



STIL OWNERS MANUAL

bullfrog[®]
spas

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User Safety and Setup Guide

Reference the User Safety and Setup Guide for important safety instructions, information about installation and delivery, electrical requirements, and more.

Use the QR code or this link:
bullfrogspas.com/manuals





Congratulations on your purchase of a Bullfrog Spas® STIL® hot tub.

NOTE: In this document, the terms “Spa” and “Hot Tub” are used interchangeably. Take a moment to read this manual carefully. Following the instructions in this manual will ensure the safe and smooth operation of your new spa.

Carefully read this Owner’s Manual before you install your spa. Your Bullfrog Spas Limited Warranty may be voided if damage is caused by failure to install, maintain, and operate your spa in accordance with the recommendations contained in this Owner’s Manual or any other printed instruction, notice, or bulletin from Bullfrog Spas. Your spa’s serial number is located both on the base under the equipment door and the Manufacturing ID Label located inside the equipment compartment of your spa.

For the safety of all those who utilize your spa and its surroundings, please make sure your spa and any adjoining installations, including the electrical hook-up, are completed according to codes and only after acquiring any necessary approvals and permits from your local, state/provincial, and/or national government. Follow all local, state, and national safety and wiring rules. Some jurisdictions require certain fencing and/or self-closing and self-latching gates to prevent accidental drowning in a pool or spa. Your spa cover comes with a locking system that meets the ASTM F1346-91 Standard for Safety Covers, which when properly used, may satisfy certain fencing and gating requirements. Your spa meets or exceeds all requirements of the Virginia Graeme Baker Pool and Spa Safety Act. Your spa has been tested and either meets or exceeds the UL-1563 portable spa standard.



Patents: www.bullfrogspas.com/patents

U.S. Patents: 7,908,684, 8,661,576, 8,881,321, 8,689,370, 8,869,469, 5,754,989, 5,987,663, 6,000,073, 6,092,246, 6,256,805, 6,543,067

New Zealand Patent: 555112, 334,093

Australia Patent: 737,335

Canada Patents: 2,588,884, 2,260,237, 2,915,184

Other patents pending worldwide

STIL spas include the following models:
STIL: STIL7 & STIL5

Bullfrog Spas reserves the right to change features, specifications & design without notification and without incurring any obligation.

Register Your Spa

Ensure the very best hot tub ownership experience by registering your warranty. Use the QR code or go to bullfrogspas.com/warranty-registration to register.

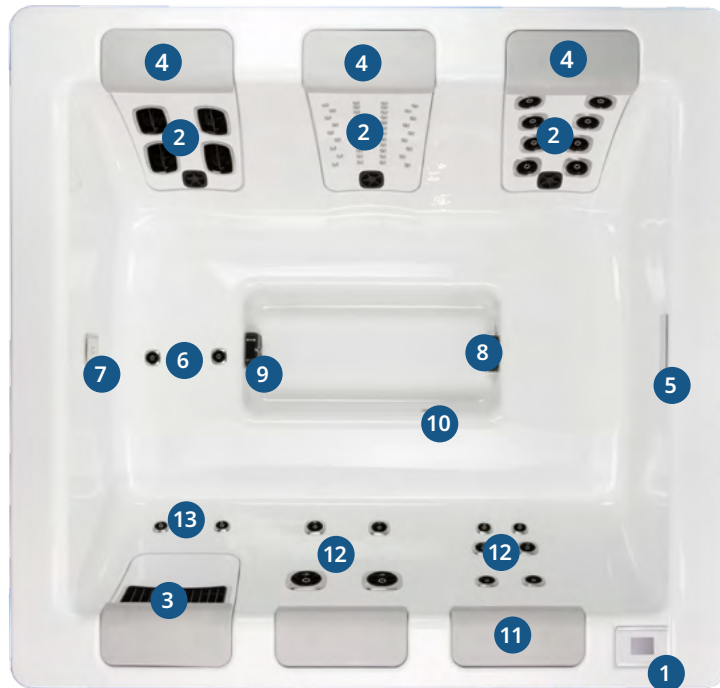


Spa Registration

GETTING TO KNOW YOUR SPA

Spa Overview

STIL7 Spa Model Pictured

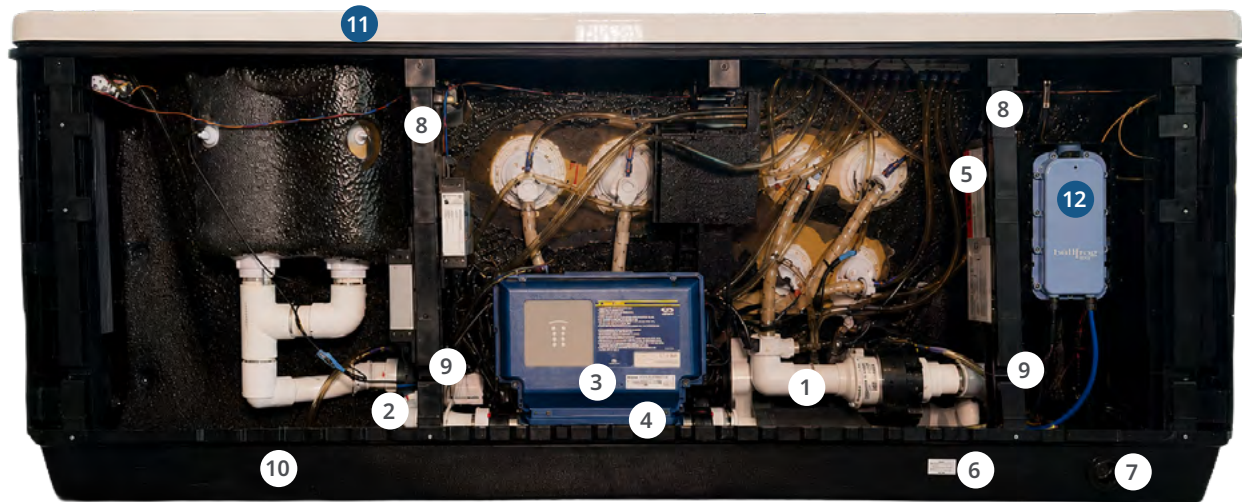


1. Main touch-screen control
2. JetPaks
3. Filter access
4. Removable headrests and JetPak access
5. Water feature*
6. Leg therapy jets
7. Interior LED light
8. Floor drain
9. Suction fitting
10. Ozone jet
11. Headrest
12. In-wall therapy jets
13. Hip/foot therapy jets

*Not available in the 120V STIL5 (Plug and Play version).

Equipment Compartment Overview

STIL7 Spa Model Pictured



1. Jet pump 1
2. Circulation pump
3. Control box
4. Water heater
5. Safety certificate and serial number
6. Serial number sticker (visible with door installed)
7. Drain outlet
8. Support stud
9. Door attachment notch in support stud
10. ABS spa base pan
11. Acrylic spa shell
12. Premium AOP by Clear Comfort®

FILLING YOUR SPA

▲ **WARNING:** An empty spa (spa without water in it) must not be left exposed to sunlight as shell damage may occur. Once the spa is unwrapped, fill spa with water immediately or shade the spa with cover to prevent direct exposure to sunlight.

IMPORTANT: Do not turn power on to the spa without water in the spa. Serious damage to the pump and heater may occur.

▲ **WARNING:** Make sure power is off to your spa prior to following spa filling procedure. Failure to do so may result in serious injury.

Spa Filling Steps

Step 1: Remove filter cover by lifting until snap fittings release.

Note: Images show spa with filter plate removed for clarity.

Step 2: Remove a filter cage cap.



Step 3: Place garden hose inside the inner chamber of the filter cage.

IMPORTANT: Never fill the spa with soft water unless an appropriate mineral supplement is immediately added (see your authorized Bullfrog Spas Dealer). If your water is extremely hard, it is preferable to either dilute the water's hardness by blending the water with water from a water softener, using a mineral filter, or by the addition of a special water softening chemical (see your authorized Bullfrog Spas Dealer).



Step 4: Fill to the water level indicator line located on the right side of the grill on the face of the filter plate assembly.

Step 5: Reinstall the filter cap(s) and filter snap cap.

Step 6: Check for leaks: After the spa is filled, check all fittings and equipment in equipment compartment for signs of leakage before turning on the spa. Turn on pump(s), once again, check for leakage. If a leak is detected, tighten the fitting by hand. If the leak persists contact your authorized Bullfrog Spas Dealer.



Step 7: Install Cover: The spa cover comes with tie down straps and locking hardware that attaches the cover to the spa or decking. If your dealer did not install the cover, refer to the Cover Installation Instructions included with the cover.

Cover locks are an essential component for compliance with the ASTM F1346-91 safety standard for spa covers.



IMPORTANT: The spa cover is a critical feature in maintaining a safe and secure spa environment. In addition keeping your spa covered when not in use is important for maintaining spa water at the desired temperature and saving energy. When spa is not in use, always place the cover over the spa and secure by pulling down on the cover strap, clicking the two sides of the cover clips together, and then locking each clip with the key provided. The cover should remain in place and locked at all times when not in use to prevent unauthorized entry and to prevent the wind blowing it open inadvertently.

PREMIUM TOUCH SCREEN CONTROL (A1000)



STIL Touch Control

IMPORTANT: Your Bullfrog Spa is equipped with one of 3 types of main control systems that correspond to the spa series. Locate the control system on your spa by matching it with the photo provided under each control panel section and follow the specific instructions in that section for operation of your spa.

Start Up

Fill the spa to its correct operating level. Be sure to open all valves in the JetPaks and all other jets in the spa before filling to allow as much air as possible to escape from the system during the filling process. For details see “Filling your spa” section. After turning the power on at the main power panel, the control panel display will go through an initializing sequence. This sequence displays information regarding the configuration of the hot tub control. After a few seconds, your control will display a standard status screen with time, jet and light status, temperature status, operation mode, etc.

