



A SERIES OWNERS MANUAL

bullfrog[®]
spas

QUICK REFERENCE

To assist you with the installation and maintenance service of your new spa, please fill out the following information and keep it on hand for future reference.

My Spa Information

Model: _____

Serial Number: _____

Dealership: _____

Dealer's Phone Number: _____

Date Purchased: _____

Date Installed: _____

Contractor Information

General

1. Name: _____

Telephone: _____

2. Name: _____

Telephone: _____

Electrician

1. Name: _____

Telephone: _____

2. Name: _____

Telephone: _____

Concrete, Decking, and Masonry

1. Name: _____

Telephone: _____

2. Name: _____

Telephone: _____

Landscaping

1. Name: _____

Telephone: _____

2. Name: _____

Telephone: _____



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

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

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 by 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 on 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 national government. Follow all local, state, and federal safety and wiring rules. Some jurisdictions require specific 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 specific fencing and gating requirements. Your spa meets

or exceeds all Virginia Graeme Baker Pool and Spa Safety Act requirements. Your spa has been tested and 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.

A Series spas include the following models:

A9L, A9L-E, A8, A8-E, A8L, A8L-E, A7D, A7D-E, A7, A7-E, A7L, A7L-E, A6, A6-E, A6L, A6L-E, A5L, & A5L-E

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

Help us ensure the very best hot tub ownership experience by registering your warranty. Use the QR code or this link to register: bullfrogspas.com/warranty-registration.



SPA REGISTRATION

IMPORTANT SAFETY INSTRUCTIONS

Safety Instructions

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

Read and follow all instructions:

▲ WARNING: To reduce the risk of injury, do not permit children to use this product unless closely supervised at all times.

As per UL requirements (U.S.), a wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4mm²) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit.

▲ WARNING: For products provided with a cord-connected, ground-fault circuit-interrupter, the GFCI must be tested before each use. If the GFCI fails to operate properly, disconnect the power until the fault has been identified and corrected.

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

▲ DANGER: Risk of Injury. The suction fittings in the spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the spa if the suction fittings are broken or missing. Do not replace a suction fitting with one rated less than the flow rate marked on the original suction fitting.

▲ DANGER: Risk of Hair Entrapment. The spa includes parts that rotate and/or oscillate. Extreme caution must be exercised by those with long hair to avoid contact with moving parts and potential entrapment. It is highly recommended that hair is controlled and/or kept out of the water in such a way as to avoid moving spa parts.

▲ DANGER: Risk of Electric Shock. As per UL requirements (U.S.), install spa at least 5 feet (1.5m) from all metal surfaces. A spa may be installed within 5 feet (1.5m) of metal surfaces if each metal surface is permanently connected by a minimum of No. 8 AWG (8.4mm²) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.

▲ DANGER: Risk of Electric Shock. Do not permit any electrical appliances, such as a light, telephone, radio, or television, within 5 feet (1.5m) of the spa. These units DO NOT have an integral ground fault circuit interrupter. The installation of an integral ground fault circuit interrupter

MUST be completed by a qualified Electrician and must meet all applicable electrical codes.

For Cord-Connected units:

Replace the damaged cord immediately.

Do not bury the cord.

Connect to grounded, grounding-type receptacle only.

▲ WARNING: To Reduce the Risk of Injury:

Water temperature in a spa should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Water temperature in excess of 104°F (40°C) may be harmful to your health. Lower temperatures are recommended for young children and/or when spa use exceeds 10 minutes.

High temperatures could have the potential for causing fetal damage during pregnancy. Pregnant women or women that could be pregnant should consult a physician and possibly limit spa usage when temperatures are in excess of 100°F (38°C).

Before entering the spa, measure the water temperature with an accurate thermometer since tolerances of water temperature regulating devices may vary.

Use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.

Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, and/or diabetes should consult a physician before using a spa.

Persons using medication should consult a physician before using a spa. Some medications may induce drowsiness while other medication may affect heart rate, blood pressure, and/or circulation.

▲ WARNING: PEOPLE WITH INFECTIOUS DISEASES SHOULD NOT USE A SPA OR HOT TUB.

▲ WARNING: TO AVOID INJURY, EXERCISE CARE WHEN ENTERING OR EXITING THE SPA OR HOT TUB. NEVER DIVE OR JUMP INTO THE SPA.

▲ WARNING: DO NOT USE A SPA OR HOT TUB IMMEDIATELY FOLLOWING STRENUOUS EXERCISE.

▲ WARNING: PROLONGED IMMERSION IN A SPA OR HOT TUB MAY BE HARMFUL TO YOUR HEALTH.

▲ CAUTION: MAINTAIN WATER CHEMISTRY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

▲ CAUTION: ADEQUATE DRAINAGE MUST BE PROVIDED IF THE EQUIPMENT IS TO BE INSTALLED BELOW GROUND LEVEL.

▲ WARNING: Risk of Fatal Hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6°F (37°C). The symptoms of Hyperthermia include dizziness, lethargy, drowsiness, and fainting. The use of alcohol, drugs, and/or medication can greatly increase the risk of fatal Hyperthermia.

The effects of Hyperthermia include:

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

▲ WARNING: Risk of Children Drowning. Your spa cover is not rated as a safety cover. It is suggested to always keep the spa cover securely fastened when not in use. This will discourage children from attempting to enter the spa unsupervised. If cover is damaged it should be replaced.

▲ WARNING: Risk of Drowning. Use caution when bathing alone. Overexposure may cause nausea, dizziness, and fainting.

▲ CAUTION: Risk of Injury. Young children should always be supervised so that they do not play in or around the spa.

▲ WARNING: Keep all glassware and other breakable objects away from the spa area.

▲ WARNING: Risk of Injury: Short-term inhalation of high concentrations of ozone and long-term inhalation of low concentrations of ozone can cause serious physiological effects.

▲ CAUTION: Unauthorized Access. Secure the spa area against unauthorized access. Make sure all spa barriers (fences, enclosures, etc.) meet all applicable national and local codes. Keep spa cover on and locked when it is not being used.

▲ CAUTION: Risk of Damage to Spa or Equipment. By performing maintenance as described in this manual, the chance of damage to your spa and its equipment will be reduced. Never block the air vents that lead to the spa's equipment compartment, doing so may cause the spa to overheat.

▲ WARNING: Risk of Electric Shock or Death. Do not operate spa during severe weather conditions (e.g. electrical storms, tornadoes, etc.).

▲ CAUTION: Non-Approved Accessories. Using accessories not approved by Bullfrog International, LC

could void your warranty or cause other problems. Please consult your authorized Bullfrog Spa dealer.

▲ CAUTION: Spa Location. Locate your spa on a foundation that can support the maximum filled weight of your spa along with the weight of all the occupants using the spa (see Site Selection and Preparation). Also, locate your spa in an environment that can withstand repeated exposure to water and the possibility of a major spill.

▲ CAUTION: Power cords must be replaced only with a special cord assembly available from the Manufacturer, its Service Agent, or similarly qualified persons in order to avoid a hazard.

▲ WARNING: This appliance is not intended for use by young children or unhealthy people without supervision.

▲ WARNING: Before obtaining access to supply terminals, all supply circuits must be disconnected.

▲ WARNING: Risk of Injury or Accidental Drowning: Do not use spa without filters, filter weirs, and JetPaks installed; these parts serve as a barrier against bodily entrapment against the filter suction fitting(s).

▲ CAUTION: Test the GFCI or RCD (Residual Current Device) before each use of the spa.

▲ WARNING: Spas equipped with JetPaks are intended to operate with all JetPaks. Do not operate spa without all JetPaks, JetPak caps, and headrests securely in place.

▲ WARNING: Risk to Infants, Elderly, and Women Planning or Experiencing Pregnancy. Please consult your physician if the above applies to you or anyone using the spa

Additional Instructions (Canadian Installations Only):

A green-colored terminal or a terminal marked G, GR, Ground, Grounding or the international grounding 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.

At least two lugs marked "BONDING LUGS" are provided on the external surface or on the inside of the supply terminal box or compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the spa or hot tub to these terminals with an insulated or bare copper conductor no smaller than No. 6 AWG.

All field-installed metal components such as rails, ladders, drains, or other similar hardware located within 10 feet (3m) of the spa or hot tub must be bonded to the equipment grounding bus with copper conductors no smaller than No. 6 AWG.

