SpaBerr™

2018
OWNER'S MANUAL

SpaBerr™

Owner's Manual
Table of Contents

SpaBerry™

Owner's Manual

IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

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

- **Risk of Accidental Drowning.** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use or approach the spa unless they are supervised at all times.
- **Risk of Serious Injury or Death.** The suction fittings in this SpaBerry are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the SpaBerry 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.
- **Risk of Electric Shock.** Install at least 5 FEET (1.5 m), from all metal surfaces. As an alternative, a SpaBerry may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum No. 8 AWG (8.4 mm^2) solid copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment can.
- **Risk of Electric Shock.** Do not permit any electrical appliance, such as a light, telephone, radio, television, etc. within 5 ft/1.5m of a SpaBerry. Never operate any electrical appliances from inside the SpaBerry or when you are wet.
- The electrical supply for this SpaBerry must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with section 680-42 of the National Electrical Code, ANSI/NFPA 70-1993. The disconnect must be readily accessible and visible to the spa occupant but installed at least 5 feet (1.5 m), from the SpaBerry's water.
- A grounding wire connector is provided on the SpaBerry to connect a minimum No. 8 AWG (8.4 mm^2) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5 m) of the spa.
- Do not attempt to remove the light housing cover without lowering the water level below the light housing cover.
- **To Reduce the Risk of Injury:** The water in a SpaBerry should never exceed 104° F (40° C). Water temperatures between 100° F (38° C) and 104° F (40° C) are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when the SpaBerry's use exceeds 10 minutes.
- **To Reduce the Risk of Injury:** Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 100° F (38° C).
- **To Reduce the Risk of Injury:** Before entering a SpaBerry, 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.
- **To Reduce the Risk of Injury:** The use of alcohol, drugs, or medication before or during SpaBerry use may lead to unconsciousness with the possibility of drowning.
- **To Reduce the Risk of Injury:** Pregnant women, the elderly, infants, or persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes, should consult a physician before using a SpaBerry. Pregnant or possibly pregnant women should not enter water warmer than 100° F (38° C).
- **To Reduce the Risk of Injury:** Persons using medication should consult a physician before using a SpaBerry since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure, and circulation.
- Observe a reasonable time limit when using the SpaBerry. Long exposures at high temperatures can cause high body temperature. Symptoms may include dizziness, nausea, fainting, drowsiness, and reduced awareness. These effects could result in possible drowning.

We do not recommend the use of Hydrogen Peroxide based products. The Spa Warranty will become void if Coast Spas or any of its retail selling dealer or servicing agents determines that Hydrogen Peroxide has been used in the Spa.

Owner's Manual

- Enter and exit the SpaBerry slowly. Wet surfaces can be very slippery.
- Proper chemical maintenance of SpaBerry's water is necessary to maintain safe water and prevent possible damage to spa components.
- Use the SpaBerry straps and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the SpaBerry and keep the SpaBerry cover secure in high wind conditions. There is no guarantee that the cover, clip tie downs, actual locks will prevent access to the SpaBerry.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS (CANADA) (CSA SAFETY INFORMATION)

In addition to the preceding safety instructions, Canadian owners should read and understand the following information from the Canadian Safety Association:

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

- A green colored terminal or a terminal marked G, GR, Ground, Grounding, or the symbol * is located inside the supply terminal box or compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying this equipment.
- IEC Publication 417, Symbol 5019.
- 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 SpaBerry to these terminals with an insulated or bare copper conductor not smaller than No. 6 AWG.
- All field-installed metal components such as rails, ladders, drains or other similar hardware within 3 meters of the SpaBerry shall be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG.
- Children should not use a SpaBerry without adult supervision.
- **AVERTISSEMENT:** NE PAS LAISSER LES ENFANTS UTILISER UNE CUVE DE RELAXATION SANS SURVEILLANCE.
- Do not use a SpaBerry unless all suction guards are installed to prevent body and hair entrapment.
- **AVERTISSEMENT:** POUR ÉVITER QUE LES CHEVEUX OU UNE PARTIE DU CORPS PUISSENT TRE ASPIRÉS, NE PAS UTILISER UNE CUVE DE RELAXATION SI LES GRILLES DE PRISE D'ASPIRATION NE SONT PAS TOUTES EN PLACE.
- People using medications and/or having adverse medical history should consult a physician before using a SpaBerry.
- **AVERTISSEMENT:** LES PERSONNES QUI PRENNENT DES MÉDICAMENTS OU ONT DES PROBLÈMES DE SANTÉ DEVRAIENT CONSULTER UN MÉDECIN AVANT D'UTILISER USE CUVE DE RELAXATION.
- People with infectious diseases should not use a SpaBerry.
- **AVERTISSEMENT:** LES PERSONNES ATTEINTES DE MALADIES INFECTIEUSES NE DEVRAIENT PAS UTILISER UNE CUVE DE RELAXATION.
- To avoid injury, exercise care when entering or exiting the SpaBerry.
- **AVERTISSEMENT:** POUR ÉVITER DES BLESSURES, USER DE PRUDENCE EN ENTRANT DANS UNE CUVE DE RELAXATION ET E SORTANT.
- Do not use drugs or alcohol before or during the use of a SpaBerry to avoid unconsciousness and possible drowning.
- **AVERTISSEMENT:** POUR ÉVITER L'ÉVANOUISSEMENT ET LA NOYADE EVENTUELLE, NE PRENDRE NI DROGUE NI ALCOOL AVANT D'UTILISER UNE CUVE DE RELAXATION NI QUAND ON S'Y TROUVE.

Owner's Manual

- Pregnant or possibly pregnant women should consult a physician before using a SpaBerry.
- **AVERTISSEMENT:** LES FEMMES ENCEINTES, QUE LEUR GROSSESSE SOIT CONFIRMÉE OU NON, DEVRAIENT CONSULTER UN MÉDECIN AVANT D'UTILISER UNE CUVE DE RELAXATION.
- Water temperature in excess of 38° C may be injurious to your health.
- **AVERTISSEMENT:** IL PEUT TRE DANGEREUX POUR LA SANTÉ DE SE PLONGER DANS DE L'EAU À PLUS DE 38°C.
- Before entering the SpaBerry, measure the water temperature with an accurate thermometer.
- **AVERTISSEMENT:** AVANT D'UTILISER UNE CUVE DE RELAXATION MESURER LA TEMPÉRATURE DE L'EAU À L'AIDE D'UN THERMOMÈTRE PRÉCIS.
- Do not use a SpaBerry immediately following strenuous exercise.
- **AVERTISSEMENT:** NE PAS UTILISER UNE CUVE DE RELAXATION IMMEDIATEMENT APRÈS UN EXERCICE SATIGANT.
- Prolonged immersion in a SpaBerry may be injurious to your health.
- **AVERTISSEMENT:** L'UTILISATION PROLONGÉE D'UNE CUVE DE RELAXATION PEUT TRE DANGEREUSE POUR LA SANTÉ.
- Do not permit electric appliances (such as a light, telephone, radio, television, etc.) within 1.5m of this SpaBerry.
- **AVERTISSEMENT:** NE PAS PLACER D'APPAREIL ÉLECTRIQUE (LUMINAIRE, TÉLÉPHONE, RADIO, TÉLÉVISEUR, ETC.) À MOINS DE 1.5 M DE CETTE CUVE DE RELAXATION.
- Maintain water chemistry in accordance with manufacturer's instructions.
- **ATTENTION:** LA TENEUR DE L'EAU EN MATIERÈS DISSOUTES DOIT TRE CONFORME AUX DIRECTIVES DU FABRICANT.
- The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in a SpaBerry.
- **AVERTISSEMENT:** LA CONSOMMATION D'ALCOOL OU DE DROGUE AUGMENTE CONSIDÈRABLEMENT LES RISQUES D'HYPERTHERMIE MORTELLE DANS UNE CUVE DE RELAXATION.

SAVE THESE INSTRUCTIONS

Hyperthermia

Prolonged immersion in hot water may cause hyperthermia. A description of the causes, symptoms, and effects of hyper-thermia 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, or 37° C. The symptoms of hyperthermia include dizziness, drowsiness, lethargy, and fainting. The effects of hyperthermia include:

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

Safety Do's and Don'ts

- **DO** read all operating instructions.
- **DO** read, understand and follow all Safety, Danger and Warning instructions before use.
- **DO** test water temperature with your hand before entering to be sure that it's comfortable.
- **DO** keep the SpaBerry cover closed when the SpaBerry is not in use. This is important for safety and for economical spa operation.
- **DON'T** block the equipment compartment vents. Blockage may cause damage to the SpaBerry equipment and will void the warranty.
- **DON'T** block or sit on the filter recess area.
- **DON'T** allow horseplay or unsupervised use of your SpaBerry.
- **DON'T** allow anyone to tamper or play with any of the safety or suction fittings of your SpaBerry.

Owner's Manual

Warning Signs

Each SpaBerry has been provided with a Warning Sign, Important Notice label and a Freezing Warning.
Always Attach Spa Cover and lock cover clips after each use.

⚠ WARNING

DURING PREGNANCY, SOAKING IN HOT WATER MAY CAUSE DAMAGE TO THE FETUS.
LIMIT USE TO 10 MINUTES AT A TIME.