Power

Tap screen to wake up the control. Touch and drag the logo icon  to the reverse logo icon  to unlock and access controls. After 30 minutes without activity the touch control will shut off.

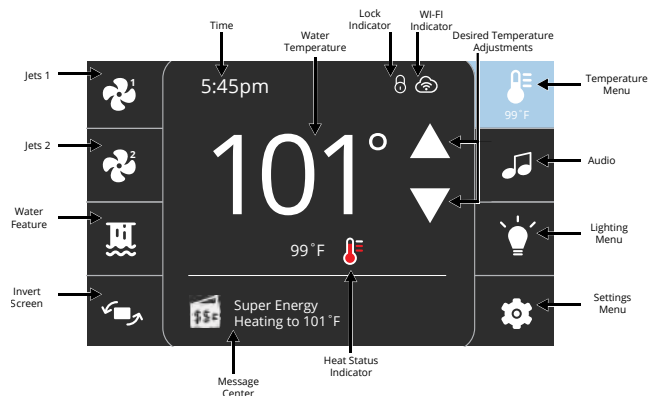
Priming the Pumps

Pumps must be primed directly after filling to ensure correct operation of your spa. After initial start up, verify that the home status screen appears on the panel. To prime the pumps press the  “Jets 1” button once to prime in low-speed. After the pump turns on and water is visibly flowing from the jets wait a few seconds and then press  “Jets 1” again to initiate high-speed operation of Pump 1. The pump has primed when water is flowing from the jets.

If your spa is equipped with a second jet pump repeat the priming process for Pump 2 by pressing the  “Jets 2” button once to turn on low speed and then a second time to turn Pump 2 on high.

IMPORTANT: Pumps should not be allowed to run without priming (no water flowing out of the jets) for more than 2 minutes. Doing so may cause damage to the pump(s).

NOTE: Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than 5 times. If the pump(s) will not prime, shut off the power to the spa and call for service.



Home/Status Screen

The Home/Status screen on your STIL (A1000) control shows basic statuses, including time, jet status, light status, screen orientation, current water temperature, heating/cooling status, spa operation mode, audio status (optional), day/night status, and settings. Most basic functions of operating your spa can be performed with one touch from the Home/Status screen. In addition, any necessary error or maintenance messages will appear at the bottom of the screen.

Start or Stop Accessories

To start or stop an accessory (jets, lights, etc.), press the associated button. Icons will become animated when their accessory is turned on and inanimate when turned off. Icons on the screen will reflect the speed or state of the devices running on your spa. When an accessory has more than two states, press the button once and then again until it reaches the desired state.

To turn on all available spa pumps in one touch, press the  “Logo” button located at the side of the main control screen. Press the button again to turn off all available pumps.

Light Operation

Use the  button to access the lights menu. Use the  button to turn on interior lights. Use the  button to turn on exterior lights. Use the associated menu options to control interior light modes (flashing, fading, solid color) and/or colors.

Invert Screen Button

From the home status screen, you may press the  button to rotate the screen 180 degrees for easier viewing from inside the spa. For spa models with 3 jet pumps (A9L), this function is available in the  Settings menu.

Adjusting the Set Temperature

Within 1 to 2 minutes after spa start-up and initialization, the water temperature will be displayed in the center of the home status screen. Press the  and  buttons to set the desired temperature. The set point will appear in blue. After 3 seconds without any change to the set temperature value, the current water temperature will reappear in white.

When the set value is lower than the current temperature, "Cooling to xx.x" will appear at the bottom of the screen. When the set value is higher than the current temperature, "Heating to xx.x" will be indicated. Normally there may be a short delay before the heating starts, during which "Heating suspended" is indicated under the value.

Spa Settings

The settings on the STIL (A1000) control pad is navigated by the use of the  (Settings) button. One press gives you access to several menus where you can manage the specific settings of your spa. After pressing the Settings button, you may access a sub-menu by pressing the associated icon.

Note that if an accessory is not present in your spa configuration, its menu will not appear. Refer to the following section to get details about the possible settings, accessories, and their detailed functionalities.

Water Care

The Water Care sub-menu will help you set up your ideal filtration and heating settings. Choose from Energy Saver, Standard, Super Clean, Weekender, and Away depending on your needs. Touch the Water Care mode name to choose your setting. A confirmation message will appear to prevent inadvertent modification of spa water care settings. Touch the check icon to confirm your choice or touch the X icon to decline.

In Economy modes, the set point will be reduced by 20°F* (11°C), which means that the heating system will not be engaged unless the temperature falls to 20°F

(11°C) below the spa's set temperature. The filtration schedule shown on the STIL (A1000) screen will apply to the main filtration pump.

Water Care Operation Modes

NOTE: Your spa will come from the factory in "Energy Saver" mode. See operation mode options below and select the best mode for your anticipated usage.

Energy Saver (factory default setting)

In Energy Saver mode, the spa temperature set point will be reduced by 20°F (11°C) (see description of "Economy modes" above) during peak daytime hours. The spa will heat to the normal set point during evening hours every day of the week.

Suggested use: Use to save maximum energy and heat only during set filter cycles.

Economy time: Every day of the week, daytime hours. Heats during filtration cycles.

Filter cycle start time: 8:00 AM, duration 1.5 hours, and 8:00 PM, duration 1.5 hours.

Standard

In Standard mode, the spa will heat to the set point and filter according to the spa's standard configuration. The spa will heat to set point at all times and all days of the week.

Suggested use: Use to maintain readiness for use every day at all times of the day.

Economy time: Not an Economy mode.

Filter cycle start times: 8:00 AM, duration 1.5 hours, and 8:00 PM, duration 1.5 hours.

Super Clean

In Super Clean mode, the spa will heat to the set point according to the spa's standard configuration. Filtration times are double the standard, increasing both filtration and operation time of supplemental water care systems like EOS and others. The spa will heat to set point at all times and all days of the week.

Suggested use: Use to maintain readiness for use every day at all times of the day and increase water care system effectiveness.

Economy time: Not an Economy mode.

Filter cycle start times: 7:00 AM, duration 3 hours, and 6:00 PM, duration 3 hours.

Weekender

In Weekender mode, the spa temperature set point will be reduced by 20°F (11°C) (see description of "Economy modes" above) from Monday to Friday. The spa will

heat to set point at all times on the weekend (Saturday & Sunday).

Suggested use: Use when the spa is used only on weekends and not on weekdays.

Economy time: Monday - Friday, 24 hours per day.

Filter cycle start time: 8:00 AM, duration 1.5 hours, and 8:00 PM, duration 1.5 hours.

Vacation

In Vacation mode, the spa temperature set point will be reduced by 20°F (11°C) (see description of “Economy modes” above). The spa will remain in this condition at all times of the day and all days of the week.

Suggested use: Use when on vacation or not using the spa for longer than 2 weeks.

Economy time: Every day of the week, 24 hours per day.

Filter cycle start time: 8:00 PM, duration 3 hours.

Default Settings: The Default Settings option will restore all Water Care modes and schedules to the spa’s default settings. You will be asked to confirm your choice.

NOTE: Spas NOT equipped with a dedicated filtration pump will turn on automatically, using jet pump 1 on low speed, to filter and/or heat. This is normal spa operation.

NOTE: Your spa is equipped with a freeze-prevention system. If potential freezing conditions are detected one or more jet pumps will turn on automatically to circulate water and prevent the possibility of freezing. This is normal operation.

Modifying Water Care Schedules

To modify a Water Care category, touch the pen icon at the right of the desired Water Care option to open the sub-menu.

Touch the Economy tab to change the economy setting and the Filter cycle tab for the filtration settings (or schedules). You can add economy or filtration schedules by touching the title labeled “Add filter cycle” or “Add economy cycle”. To delete a schedule, touch the garbage can icon at the right of the desired function title. Confirm your action when prompted.

You can modify the programmed schedules by selecting one and adjusting the schedule. You have several possibilities for the schedule (Mon-Fri, weekend, every day, or single days). The schedules will be repeated each week. The time and duration are set in 30-minute increments. When changes are done, press “confirm”. If you don’t want to keep any changes, press “cancel” or use the calendar icon to go back. Ensure that you have selected the desired Water Care mode in the main Water Care menu.

Maintenance Reminders

The STIL (A1000) keypad can be set up to remind you of several types of maintenance required on your spa, including rinsing the filter, cleaning the filter, changing spa water, and doing two-year professional maintenance checks. Each task has its own standard duration based on normal use, or you may adjust it to fit your specific expected usage.

Access the Reminders sub-menu by pressing the  Reminders icon in the Settings menu.

Maintenance reminders allow you to verify the time left before maintenance is required, as well as to reset the time once a task is completed.

To reset a task, select it by pressing the title of the specific reminder, then confirm when prompted. Once you have confirmed, the task timer will be reset. You can also use the option “Reset Reminders” to reset all the reminders.

Set Date and Time of Day

Setting the correct date and time is important for settings to function as expected. Upon restarting your spa adjust the time format (24 hr. or AM/PM) and change the year, date, and time as needed.

Within the ⚙ Settings menu, select “Date & Time” to access these sub-menus.

Select “Set Date” to adjust the year, month and day. Swipe up and down the column you want to change and select the desired value. When you are done, touch the ⚙ Settings icon to save.

Select “Set Time” to change the hour, minute, and time format. Swipe up and down the column you want to change and select the desired value. When done, touch the ⚙ Settings icon to save.

Keypad Settings

In the Keypad sub-menu, you can change the temperature unit settings or the language setting.

Change temperature units by touching the “Temperature Units” title and then the desired unit of measurement.

Change the language setting by touching the “Language” title and then selecting the desired language.