Warning Signs (North America)

Included with the spa is a warning sign to inform users and guests of the risks involved with using a spa. This sign is suitable for indoor and outdoor use. It should be placed in a noticeable place adjacent to the spa. For free additional copies, contact your authorized Bullfrog Spas Dealer.

*Final warning sticker is included with spa for installation by owner.



REDUCE THE RISK OF ELECTROCUTION

1. NEVER PLACE AN ELECTRIC APPLIANCE WITHIN 5 FEET OF SPA

REDUCE THE RISK OF CHILD DROWNING

1. SUPERVISE CHILDREN AT ALL TIMES.
2. ATTACH SPA COVER AFTER EACH USE.

REDUCE THE RISK OF OVERHEATING

1. CHECK WITH A DOCTOR BEFORE EACH USE IF PREGNANT, DIABETIC, IN POOR HEALTH, OR UNDER MEDICAL CARE.
2. EXIT IMMEDIATELY IF UNCOMFORTABLE, DIZZY, OR SLEEPY. SPA HEAT CAN CAUSE HYPERTHERMIA AND UNCONSCIOUSNESS
3. SPA HEAT IN CONJUNCTION WITH ALCOHOL, DRUGS, OR MEDICATION CAN CAUSE UNCONSCIOUSNESS.

WHEN PREGNANT, SOAKING IN HOT WATER FOR LONG PERIODS CAN HARM YOUR FETUS.

MEASURE WATER TEMPERATURE BEFORE ENTERING.

1. DO NOT ENTER SPA IF WATER IS HOTTER THAN 100°F (38°C)
2. DO NOT STAY IN SPA FOR LONGER THAN 10 MINUTES.

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GETTING TO KNOW YOUR SPA

Spa Overview

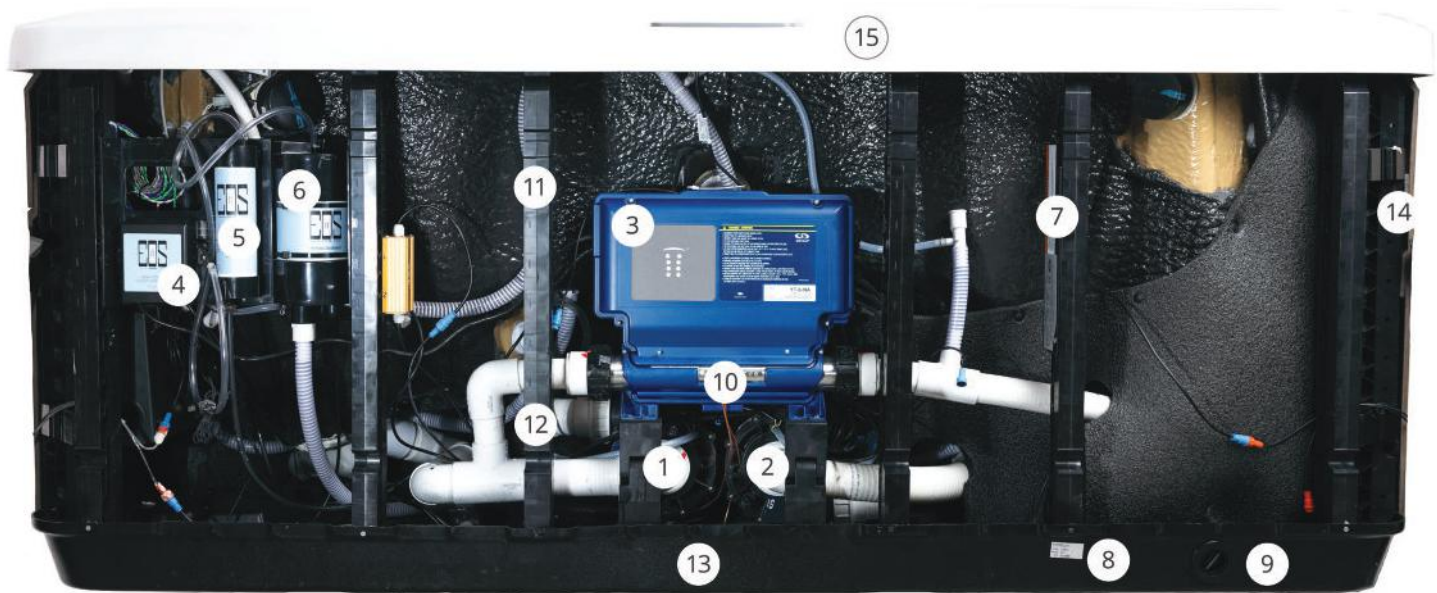
(A7 Select Spa Model Pictured)



1. Main control
2. Auxiliary control
3. JetPaks
4. Filter access (behind JetPak to the right of control panel).
5. Removable headrests and JetPak access
6. Water feature
7. Foot and leg therapy jets
8. Interior LED light
9. Floor drain
10. Suction fitting (behind each JetPak at the base of the JetPod area)
11. Ozone jet
12. Filter intake and weir door
13. Hip therapy jets
14. Wrist therapy jets
15. Lighted cup holder

Equipment Compartment Overview

Spa Equipment Compartment "A7L" Series



1. Jet pump 1
2. Jet pump 2
3. Control box
4. Ozone / AOP
5. EOS carbon filter
6. EOS mixing module
7. Safety certificate and serial number
8. Serial number sticker (visible with door installed)
9. Drain outlet
10. Water heater
11. Support stud
12. Cabinet attachment notch in support stud
13. ABS spa base pan
14. Audio control box (on the side, not visible)
15. Acrylic spa shell

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 pumps and/or 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.

NOTE: To avoid a possible airlock condition be sure to open all valves in the JetPaks and all other jets in the spa before filling. This will allow as much air as possible to escape from the system during the filling process.

Spa Filling

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).

Spa Filling Steps (A Series)

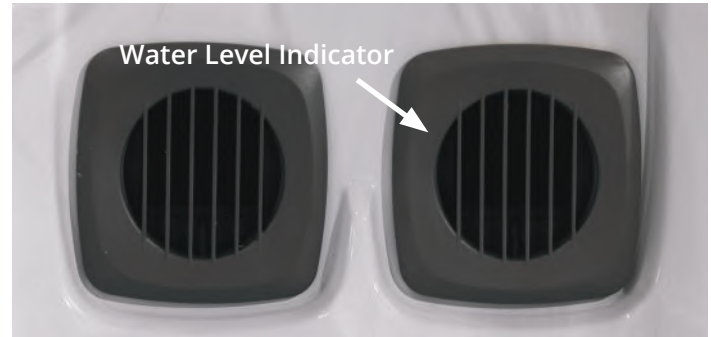
Step 1: Select any seat with a JetPak. Push JetPak towards the center of the spa and remove the JetPak.



Step 2: Place a garden hose in the JetPak bulkhead.



Step 3: Fill to the water level indicator or just above the midpoint of the filter intake grate and proceed to start up procedure.



Step 4: After the spa is filled, check all fittings and equipment in the equipment compartment for signs of leakage before turning on the spa. Turn on the pump(s), and 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 5: 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 critical 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 the spa is not in use, always place the cover over the spa and secure it by pulling down on the cover strap, clicking the two sides of the cover clips together, and locking each clip with the key provided. The cover should remain in place and locked when not in use to prevent unauthorized entry and prevent the wind from inadvertently blowing it open.

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.

EXTERNAL AIR BLEEDER INSTRUCTIONS

These instructions should be followed at initial and subsequent draining and refilling to prevent pump cavitation caused by trapped air within the pump and plumbing system.

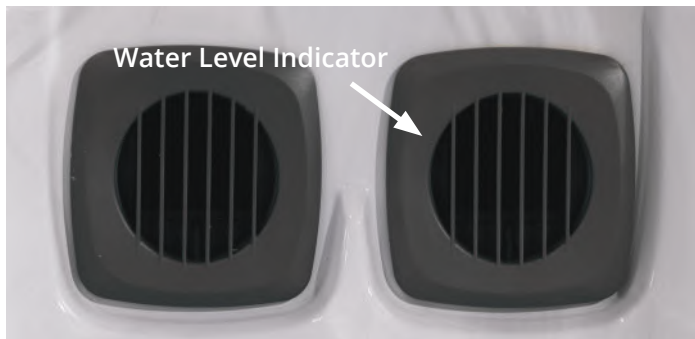
Turning on the power to the spa before performing this priming process may make the priming process more difficult.