PREVENT DROWNING

SPA HEAT SPEEDS UP EFFECTS OF ALCOHOL, DRUGS, OR MEDICINE AND CAN CAUSE UNCONSCIOUSNESS.

IMMEDIATELY LEAVE SPA IF UNCOMFORTABLE OR SLEEPY.

PREVENT CHILD DROWNING

WATER ATTRACTS CHILDREN.

ALWAYS ATTACH A SPA COVER AFTER EACH USE.

This label outlines safety precautions. This sign should be permanently placed in a location that is visible to the SpaBerry user. Replacement signs can be obtained from:

www.thespaberry.com

⚠ IMPORTANT

This spa is insulated with high-density urethane foam for structural support and energy efficiency. When empty of water and left in direct sunlight without the spa cover in place, the spa is vulnerable to ultra violet or solar damage. Temperatures generated by sunlight can become concentrated in the spa shell surface causing the shell material to delaminate from the urethane foam backing. This occurrence is considered abuse and may result in blisters, bubbles, or large layer delaminations. **This occurrence is not covered under warranty.** The spa cover must be kept on the spa while empty of water.

NOTE: THIS MARKING IS TO BE REMOVED ONLY BY THE OWNER.

WARNING
DO NOT FILL SPA WITH WATER DURING FREEZING CONDITIONS
Damage due to freezing is not a warrantable condition

SpaBerry™

Owner's Manual

Features of the SpaBerry

Congratulations on the purchase of your SpaBerry! Take the time to read these instructions carefully. If installed and maintained properly your spa will provide many years of enjoyable, trouble-free operation. Read all of the instructions for further reference on SpaBerry operation.

The following features are included on your SpaBerry:

- Tested to UL 1563
- 110 Volt Operation, convertible to 220V by a licensed electrician
- Completely self-contained
- Built-in, automatic freeze protection
- Two person capacity
- Designed for indoor or outdoor use
- Top access, easy to clean filter system
- Water level referencing Weir Skimmer
- Long life, dual speed pump
- 35 sq. ft. of filtration

Installation

Location and Setup

Before attempting to install or use your SpaBerry, please read these instructions thoroughly. Because your SpaBerry is completely self-contained, you can install it just about anywhere you wish . . . on a deck, patio, or even indoors. Just be sure to position it above ground, in an area with good drainage and on a level surface that fully contacts the bottom of the SpaBerry.

A concrete slab is best but not required. You may choose to install it on a wood deck. If you choose to install your SpaBerry on a raised deck or indoors, we recommend you contact a licensed contractor to confirm the surface will hold a SpaBerry filled with water. Movement of your deck or slab may result in damage to the SpaBerry, which is not covered by warranty. Wherever you plan to install your SpaBerry, be sure the surface is flat and solid. Locate your SpaBerry so that the equipment is above grade and not subject to flooding. Water should always drain away from the SpaBerry. If you are placing your SpaBerry next to an obstacle, such as a fence or wall, be sure that you place the SpaBerry with the equipment compartment facing forward for easy equipment access.

NOTE: If you install the SpaBerry indoors, the surrounding area should be waterproof or water resistant. Water may splash out during normal usage and when entering or exiting the SpaBerry. Spa-Berry is not responsible for any water damage, humidity damage to any indoor location for any reason.

SpaBerrys are equipped with a locking cover that meets or exceeds ASTM F1346-51 Safety Standard for Covers," but is not an adequate safety measure to prevent unsupervised entry.

WARNING AVOID DROWNING RISK

FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN INJURY OR DROWNING NON-SECURED OR IMPROPERLY SECURED COVERS ARE A HAZARD.
REMOVE COVER COMPLETELY BEFORE ENTRY OF BATHERS.
ENTRAPMENT POSSIBLE.
KEEP COVER ON SPA AND LOCKED WHEN NOT IN USE

SpaBerr™

Owner's Manual

Spa Cover Installation Instructions

Required Tools:
Drilling Machine
Drill bit, 3/32"
Phillips screwdriver
Marking Pen
Masking Tape

Using masking tape, tape the drill bit about ½" from the tip. This will be the limit of the depth of the drilling to be made.

1. Place cover on the spa. Be sure it is correctly positioned.

2. Position the tie-down hardware with the latch (attached to the straps of your cover) on the side of the spa.
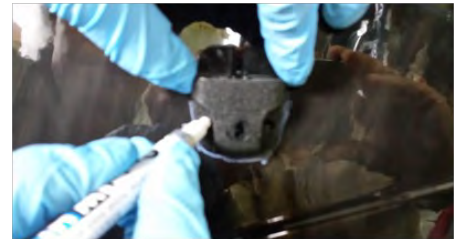

3. With the straps pulled taut (not overly tight), use a suitable colored pen to mark the location of the latch placement.

4. Position the latch with reference to the mark.

5. Mark the position of the holes for screw through the latch.

6. Drill the 2 pilot holes. Do not drill beyond the ½" limit set by the masking tape on the drill bit.

7. Using the screws provided, attach the latch to the spa.

8. Keep cover fastened down at all times when not in use. Locking hardware may be locked with a key (provided).

SpaBerry Door

IMPORTANT!

PROPER METHOD FOR ATTACHING EQUIPMENT DOOR

STEP #1   Insert the (5) equipment door bolts and turn until they are loosely threaded in the order shown below.

STEP #2   In the same order as STEP #1, turn each door bolt until gently snug. DO NOT OVERTIGHTEN.
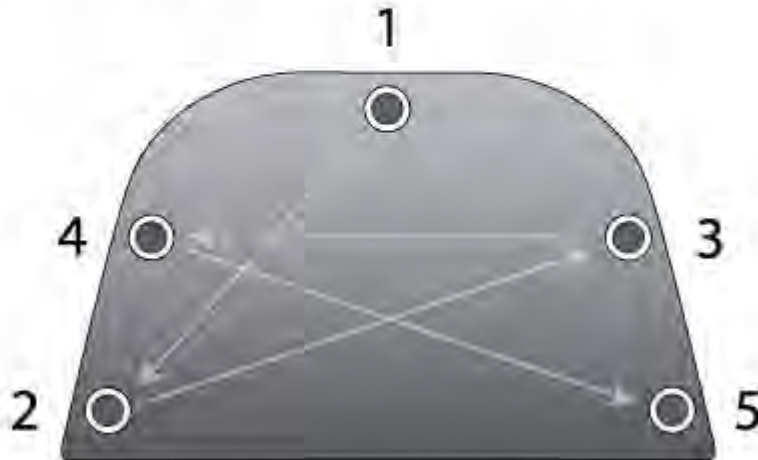
All hardware must be protected from dirt and moisture
Do not use ANY tools to tighten equipment door bolts.

Warning! Failure to follow these procedures may cause the acrylic access door to become damaged and/or cracked.

Electrical Connections and Filling

⚠️ **Warning** **Do not turn on electrical power to your SpaBerry until told to do so later in this manual.**

To hook up your SpaBerry, follow these instructions:

1. Remove the filter cartridge outer lock ring by turning counterclockwise and then lift up to remove it. Lift the center float up and out to expose the filter cartridge.

2. Remove the filter cartridge by turning the cartridge counterclockwise 2-3 rotations. Lift cartridge out of the canister.

NOTE It is very important that you read the **Water Care Guide** section before filling your SpaBerry

WARNING: Do NOT fill spa with water in freezing conditions. When below 0°C/32°F, the water will freeze. Damage due to freezing is NOT a warrantable defect.

3. Place a hose in the empty skimmer receptacle and fill the SpaBerry from 1" above the highest jet to 5" from the top of the spa. Always use cold water when filling spa to prevent shell damage.
4. Connect the power cord, coming from under the SpaBerry to a properly rated outlet. A dedicated 15 amp circuit should be used for premium performance of spa. This means no other plugs on this circuit.
5. Once the SpaBerry is filled, replace the filter and turn on the power at the GFCI circuit interrupter. Push the JETS button twice to turn the pump on to high speed. Let the system run for 30-45 seconds to prime the pump. Then push the button again to shut the pump off. If the jets do not start, there is air trapped in the plumbing lines. To eliminate the trapped air, turn the pump on and off several times to force the trapped air through the pumps. If you are finding this difficult there is an air bleed valve in the equipment area. Shut the pump off and then open this valve until water starts to come out. Close the valve and turn the pump on again. Repeat if necessary.
6. Within 4-6 minutes after the power is turned on, the SpaBerry will automatically begin its first one-hour filtration cycle (this cycle may be interrupted if the jet pump is being turned on and off at the time). If there is no jet action during the filter cycle, repeat the pump priming steps described in step 6 above. Once the jets are working properly, turn the power off and on again at the GFCI to reset the Start Time of the filtration cycle, which will begin 4-6 minutes after the power is turned back on.
7. The SpaBerry will automatically filter itself twice each day. During each filter duration cycle, the pump will run on low-speed for the duration of the cycle. The second filter cycle will begin 12 hours after the start of the first. To set a different start time for the filter cycles, you can turn the power to the SpaBerry off then back on using the GFCI breaker at the time of day you would like the cycle to run.
8. Now set the water temperature by pushing the UP/DOWN Buttons until the desired water temperature (called the "Set Temperature") appears in the Display Window. The SpaBerry will not allow the temperature to be set above 104°F (40° C). After a few seconds, the screen will revert to showing the current SpaBerry water temperature. Whenever the temperature falls below the Set Temperature, the SpaBerry will turn on the heater and run the pump at low speed to bring it back up to the Set Temperature.