Standby/Lock

Standby mode allows you to service your spa. Pumps can be stopped for 30 minutes in this mode and will automatically restart after. Select Standby mode by pressing the ⏸ pause/standby icon. The home/status screen and normal spa function will resume after the 30-minute standby period.

The Lock option allows the user to partially or completely lock the keypad. Selecting the “Lock” option will lock all functions on the control, while the “Partial Lock” option will allow jets, audio, and lights

to remain functional. To lock the keypad, select  “Lock Settings,” then select “Lock” or “Partial Lock” according to the functions you wish to lock. When asked, select a 4-digit code. The same code will be needed to unlock the keypad. To lock the keypad again, you will be prompted to select another 4-digit code.

The keypad can be unlocked with a universal unlock code (3732) or by a reset of the keypad. When Full Lock is selected, all functions are locked. In Partial Lock, you may activate accessories, but spa settings may not be changed.

Electrical Configuration

IMPORTANT: Please do not make changes in this section unless you are a qualified electrician.

In this section, you can change the low-level configuration, as well as modify the number of phases and the input current value.*Please refer to the diagram on the spa control center box, located inside of the equipment compartment, for the default configuration of your specific spa model. Once the modification is completed, confirm the selection when asked and touch the ⚙ Settings icon to return to the Settings menu.

NOTE: On initial connection, the installer is prompted for electrical configurations. The Low-Level setting is selected by the installer. The Phase and Amperage is set automatically. Default settings should be confirmed by the installer to match the actual phase and amperage at the spa’s installation location. In rare occasions it may be necessary to adjust the Phase and Amperage setting to match the actual service available at the installation location using the instructions above.

*Depending on the pack configuration, a code may be required to modify the low-level number. This code is 5555.

About

This section displays technical information about the STIL control software version and applicable revisions of the different components of your system.

Audio System Controls (Optional)

Press the  Audio icon to access “in.stream 2” player controls.

If you are using a device with Bluetooth technology, it must be connected for functions to work. Use code 5555 to pair.

Speaker settings: Move the sliders to adjust the Balance, Fader, and Subwoofer settings. The Fader and Subwoofer sliders will only appear in the Speakers menu if the corresponding speakers are available.

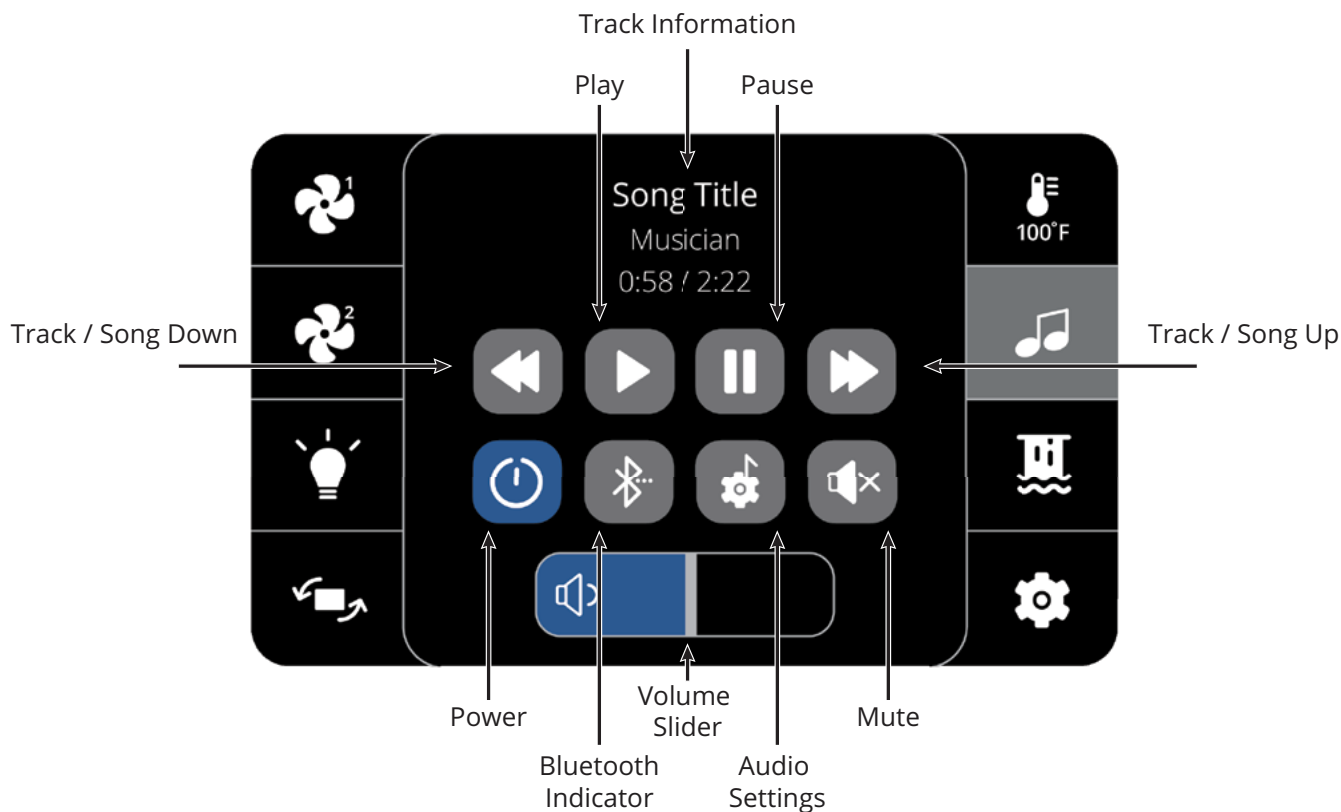
Source menu: To change the audio source, simply tap on the “Audio Settings” menu and select the desired audio source or device. Note that only the sources available on the STIL Audio will be displayed in the source menu.

Connect Bluetooth: The first time you use your Bluetooth device with an STIL Audio system, you must first “pair” or connect your device to the spa audio system according to the standard functionality of your specific device.

*Each device must be connected separately. Use code 5555 to pair.

Disconnect Bluetooth: If a device with Bluetooth technology is connected to the STIL Audio, you can disconnect it by pressing the Disconnect button at the bottom of the screen. Doing so will also prevent the audio system from automatically reconnecting to this specific device until it has been reconnected using the device itself. For proper function, place your Bluetooth device within 20 feet (6 meters) of your spa. The device should have a “line of sight” to the spa control panel / equipment door area.

NOTE: Certain house construction materials and other obstructions can impair Bluetooth connectivity. You may need to experiment with where to place your device for best results.



JETPAKS & JETS

Interchanging JetPaks STIL Series

Step 1: Put the spa in “Standby.” This will prevent the pump(s) from activating (see Control Systems).

Step 2: Remove the head rest and Snap-Cap entirely by lifting upwards.



Step 3: While applying pressure downward on the manifold push the manifold toward the inside of the spa to release the manifold from the wall clip assembly, then lift the jet plate straight up to remove.

CAUTION! WHILE PERFORMING STEPS 3 AND 4 YOU MUST USE THE BLACK MANIFOLD AREA AS THE POINT OF CONTACT AS SHOWN IN THE PICTURE. PRESSURE APPLIED TO THE FRONT FACE (ACRYLIC PLATE) MAY CAUSE DAMAGE TO THE JETPAK VOIDING THE WARRANTY.



Step 4: Exchange JetPak.



Step 5: Lower the manifold of the new JetPak carefully as to align the lower valve assembly and gasket into the bulkhead fitting. Apply pressure downward as you move the JetPak manifold until the manifold is secured in the wall clip assembly.

Step 6: Replace the Snap-Cap and head rest over the JetPak and press down firmly to snap into place.

Additional Jets

In addition to the jetting options offered as part of the JetPak Therapy System, additional foot, hip, calf, wrist, and hip jets may be available in your spa model to provide an optimal spa therapy experience. Like JetPaks, many of these jets may also be adjusted to personalize your spa to achieve your ideal therapy, intensity, and massage experience.

Adjustable Jets STIL

To adjust the water flow to JetPak jets turn the valve located in the lower portion of each JetPak.

To increase jet water pressure, turn the valve handle counter clockwise.

To decrease jet water pressure, turn the valve handle clockwise.



To adjust the water flow to adjustable jets in the shell of STIL spas turn the inner jet face.

To increase jet water pressure, turn the jet face clockwise.

To decrease jet water pressure, turn the jet face counter clockwise.



WATER CARE & CHEMISTRY

Chemicals

Properly maintaining your spa water is very important to ensure enjoyment in using your spa and to maximize spa shell and equipment life. Properly maintaining your spa water chemistry will require regular attention to prevent poor water quality, potential unhealthy conditions, and possible damage to your spa.

For all water care-related questions, please refer all water care-related questions and concerns to your local Authorized Bullfrog Spas Dealer. Your Authorized Bullfrog Spa dealer can recommend the correct products and procedures for safely sanitizing and maintaining your spa according to local water chemistry, regulations, and your specific circumstances.

Suggested Water Care Method: FROG® @ease® (USA Only)

All 2-filter Bullfrog Spas come equipped with an @ease-ready holder system installed in the filtration compartment. This holder accepts FROG @ease system cartridges (mineral & SmartChlor® chlorine) designed specifically for Bullfrog Spas. The @ease system holder and system cartridge kits may be obtained through your Authorized Bullfrog Spas Dealer.



Sanitizing System Operating Instructions for Bullfrog Spas®

FROG® @ease® and FROG @ease XL™ are hot tub sanitizing systems* custom designed for Bullfrog Spas that takes the guess work out of water care so you always feel at ease while enjoying your hot tub.

Triangle Cartridges



Blue -
FROG
@ease
Mineral
Cartridge

Silver -
FROG
@ease
SmartChlor®
Cartridge
(180 gr)

Rounded Cartridges



Blue -
FROG
@ease
Mineral
Cartridge

Silver -
FROG
@ease
SmartChlor®
Cartridge
(180 gr)

Silver -
FROG
@ease XL
SmartChlor®
Cartridge
(300 gr)

The combination provides the Fresh Mineral Water®∞ benefits of **cleaner, clearer and softer®** water that's easier to take care of.

