona Avenue, Chandler, Arizona 85248
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MEMBER