NOTE To confirm that the heater is on the Heat Indicator light on the control panel will glow.

9. After completing the above steps, see the Water Care Guide section to ensure proper water chemistry
10. Place the SpaBerry cover on the SpaBerry to conserve energy and keep it ready for use.

⚠️ **Warning** **DO NOT ENTER THE WATER** if the water temperature is in excess of **104°F.** Always test your water temperature with an accurate thermometer.

Owner's Manual

Initial Start-up

IMPORTANT: About the GFCI Circuit Interrupter — The GFCI (Ground Fault Circuit Interrupter is an electrical safety switch that automatically shuts off power to the SpaBerry in case of an electrical malfunction. The GFCI should be OFF before the SpaBerry is filled. Manually turn off power to the SpaBerry any time by using the GFCI. Just push the switch to the TEST position. After turning off the GFCI, make sure the control panel display window is blank, to know the power is off. When the power is ready to turn back on, reset the GFCI by pressing the RESET button. Do not use your SpaBerry unless you understand the operation of the GFCI. SpaBerry owners should test gfci monthly to ensure protection. To do this, press the Test button and verify the spa shuts down.

The GFCI is in the 120V cord. The cord comes out of the equipment base on the left side. The outlet that you connect the SpaBerry to must be rated at 120 volts and 15 amperes.

Note: SpaBerry is convertible to 220V. If you choose to convert to 220V, you must install a 30 or 40 amp GFCI breaker. It is recommended that this be done by a licensed electrician. Minimum wire size is #8. All connections must conform to local electrical codes. Power connections, and control jumper settings are contained in the wiring diagram inside the control panel cover. *** By converting the spa to 220V you will have increased heater performance from 1Kw to 4Kw. This will also allow the heater to run while the pump is in high speed.*** Please follow the instructions on 120 to 220 VAC Conversion Guide on the next page.
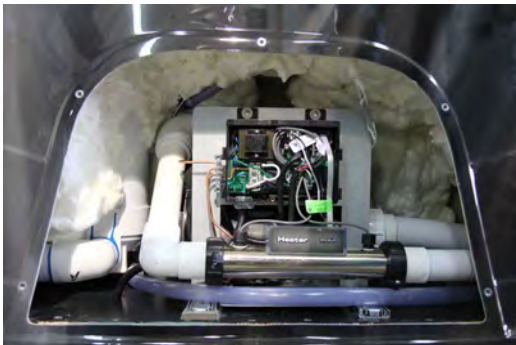
1. Locate the equipment compartment
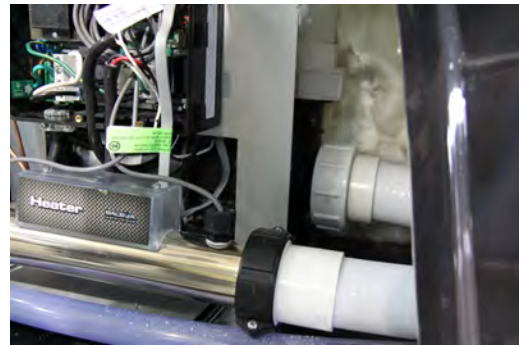
2. Check that the pump unions (in illustration) are hand tight to prevent the possibility of leakage.

IMPORTANT!

PROPER METHOD FOR ATTACHING EQUIPMENT DOOR

STEP #1   Insert the (5) equipment door bolts and turn until they are loosely threaded in the order shown below.

STEP #2   In the same order as STEP #1, turn each door bolt until gently snug. DO NOT OVERTIGHTEN.

All hardware must be protected from dirt and moisture
Do not use ANY tools to tighten equipment door bolts.

Warning! *Failure to follow these procedures may cause the acrylic access door to become damaged and/or cracked.*

SpaBerry™
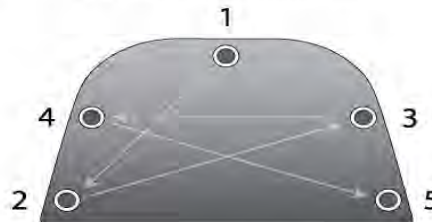
Owner's Manual
120 to 220 VAC Conversion Guide

ALL SPA INSTALLATION OR REPAIRS MUST BE DONE BY A CERTIFIED ELECTRICIAN IN ACCORDANCE WITH THE COUNTRY OR LOCAL ELECTRICAL CODES IN EFFECT AT THE TIME OF THE INSTALLATION.
PLEASE NOTE, SOME JURISDICTION MAY REQUIRE THE HOME OWNER TO TAKE AN ELECTRICAL PERMIT OUT WITH LOCAL SAFETY AUTHORITY SO PLEASE MAKE SURE PROPER STEPS ARE FOLLOWED IN THIS REGARD.

Steps to connect to 220 VAC
1.) Disconnect the power cord wires connected into the main circuit board terminal
2.) Remove the power cord from the spa pack
3.) Move the Jumper in J11 from vertical to horizontal position as shown in figure 2 (on next page). Make sure this jumper is on both pins.
4.) Remove the jumper wire from J28 and J57 shown in figure 3 (on next page).
5.) Wire connection on main circuit board terminal (top to bottom) as shown in figure 4 (on page 14):
  - Leave the top empty.
  - Connect (white/blue wire) Neutral on the second.
  - Connect (black wire) Line 1 on third from the top.
  - Connect (red wire) on Line 2 fourth from the top.

6.) Connect the ground copper wire in the outside ground lug as shown in Figure 4 (on page 14).
7.) Make sure all wires are connected properly and are not damaged in any way.
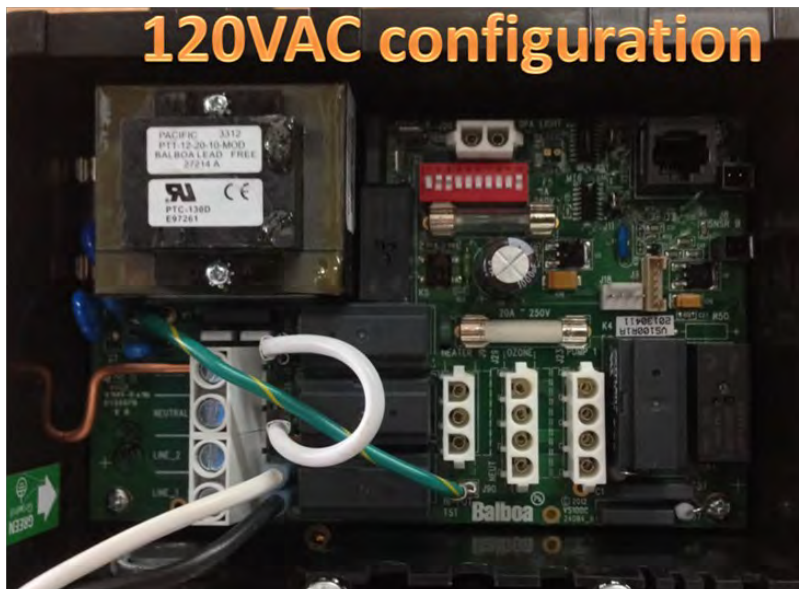