FROG @ease Mineral Cartridge

Active Ingredient:

Silver Chloride0.5%

Other Ingredients:99.5%

Total:100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

DIRECTIONS FOR USE: It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For use in hot tubs up to 600 gallons. Use with the FROG @ease SmartChlor Cartridge in the FROG @ease Sanitizing System for Bullfrog Spas. Ensure all hot tub equipment is working properly. Operate the pump and filter as recommended by your hot tub manufacturer. Clean filter following manufacturer's directions. May be used with a previously filled hot tub unless it was sanitized with bromine or biguanides. Then drain and fill the hot tub with fresh water before using this product.

Read entire operating instructions for complete directions for use.

Step 1: Prepare the Hot Tub

1. Fill hot tub with fresh water. If using source water that is high in calcium, iron or other metals, see your dealer before filling the hot tub. It may require the use of a metal control product.

If previously using bromine and switching to FROG @ease System, you must drain and refill your hot tub before using this product.

If previously using dichlor you may convert to FROG @ease System without having to drain the hot tub, as long as cyanuric acid level is below 80 ppm.

2. Clean or replace filter cartridges when dirty (Follow manufacturer's instructions).

3. Balance water by following STEPS a - d in order.

IMPORTANT: Always follow printed instructions on the balancing chemical packages. Add balancing chemicals in small increments one at a time with the jets on and wait 6 hours before testing again and adding any additional balancing chemicals.

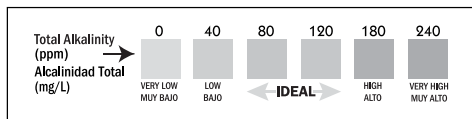
Water Balance Guidelines

pH:	7.2 - 7.6
Total Alkalinity:	80 - 120 ppm
Hardness:	150 - 250 ppm
Total Dissolved Solids:	<1500
Cyanuric Acid:	0 - 50 ppm

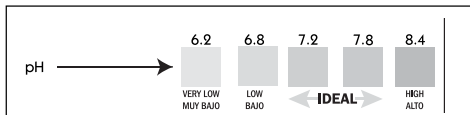
a. Take a water sample from the hot tub and dip a FROG @ease Test Strip into it.



b. Look at the **Total Alkalinity** reading first. Adjustments should be made to bring the Total Alkalinity in the **range of 80 - 120 ppm** prior to making any adjustments to pH even if it throws pH off further.



c. After Total Alkalinity is in range, **test for pH**. It should be **between 7.2 and 7.6**. If higher or lower, add a pH adjuster.



d. Lastly **test for Hardness**. It should be **between 150 and 250 ppm**. If higher, partially drain the hot tub (about 6 inches) and fill with water low in calcium. If lower, add Calcium Increaser.

If balancing takes longer than 2 days shock the water and maintain a chlorine level while continuing balancing.

4. **Very Important!** After balancing and before using cartridges, establish an initial residual of 0.5 - 1.0 ppm free chlorine with FROG® Jump Start® start-up shock, included in this package, that quickly dissolves with an effervescent fizzing action - one packet per 600 gallons.



5. Heat water to the manufacturer's recommended temperature.

Step 2: Set the Cartridges

1. Remove the FROG @ease SmartChlor Cartridge from its bag before proceeding.

2. Set the FROG @ease Mineral Cartridge to the highest setting using the dial on the bottom of the cartridge. No further adjustments are necessary for the life of the cartridge.

3. Set the FROG @ease SmartChlor Cartridge to the setting that matches your hot tub model number and the type of cartridge being used.

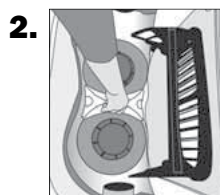
For Triangular Shaped Cartridges	Setting #
A5L, R5L	1
A6, A6L, M6, R6, R6L, STIL5, X6L, X7, X7L	2
A7, A7L, M7, M8, R7, R7L, R8L, STIL7, X8, X8L	3
A8, A8D, A8L, A9L, M9, R8,	4
For Round Shaped Cartridges	Setting #
A5L	2
A6, A6L, STIL5, X6L	3
X7, X7L	3
A7, A7L, STIL7	3
M7, X8, X8L	4
A8D, A8L, M8	4
A9L, M9	5

If needed, you may increase or decrease the dial setting. Once set, the FROG @ease SmartChlor Cartridge will maintain a low 0.5 to 1.0 ppm chlorine level as long as the pH stays within 7.2 and 7.6 so typically there is little need to adjust the cartridge setting.

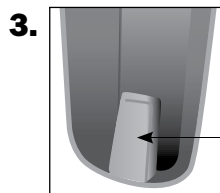
Step 3: Put the System to Work

Between Filter Cartridges

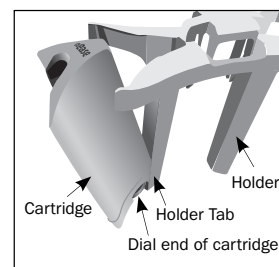
1. Remove filter snap cap.



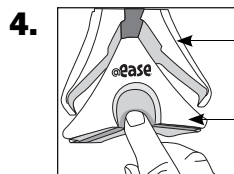
Hold weir door/filter plate out into the hot tub slightly or remove from hot tub. If cartridge holder is already installed between the filter cartridges, remove by pulling up on the handle.



Detail of Cartridge Holder Tab

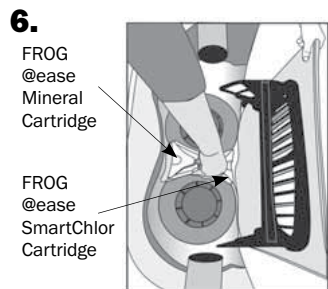


Snap the FROG @ease Mineral Cartridge into one opening of the cartridge holder. With the @ease logo facing the holder, put the dial end of the cartridge into the holder first by connecting the tab on the holder with the indent in the cartridge.



Then push the top part of the cartridge in until it snaps into place

5. Follow the same procedure for the FROG @ease SmartChlor Cartridge into the other opening.



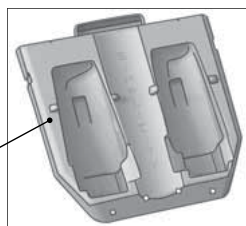
With the silver FROG @ease SmartChlor Cartridge facing the inside of the hot tub, insert cartridge holder between the filter cartridges under the weir door/filter plate pushing down until it stays in place.

7. Replace filter snap cap.

Using the Simplicity Filter System

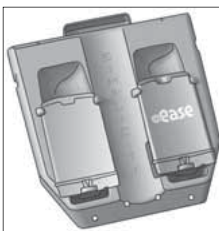
1. Turn off main power to the hot tub and remove the JetPak to the right of the main control.

Simplicity Filter System

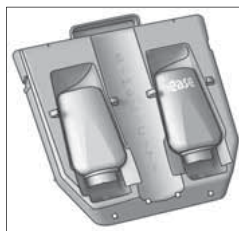


2. Insert FROG @ease Mineral Cartridge and FROG @ease SmartChlor Cartridge into the two openings on the outside of the filter system. Push cartridges in until they are latched.

FROG @ease System

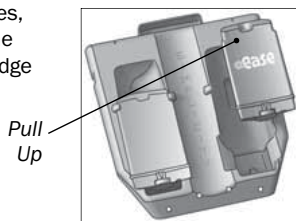


FROG @ease XL System

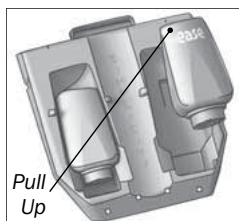


3. To remove cartridges, pull up at the top of cartridge and lift out.

FROG @ease System



FROG @ease XL System



4. Replace JetPak.

Replacing Cartridges

Replace FROG @ease Mineral Cartridge every four months, or when draining and refilling hot tub.

Discard it in the trash even though you will hear the spent media left inside. Don't attempt to reuse: the minerals are spent after 4 months.

Replace FROG @ease SmartChlor Cartridge when empty based on the FROG @ease Test Strip showing a lighter color than the out indicator on the bottle. The life of the cartridge varies depending on hot tub size and number of users. FROG @ease SmartChlor Cartridge will last about 3-4 weeks for an average 400 gallon hot tub. Drain water from cartridge to ensure it is empty. Discard in trash or offer for recycling if available.

Step 4: Routine Hot Tub Care

1.



Drain and refill hot tub as directed by your hot tub manufacturer. Whenever you drain and refill, make sure to replace your FROG @ease minerals.

2.



Run filtration system as recommended by your hot tub manufacturer to maintain proper water flow through the system.

3.



Regularly test water with FROG @ease Test Strips and follow directions in Step 1 for maintaining pH, Total Alkalinity and Hardness.

NOTE: pH is affected by bather load, chemicals used, evaporation and the make-up of your source water so maintaining water balance regularly is important.

4.

FROG @ease SmartChlor Cartridge will maintain 0.5-1.0 ppm free chlorine level as long as the water is balanced.

NOTE: Free Chlorine levels are reduced up to 75%* when using FROG @ease Minerals.

NOTE: Why FROG @ease Test Strips? The FROG @ease SmartChlor Cartridge forms a chlorine reserve that will be inaccurately measured as total chlorine on other test strips. Unlike conventional chlorine, the SmartChlor reserve readily shifts to free chlorine as needed, maintaining hot tub health with a low level of chlorine.

5.



Shock the hot tub with FROG Maintain®, a non-chlorine shock for easy single-dose shocking when you replace the FROG @ease SmartChlor Cartridge or once a month.

6.