Priming instructions:

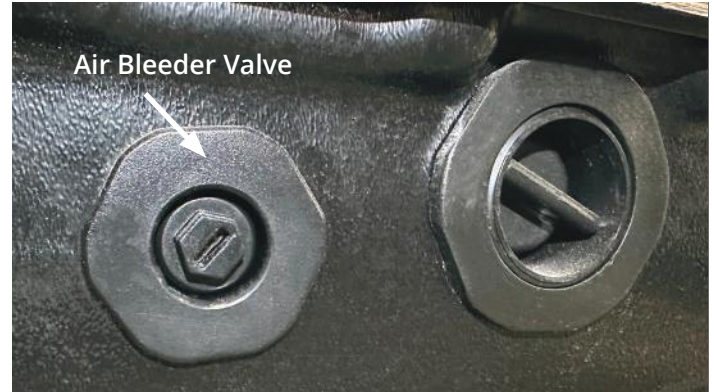
Step 1: Remove the filter cover and filter from the spa. Fill the spa to the proper level using the instructions listed in “Filling Your Spa” above.

Step 2: Fill the spa to the proper water level described in your spa owner’s manual.

Note: A water level indicator is located in the center of the weir or skimmer cover.



Step 3: Using caution, carefully remove the air bleeder screw from the external air bleeder fitting with a standard screwdriver or ½” socket to unscrew it in a counterclockwise rotation.



Air Bleeder Screw / O-Ring

Note: To prevent losing the bleeder screw and O-ring, grasp the screw while unthreading. Once removed, air and water will begin to escape through the opening.

Step 4: Allow water to flow freely from the external air bleeder fitting for approximately 60 seconds.

Note: Use a wet/dry vacuum or tray to catch escaping water for spa installations located indoors.

Step 5: After 60 seconds, reinstall the bleeder screw and O-ring. First, by hand and then by using a standard screwdriver until snug. **Do not over-tighten.**

Step 6: Turn on the power to the spa and turn on one pump at a time starting with pump 1, ensuring that each pump is properly primed. If you discover a pump is not moving water properly after 30-60 seconds, turn off the power to the spa and repeat steps 3 through 6.



Note: Spa equipment with circulation pumps are not as noticeable when operating correctly; for this reason, you will need to watch the control panel closely for approximately 60 seconds or until the display reads “Heating to 99°F (37°C)” (or Heating to 104°F / 40°C). If the panel displays **ERROR NO FLO**, turn off the power to the spa and repeat steps 3 through 6.

PREMIUM TOUCH SCREEN CONTROL (A1000)






A Series Touch Control


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 a few minutes without activity the touch control will turn off.

Priming the Pumps

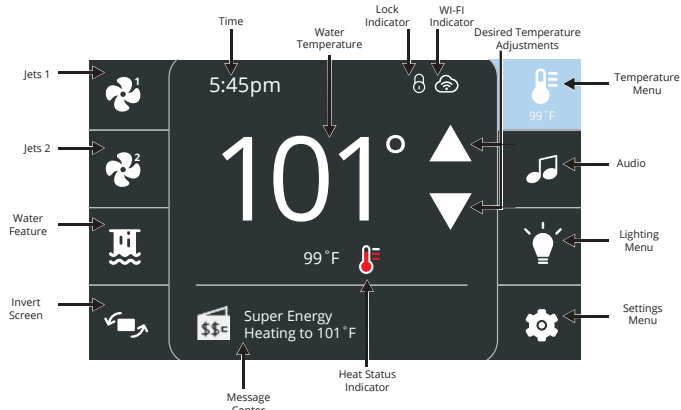
Pumps must be primed directly after filling to ensure the correct operation of your spa. After initial start-up, verify that the home status screen appears on the panel. To prime the pumps, press the  “Jets 1” button once to prime on low-speed. After the pump turns on and water is visibly flowing from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

If you have the A9L model, your spa will be equipped with three jet pumps. To prime pumps 1 and 2, follow the instructions above. Press the  “Jets 3” button to prime the third jet pump. All pumps will have primed when water is observed flowing from the jets associated with each pump.

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 A Series (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), brightness, 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 A Series (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 submenu 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 submenu 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 A Series (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 all 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 submenu.


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 A Series (A1000) keypad can be set up to remind you of several types of maintenance required on your spa, including cleaning or replacing 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 submenu 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.

Status Light

On Plus and Select A Series trim packages, the door light will act as a status alert for maintenance reminders or if there is a problem with your spa. If there are no reminders or no warning lights, the light will remain ON, with no flashing. Here is what the reminder light and warning light look like:

Reminder Light: 1 Slow Fading Flash

This will come on when there is a filter that needs to be replaced, a change of water is recommended, recommended maintenance to EOS filter, headrests, or recommended spa check-up, or to replace your cover.

Warning Light: 3 Quick Flashes


This will come on if there is a low flow warning, a high limit error, temperature prob error, or an overheat condition with the water.


The status light will stop when the issue has been fixed.


The reminder alert can be checked on the screen once the task has been completed or when the user disables the feature. Following this, the light will return to normal operation as solid white.

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 submenus.

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 submenu, 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 A Series 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.

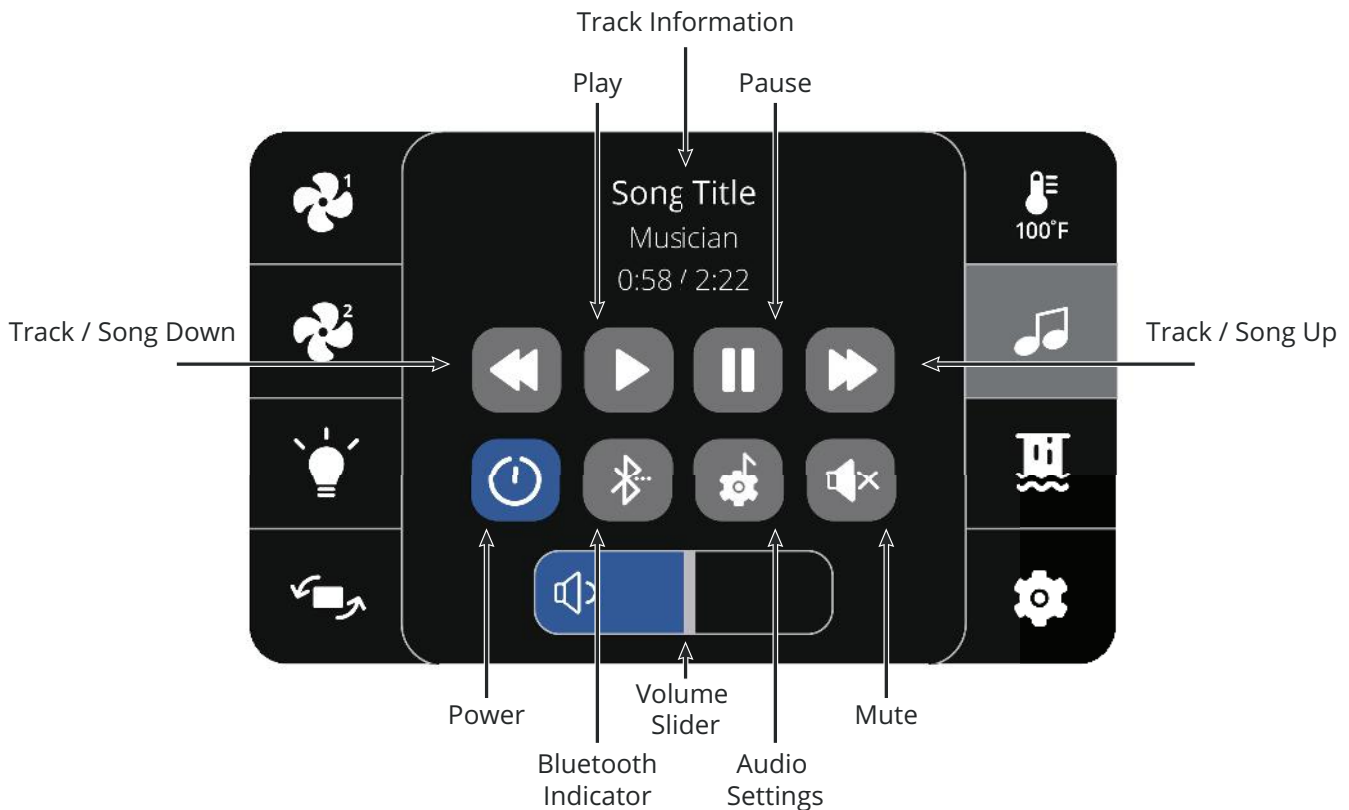
Source menu: To change the audio source, simply tap on the “Audio Settings” menu and select the desired audio source or device. Note that only the sources available on the A Series Audio will be displayed in the source menu.