FIGURE 1—120 VAC Configuration

120 to 220 VAC Conversion Guide….continued

FIGURE 2— Jumper in Horizontal Position

FIGURE 3—Remove Jumper from J28 and J57

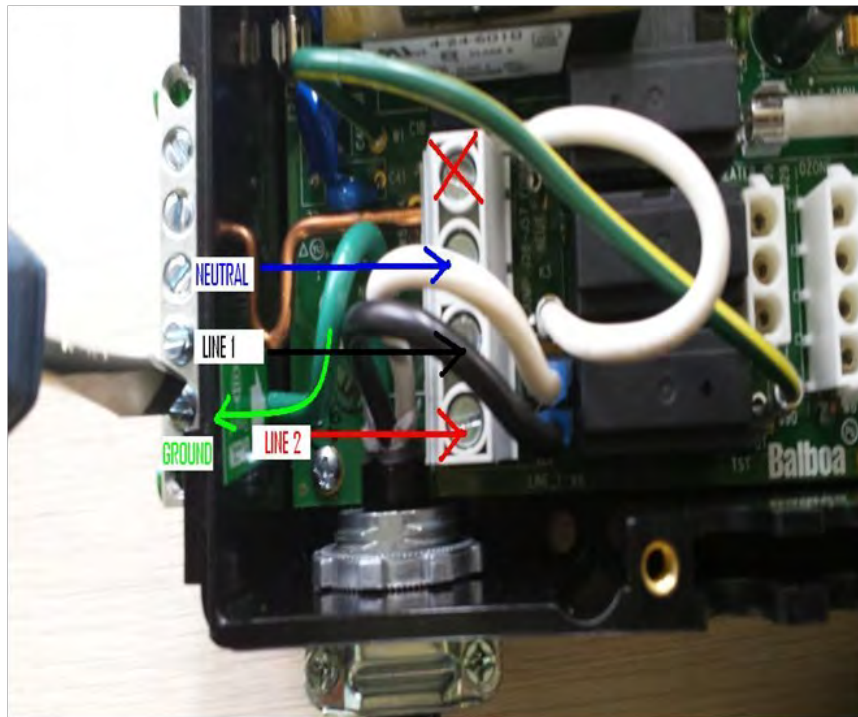# 120 to 220 VAC Conversion Guide….continued
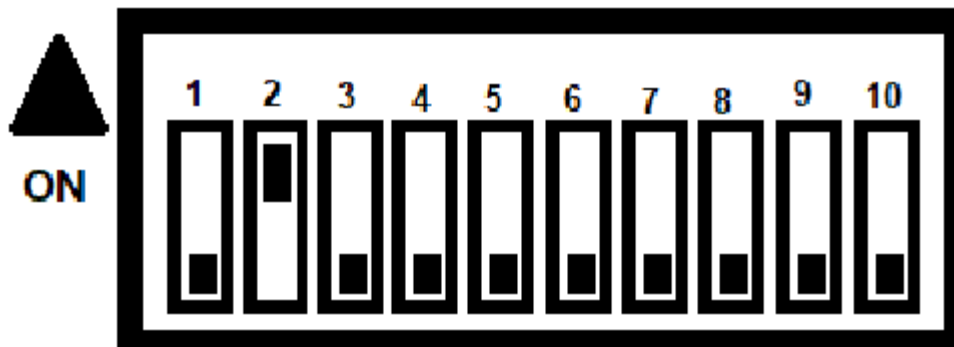

FIGURE 4—Power Wire Connections

FIGURE 5—Dipswitch #A2

Dip switch 2 in "ON" position → Heater can run while pump is in low and high speed (High amperage) shown in figure 5.

Operation

Before using your SpaBerry you should read and become completely familiar with the content of this section.

Location of SpaBerry Components

The SpaBerry components consist of two seats, two Poly Rotator jets, two Poly Directional jets, two Poly Massage jets, one Front access light, water feature with on/off valve, two suction fittings, one Weir skimmer, and an equipment compartment.

The following three photographs show the location of these components.

Skimmer   Front Access Light   Poly Massage Jet   Suction   Poly Directional Jet   Poly Rotational Jet
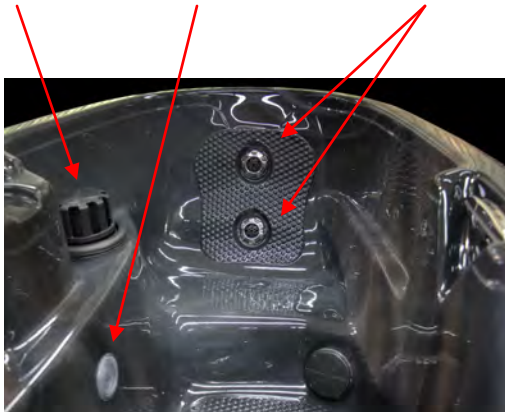
The direction of the Poly Directional jet is adjustable by turning the nozzle in the desired direction. Also, it may be turned on or off. To do this, simply turn the outer part (or face) of the jet clockwise to shut it off and counterclockwise for the fully on position.

The Poly Rotational jet will rotate in a circular motion as the water passes through it. Also, it may be turned on or off. To do this, simply turn the outer part (or face) of the jet clockwise to shut it off and counterclockwise for the fully on position.

The Poly Massage jet will rotate in a circular motion as the water passes through it. Also, it may be turned on or off. To do this, simply turn the outer part (or face) of the jet clockwise to shut it off and counterclockwise for the fully on position.

If the heater is on and the pump is turned to high speed, the heater will turn off. This feature keeps the control system within the 15 ampere limit.

Special Feature

15

On/Off Valve for the Water feature

The On/Off valve (left) will control the waterfall in your SpaBerry. Once you have turned the jets on, turn the valve to adjust the water flow from this waterfall.

Suction Fitting

The **Suction Fittings** are located near the bottom of the SpaBerry and allow the water to be pulled from the SpaBerry and sent to the pump for re-circulation.

Weir Skimmer

This device removes floating debris from the water surface. This device provides a water return path to the SpaBerry's equipment and flow through the filter element. See Filter Cleaning for cleaning the filter.

Equipment Compartment

The equipment compartment contains the pump, heater, control box, and temperature regulator. See Operation for more information on these components.

Owner's Manual

Control Panel Operation

Control the functions of your spa using the topside Control Panel. Understand the following information before starting up the spa.

	1. Display Window The Display Window shows the current status of the SpaBerry: its monitoring functions, self-diagnostics, or programming messages. By default this will show the SpaBerry's water temperature
	2. FILTER Indicator Light This light glows when a filter cycle is in progress.
	3. SET Indicator Light This light glows when you are changing any of the settings.
	4. HEAT Indicator Light This light glows when the heater is on.
	5. JETS Button Pushing the JETS Button once starts the pump on LOW speed. Pushing it a second time turns on HIGH speed. Pushing it a third time turns the pump off. If there is a need for heat the pump will remain on in low gear.
	6. LIGHT Button Your SpaBerry is equipped with an LED main light. Pushing the Light Button once turns the LED on. Pushing it a second time turns the LED off. For more information about the programming functions of your LED, please consult the LED section of this manual.
	7. TEMPERATURE Buttons Control the water temperature with the Up (+) and Down (-) Buttons. Push a button once to change the temperature by one degree, or hold it down to rapidly change it by many degrees. The temperature can be set no higher than 104 ° F (40° C). After the desired temperature is set, the Display Window will revert to showing the actual water temperature. The SpaBerry will heat to the new Set Temperature automatically.
	8. PROGRAM Button Push PROGRAM to begin the process of programming the SpaBerry functions. See the section on "Programming the SpaBerry Functions" for details.

Owner's Manual

Programming the SpaBerry Functions
Heat Modes (via the Program Button)

Standard Mode: maintains the desired temperature. Note that the last measured spa temperature displayed is current only when the pump has been running for at least 1 minute. "**STD**" will appear on the display momentarily when you switch into Standard Mode.

Economy Mode: heats the spa to the set temperature only during filter cycles. "**ECN**" will alternate with the temperature when the temperature is current. "**ECN**" will alternate with "- - -" when the temperature is not current.

Pressing "Jets" while in economy mode puts the spa in **Standard-In-Economy-Mode**, ("**SE**") which operates the same as Standard Mode, then reverts to economy mode after 1 hour. During this time, pressing and releasing "Program" will revert the mode to Economy immediately.

Sleep Mode: heats the spa to within 20°F/11°C of the set temperature only during filter cycles. "**SLP**" will alternate with the temperature when the temperature is current. "**SLP**" will alternate with "- - -" when the temperature is not current.

The Program button is used to switch between Standard, Economy, and Sleep modes. Press and release "Program" to enter Mode Programming, press "Down" to cycle through to desired mode (LED display flashes until confirmed), then press "Program" to confirm selection.

Filter Cycles & °F vs. °C (via the Program Button)

The pump will run in low speed during filtration.

The first filter cycle ("day") begins 6 minutes after the spa is powered on. The second filter cycle ("night") begins 12 hours after the first one. Filter duration is programmable for 0.5-6.0 hours ("**F0.5**"-"**F6.0**"). The default filter duration is 2 hours.

The **Program** button is used to set filtration cycles. Hold down "Program" for at least 3 seconds. When Filter Duration appears, press "Down" or "Up" to select the filter duration. Press "Program" to select the number of filter cycles. The display will show "**dn**" (both "day" and "night" cycles); "**d**" ("day" cycle only); or "**n**" ("night" cycle only). Press "Down" or "Up" to adjust.

The **Program** button is also used to change between °F and °C. After filtration is set, press "Program" to select Fahrenheit ("F") or Celsius ("C"). Press "Down" or "Up" to adjust. Press "Program" again to exit the programming mode.

The "Filter" LED indicator lights when either filter cycle is running.

CAUTION: Long and/or numerous filter cycles could cause overheating of the SpaBerry, especially in hot climates.

Dynamic L.E.D Light

SpaBerry is equipped with a main LED light that controls the colors by pushing the light button on the keypad.
To Operate Light Functions:
- Press **Light** key once and the first color pattern sequence will be displayed
- To activate the next color pattern, press **Light** key again. Light will turn off, then press **Light** key within 3 seconds to activate the next color sequence.

The Color Pattern Sequences are:

- Fade (Blue-Green)
- Solid White
- Solid Pink
- Solid Purple
- Solid Blue
- Solid Dark Blue

- Solid Teal
- Solid Green
- Slow Fade
- Quick Fade
- Quick Change
- Fast Strobe

Light Bulb replacement instructions from inside the SpaBerry

1. Use front access light wrench to unscrew lens cover and remove LED.
2. Insert new LED in light socket until it holds firmly into position (use tab to insert).
3. Screw lens back in ensuring water-proof gasket is correctly positioned.

Water Care for your SpaBerry

Water Start-Up Procedure

Never add any chemicals until all occupants are out of the water. Chemicals coming in contact with humans can cause skin or eye irritation.