Replace your FROG @ease SmartChlor Cartridge and complete FROG @ease System that comes with a FROG @ease Mineral Cartridge as directed under “Step 3: Put the System to Work”.

Troubleshooting

Cloudy Water or Low-Chlorine Levels

- Shock the hot tub with FROG Maintain, a non-chlorine shock.
- Check water balance. pH and Total Alkalinity need to be in the proper ranges for the FROG @ease System to work correctly.
- Check FROG @ease SmartChlor Cartridge and replace if empty—see instructions under Step 3: Put the System to Work.
- If FROG @ease SmartChlor Cartridge is not empty, turn dial setting up one number while maintaining water balance. If needed turn dial up again.
- Check your calendar. The entire FROG @ease System including a FROG @ease Mineral Cartridge needs to be replaced every four months. Without the minerals, SmartChlor will not be enough to sanitize the hot tub.

FROG @ease SmartChlor Cartridge Life

- If hot tub is larger than 400 gallons with significant bather load, you

may require a higher dial setting which will shorten the cartridge life.

- If you think the cartridge setting is too high, you can turn the dial setting down one number while maintaining water balance. If needed, turn dial down again.

High Chlorine Levels

- This is highly unlikely with the FROG @ease System because SmartChlor is self-regulating. However, if you use standard test strips, it may appear that total chlorine is higher than the free chlorine.
- No worries—the strip is measuring the SmartChlor reserve, which will shift to free chlorine as needed. Please always use the FROG @ease Test Strips that were included with your System.

Learn more at frogproducts.com or call 800.222.0169

Register your FROG @ease Sanitizing System at frogproducts.com



Manufactured for King Technology, Inc.

6000 Clearwater Dr, Minnetonka, MN 55343 U.S.A.

800-222-0169 | frogproducts.com

Made in U.S.A. Patents: kingtechnology.com/IP

Ver la versión en español de este manual en frogproducts.com

+ FROG @ease System consists of the FROG minerals silver chloride and carbonate used with 0.5 ppm of FROG @ease SmartChlor Cartridge. The FROG @ease Mineral Cartridge must be used in conjunction with the FROG @ease SmartChlor Cartridge.

* Compared to the minimum ANSI recommended chlorine level of 2.0 ppm for a hot tub.

☞ For pools and hot tubs.

EPA Est. No.: 64114-MN-1

E09220723R5 20-48-0108

Additional Water Care Methods (alternative or outside USA)

In areas where the FROG @ease system is unavailable (outside the USA), consult your local Authorized Bullfrog Spas dealership for specific options for maintaining water quality. Your Authorized Bullfrog Spa dealer can recommend the correct products and procedures for safely sanitizing and maintaining your spa according to local water chemistry, regulations, and your specific circumstances.

CAUTION:

- Always follow chemical manufacturers' instructions and never mix chemicals.
- Use an accurate test kit to perform all chemical tests.
- Add chemicals directly to the spa, evenly spreading the chemicals over the surface of the water with the jets operating, or use an appropriate feeding or metering device and check chemical levels often.
- Run the filter pump on high speed, with the cover removed, for at least 30 minutes after applying any chemicals to mix adequately and avoid potential damage to equipment, accessories, or surfaces.
- Names of spa chemicals will vary from one manufacturer to another. Please contact your authorized Bullfrog Spas dealer if you have any questions.

Starting the Spa with New Water

IMPORTANT: Never fill the spa with soft water unless an appropriate mineral supplement is immediately added. If your water is extremely hard, it is preferable to dilute its hardness by blending it with water from a water softener or adding special water softening chemical. For more information, contact your authorized Bullfrog Spa dealer.

Step 1: Add the prescribed dose of stain and scale inhibitor while filling the spa. This will provide the initial protection against staining and scaling. Once the spa is filled, add the prescribed dose of water clarifier. This will clear the water of any micro-particulates in the new water.

Step 2: If possible, have your authorized Bullfrog Spas dealer test the calcium hardness (CH) of your spa. Adjust as per your dealer's recommendations.

Step 3: Test and adjust the total alkalinity (TA). The TA should measure 125 to 150 parts per million (PPM).

Step 4: Test and adjust the pH. The pH should measure 7.4 to 7.6.

Step 5: If you use a water clarifier. After the spa water has circulated for one hour, add ½ teaspoon of granular chlorine or one teaspoon of granular bromine per 200 gallons (909.2l) of spa water. After several hours, check the sanitizer level and adjust, if necessary, to the following levels:

- Chlorine Level: 5.0 PPM (parts per million).
- Bromine Level: 6.0 PPM (parts per million).

Step 6: Startup water chemistry is now complete. However, it may take additional time for the filter to completely clear the water.

Regular Spa Water Care Sanitizer and pH Levels

It is essential to test and adjust your spa's sanitizer and pH level frequently. If the spa is used 0-3 times weekly, we recommend that you test the water a minimum of 2-3 times a week. For each additional use, test the water one additional time. Test kits and supplies are available from your authorized Bullfrog dealer.

pH Control: Proper pH balance is extremely important in controlling bacteria, providing water that is comfortable to the user, and preventing damage to the spa and equipment. The pH scale ranges from 0-14. Levels of pH less than 7.0 are acidic, while pH levels greater than 7.0 are basic. The proper pH range for a spa is 7.4-7.6.

High pH levels (greater than 7.6): Can cause scale build-up on the spa and its equipment, cloudy water, a prematurely dirty filter, and less effective chlorine sanitation. To correct high pH levels, add a pH decreaser.

NOTE: Never use Muriatic or Hydrochloric acid to adjust pH as it can damage the spa shell and surroundings.

Low pH levels (less than 7.4): Can cause discomfort to the spa users and corrosion to the spa equipment. To increase pH levels, add a pH increaser.

Always test, and adjust the pH level before you test and adjust the sanitizer level.

Sanitation: Spa water sanitizers kill bacteria and keep the water clean. Bullfrog Spas recommended effective and safe sanitizers are granular chlorine (Dichlor) or granular bromine. Chlorine and bromine are the only two spa sanitizers approved for use in spas by the EPA.

▲ WARNING: Trichlor chlorine tablets should never be used in a portable spa. Dissolve rate, potency, and the extremely low pH of this chemical can cause severe damage to the spa surface and components. The use of trichlor chlorine tablets will void the Bullfrog Warranty.

Bromine and Dichlor tablets are also not recommended as an acceptable sanitizer in Bullfrog Spas unless an appropriate feeding or metering device is used and the water is frequently tested and monitored as excessive bromine or chlorine in the spa can cause surface damage and component failure.

With each sanitizer test, use either granular Chlorine or Bromine to maintain the following levels:

- Chlorine Level: 3.0 to 5.0 PPM (parts per million)
- Bromine Level: 3.0 to 6.0 PPM (parts per million)

Super Sanitation or Spa Shock

Regular sanitation does not eliminate non-filterable wastes, such as sweat, oils, hair sprays, etc., which may build up in the water. These substances make the water unattractive and can interfere with sanitizer effectiveness. Super sanitation is achieved by “shocking” the spa water with a non-chlorine shock (Potassium Peroxymonosulfate), granular chlorine (Dichlor), or granular Bromine (Bromine concentrate).

Super Sanitize the water once a week by adding one of the following:

- Granular chlorine 2 teaspoons (10ml) of per 200 gallons (909.2l) of water
- Granular bromine 4 teaspoons (20ml) of per 200 gallons (909.2l) of water
- Non-chlorine Shock 5 teaspoons (25ml) of per 200 gallons (909.2l) of water

NOTE: Super sanitation may be required more than once per week for heavy usage. With ozone, it may not be necessary to shock the water every week; contact your authorized Bullfrog Spas dealer for more information.

Total Alkalinity (TA): Total alkalinity (TA) is the quantitative measurement of alkaline components (carbonates and bicarbonates) present in water to act as a buffer against rapid pH changes. Proper total alkalinity levels are important to ensure optimal chemical balance in spas. Low TA can cause pH to be unstable. To correct low TA, add a Total Alkalinity Increaser. High TA can cause the water to be scale-forming, cloudy, and corrosive to the spa and its components, in addition to other pH-related problems. Contact your authorized Bullfrog Spas dealer if the spa water has high TA.

Calcium Hardness (CH): Calcium hardness (CH) measures dissolved calcium in the water. Low CH (soft water) can stain the spa surface and cause corrosion to the spa and its equipment. To correct low CH, add a calcium hardness Increaser. High CH (hard water) can cause cloudy water and rough-scale build-up on the

spa surface and equipment. Contact your authorized Bullfrog Spas dealer if the spa water has high CH.

Stain and Scale Control: Stain and scale problems are common in hot water environments. To help prevent and control staining and scaling, use a stain and scale inhibitor per the manufacturer’s instructions. Add stain and scale inhibitor 3-4 days after super sanitation.

Foam-Control: Spa water that contains body oils, lotions, and soap residue combined with high water temperatures can cause excessive foaming on the water’s surface. For a temporary fix, add a foam remover as per the manufacturer’s instructions. The best way to control foam is to super chlorinate the water; this will destroy the soap agents that normal levels of sanitizer will not. Add 2 tablespoons (20 ml) per 100 gallons (454.6 liters).

Cloudy Water Prevention and Control: There are two basic reasons that spa water becomes cloudy. First, non-filterable liquid waste (e.g., perspiration) has contaminated the water. To remove these substances, Super Sanitize the water. Second, non-filterable micro-particulate waste (e.g., dust) has contaminated the water. To remove these substances, use a Water Clarifier as per the manufacturer’s instructions.

Water Chemistry Troubleshooting

Before each spa use, check the water. If the water appears cloudy, off-color, has significant surface foam, or smells of excessive chlorine/bromine, the water needs to be treated or drained. Using the spa in these conditions could result in irritations.