Connect Bluetooth: The first time you use your Bluetooth device with an A Series 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 A Series 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.



AUXILIARY CONTROL

A Series Auxiliary Control Instructions

Each auxiliary control only manages the specific pump to which it corresponds and is based on location.

To turn the pump on:

Step 1: Press the button with the jet icon once for low power.

Step 2: Press a second time for high power.

Step 3: To turn it off, press a third time.

To turn on/off the water feature:

Step 1: Press the button with the water icon once to turn it on, then again to turn it off.

To turn on lights:

Step 1: Press the button with the lightbulb icon to turn lights on/off.



JETPAKS & JETS

Interchanging JetPaks

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

Step 2: Remove the JetPak from the pod by sliding a hand into the recess between the top of the headrest and the spa. Push the JetPak away from you and toward the inside of the spa.



CAUTION: THE HANDHOLD ON THE BACK OF THE JETPAK HEADREST SHOULD BE USED FOR HANDLING THE JETPAK (AS SHOWN). PRESSURE APPLIED TO THE FRONT ACRYLIC PLATE FOR REMOVAL, REPLACEMENT, OR HANDLING MAY CAUSE DAMAGE TO THE JETPAK AND MAY VOID THE WARRANTY.”

CAUTION! THE BLACK MANIFOLD AREA MUST BE USED AS THE POINT OF CONTACT (AS SHOWN). PRESSURE APPLIED TO THE FRONT ACRYLIC PLATE MAY CAUSE DAMAGE TO THE JETPAK, VOIDING THE WARRANTY.

Step 3: Place the JetPak in the desired location in the spa. Align the JetPak in the JetPod area. Seat the blue gasket at the bottom of the JetPak into the manifold and secure the JetPak in place by pulling (if outside spa) or pushing (if inside spa) firmly into place until you feel the J hook engage to lock the JetPak into place.

NOTE: Pushing or pulling the JetPak into place with too much force may damage the hook or the JetPak.

Headrest Removal

Removal of the JetPak headrest, snap cap, or internal JetPak cap assembly is not necessary for normal spa operation. However, for proper spa maintenance, it is recommended to clean these parts thoroughly. Disassembly may help make cleaning easier. It may also be necessary to disassemble the JetPak cap assembly for replacement of associated parts.”

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

Step 2: Remove the JetPak from the pod by sliding a hand into the recess between the top of the headrest and the spa.

Push the JetPak away from you and toward the inside of the spa.

Step 3: Remove the headrest by placing your hands under the front of the headrest. Gently pull up and back to release from the snap cap.



Step 4: At the front of the snap cap, grasp light blue wedge and pull up. Remove completely.



Step 5: Grip the internal JetPak cap assembly and pull up to remove completely from the Jetpak manifold. If you have an A Series Select spa, there is a light that is held in by snaps; take care not to let it slip off. Remove the light by gently pulling forward off snap to clean the internal JetPak cap assembly.



Step 6: To put back together, snap light back in place. Align internal JetPak cap assembly ears with JetPak manifold and press down until it snaps into place. Slide light blue wedge back into the slot and push down until it clicks. Fit the upper snap cap and headrest back on top of the internal JetPak cap assembly by lining up the back inner lip with the edge of the snap cap fitting inside the inner lip. This will require slight adjusting to place back on. For premium headrests (A Series Plus and A Series Select) verify that the headrest encapsulates and goes around the snap cap on the back and side.

Neck Headrest Removal - A Series Trim

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

Step 2: Remove the JetPak from the pod by sliding a hand into the recess between the top of the headrest and the spa. Push the JetPak away from you and toward the inside of the spa.

Step 3: Remove the headrest by placing your hands under the two front edges. Gently pull up and back to release from the snap cap.

Step 4: Remove the snap cap by placing hands on the two back corners and lifting, separating the snap cap clips from the internal JetPak cap.

Step 5: At the front of the internal JetPak cap, grasp the light blue wedge and pull up. Remove completely.

Step 6: Grip the internal JetPak cap assembly and pull up to remove completely from the JetPak manifold. If you have an A Series Select spa, there is a light that is held in by snaps; take care not to let it slip off. Remove the light by gently pulling forward off snap to clean the internal JetPak cap assembly.

Step 7: To put back together, align internal JetPak cap assembly ears with black JetPak manifold and press down until it snaps into place. Slide light blue wedge back into the slot and push down until it clicks. Slide front of snap cap over the two leading edges of the JetPak and push down on the two back corners, reengaging the snap cap clips onto the internal JetPak cap. Slide the two tabs of the headrest under the front of the snap cap, then push the back down to clip it into place.

Neck Headrest Removal - A Series Plus and Select Trims

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

Step 2: Remove the JetPak from the pod by sliding a hand into the recess between the top of the headrest and the spa. Push the JetPak away from you and toward the inside of the spa.

Step 3: Remove the headrest by placing your hands under the two front edges. Gently pull up and back to release from the snap cap.

Step 4: At the front of the internal JetPak cap, grasp the light blue wedge and pull up. Remove completely.

Step 5: Grip the internal JetPak cap assembly and pull up to remove completely from the JetPak manifold. If you have an A Series Select spa, there is a light that is held in by snaps; take care not to let it slip off. Remove the light by gently pulling forward off snap to clean the internal JetPak cap assembly.

Step 6: To put back together, snap light back in place (Select trim only). Align internal JetPak cap assembly ears with black JetPak manifold and press down until it snaps into place. Slide light blue wedge back into the slot and push down until it clicks. Fit the headrest back on top of the internal JetPak cap assembly by lining up the back inner lip with the edge of the snap cap fitting inside the inner lip. Verify that the headrest encapsulates and goes around the snap cap on the back and side. Slide the two front edges of the headrest back onto the leading edge of the JetPak.

Additional Jets

In addition to the jetting options offered as part of the JetPak Therapy System, additional foot, 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 A Series

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

- To increase jet pressure, turn the valve handle counterclockwise.
- To decrease jet pressure, turn the valve handle clockwise.

To adjust the water flow to the adjustable jets (in the shell of A Series spas) turn the inner jet face.

- To increase water pressure, turn the jet face clockwise.
- To decrease jet pressure, turn the jet face counterclockwise.

IMPORTANT: Turning off jets will increase pressure to other jets on the same pump. To avoid unnecessary system pressure, never shut off all jets at the same time.

NOTE: To allow for proper circulation, the valve located in A Series JetPaks is designed to adjust jet pressure but will not completely stop jet flow.

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 A Series 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.

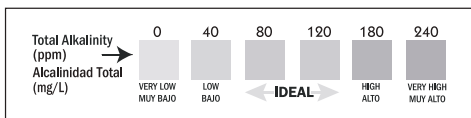
IMPORTANT: Always follow printed instructions on the balancing chemical packages. Add balancing chemicals in small increments one at a time with the jets on and wait 6 hours before testing again and adding any additional balancing chemicals.

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

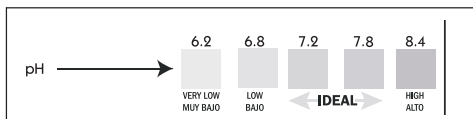
a. Take a water sample from the hot tub and dip a FROG @ease Test Strip into it.



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

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

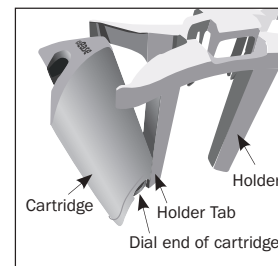
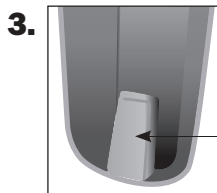
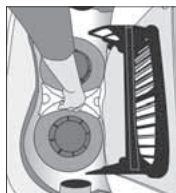
If needed, you may increase or decrease the dial setting. Once set, the FROG @ease SmartChlor Cartridge will maintain a low 0.5 to 1.0 ppm chlorine level as long as the pH stays within 7.2 and 7.6 so typically there is little need to adjust the cartridge setting.