All chemical dosages in this section are based on treating 100 gallons (379 liters) of water. To calculate the appropriate amount to use, multiply the dosage per 100 gallons by your spa's capacity in gallons divided by 100. *For example*, to administer a 2 ounce per 100 gallons dose to a spa, multiply the 2 ounces by (375 gallons / 100), or 3.75, which equals 7.5 ounces.

One ounce (29.6 ml) is approximately equal to two tablespoons or six teaspoons.

SpaBerry Model	Volume of Water
SpaBerry 2.0	125 US Gallons/473 Litres
SpaBerry 3.0	125 US Gallons/473 Litres
SpaBerry 4.0	125 US Gallons/473 Litres
Tublicious by SpaBerry	132 US Gallons/500 Litres
MiBerry	78 US Gallons/295 Litres
MiBerry Edge	125 US Gallons/473 Litres

Test Your Water

The procedures in this section must be followed anytime you drain or fill your SpaBerry, including when you first install your spa. Additionally, if your source water changes, you must test the new source in this manner before running the spa as the chemical makeup of the water may have changed.

Recording Test Results

Record your test results in this table for future reference. This table can then be used for future water changes or major refills without retesting – unless you move or something changes your local source water.

SpaBerry™

Owner's Manual

Water Refill Data Table			
Model Type: _____ Capacity: _____			

	Ideal	Your Water	Necessary Adjustments
Calcium	200-400 ppm	_____ ppm	Add _____ of _____
TDS	300-2000 ppm	_____ ppm	Add _____ of table salt
Metals	0 ppm	_____ ppm	Add _____ of **Sequestrant**

Check Your Water

Total Alkalinity

Total Alkalinity (TA) is a measurement of the water's ability to resist changes in pH. TA affects and buffers the pH of the water. If TA is above 120ppm, pH becomes difficult to adjust. If TA is below 80ppm, pH becomes unstable and is more difficult to keep in the ideal range. Proper TA levels also allow other chemicals to perform optimally.

pH Level

All bodies of water have a pH level, which is a measurement of the hydrogen ion concentration in the water. A pH reading of 7.0 is considered neutral; a lower reading is considered acidic and a higher reading is considered basic. Your spa's pH level should be between 7.2 – 7.8.

How To Test Your Water

Test the Total Alkalinity (TA) and pH utilizing Spa Test Strips, which are available at www.thespaberry.com Be sure to turn the jets off when testing. Follow the directions on the Test Strips container to ensure an accurate reading. TA should read between 80 - 120ppm, and pH should read between 7.2 - 7.8. Adjust Total Alkalinity first. When TA is in the proper range, adjust the pH. Finally, check and adjust the sanitizer level.

Total Alkalinity Control

Use the following guidelines if you need to make adjustments.
1. Total Alkalinity is above 120ppm
    *   Turn the jets off and then add 1 ounce (29.6 ml) of pH/Alkalinity Decreaser into the center of the water.
    *   Wait 1 minute, then turn the jets on at high speed for at least 5 minutes.
    *   Turn jets off and retest.
    *   Repeat this procedure until the TA reads close to 80ppm.
NOTE: When Total Alkalinity is above 120ppm the pH will change slower than the Total Alkalinity.

2. Total Alkalinity is below 80ppm
    *   Add 1 ounce (29.6 ml) of pH/Alkalinity Increaser with the jets turned on at high speed.
    *   Continue running the jets at high speed for at least 5 minutes.
    *   Turn the jets off and retest.
    *   Repeat this procedure until the TA reads close to 80ppm.
NOTE: When Total Alkalinity is below 80 ppm the pH will change faster than the Total Alkalinity.

Check Your Water ...continued

pH Control

High pH (above 7.8) can reduce sanitizer efficiency, cloud the water, promote scale formation on surfaces and equipment, and interfere with filter operations. When pH is too high, add pH/Alkalinity Decreaser. Low pH (below 7.2) is equally damaging and can cause equipment corrosion, irritating water and rapid sanitizer dissipation. When pH is too low, add pH/Alkalinity Increaser.

First, test and adjust Total Alkalinity per the instructions in the Total Alkalinity section. Test the pH level only after you have adjusted the Total Alkalinity.   Use the following guidelines if you need to make adjustments.

- pH above 7.8
    - Add 1 ounce (29.6 ml) of pH/Alkalinity Decreaser with the jets turned to high speed.
    - Continue running jets on high for at least 5 minutes.
    - Turn the jets off and retest.
    - Repeat procedure until the pH reads between 7.2 – 7.8.
- 2. pH below 7.2
    - Add 1 ounce (29.6 ml) of pH/Alkalinity Increaser with the jets turned to high speed.
    - Continue running jets on high for at least 5 minutes.
    - Turn jets off, retest and repeat procedure until the pH reads between 7.2 – 7.8.

Water Testing

We recommend testing your water before each use with a Spa Test Strip. These are available from at www.thespaberry.com.

Total Alkalinity

Total Alkalinity (TA) should be in the 80-120ppm range. If it is not in the acceptable range, refer to the Check Your Water section for details on bringing your TA back to normal.

pH Control

The acceptable range for pH is between 7.2 and 7.8. If it is not in the acceptable range, refer to the Check Your Water section for details on bringing your pH back to normal.

Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use the SpaBerry unless they are supervised at all times.

DANGER

Draining Your SpaBerry

The SpaBerry is gravity-drained, without the need for a pump. To drain the spa, locate the hose bib, which is located in the equipment compartment. Remove the cap from the hose bib and screw a garden hose onto the hose bib, put the other end of the hose in a safe place for water run-off, and then turn the valve on the side of the hose bib ninety degrees to release the flow of water. Do not forget to close the valve again and replace the cap before re-filling the SpaBerry.

Owner's Manual

Filter Cleaning

Always turn off the power to the SpaBerry before cleaning the filter elements. Your SpaBerry is equipped with one top access filter cartridges. We recommend that you clean the filter every month as preventative maintenance.

Remember to power down the spa before removing the filter. To clean the skimmer filter cartridge, lift out center float of the skimmer assembly. Turn the top of the center float counterclockwise to access basket area. Rinse away any large debris. Next, remove the Filter cartridge by turning the cartridge counterclockwise. Then lift the filter out of its canister. Clean the cartridge with a high-pressure garden hose. Every other cleaning, soak the cartridges in cartridge cleaner, rinse it thoroughly, and reinstall. After cleaning, run the pump for a few minutes at high speed then return to the heating mode.

SpaBerry Surface Care

It is recommended that a "cheesecloth" rag, or other soft rag, is used to clean the entire shell surface with Water Line Cleaner or a similar product from your SpaBerry dealer. Or use ph/Alkalinity Increaser or a 50/50 solution of denatured alcohol and water. Be sure to thoroughly rinse the shell after cleaning. ***Do not use citrus-based cleaners on the shell surface.***

SpaBerry Vinyl Covers

To maintain a "nearly original" appearance on your vinyl cover, it is recommended that a protectant with a high SPF (sun protection factor) is applied per instructions of the protectant.

Special Cold Weather Instructions

All SpaBerry's are designed for year-round use. They are insulated for energy efficiency and to protect the plumbing and equipment when the system is operational. The system has a "Smart Winter" freeze protection mode to circulate water during freezing weather, assuming the system has electrical power and the proper water level. Therefore, keeping your system operational is your best defense against freeze damage.

However, if there are freezing conditions present and shutting down the SpaBerry for the winter is unavoidable, or where conditions may get too cold for the SpaBerry's "Smart Winter" mode to prevent freezing, the SpaBerry should be winterized by a professional authorized service provider. Draining the SpaBerry will not prevent freeze damage, because small amounts of water in the plumbing can expand and damage the system.

Winterizing the SpaBerry is specifically not covered by the warranty. This is why only a professional should be allowed to winterize your SpaBerry if it becomes necessary.

The system is equipped with automatic freeze protection. However, a power outage can cause the equipment to freeze quickly. During freezing conditions, check the system frequently to ensure proper operation. Always check the system after any power failure to ensure that it is operational.

SpaBerry

Springtime Startup of a Winterized System

If the SpaBerry has been winterized, it is highly recommended that you contact an authorized service provider to restart it. The following is an outline of the procedures involved.

- Make sure o-rings for pumps are in place and undamaged.
- Make sure all the fittings that loosened are re-tightened.
- Replace all jet fittings, pump drain plugs, hose bib drains, and bleeder valves
- Fill the system with water in the normal way
- Turn the power back on.
- Run the jets on high speed for about 15 minutes.
- Drain the water.
- Put the filter(s) back in.
- Refill the system and treat chemically as one would after a normal water change

For more information about Winterizing the system, or restarting a Winterized system, please go to www.thespaberry.com and complete a service request form.

Caution

During freezing conditions, check your SpaBerry frequently to ensure proper operation. Always check your SpaBerry after any power failure to ensure that it is operational.

Warranty Information

Register your new SpaBerry online at www.thespaberry.com at your convenience! Timely product registration will allow for enhanced communication and prompt service under the terms of your warranty, should the need arise. Registration is a requirement before any service can be authorized and/or performed.