Contact your authorized Bullfrog Spas dealer or another service center capable of performing a computerized water analysis for assistance in handling spa water chemistry.

Your Bullfrog Spas spa may be equipped with the EOS enhanced ozone purification system. Long-term maintenance of this system requires the replacement of the O3 Filter Cartridge approximately every 24 months. Contact your authorized Bullfrog Spas dealer for replacement cartridges and more information.

Freeze Protection

NOTE: Your spa is equipped with a freeze protection mode. When potentially freezing outside temperatures are detected, your control system will turn on to check the water temperature. If heating is necessary to protect from freeze conditions, your spa may turn on and heat to a safe temperature. A notification will display on the primary control screen, indicating this mode is engaged.

SPA MAINTENANCE

Ozone Purifier (Optional)

The EOS premium ozone system operates automatically when installed. Spas with EOS installed may experience a reduced need for chemical sanitizer, allowing for maintaining sanitizer levels closer to the suggested minimum recommended level of 3 PPM. Always maintain an absolute minimum of 2 PPM. The EOS system may also potentially reduce the frequency of super sanitization or spa shock application to a bi-weekly basis or less, depending on usage patterns.

The Bullfrog EOS requires no special maintenance during normal usage. Long-term maintenance requires replacing the Carbon filter cartridge approximately every 24 months. Contact your authorized Bullfrog Spas dealer for more information.



Your Bullfrog Spas spa may be equipped with an optional WellSpring High Output ozone purification system. This system may also reduce your sanitizer usage. Contact your authorized Bullfrog Spas dealer for information on periodic maintenance or replacement of ozone system parts.

Changing Spa Water

WARNING: An empty spa (spa without water in it) must not be left exposed to sunlight as shell damage may occur. Once the spa is unwrapped, fill spa with water immediately or shade the spa with cover or wrapping to prevent direct exposure to sunlight.

As you use your spa, soap and detergent residues from your skin and bathing suits, along with other substances from maintaining the spa's water chemistry, will accumulate in the spa water and make maintaining the water more difficult. Rinsing your bathing suits and showering without soap before entering your spa will increase the life of your spa water. Depending upon usage, the spa water will need to be changed every 1-4 months or when the water chemical levels become difficult to manage. When changing spa water, remove all JetPaks. Clean the shell and jet pod areas with a spa surface cleaner. See Spa

Shell Care. Clean the other areas of the spa, including JetPaks, with a spa surface cleaner as necessary.

IMPORTANT: Drain your spa to an area that can handle a large quantity of water. If draining water onto vegetation, make sure that the water's sanitizer level (chlorine or bromine) is less than 0.5 PPM.

WARNING: Avoid drainage that can lead into basement window wells or any other area where damage could occur.

To Drain Your Spa:

Step 1: Turn-off main electrical breaker to spa.

Step 2: Locate drain below equipment compartment door.

Step 3: Pull the drain out with a slight clockwise turn. Use pliers if needed.

NOTE: Drain is fully extended at approximately two inches (five centimeters).

Step 4: Remove drain cap.

NOTE: The drain spout will not drain when fully extended.

Step 5: Attach a standard garden hose. Push the drain spout in halfway to actuate the drain.

NOTE: The Spa will drain about five gallons (20 liters) per minute. Ensure that the drainage is in an area safely away from window wells or basement entrances.

Step 6: Once the spa is fully drained, pull the drain spout out all the way, remove hose, replace the drain cap and push drain in all the way.

To Refill Your Spa:

WARNING: When refilling the spa, always super sanitize the new water by adhering to the instructions in the Water Chemistry section.

See Spa Filling instructions Page 9.

Filter Maintenance STIL

It is recommended that pleated cylindrical filter cartridge(s) used in STIL, R Series, X Series, and STIL spas be cleaned every 3-6 weeks or as needed. Spas equipped with the optional circulation pump system may require increased cleaning intervals based on use and local water conditions.

Replace the filter cartridge(s)

After multiple cleanings, worn filter cartridges will need to be replaced. To maintain warranty protection, use only genuine Bullfrog Spas filter cartridge replacements. To clean or replace your filter cartridge(s), complete the following:

CAUTION: Never operate spa with the filter(s) removed.



Step 3: Remove the pleated cartridge(s) by turning the filter core cap(s) counter clockwise then sliding the cartridge(s) upward from the filter core.



Step 4: Using a garden hose with a nozzle or other high-pressure device, clean cartridge(s). Work first from the inside, top to bottom on each pleat then from the outside, top to bottom on each pleat.

To remove collected lotions or body oils, soak cartridge(s) in warm water with a filter cleaner or detergent.

To remove calcium deposits, soak cartridge(s) in a plastic container using a 1:10 ratio of muriatic acid to water solution. Calcium deposits indicate a high spa pH, which should be corrected.

NOTE: Filter(s) must be cleaned with a filter cleaner/degreaser before attempting to remove calcium and mineral deposits with any acidic based product.

Step 5: Reinstall cartridges(s) by aligning the cartridge slot with the filter core fin; reinstall the filter core cap(s), filter plate, and filter cap.

Step 6: Restore main power to the spa.

IMPORTANT: Using a brush to clean a filter cartridge could cause damage to the filter media.

LED Light Replacement

Contact your authorized Bullfrog Spas Dealer for repair.

Spa Surface Care

IMPORTANT: Your spa cover is an essential part of the spa system to protect spa surfaces, ensure safety, and provide the highest possible efficiency. Ensure the cover is in place at all times except during spa use.

General Cleaning

Use mild dish washing soap, window cleaner, or other products recommended by your local Authorized Bullfrog Spas Dealer for regular cleaning. For stubborn stains, use a mild acrylic cleaner or a mild detergent. To apply these cleaners, use a soft, damp cloth or sponge. Rinse well and dry with a clean cloth. To clean hard water stains, remove light scratches and protect your spa shell, contact your authorized Bullfrog Spas Dealer.

Cleaning a Surface Buildup Line

With regular use of the spa, oils, lotions, and hair products can build up on the water's surface in small amounts. This could leave a line around the perimeter. This buildup can be easily removed using a spa surface cleaner or equivalent. Avoid using cleaning agents that leave soap residue in the water.

▲ WARNING: Never allow your spa surface to be exposed to alcohol, acetone (nail polish remover), nail polish, dry cleaning solution, lacquer thinners, gasoline, pine oil, abrasive cleaners, or any other household chemicals other than those listed. These chemicals void the warranty.

Spa Cabinet Care

The EternaWood™ cabinet components are made to provide many years of maintenance-free service. For regular cleaning, use mild dish washing soap. For stubborn stains, contact your authorized Bullfrog Spas Dealer.

Spa Cover Care

▲ WARNING: A non-secured, improperly secured, or damaged cover may pose a safety threat to children

and cause damage or injury if blown off by the wind. Always remove the entire cover before using the spa.

IMPORTANT: Do not stand, sit, or place any item on the cover that could damage it. Gently remove any snow accumulations over 2 inches (5cm). Always secure the cover with all of the cover locks when not in use, whether the spa is empty or full of water.

Cleaning the Spa Cover

At least monthly, clean the spa cover.

Step 1: Use a garden hose to spray the entire cover with water.

Step 2: Rinse away all traces of dirt, sand, and debris from the cover.

Step 3: Try not to touch the cover or rub anything on it while it is wet.

Step 4: Air dry.

Step 5: Secure the cover clips.

NOTE: If water doesn't bead on the cover when spraying with water and the cover looks darker in some areas, use an outdoor fabric protectant (never petroleum-based) to condition the area per your Bullfrog Spas Dealer's instructions.

NOTE: If more thorough cleaning is required, add 2 ounces of mild soap to 1 gallon of warm water. Clean the cover fabric with a soft brush. Rinse thoroughly with cold water and air dry. Use an outdoor fabric protectant to condition the area per your Bullfrog Spas Dealer's instructions.

Miscellaneous Care

Waterfall Cleaning Instructions

Step 1: Remove the circular flow control knob by pulling up on the edges. (This might be tight when your spa is new.)

Step 2: using needle nose pliers for grip, twist out the white internal mechanics. This includes a small attached basket which acts as a debris filter.

Step 3: Clean the filter basket and internal waterfall parts.

Step 4: Twist the basket and internal mechanics back into the hole and replace the flow control knob.

Cleaning and Protecting Headrests

Regularly clean all headrests with mild soap, water, and a clean cloth. Monthly, treat headrests using a non-petroleum-based conditioning product as recommended by your Bullfrog Spas dealer. This will maintain the water resistance and luster of the product.

IMPORTANT: Remove the pillows during and after shock-treating the spa water or when sanitizer levels are high. Leave the cover open for at least 30 minutes after shocking to ensure pillows are not adversely affected.

NOTE: Spa headrest material is not designed to last forever in the presence of the sanitizers necessary to maintain clean and clear spa water. However, discoloration and degradation are greatly accelerated by high sanitizer use and/or improper ventilation after sanitizer application and shock treatments. Proper care will extend headrest life but most often headrests will need to be replaced every few years and are not covered by the Bullfrog Spas Warranty beyond manufacturer defects.

Vacuum the Spa

Debris from wind, trees, and users will occasionally accumulate on the bottom of the spa. The filtration system will remove the smaller debris. Large or heavy debris can be removed with a handheld spa vacuum available at your Bullfrog Spas dealer.

Low-Use or No-Use Periods

For extended low-use or no-use periods, consider the following options to maintain your spa more easily.

No Use for Two to Six Weeks

If the spa will not be used for at least two weeks, lower the temperature to the lowest setting of 80 F (26°C) or place in low range heat mode. Lowering the temperature will cut the cost of operation, however; you will need to adjust the temperature setting approximately 4 hours before use in order to heat the spa to 100 F (38°C).

IMPORTANT: During all low and no-use periods, be sure to maintain the spa water as per the instructions in the Water Chemistry section.