Step 3: Put the System to Work

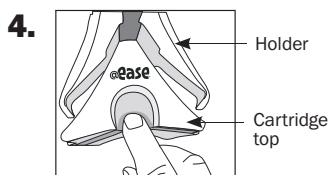
Between Filter Cartridges

1. Remove filter snap cap.

2. 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.



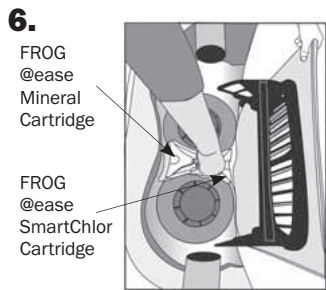
3. Snap the FROG @ease Mineral Cartridge into one opening of the cartridge holder. With the @ease logo facing the holder, put the dial end of the cartridge into the holder first by connecting the tab on the holder with the indent in the cartridge.



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

3

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



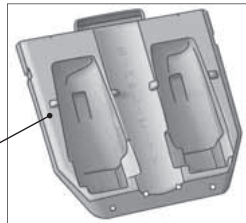
With the silver FROG @ease SmartChlor Cartridge facing the inside of the hot tub, insert cartridge holder between the filter cartridges under the weir door/filter plate pushing down until it stays in place.

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

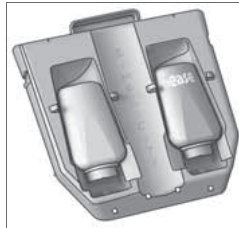


2. Insert FROG @ease Mineral Cartridge and FROG @ease SmartChlor Cartridge into the two openings on the outside of the filter system. Push cartridges in until they are latched.

FROG @ease System

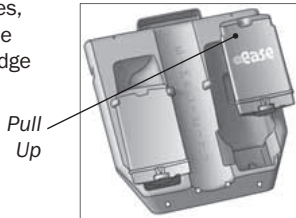


FROG @ease XL System

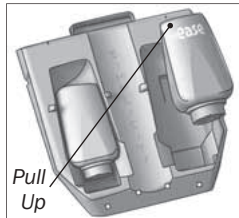


3. To remove cartridges, pull up at the top of cartridge and lift out.

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

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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.

Status Light

The lighted logo badge on the equipment door of your Plus or Select A Series trim package spa acts as an indicator of spa function. If your spa is functioning normally, the lighted badge will remain lighted in a solid or steady state. If there is a reminder or error condition, you will see the light functioning as below.

Reminder Light:

1 Slow Fading On/Off

A slow on/off fading of the indicator light in the A Series name badge is an indication of a reminder or recommended action. Refer to the text on the main control for the specific recommendation. Reminders may include: filter change or cleaning, spa water change, water care device replacement, headrest replacement, spa check up, cover replacement, or other recommended actions. Once the recommended action is performed, or if the action is deemed not necessary, you may reset the reminder in Settings. Once the reminder is reset the light will return to a solid state.

Warning Light:

3 Quick Flashes

Three quick flashes of the indicator light in the A Series name badge are an indication of a system warning and immediate action is required. Refer to the text on the main control for the specific warning or error. Warnings and errors may include: low flow to the heater, a high limit error, temperature probe error, a freeze or overheat condition, or other critical system error. Please contact your Bullfrog Spas Authorized retailer or service center immediately. The quickly flashing indicator light will return to solid once the issue has been corrected and the error cleared.

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.

SPA MAINTENANCE

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.

It is recommended that the pleated flat Simplicity filter used in A Series spas be cleaned or replaced every 4 weeks, or sooner if needed. You may prefer to simply replace monthly, or Simplicity filters can be cleaned by spraying along the pleats from one side of the filter to the other with a garden hose and nozzle, then rinsing thoroughly. Even with regular cleaning, Simplicity filters will eventually become less effective and should be replaced at least every 12-16 weeks.

Replacing the filter

To ensure proper cleaning and function of your A Series spa, filter will need to be replaced at recommended intervals. To maintain warranty protection, use only genuine Bullfrog Spas filter replacements. To replace your filter complete the following:

CAUTION: Never operate spa with the filter removed.

Step 1: Turn off main power to the spa.

Step 2: Remove the JetPak in front of the Simplicity filter housing (this is the first JetPak to the right of main control) following the instructions in the section titled "Interchanging JetPaks."



Step 3: Remove the Simplicity Filter holder. Reach down into the jet pod and grasp the handle. Push toward the inside of the spa and lift up to remove from the housing.



Step 4: Remove and replace the filter. Open the Simplicity Filter holder to reveal the filter. Grasp the loop at the top of the filter with one hand and lift, using the other hand to assist in removing the filter. Discard the used filter

Insert a new filter. Orient the new filter such that the glue lines will be visible after the filter has been inserted into the Simplicity Filter holder. Slide one end of the filter under the retention slots and press down on the other end (with the loop), until filter is fully seated.



Step 5: Reinstall the Simplicity Filter holder back into the pod, by aligning the bottom of the unit in the housing with the handle up and snap the filtration unit into place in the housing with a back and down motion.

Step 6: Replace the JetPak by following the instructions in the section titled "Interchanging JetPaks."

Step 7: Restore the main power to the spa.

LED Light Replacement

Contact your authorized Bullfrog Spas Dealer for repair.

Clear Comfort for Bullfrog Spas AOP System Maintenance

Swim Series spas feature the premium Clear Comfort for Bullfrog Spas AOP System (CCW25) installed standard. The Clear Comfort AOP system supports water care with a powerful advanced oxidation process (AOP). The system operates automatically during filtration cycles. You can confirm normal system operation by opening the equipment door, locating the system control unit and cartridge, and viewing the color of the status lights. There is a status light on the CCW25 control unit (gray box) and one on the Clear Comfort for Bullfrog Spas CCW25 cartridge (blue). A green light on the control unit indicates normal operation. No status light indicates a power interruption or malfunction. If this is the case, contact your Authorized Swim Series Dealer for service. A blue light on the cartridge indicates normal operation at full capacity. When the light on the cartridge changes to yellow, it is time for a cartridge exchange. Depending on use, it is expected to be necessary to exchange your cartridge about once per year with a Clear Comfort for Bullfrog Spas CCW25 cartridge available at your Authorized Swim Series Dealer.

Clear Comfort for Bullfrog Spas CCW25 Cartridge Exchange

Follow the instructions to exchange your Clear Comfort for Bullfrog Spas CCW25 cartridge.

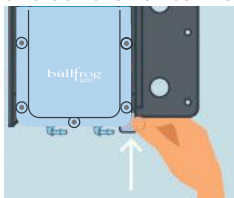
Turn off power to the spa at the breaker. NOTE: Never attempt to service the CCW25 unit if wet. To access the Clear Comfort cartridge follow the instructions in “Removing & Installing the Equipment Door” to access the equipment area. Locate the Clear Comfort for Bullfrog Spas control unit and cartridge.

Ensure power to the CCW25 controller and cartridge are off by ensuring that both status lights are not illuminated.

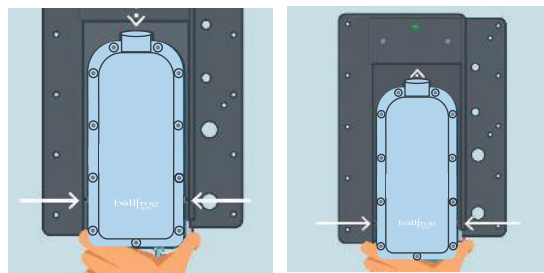
Disconnect air tubing (2 lines) from the barbed fittings at the bottom of the CCW25 cartridge by pulling the air line from the barbed fitting.



Press and hold the metal release tab at the bottom right of the controller to free the cartridge.



Pull the CCW25 cartridge unit down until the indented slots in the cartridge align with the guide ridges in the controller (about 1 inch/2.5 cm).



When slots in the cartridge align with the guides in the controller, pull the cartridge towards you and free it from the unit.