ONE YEAR LIMITED WARRANTY

This warranty is available to the original purchaser only when purchased in the United States or Canada. The SpaBerry warranty is non-transferrable. SpaBerry is not to be used in commercial applications.

SpaBerry shell is warranted against cracks, blisters, delamination and waterloss through the shell (due to worklanship or manufacturing defects) for one year from the original date of delivery. A crack is defined as a break in the shell that goes all the way through the shell. Equipment, fittings and internal plumbing lines are warranted against leaking due to defects in materials or workmanship for one year from the original date of delivery. The SpaBerry cover is warranted for one year. No charge will be made for parts. All labor and service fees are the responsibility of the SpaBerry owner.

SpaBerry will repair or replace any component found to be defective under the terms and conditions of this warranty. SpaBerry reserves the right to substitute a component of equivalent value either new or factory reconditioned and any such repair or replacement shall assume as its warranty only the remaining portion of the warranty on the original product. SpaBerry must authorize the return of all defective parts. Customer will bear all freight costs for parts or SpaBerrys returned for repair or replacement.

Spaberry entertainment system is warrantied against defects in material and workmanship for one year from the original date of delivery. Failure to maintain water chemistry and/or neglect in cleaning the stainless steel components could escalate the chemical attach on the stainless. Due to environmental conditions out of our control, we are unable to warranty discolourations or corrosion on stainless steel parts. The following items are not included in this warranty but are warranted to be free from defects in material or workmanship at the time of delivery to the original purchaser: SpaBerry filter, BerryPure, dirty filter, air locks, incorrect water chemistry, loose unions, pinched or misaligned gaskets, pump seals, closed jets and fuses.

EXCEPTIONS TO WARRANTY

The following items are specifically excluded from any warranty coverage:

SpaBerry is not liable for the following: removal and/or installation of the SpaBerry, the SpaBerry surface damage or discoloration, cosmetic scratches, gouges or crazing damage caused by: failure to follow procedures defined in the Owner's Manual/Guides, improper or incorrect electrical hook-up, scratches and damage caused by normal use, improper installation or installing the SpaBerry on unstable surface, moving the SpaBerry, including, but not limited to use of a crane, use of sanitizers such as Tri-Chlor (tablets or sticks), calcium hypochlorite, sodium hypochlorite, and any chemical that may dissolve or remain un-dissolved on the SpaBerry shell, damage or staining caused by mineral or chemical content of the SpaBerry's water. Avoid use of citrus-based cleaning solutions, they can cause shell crazing. SpaBerry does not assume any responsibility for incidental or consequential damages, use of SpaBerry in a non-residential application, acts of nature, accidents, or other causes beyond the control of SpaBerry. A SpaBerry, when empty of water and left in direct sunlight without the hot tub cover in place, are vulnerable to ultraviolet or solar damage. Temperatures generated by sunlight can become concentrated in the shell surface causing the shell material to delaminate. This occurrence is considered abuse and may result in surface blisters, bubbles, or large layer delamination. This occurrence is not covered under warranty. The SpaBerry cover must be kept on the SpaBerry while empty of water. All SpaBerry accessories including, but not limited to, SpaBerry's **"BerryWrap™"** appliqués, BerryPure™. Accessories may be covered by other warranties. This warranty gives you specific legal rights and you may also have other rights which vary from state to state or province to province.

Owner's Manual

Troubleshooting Guide

Please go to **www.thespaberry.com** and complete a service request form.

NO POWER TO SPA - GFCI

Symptom	Corrective Action

No power to spa	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work.
	
	Is there any physical damage (broken pins, cut wires, etc.) and/or chemical, and/or water damage to the GFCI Power Cord?
	Yes-Submit a 'service request form', follow the link above or go to: www.thespaberry.com
	No -Follow step 1
	STEP 1. Is there 120 volt power at the wall outlet where the GFCI Power Cord is plugged in?
	  Yes-Follow step 2
	  No -Follow step 3
	2. Is the light on the GFCI Power Cord illuminated?
	  Yes-Follow step 4
	  No -Follow step 5
	3. Have you tried other electrical devices to test if there is power at the wall outlet?
	  Yes-Follow step 6
	  No -Follow step 7
	4. Is there 120 volt power across the black and white wire at the circuit board terminal, TB1?
	  Yes-Follow step 8
	  No -Follow step 10
	5. GFCI Power Cord is defective. Replace the GFCI Power Cord.**
	6. Did the other electrical device work?
	  Yes-Follow step 2
	  No -Follow step 11
	7. Have a certified electrician check the power from the outlet wall. Then follow step 3.
	8. Is there continuity in the main fuse? i.e. has the fuse tripped?
	  Yes-Replace the circuit board. **
	  No –Replace the fuse. Then follow step 9.
	9. Is there power to the spa with the new fuse.
	  Yes-Problem is resolved. You should now have power to your spa.
	  No –Follow step 10
	10. Is the GFCI Power Cord connected to the circuit board as shown on the wiring diagram found on the backside of the power pack cover?
	  Yes-Follow step 5
	  No -Follow step 12
	11. Have a certified electrician check the power from the outlet wall.
	12. No -Have a qualified electrician/technician properly connect all the wires to the circuit board.

** The standard SpaBerry warranty is on parts only for one (1) year from the original date of purchase.

Troubleshooting Guide

Please go to **www.thespaberry.com** and complete a service request form.

TRIPPING GFCI

Symptom	Corrective Action
GFCI Breaker is tripping	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work. STEP 1. Turn the power off to the spa. Disconnect all the components (pump, heater, light, control panel) from the circuit board. Now turn the power on to the spa. Did the GFCI breaker trip? 　　Yes-Reference the wiring diagram and ensure that all jumpers are set in their correct position. In addition, ensure all remaining jumper wires are firmly and properly connected. Reconnect the power again. If the breaker trips again, proceed to replacing the board.** 　　No - Turn the power off again to the spa. Using process of elimination, connect each component (pump, control panel, light and heater) one at a time and turn the power on each time you connect a component to narrow which component is causing the breaker to trip. Once you isolate the component that is causing the breaker to trip, then proceed to the instructions on pages 27 to 32 and follow that specific components respective trouble-shooting guide. Example: If the breaker tripped when you connected the control panel, then turn to page 28 , "Tripping GFCI-Section Two-Control Panel" and follow the provided steps.

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Troubleshooting Guide

TRIPPING GFCI — SECTION ONE — CIRCUIT BOARD

Symptom	Corrective Action

The GFCI is tripping.
 	
There are five main causes for a GFCI to trip (heater, circuit board, control panel, light and/ or pump) In 'Section One' we will investigate the circuit board as the main cause.
	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work.
	
	Is the circuit board the cause for tripping the breaker?
	STEP 1. Is there a 120 VAC across the black and white wire at the circuit board terminal, TB1? (For 240 VAC, measure across the black and red wire).
	    Yes-Follow step 2
	    No -Follow step 3
	2. Is there any damage to the circuit board?
	    Yes-Follow step 4.
	    No -Follow step 5.
	3. Reference the wiring diagram and ensure that all jumpers are set in their correct position. In addition, ensure all remaining jumper wires are firmly and properly connected. Reconnect the power again. Did the breaker trip?
	     Yes-Follow step 4.
	     No -Follow step 5.
	4. Replace the circuit board.**
	5. Are there any error codes displayed on the control panel?
	    Yes-Follow the instructions on the control panel message section.
	    No -Follow step 6.
	6. Reference the wiring diagram. Are all the DIP switches set properly?
	    Yes-Follow step 4.
	    No -Follow step 7.
	7. Set the DIP switches properly. Reconnect the power again. Did the breaker trip?
	    Yes-Follow step 4.
	    No –The circuit board is good. Follow the instruction on Tripping GFCI-Section Two-Control Panel.

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    purchase.

Owner's Manual

Troubleshooting Guide
TRIPPING GFCI —SECTION TWO- CONTROL PANEL

Symptom	Corrective Action
The GFCI is tripping. There are five main causes for a GFCI to trip (heater, circuit board, control panel, light and/ or pump) In 'Section Two' we will investigate the control panel as the main cause.	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work. Is the control panel the cause for tripping the breaker? STEP 1. Is the control panel display illuminated? Yes-Follow step 2 No -Follow step 3 2. Are there any error codes appearing on the control panel display? Yes-Follow step 4 No -Follow step 5 3. Is the control panel connected properly to the circuit board? Yes-Follow step 6 No -Follow step 7 4. Follow the instructions on the control panel message section. 5. When you press a button on the control panel, does the corresponding indicator light illuminate? Yes-Follow step 8 No -Follow step 9 6. Do you read 12 VAC on the circuit board port J1 for the control panel? Yes-Follow step 10 No -Follow step 11 7. Disconnect the control panel and reconnect it properly. Follow step 5. 8. Can you turn on/off all the components from the control panel? Yes-Follow step 12 No -Follow step 9 9. Replace the control panel.** 10. Disconnect the control panel and reconnect it properly. Did the control panel work? Yes-Follow step 12 No -Follow step 9 11. Replace the circuit board.** 12. The control panel is good. Follow the instructions on Tripping GFCI– Section Three -light.

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Owner's Manual

Troubleshooting Guide

TRIPPING GFCI—SECTION THREE—LIGHT

Symptom	Corrective Action

The GFCI is tripping.
 	