IMPORTANT: For all no-use periods and every week, be sure to have someone visually check that the spa is functioning correctly and maintain the spa water as per the instructions under the Water Chemistry section. Not doing so may lead to corrosion, staining, and scaling to the spa and its equipment. During periods of freezing temperatures, a spa that has malfunctioned may be subject to damaged plumbing or equipment as a result of ice buildup within the spa. If the spa cannot be checked and maintained weekly, consider winterizing the spa.

No Use for Over Six Weeks

When you are not planning to use the spa for six or more weeks, or when someone cannot maintain the spa every week, you should use Away mode.

For extended absences, you may also choose to winterize the spa. To winterize, follow these steps:

Winterization

▲ WARNING: Before winterizing your spa, it will be necessary to super sanitize the spa water as per the instructions in the Water Chemistry section. This procedure will help prevent the growth of bacteria, algae, and fungi in any areas of plumbing that may not be entirely free of water after you drain your spa for its period of winterization.

NOTE: Your spa is equipped with a freeze protection mode. When potentially freezing outside temperatures are detected your control system will turn on to check the water temperature. If heating is necessary to protect from freeze conditions, your spa may turn on and heat to a safe temperature. A notification will display on the primary control screen, indicating this mode is engaged.

Step 1: Drain the water.

Step 2: Open all lower JetPak valves to allow the water to drain from each JetPak as you drain the spa. Once the water is completely out of the spa, close each valve before proceeding to step 3.

Step 3: Use a shop vacuum to vacuum the plumbing lines by placing the vacuum nozzle over each of the lower jet faces in the spa. Lower jets are any jets located at or below the bench seat area.

Step 4: Remove the drain plug from the pump(s) and loosen all PVC pipe unions in the equipment compartment. Do not replace the plugs or tighten the unions until the spa is de-winterized.

Step 5: Clean the spa shell and JetPaks.

Step 6: Remove Simplicity Filter and clean or replace, and then reinstall.

Step 7: Secure the cover to the spa utilizing the tie downs and locking system. In areas where heavy snow is anticipated, place a large piece of plywood (or its equivalent) on top of the spa cover to support the cover with the added weight of the snow. Remove snow off the cover following each snowstorm.

▲ WARNING: To avoid water from becoming trapped between the floor suction fitting and the filter pipe, use a wet/dry vacuum to remove the remaining water from the pipe by placing the vacuum end over the filter hole. In a two-pump spa, plug off one filter using a tennis ball, then vacuum out the water. Or pour ½-1 gallon (5-9 liters) of RV antifreeze into the filter hole.

NOTE: RV antifreeze is nontoxic and does not require evacuation at start up.

Spa De-Winterization

To de-winterize the spa, reverse the winterization procedure. Refill to the water level mark.

▲ WARNING: Whenever refilling the spa, it will be necessary to super sanitize the new spa water. Instructions are found in the Water Chemistry section.

EQUIPMENT DOORS

STIL Door Removal

STIL spas are designed so that there are no visible fasteners from the exterior. Snap features in the corners and the cabinet panels allow for simple equipment area access, however, it is important to follow these recommended door removal instructions to avoid damaging the door or corner panels.

Step 1: Remove Corners – It is important to remove the front two corners overlapping the door before attempting to remove the door itself. This is done by placing a short flathead screwdriver below the corner and slipping it up partway behind the corner and using it as a lever to pry out the bottom half of the corner outward. Once this is done, grab the corner by the bottom and pull it straight out allowing the top snap to come free. Pull corner down and out of the groove on the top.



Step 2: Remove Door – Once both front corners are removed, look on each side of the front door to see the snap feature built into the cabinet. To remove the door, start by placing a longer flathead screwdriver or short pry bar into the center of the snap feature and use it as a lever to pop the door out of the first snap. Grab the base of the door and carefully begin pulling it out such that the rest of the snaps come free one by one across the length of the door. The door can then be dropped out of the groove on top and removed from the spa.

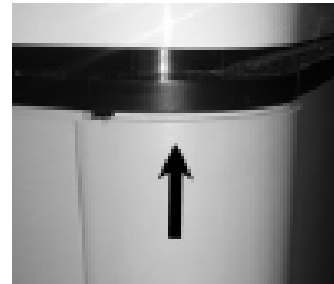


Step 3: Electrical Disconnect – be sure to disconnect any lighting or any other electrical wiring that is mounted onto the door before completely removing it.

STIL Door Installation

Step 1: Electrical –Reconnect any lighting or electrical devices on the door before installing.

Step 2: Door – Slip the upper lip of the door into the top groove of the extrusion. Lower the door while gently pushing on it until you feel the snaps line up with the snap features in the ribs. Starting from one side, force the first snap into place. Continue down the length of the door and forcefully push the cabinet into each of the snaps until the door is completely in and secured. You can feel along the bottom to make sure all are in place and no gaps are present.



Step 3: Corner – Slip the upper lip of the corner into the top groove of the spa. Starting from the top force the first snap into place, if the corner has slipped down and is not flush with the top groove this is the best time to push it back up into place. Continue down the length of the corner and forcefully push it into each of the snaps until the corner is completely secured. The corner should fit tightly against the cabinet on both sides.

ELECTRICAL REQUIREMENTS

Instructions

IMPORTANT: Provide a copy of these instructions to your Electrician. The installation of all spas must be in accordance with national and local wiring rules. Always have a licensed Electrician perform the electrical installation. Each Bullfrog Spa is manufactured and tested to a standard that provides maximum protection against electrical shock. Improper wiring may prevent the spa from operating safely, which could result in electrical shock, injury, or death. Improper wiring could also lead to a malfunction of the spa's equipment and risk of fire.

Drilling Conduit Hole:

All dimensions are at the bottom base. 1" (2.54cm) Conduit Drill 1-3/8" (3.49cm) hole 3/4" (1.91cm) Conduit Drill 1-1/8" (2.86cm) hole Center of hole is 1" (2.54cm) from the ground.

Important Technical Information

Voltage Definitions: When reading these instructions, the term 120V~ refers to the 110-120V~ range of voltage, while the 240V~ term refers to the 220-240 range of voltage.

Wiring Connection: Appliance must be permanently connected to fixed wiring (except for U.S./CAN 120V~/60Hz Cord-Connected units). Wiring Diagrams: In addition to the instructions that follow, please reference the appropriate Wiring Diagrams (120V~/60Hz Cord-Connected, 120V~/60Hz Permanently-Connected, 240V~/60Hz Permanently-Connected, or 230V~/50Hz Permanently-Connected).

Electrical Service Wire Size and Type: The size of wire required to supply the spa with power depends on the length of the electrical run and should only be determined by a licensed Electrician. Installation must be in accordance with all national and local wiring rules. All wiring from the disconnect to the spa must be copper to ensure adequate connections. Never use aluminum wiring from the GFCI disconnect to the spa."

Spa Location:

Overhead Power Lines: Based upon the national and local wiring rules that apply to your area, you will need to install your spa at the required minimum horizontal and vertical distances from all power lines.

Service Disconnect: Based upon your area, a disconnect device must be incorporated into the fixed wiring in accordance with federal and local wiring rules. If the federal and local wiring rules permit, a GFCI Sub Panel may be used to substitute the service

disconnect, providing that it is located within the same parameters.

Electrical Outlets, Switches, and Devices: Based upon the national and local wiring rules that apply to your area, you must install your spa at or beyond the required minimum distance from all electrical outlets, switches, and devices.

Bonding: Based upon the national and local wiring rules that apply to your area, the Control System Box located inside the equipment compartment of your spa must be bonded to all metal equipment, handrails, fixtures, enclosures, pipe, or conduit that are located within the maximum specified distances. The bonding is to be connected to the ground lug connector on the exterior surface of the Control System Box and all metal items previously described.

Equipment Compartment Access: Make sure the spa is positioned so that access to the equipment compartment will not be blocked.

Ground Fault Circuit Interrupters (GFCI) or Residual Current Devices (RCD): As per national and local wiring rules, all spas, hot tubs, and associated electrical components must be protected by a GFCI or RCD, either at the main breaker box or at the service disconnect.

WARNING: Removal or bypassing the GFCI will result in an unsafe spa and will void your spa's warranty. When installing the GFCI, all conductors except the green ground must be routed through the GFCI, including the neutral. Never bypass the neutral line. If the neutral line is bypassed, the current will be imbalanced and cause the GFCI to trip. See GFCI Wiring Diagrams or contact Bullfrog International, LC, or your authorized Bullfrog Spa dealer.

REQUIRED TEST PROCEDURE: After the spa is first filled and turned on, and prior to each use, the GFCI should be tested as follows:

Step 1: Press test on the GFCI breaker. The spa should stop operating.

Step 2: After 30 seconds, press reset and then verify that power has been restored to the spa. If the GFCI fails to operate in this manner, you may have an electrical malfunction and be at risk of electrical shock. Should this occur, turn off the GFCI breaker to the spa and do not use the spa until the malfunction has been repaired by a licensed Electrician or your authorized Bullfrog Spa dealer.

Dedicated Electrical Circuit Breaker: The electrical service to the spa must include a suitably rated switch or circuit breaker. Whether the spa is a 120V~/60Hz Cord-Connected spa or a 120V~/60Hz, 240V~/60Hz, or 230V~/50Hz Permanently-Connected spa, it is required that the circuit breaker that supplies power to the spa is dedicated and does not supply power to any other electrical outlet, device or item.

Electrical Access Conduit: Each Bullfrog Spa is manufactured with three electrical access chase ways in its base to allow conduits to be run to the spas control system. These chase ways are marked by stickers indicating access points.
12V Maximum on Live Parts: Live parts accessible to the user must not exceed 12V.
240V~/60Hz 30A Conversion Option: If there is not 50A of electrical service available, an authorized Bullfrog Spa dealer or Electrician can easily convert the spa to operate on 30A (conversion instructions are located inside the Control System Box). Please be aware that spas converted to 30A are only capable of heating the water when pump 1 is on low-speed, not high-speed. This heating limitation is acceptable in most climates as well as indoor installations.