Repeat these instructions in reverse to install the new cartridge. Be sure to use Clear Comfort for Bullfrog Spas CCW25 cartridges, available at your Authorized Bullfrog Spas Dealership. Other Clear Comfort cartridges are not configured for and will not function correctly in a Clear Comfort for Bullfrog Spas unit. For proper recycling, please return your used cartridge with the pre-paid label and packaging provided with your new cartridge.

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 dishwashing 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 dishwashing 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

Standard Waterfall (A Series)

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.

Premium Waterfall (A Series Plus & A Series Select)

Step 1: Remove the waterfall cover by lifting up on the very front edges of each side of the waterfall.

Step 2: Clean the cover and inside the exposed waterfall.

Step 3: Reinstall the cover by securing the back on the provided tabs, then close the front by pushing forward until it clicks into place.

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 headrests 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 headrests 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.

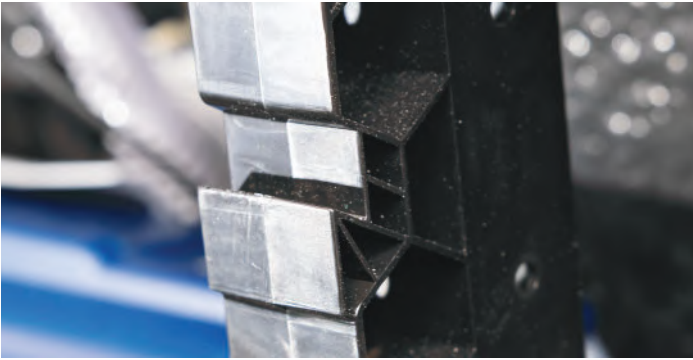
Spa De-Winterization

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

A Series Door removal:



French Cleat (top) and C-Clip (bottom)



Step 1: Remove the right and left cabinet corner pieces on either end of the spa. Grip the bottom of each corner piece and pull toward you, away from the spa. The corner should pop out of the C-clip, located about six-inches from the bottom of the corner. The cables attached to the sconce lights that are mounted in the corners will stay attached. Set the corners aside.

Step 2: Secure the bottom of the cabinet panel with one or two hands, pulling it toward you. You will feel the door pop out of the C-clips, about six-inches from the bottom of the cabinet door panel. It will be attached in multiple areas across the door, depending on the number of studs.



Step 3: Once it has popped out of the bottom C-clips, lift the door up about an inch to release it from the French cleat groove. Once the door panel has cleared both the C-clip channel and the French cleat slowly lower to the ground.

WARNING: Be sure to clear the door from both the C-clip channel and French cleat with care. Pulling the door abruptly from the spa or with too much force before ensuring it has cleared the C-clip channel and French cleat could damage either the door or the attachment components, or both.



Step 4: Unplug the name badge to set the door aside and access the inside of the equipment compartment.

A Series 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 behind the lip of the spa. Lower the door panel while gently pushing it against the studs until the French cleat on the back of the door catches and engages with the French cleat channel on each of the studs. When the door is supported and hanging by the French cleat, the C clip and C clip channels should be aligned. Start from one side of the door and firmly press the front of the door inward until the C clip snaps into the C clip channel. Repeat for each stud and C clip channel along the door until the door is secured.

Step 3: Connect any sconce light wiring if needed and replace corners.

When reinstalling the corner, it is important to know that the corner needs to be inserted at a 45° angle up into the lip of the shell as much as possible before it can come down and be clipped into place.

INSTALLATION & DELIVERY

Reference Material

Before attempting to install or use your spa, please read Important Safety Instructions and all the installation instructions that follow.

Site Selection and Preparation

Your home most likely offers multiple sites where your spa may be installed. Use the information presented in this section to assist you in carefully selecting the location that works best for you. It is your responsibility to choose and prepare the site properly before delivery, so you will experience a smooth and efficient delivery and obtain optimal use and full enjoyment of your spa.

Environment

Surroundings: The direction that your spa will be facing will contribute to your overall bathing experience. Select the spa location that will provide optimal views based on your property layout. Consider your lifestyle and where you want to enjoy your spa and situate it accordingly. Indoor installations provide privacy but create high humidity levels (see Indoor Considerations). If your spa is outside, a nearby place for you and your guests to change clothes is a huge convenience. Also, a location near a house entry is convenient in areas with extreme winter climates.

Indoor Considerations: Indoor spa installations have special requirements.

The environment around and below the spa should be water-resistant and preferably waterproof. It must be capable of handling water splashed out from the spa and the possibility of a malfunction.

Recommendations to handle water around the spa include but are not limited to a floor drain and a catch basin equivalent to the volume of water in your spa. Condensation can also occur on the spa cover and drip onto the floor. Therefore, ensure that flooring materials provide a good grip when wet and are resilient to constant exposure to water and chemicals.

In addition to handling the water from the spa, it is recommended that the room be appropriately ventilated. Humidity levels will naturally increase after the spa is installed and in use. Water may get into the woodwork and produce dry rot, mildew, or other problems. Over time, high humidity levels and spa chemicals can cause water damage to your floor, wall, and ceiling surfaces.

To minimize humidity damage, it is best to provide plenty of ventilation, such as a ceiling fan and moisture-resistant paint. An architect can help determine if special ventilation equipment is required, such as a humidistat

or dehumidifier that can be installed to regulate indoor humidity during spa use.

NOTE: Typical indoor surfaces include, but are not limited to concrete, wood, non-slip tile, or linoleum.

Outdoor Considerations: There are several considerations when installing your spa outdoors.

1. Avoid selecting a site where excessive water may contact the spa, such as sprinklers or a roof edge without rain gutters.
2. Avoid areas of direct, prolonged sunlight (if possible). The ultraviolet rays may fade or damage the spa cover and cabinet.
3. Check all applicable national and local codes regarding possible restrictions that require fencing or childproof gates around the spa.
4. Prevent dirt, sand, and foliage from being tracked into your spa by utilizing concrete, concrete pavers, or stone for paths and access areas (or avoid positioning your spa in an area where debris will be tracked into the spa). Check the location of trees and spill paths from gutters to determine if wind or rain will sweep debris into your spa.
5. Consider your view and privacy during all seasons of the year so your experience in your outdoor spa will be enhanced rather than limited.

NOTE: Typical outdoor surfaces include, but are not limited to concrete, brick, non-slip tile, wood decking, pea gravel, or sand.

Spa Location

Service Access: Some people choose to install tile, stone, or custom wood around their spas. If you are installing your spa with custom trimming, remember to allow access for service. Should your spa need service, a technician may need to remove the spa's equipment compartment door or side panels or access the spa from beneath. Also, it is always best to design special installations so the spa can still be moved or lifted from the ground.

Access to Circuit Breakers: For service purposes, allow easy access to the circuit breakers in the electrical service panel (permanently connected models) or the interrupter switch on the end of the power cord (cord-connected models).

Electrical Safety Requirements: The installation of all spas must be in accordance with national and local wiring rules and applicable permits consistent with local regulations. A licensed electrician must perform the electrical installation and GFCI test procedure. 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, resulting in electrical shock, injury, or death. Improper wiring could also lead to a malfunction of the spa's equipment and risk of fire. When considering a location for your spa, consult with a licensed electrician about the following:

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 national and local wiring rules. If the federal and local wiring rules permit, a GFCI or RCD 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 on the national and local wiring rules that apply to your area, you must install your spa at 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 connected to the ground lug connector on the exterior surface of the Control System Box and all metal items previously described.

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

All other national and local rules that may be applicable.

Water Drainage: Your spa contains an equipment compartment, which houses all of its electrical components. Allowing water into the equipment compartment can damage the electronics or may result in tripping your spa's circuit breaker. If installing the spa below ground level, or where water may accumulate, it is the owner's responsibility to ensure that water will drain adequately to avoid damage to spa equipment. For standard installations at ground level, choose a site where water will drain away from the spa.

Use of a Cover-Lifting Mechanism: If using a cover-lifting mechanism, allow up to 18 inches (.61m) of clearance behind the spa. Check with your authorized Bullfrog Spas Dealer for the exact clearance requirements for the cover-lifting mechanism.

Spa Foundation

General Guidelines: Select a structurally sound flat surface that is reasonably level to serve as your spa's

foundation. A foundation that shifts or settles may cause stress to the spa shell.