There are five main causes for a GFCI to trip (heater, circuit board, control panel, light and/ or pump) In 'Section Three' we will investigate the light as the main cause.
	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work.
	
	Is the light the cause for tripping the breaker?
	STEP 1. With a voltmeter, measure the voltage on port J21 on the circuit board for light. Is there a 12 VAC reading?
	   Yes-Follow step 2
	   No -Follow step 3
	2. Does the main light bulb turn on?
	   Yes-Follow step 8
	   No -Follow step 4
	3. Has the light fuse been checked?
	   Yes-Follow step 5
	   No -Follow step 6
	4. Replace the main light bulb/controller.**
	5. Is the light fuse defective?
	   Yes-Replace the fuse.
	   No -Follow step 7
	6. Test the light fuse then follow step 5.
	7. Replace the circuit board.**
	8. The main light bulb/controller is not the cause of the breaker to trip. Follow the instructions on Tripping GFCI-Section Four-Pump.

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SpaBerry™

Owner's Manual

Troubleshooting Guide

TRIPPING GFCI - SECTION FOUR-PUMP

Symptom	Corrective Action

The GFCI is tripping.
 	
There are five main causes for a GFCI to trip (heater, circuit board, control panel, light and/ or pump) In 'Section Four' we will investigate the pump as the main cause.
	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work.
	
	Is the pump the cause for tripping the breaker?
	STEP 1. Reference the wiring diagram, is the pump properly connected to the circuit board port J23?
	   Yes-Follow step 3
	   No -Follow step 4
	2. Does the pump indicator light on the control panel illuminate when the pump button is pressed?
	   Yes-Follow step 5
	   No -Follow step 6
	3. Replace the pump motor assembly.**
	4. Have a technician check and properly connect the wiring connections on the circuit board. Did the breaker trip, after properly connecting the wiring connections on the board?
	   Yes-Follow step 3.
	   No –Follow step 2.
	5. Did you prime the pump?
	   Yes-Follow step 7
	   No -Follow step 8
	6. Replace the control panel. If it still doesn't work, replace the circuit board.**
	7. Does the pump turn on?
	   Yes-Follow step 9
	   No -Follow step 10
	8. Prime the pump. Is the pump still not working?
	  Yes/No-Follow step 11
	9. Is the pump working on both speeds?
	   Yes-Follow step 12
	   No -Follow step 13
	10. Replace the pump fuse. Do you read 240 VAC (120VAC for 120 pump) on the circuit board across the black and white wire or the black and red on J23?
	   Yes-Follow step 3.
	   No -Follow step 14
	11. Does the pump turn on?
	   Yes-Follow step 9
	   No -Follow step 10
	12. Is the pump making any noise?
	  Yes/No-Follow step 15
	13. Is the pump working in low speed?
	   Yes-Follow step 16
	   No -Follow step 17
	
	...continued on next page…

** The standard SpaBerry warranty is on parts only for one (1) year from the original date of purchase.

Troubleshooting Guide

SECTION FOUR—PUMP...continued

Symptom	Corrective Action
The GFCI is tripping	14. Replace the circuit board.** 15. Is the pump seal leaking? 　　Yes-Follow step 17 　　No -Follow step 18 16. Is the pump working in high speed? 　　Yes-Follow step 19. 　　No -Follow step 17. 17. Replace the pump motor assembly or have a technician repair it.** 18. Is the pump union leaking? 　　Yes-Follow step 20. 　　No -Follow step 22. 19. Is the pump making any noise? 　　Yes/No-Follow step 15. 20. Is the union gasket/O-ring missing or pinched? 　　Yes-Follow step 21. 　　No -Follow step 17. 21. Replace the union gasket/O-ring.** 22. There is no problem with the pump motor assembly. Follow the instruction on Tripping GFCI -Section Five-Heater.

** The standard SpaBerry warranty is on parts only for one (1) year from the original date of purchase.

Owner's Manual

Troubleshooting Guide

TRIPPING GFCI — SECTION FIVE—HEATER

Symptom	Corrective Action

The GFCI is tripping.
 	
There are five main causes for a GFCI to trip (heater, circuit board, control panel, light and/ or pump.) In 'Section Five' we will investigate the heater as the main cause.
	Note: Always consult a qualified Service Technician or Electrician before attempting any diagnostic or repair work.
	
	Is the heater the cause for tripping the breaker?
	STEP 1. Is the pump working properly on low and high speed?
	   Yes-Follow step 2
	   No -Follow step 3
	2. Are there any error codes appearing on the control panel display?
	   Yes-Follow step 4
	   No -Follow step 5
	3. Have a technician check and test the pump motor assembly. Is the pump working properly on low and high speed?
	   Yes-Follow step 2.
	   No –Replace the pump motor assembly.**
	4. Follow the instruction on the Control Panel Message section.
	5. Make sure that the set temperature is higher than the actual water temperature. Is the heater indicator light on the control panel illuminated?
	   Yes-Follow step 6
	   No -Follow step 7
	6. Can you read 120 volt between the black and white wires of the heater cord connected to port J9 on the circuit board?
	   Yes-Follow step 8
	   No -Follow step 9
	7. With a digital thermometer, measure the water temperature and compare it with the temp. value displayed at the control panel display. Is the temperature difference greater than $\pm2°F(1°C)$?
	   Yes-Follow step 10
	   No -Follow step 11
	8. Did you get a heater resistance reading?
	   Yes-Follow step 12
	   No -Follow step 13
	9. Have a qualified technician test the circuit board.
	10. Check if the temp sensors are properly inserted into the heater tube and properly connected to the circuit board.
	11. System works fine. Follow step 8.
	12. Was the reading between $12.96Ω$ to $15.84Ω$? Have you tested the heater for amperage?
	   Yes-Follow step 14
	   No -Follow step 15
	13. Replace the heater assembly.**
	14. Was the amperage draw 7.58-9.26A (120V) and 15.15-18.52A (240V) ?
	   Yes-Follow step 16
	   No -Follow step 13
	15. Have a technician test the heater for amperage. Follow step 14.
	16. Is there a leak from the heater nuts?
	   Yes/No-Follow step 13

** The standard SpaBerry warranty is on parts only for one (1) year from the original date of purchase.

SpaBerry™

Owner's Manual

Troubleshooting Guide

PUMP DIAGNOSTICS

Symptom	Corrective Action
Pump is running but jets are just pulsating (due to low water level	The most common cause is water level that is too low. Fill with water up to 5" from the top of the spa.

Pump is running but there is no pressure from jets (How to determine and remedy the jets being turned off as the cause.)	Has the filter been cleaned and free from debris?
	   Yes-Follow step 1
	   No -Follow step 2
	STEP 1. Are the knife valves open?
	   Yes-Follow step 3
	   No -Follow step 4
	2. Clean the filter cartridge.
	3. Are the jets turned on?
	   Yes-Follow step 5
	   No -Follow step 6
	4. Open the knife valves by turning and pulling the lever up.
	5. Follow instructions on the air lock section on next page.
	6. Turn on the jets by turning the face of the jet counter clockwise.
	Is there pressure from the jets?
	   Yes-Follow step 7
	   No -Follow step 8
	7. Yes- Problem is resolved.
	8. Follow instructions on the air lock section on next page.

Pump is running but no pressure from jets (How to determine and remedy if an air lock is the cause.)	Reset power at GFCI. When PR mode is displayed on control panel, press jet button to high speed and let the pump run for 45 to 60 seconds. Turn jets off. After 30 seconds, press jet button to low speed and high speed. Is there any pressure from the jets?
	Yes-Problem is resolved.
	No - Follow step 1
	STEP 1. Repeat above process a couple of times. Is there pressure from the jets?
	   Yes-Follow step 2
	   No -Follow step 3
	2. Problem is resolved.
	3. Turn off power to spa and unplug power cord from wall. Bleed the air by loosening the pump union nut. When water starts to come out, hand tighten the union nut. Plug the power cord to wall outlet and turn on the power to the spa. When PR mode is displayed on the control panel, press jet button to low speed and high speed. Is there any pressure from the jets?
	   Yes-Follow step 4
	   No -Follow step 5
	4. Problem is resolved.
	5. Repeat the above process of bleeding the air through the union nut a couple more times.
	If problem persists, go to www.thespaberry.com and complete a service request form.