230V~/50Hz, 32A Conversion Options: If there is not 32A of electrical service available, an authorized Bullfrog Spa dealer or an Electrician can easily convert the spa to operate on either a single or dual 16A x2 service. Conversion instructions for the following configurations are located inside the Control System Box of the spa.

230V~/50Hz 16A Single Service: Please be aware, that spas converted to 16A are only capable of heating the water when the circulation pump is on low-speed, not high-speed. This heating limitation is acceptable in most climates as well as indoor installations.

230V~/50Hz 16A, 16A Dual Service: The operation of a spa is identical to a single 32A service, except that service is divided into two separate 16A services.

230V~/50Hz 20A, 2PH+N 20A Dual Service: (Model A9L only) Operation of spa is normal.

230V~/50Hz 40A, 1PH+N 40A Single Service: (Model A9L only) Operation of spa is normal.

400V~3N 16A x 3, 50Hz Service: Operation of spa is identical to 32A service is divided into 3 separate 240V~ services with one shared neutral.

New Installations and Re-Installations

These instructions apply to both new installations and re-installations which may occur when a spa is moved or relocated to a new location.

120V~/60Hz Equipment

120V~/60Hz Cord Connected Installation: This option is only applicable if the spa was ordered from the factory with both a 120V~/60Hz pump and a 120V~/60Hz power cord. The spa's Safety Approval Listing and warranty will be void, and the spa may be unsafe if an aftermarket power cord is installed on the spa. Cord-Connected spas have already been converted to operate on 120V~/60Hz power at the factory and come with approximately 15' (4.57m) of usable power cord (the maximum length allowed) attached to the spa. This factory-installed power cord comes with a built-in GFCI breaker.

IMPORTANT: Cordage shall be replaced only with a special cordage assembly available from the manufacturer, its service agent, or similarly qualified persons to avoid a hazard.

Cord-Connected 120V~/60Hz spas require that the factory-installed power cord, with its built-in GFCI breaker, be connected to a 120V~/60Hz, 15A, Single-Phase, dedicated, grounded circuit and power outlet. It is important that this circuit is dedicated (not being used by any other electrical appliance), or your spa may not function properly. For safety purposes, the location of the power outlet (where the spa is to be connected) can be no closer than the minimum allowable distance specified by the national and local wiring rules in your area. Installation must be in accordance with all federal and local wiring rules.

WARNING: Never use an extension cord. Bullfrog International, LC does not allow the use of an extension cord under any possible situation. The use of an extension cord voids any warranty on the spa equipment and exposes the consumer to additional risk of fire, electrical shock, injury, or death.

120V~/60Hz Equipment

Permanently-Connected 120V~/60Hz spas require a GFCI protected, 3-wire (Line 1, Neutral and Ground), 120V~/60Hz, 15A, Single-Phase, dedicated electrical circuit. It is important that this circuit is dedicated (not being used by any other electrical appliance), or the spa may not function properly. Installation must be in accordance with all national and local wiring rules.

240V~/60Hz Equipment

Permanently-Connected 240V~/60Hz spas require a GFCI protected, 4-wire (Line 1, Line 2, Neutral, and Ground), 240V~/60Hz, 50A or 60A, Single-Phase, dedicated electrical circuit. It is important that this circuit is dedicated (not being used by any other electrical appliance) or the spa may not function properly. Installation must be in accordance with all national and local wiring rules.

230V~/50Hz Equipment

This equipment allows for the spas to operate only on a 230V~/50 Hz electrical service.

Permanently-Connected 230V~/50Hz, 32A spas require an RCD protected, 230V~50Hz, 32A Single-Service, or a 16A Single Service, or 16A-16A x2, 400V~, 3N, 50Hz, 16Ax3, a dedicated electrical circuit. It is important that this circuit is dedicated (not being used by any other electrical appliance), or the spa may not function properly. For specific conversion instructions, please refer to the system wiring diagram inside the Control System Box (located in the spa's equipment compartment). Installation must be in accordance with all national and local wiring rules.

Connecting the electrical service to the spa

IMPORTANT: Installation must be in accordance with all national and local wiring rules and performed by a licensed Electrician.

Step 1: Choose one of the three available conduit entry points. (Yellow Black decal)

Step 2: Determine the conduit diameter and drill a hole that is appropriately sized for the conduit (¾" conduit

drill 1-1/8" hole, 1" conduit drill 1-3/8" hole). Use the + as the locator for the center of the hole. The hole saw must go through two layers of plastic. There is a 1" space between both layers.

Step 3: Push the conduit through the hole until it comes out into the equipment area.

Step 4: Remove the faceplate to the Control System Box.

Step 5: Connect the conduit to the Control System Box using a Liquid Tight Connector.

Step 6: Run the required wires through the conduit to the Control System Box.

Step 7: Connect the electrical service wires to the terminal block located in the Control System Box.

Step 8: Replace the Control System Box faceplate and the equipment compartment door. The electrical hook-up is complete.

Note: To conform with electrical codes, and to create a barrier against pests, any holes created in the base of your Bullfrog Spa should be fitted with an appropriate connector.

DISPLAY MESSAGES AND ERROR MESSAGES

Code	Message
HL	High Limit circuit has tripped!
FLO - L01 FLO - L02 FLO	FLO condition - Check filter, pump, blockage, air lock and water level
NO FLO	Persistent NO FLO, all off - Check filter, pump, blockage, air lock and water level
HR	A hardware error was detected (Relay stuck)
OH	Spa temperature is too high
Pr	Temp probes or detection circuit are defective
AOH	Elevated internal temperature
FLC	The pressure switch is closed
SP in	Input voltage issue
RH NC	Comm. error between in.xm2 - in.therm
RH ID	in.xm2 and in.therm incompatible
SC ER	Error detected during the learning mode
F1	in.xm2 Fuse # 1 is blown
F2	in.xm2 Fuse # 2 is blown
F3	in.xm2 Fuse # 3 is blown
ER1	SwimSpa config. : slave unit is missing
Hr	Hardware error was detected (Thermal fuse)
UPL	The spa pack does not have valid software. Please insert valid in.stick to reprogram spa pack.
CFLO	No Flow condition
HiBr	Add fresh water to the spa
HiBr	Add fresh water to the spa
LoBr	Add BromiCharge to spa water
NoBr	Add BromiCharge to spa water
Comm	Verify cable connections
Supp	Connect power cord to 240 V source

TROUBLESHOOTING GUIDE

This guide will assist in solving simple problems with the spa. If the problem cannot be solved using these procedures, contact your authorized Bullfrog Spas Dealer.

Control panel displays an error message:

Cause: An error has occurred.

Solution: See Diagnostic Messages for specific errors.

Control pad and spa equipment do not operate:

Cause #1: No electrical power to spa.

Solution: Turn on or reset the GFCI circuit breaker.

If this does not solve the problem, have a qualified Electrician check the electrical service.

Cause #2: The 20 or 30A fuse, depending on the system, has blown.

Solution: Contact your authorized Bullfrog Spas Dealer.

GFCI breaker trips repeatedly:

Cause #1: Improper wiring to spa or GFCI breaker is defective.

Solution: Consult with a qualified Electrician.

Cause #2: There is a defective component on the spa.

Solution: Contact your authorized Bullfrog Spas Dealer.

Spa pump turns off during operation:

Cause #1: Automatic timer has completed its 30- or 60-minute cycle.

Solution: Turn on the pump.

Cause #2: Pump has overheated due to the vents on the equipment door being blocked.

Solution: Clear items away from vents.

Cause #3: The pump motor is defective.

Solution: Contact your authorized Bullfrog Spas Dealer.

Spa will not heat:

Cause #1: Thermostat has been turned down or set to low heat range.

Solution: Adjust thermostat to desired temperature or set to high heat range.

Cause #2: High limit sensor has tripped.

Solution: Press any button to reset.

Cause #3: Heating system is defective.

Solution: Contact your authorized Bullfrog Spas Dealer.

Standard Spa light does not work:

Cause #1: Light bulb has burned out.

Solution: Replace light bulb.

Cause #2: Lighting system is defective.

Solution: Contact your authorized Bullfrog Spas Dealer.

Jets surge on and off

Cause: Water level is too low or filters may be dirty.

Solution: Adjust water to the water level indication mark on the faceplate of the filter assembly. Clean the filters.

Spa pump will not turn on, creates a burning smell while running, or makes excessive noise while running:

Cause: Pump motor is defective. Running during high ambient outside temperatures, excessive run time.

Solution: Contact your authorized Bullfrog Spas Dealer.

Jets are weaker than normal or do not work at all, but the pump is running:

Cause #1: Jet handle(s) STIL are partially or fully closed. Valves are closed STIL JetPak II, **Solution:** Open jet handle(s) / valve(s).

Cause #2: Filter cartridge is dirty. **Solution:** See Cleaning the Filter.

Cause #3: There is air trapped in the spa equipment or its face piping

Solution: Remove the clamp to the air bleed line and remove the air line from the pump until air has purged out and you see water flow and reconnect.

Cause #4: The suction fitting(s) are blocked.

Solution: Remove any debris that may be blocking the suction fitting(s).

LIMITED WARRANTY INFORMATION

Strong, Reliable Warranty Protection

Your spa is protected by one of the strongest warranties in the industry. Use the QR code or go to bullfrogspas.com/warranty to refer to the warranty for your specific spa series.



Warranty Information

Register Your Spa

Ensure the very best hot tub ownership experience by registering your warranty. Use the QR code or go to bullfrogspas.com/warranty-registration to register.



Spa Registration



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