The foundation that your spa rests on must have adequate weight-bearing load capacity to support the weight of your spa, its water, and the people using it. The maximum filled weight of a spa can be as much as 6,000 lbs. (2,800kg), plus the weight of the occupants that use the spa (for the weight-bearing load requirements as well as the maximum filled weight of your spa, refer to the Spa Technical Specifications Chart or contact your local authorized Bullfrog Spas Dealer).

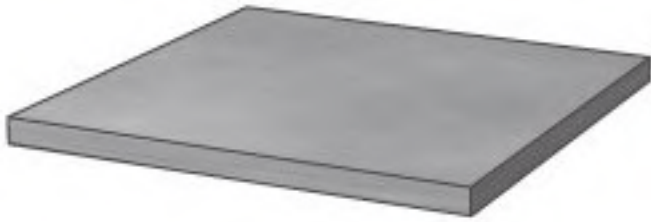
If your spa's pad is slightly sloped, it may not affect the spa's performance or its structure. However, there should be no dips, sags, or unevenness in the pad. Most patios are built to slope away from the house for drainage purposes. There should be no more than a 1/2" (1cm) slope in an 8 ft (2m) run. Recommended flooring materials include a concrete pad, concrete pavers or bricks, pea gravel, or crushed rock 1.5" (4cm) or less, or a reinforced deck. Your authorized Bullfrog Spas Dealer may also sell or recommend pre-formed spa pads.

NOTE: Concrete foundations should be a minimum of 4 inches (10cm) thick and should be reinforced with either rebar or mesh. The rebar or mesh should be attached to a bond wire (see Electrical Requirements and Installation Instructions).

WARNING: To prevent severe damage to your spa, the spa foundation must be supported by a flat, stable, and consistent subsurface. Bullfrog Spas International highly recommends consulting a qualified, licensed contractor before installing any spa foundation. For assistance, contact your authorized Bullfrog Spas Dealer.

WARNING: Because your spa pad must provide continuous support for the entire base of the spa, you should never level it with shims. If it is necessary to level your spa, make sure the entire spa's structure is fully supported, both in the center as well as the outer edge. When leveling your spa, there should be no voids beneath it. Contact your authorized Bullfrog Spas Dealer before making any leveling adjustments. Structural damage to the spa resulting from incorrect installation, placement on an inadequate foundation, or improper leveling will void the spa's warranty.

Elevated Installations: Be sure your deck or elevated structure can support the maximum filled weight of your spa with the total weight of occupants that use it. You must know the deck's weight-bearing load capacity and ensure that it is greater than the maximum filled weight of your spa combined with the occupants using it, or severe injury or structural damage could result. To find the weight-bearing load requirement and the maximum filled weight of your spa, refer to the Spa Technical Specifications Chart or contact an authorized Bullfrog Spas Dealer.



Concrete Pad



Concrete Pavers



Pea Gravel or Crushed Rock

CAUTION: Consult a qualified structural engineer or contractor before the spa is placed on an elevated structure or deck.

Design Considerations

Hard-Surface Options (Decking and Flooring): In addition to selecting a hard surface that meets the recommended safety and maintenance criteria, consider textures and colors that will assist in enhancing the aesthetics of the area in which your spa will be installed. The decision to match, contrast, or blend the hard surface colors and textures with those of your spa should only be made after carefully researching your options. The cost of a Landscape Architect may be money well spent.

Surrounding Landscape: The correct landscape around your spa will soften the adjacent hard surface areas and add life and much enjoyment to the environment. If the budget allows, you may want to consult with a Landscape Architect for expert advice.

Spa-Side Accessories: Besides selecting the correct hard surfaces and landscape around your spa, the addition of the proper spa-side accessories will provide just the finishing touch that you are looking for. Spa steps, benches, towel racks, planter boxes, or an outdoor fireplace are a few items to consider when accessorizing your spa.

Delivery Basics

To prepare for the delivery of your spa, make sure the delivery path is clear, and no obstructions are present. Occasionally a crane is required to install the spa by lifting it to its final destination. The crane operator will lift your spa over walls, buildings, or any other obstruction and place it as close to the installation site as possible.

Depending on access to the spa site, your spa may be dollyed in either a horizontal or vertical position. For your convenience, the following charts provide the dimensions of your spa in either the horizontal or vertical position.

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 the spa with water immediately or shade the spa with cover or wrapping to prevent direct exposure to sunlight.

WARNING: Watch for power lines.

Model	Width	Length	Height
A9L	7' 10" (2.39m)	9' 2" (2.80m)	3' 2" (.97m)
A8, A8L	7' 10" (2.39m)	7' 10" (2.39m)	3' 2" (.97m)
A7D, A7L, A7	7' 4" (2.24m)	7' 4" (2.24m)	3' (.91m)
A6, A6L	7' 4" (2.24m)	6' 8" (2.03m)	2' 10" (.86m)
A5L	5' 8" (1.73m)	7' 0" (2.13m)	2' 8" (.81m)

Corner Radius for A Series Models is 4" (0.1016m)

ELECTRICAL REQUIREMENTS & INSTALLATION

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 sp. 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 ($\frac{3}{4}$ " 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. Use the provided conduit hole plugs to cover the two unused conduit holes inside 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.