Owner's Manual

Troubleshooting Guide

CONTROL PANEL MESSAGES

Symptom	Cause	Corrective Action
LF or HFL (Low water flow in heater)	low water level, dirty filter and air lock	A significant difference between heater temperature sensors was detected. Adjust the water level in spa to 5" from the top of spa and ensure the filter is clean and free of debris. Did the error message disappear? Yes- Problem is resolved No - Follow instructions on air lock - pump section.
LF or HFL (Low water flow in heater)	pump	With correct water level, a clean filter and the air locks removed, has the error message disappeared? Yes- Problem is resolved No - Reset the power to the spa and re-evaluate Has the error message disappeared? Yes- Problem is resolved No - Proceed to page 33, 'Pump Diagnostics' If problem persists, go to www.thespaberry.com and complete a service request form.
OHH/OHS (Overheat warning) **Do Not Enter Water**	set temperature is too high	Do not enter the water! Remove the spa cover and allow the water to cool. At 107°F/41.7°C, the spa should automatically reset. If the spa does not reset, shut off the power to spa and go to www.thespaberry.com and complete a service request form.
SNA/SNB/SNS	Defective sensors (Sensors not working or out of balance)	Reset power to the spa. Did the error message disappear? Yes- Problem is resolved No - Follow step 1 STEP 1. Check the sensors for cracks or damage and/or cuts on the wiring. Are there visible signs of cracks on the sensors or damage on to the wiring? Yes-Follow step 2 No -Follow step 3 2. Replace the temperature sensors.** 3. Are the sensors properly mounted to the heater tube and properly connected to the circuit board. Yes-Follow step 4 No -Follow step 5 4. Did the error message disappear? Yes-Follow step 6 No -Follow step 2 5. Mount the sensors properly, disconnect and reconnect the sensor wiring properly to the circuit board. Did the error message disappear? Yes-Follow step 6 No -Follow step 2 6. Problem is resolved.

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Troubleshooting Guide

CONTROL PANEL MESSAGES...continued

Symptom	Cause	Corrective Action
PSt or CrC or CFE (Error message in the software)	software	Reset the power to spa. Did the error message disappear? Yes- Problem is resolved. No - Go to www.thespaberry.com and complete a service request form.
ICE (potential freeze condition detected)	Freezing weather conditions and power failure	No action is required. All equipment will activate regardless of the spa status. The equipment stays on for 4 minutes after the sensors detect that the spa water has risen to 45°F/7.2°C or higher. If the problem persists go to www.thespaberry.com and complete a service request form.
"--" - (Temperature unknown)	Not a problem	After the pump has been running for 1 minute, the current water temperature will be displayed.
STD, ECN, SE or SLP (Heat mode message)	Not a problem	Refer "Programming the SpaBerry Functions" section of this manual and control panel diagnostic section of the troubleshooting guide.
DR or DRY (Inadequate water in heater)	low water level, dirty filter and air lock	Adjust the water level in spa to 5" from the top of spa and that the filter is clean and free of debris. Did the error message disappear? Yes- Problem is resolved No - Follow instructions on page 33, "Pump Diagnostics and refer to the 'air lock' section.

CONTROL PANEL DIAGNOSTICS

Programming: Stuck in ECN, SLP, SE mode	Spa needs to be programmed to STD mode or standard mode.
	     Press and release the "Program" button to enter programming mode.
	     Press the "Down" button to browse through modes.
	     When the STD mode appears on display, press the "Program" button to confirm the selection.

Too hot: Set temperature is too high	Check the set temperature. Press "Down" button to decrease the set temperature.

SpaBerry™
Owner's Manual

Troubleshooting Guide

JETS DIAGNOSTICS

Symptom	Cause	Corrective Action
low water pressure at jets	Low water level	Ensure that the water level in the spa is 5" from the top of the spa. When the water level is at 5" from the top of the spa, did the pressure at the jets increase? Yes-Problem is resolved. No -Follow step 1. STEP 1. Check if foreign material is restricting the flow of water at the jets. Open the jets by turning the jet face counter clockwise until the lock is disengaged. Remove the jet and check the jet and jet body for any foreign material. Remove, then re-install the jet into the jet body. Did the pressure at jets increase? Yes-Follow step 2 No -Follow step 3 2. Problem is resolved. 3. Go to www.thespaberry.com and complete a service request form.

LEAK DIAGNOSTICS

Symptom	Corrective Action
Leak	Go to www.thespaberry.com and complete a service request form. A technical support representative will contact you within 24 business hours. For the fastest resolution possible, capture as many photos and possibly a video clearly showing the leak. When the support representative makes contact, they will provide you with details of how to upload the information.

AUDIO DIAGNOSTICS

Symptom	Corrective Action
Speaker volume is too low	Increase the volume on the audio device being used. Did the speaker volume increase? Yes-Problem is resolved. No -Use other devices to verify. Did the speaker volume increase with other devices? Yes-Problem is resolved. No -Follow instructions on loose speaker wire connections section. Note: This is an unamplified audio system, which means the volume of sound coming from the speakers is directly related to the 'gain' or output from your playing device.
Speaker volume is too low due to loose speaker wire connections	Check the speaker wires to make sure they are not loose. Adjust wire connections if required. Did the volume at speaker increase? Yes-Problem is resolved. No -Replace the speaker.**

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Owner's Manual

Troubleshooting Guide

SPA COVER

Symptom	Corrective Action
1. Improper fit 2. Warped cover 3. Damaged straps 4. Screws breaking	Go to www.thespaberry.com and complete a service request form with the following: 　1. Customer name 　2. Brief description of the problem 　3. Photos showing the problem (a support representative will contact you with instructions on where and how to submit the photos)

WATER CHEMISTRY

Symptom	Corrective Action
1. Water is cloudy 2. Smelly water 3. Excessive bubbles 4. Imbalanced water chemistry	Follow the instructions in the "Water Care for your SpaBerry" section of this Owner's manual to adjust and balance the water chemistry of the spa.

ACRYLIC

Symptom	Corrective Action
1. Damaged acrylic surface 2. Cracks on acrylic 3. Crazing	Go to www.thespaberry.com and complete a service request form with the following: 　1. Customer name 　2. Brief description of the problem 　3. Photos showing the damaged area; if spa is already installed, photos of the spa including the surrounding area (a support representative will contact you with instructions on where and how to submit the photos)

SHIPPING

Symptom	Corrective Action
Damaged spa due to shipping/handling	Go to www.thespaberry.com and complete a service request form with the following: 　1. Customer name 　2. Brief description of the problem 　3. Photos showing the damaged area of spa; photos of the packaging (a support representative will contact you with instructions on where and how to submit the photos)

FREEZING

Symptom	Corrective Action
Spa water is frozen due to power failure during freezing conditions	CAUTION! In many areas of the world the temperature may drop below 32°F (0°C). We recommend the spa is always filled with water and running at normal spa temperatures. By doing this you will minimize the risk of freezing within your spa. If it is necessary to leave your spa unattended for long periods of time during cold weather conditions, you should drain your spa to avoid accidental freezing caused by power outages. Please also refer to "Special Cold Weather Instructions" section of this manual. Heat the equipment area using a portable heater. Ensure that the heater is not too close to the equipment. When the spa is completely thawed and the equipment and plumbing is warm, follow the normal operation procedures for starting the spa.

Owner's Manual

Troubleshooting Guide

WATERFALL DIAGNOSTICS

Symptom	Corrective Action
Water spraying out of the tub due to pinched plumbing or pinched outlet	Visually check if waterfall outlet is pinched. Is the waterfall outlet pinched? Yes-Follow step 1. No -Follow step 2. STEP 1. Replace the waterfall outlet.** 2. Is the waterfall plumbing pinched? Yes-Follow step 3 No -Follow step 4 3. Repair or replace the plumbing of the waterfall.** 4. Visually check the waterfall outlet for partial blockage with dirt and debris. Is the waterfall outlet partially blocked with dirt and debris? Yes-Follow step 5 No -Follow step 7 5. Open the waterfall and remove dirt and debris. After the waterfall is cleaned and re-assembled, is the waterfall working as intended? Yes-Follow step 6 No -Follow step 7 6. Problem is resolved. 7. Go to www.thespaberry.com and complete a service request form.
Waterfall is not working due to control valve being turned off	Check if the waterfall control valve is turned on. Is the control valve on? Yes-Follow step 1. No -Follow step 2. 1. Check the waterfall plumbing line. Is the hose blocked or pinched? Yes-Follow step 3 No -Follow step 3 2. Turn the waterfall valve on by turning it counter clockwise. 3. Go to www.thespaberry.com and complete a service request form.
Rusted SS plate	Go to www.thespaberry.com and complete a service request form with the following: 1. Customer name 2. Brief description of the problem 3. Photos showing the rusted area

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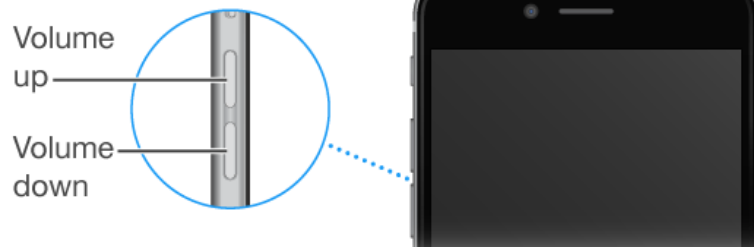
MIL-idock

The idock weatherproof enclosure is designed for use with audio devices with a 3.5mm audio jack.

<u>Setting up the Audio Device</u>

1. Slowly pull out the idock tray to open the enclosure. When extended the tray swing hinge will be exposed on top of the enclosure.
2. Open the enclosure door. The door swings up.
3. Locate the 3.5mm jack inside the enclosure.
4. Plug the 3.5mm cord (provided) into the music device (ie Smart Phone, Tablet, iPod, etc).
5. Once the 3.5mm jack is connected to the device open the app that will be playing the audio and/or select the audio track.

Note: The volume for audio sound is controlled from the device.

SpaBerry

Owner's Manual