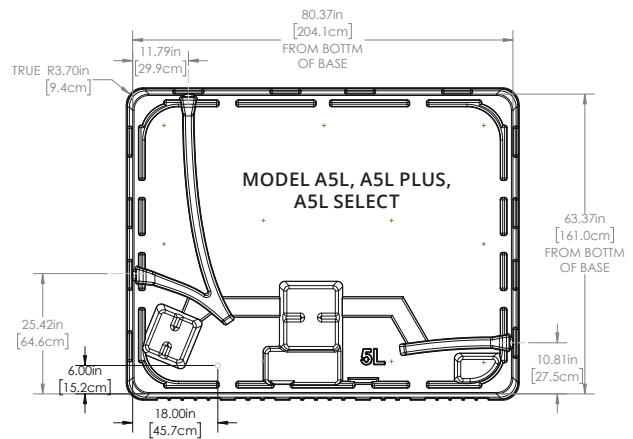
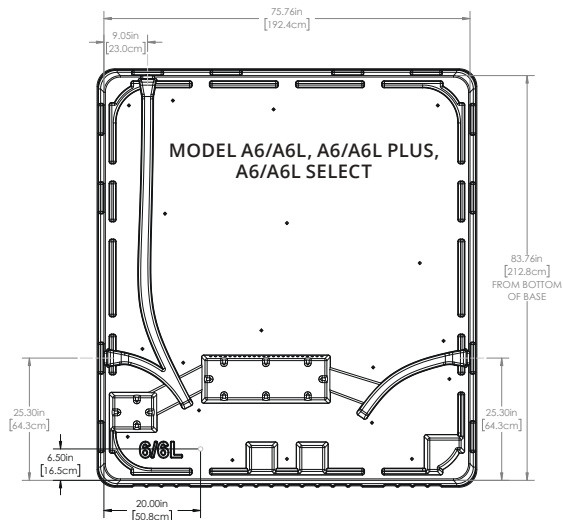
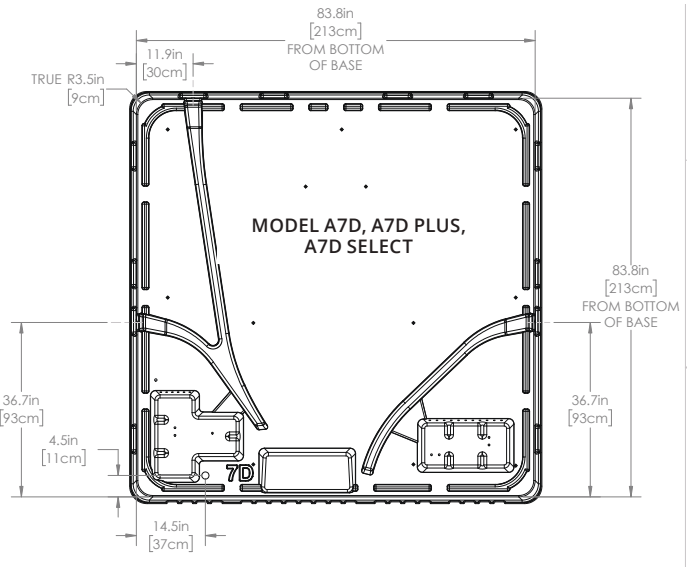
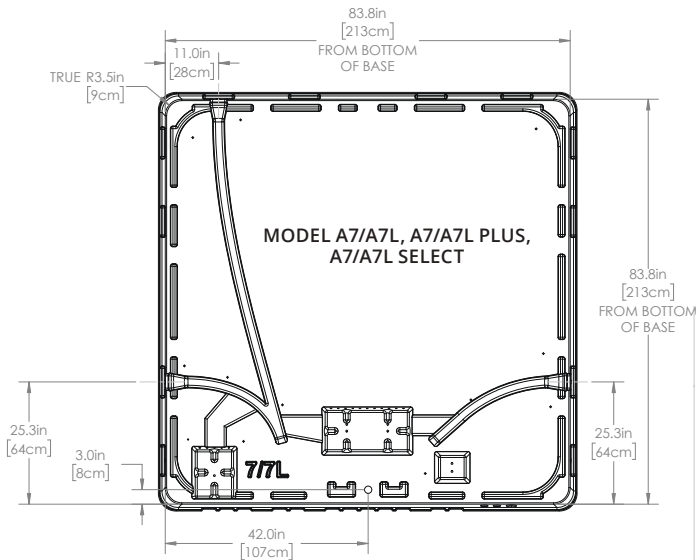
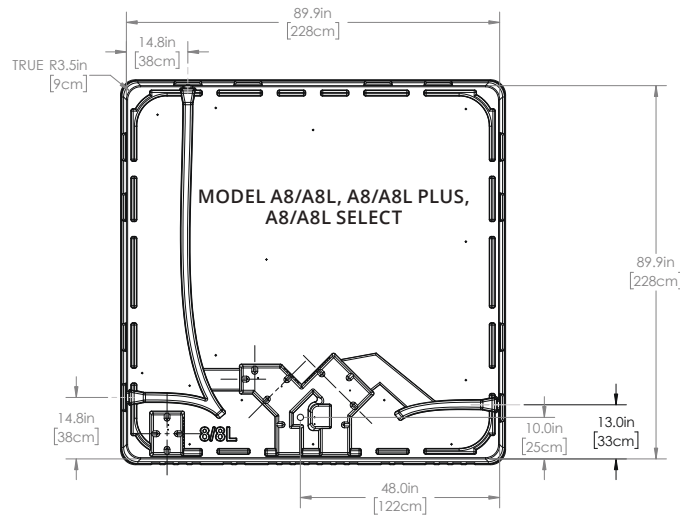
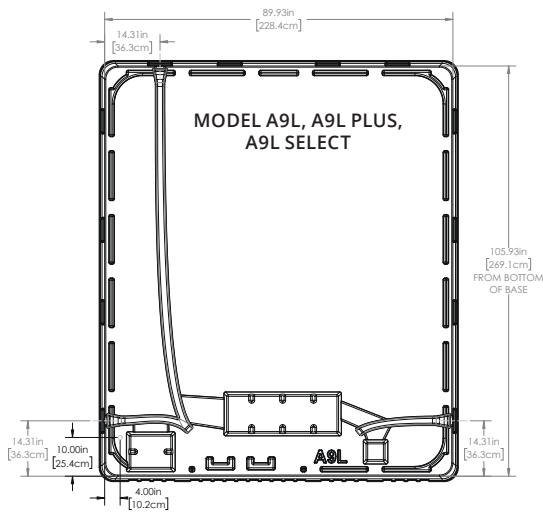
Step 8: Replace the Control System Box faceplate and the equipment compartment door. The electrical hook-up is complete.

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.



Note: Your spa may be delivered with a bolt to secure jet pumps during transportation. This shipping bolt is labeled and is located near the foot of the pump(s) inside the equipment area. This bolt does not affect function. However, in some instances, vibration resulting in noise may occur during pump operation if left in place. As an optional step in the start-up process, remove and discard the shipping bolt. If spa is equipped with a Circ Pump it will also have a similar bolt.

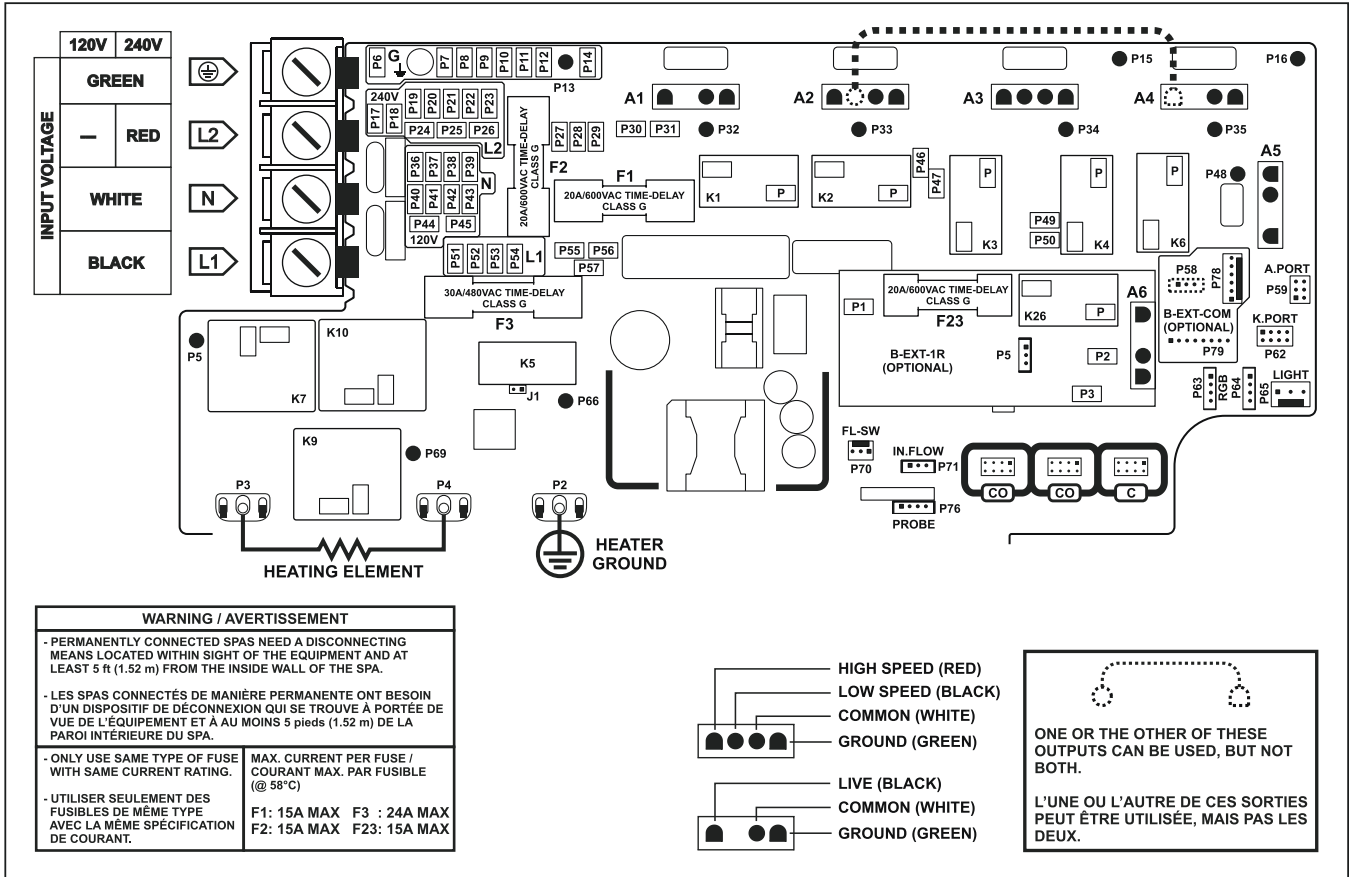
ELECTRICAL CHASEWAY DIAGRAMS



HARDWARE SETUP/WIRING DIAGRAMS

Note: Each Control System Box is labeled with a QR code that links to the supplier's Technical Documents associated with your specific Control System Box and its software. Scan that QR code for the Quick Start Card, Techbook, and more.

A Series Standard (YE-6)



Connection for model without AMP connectors:

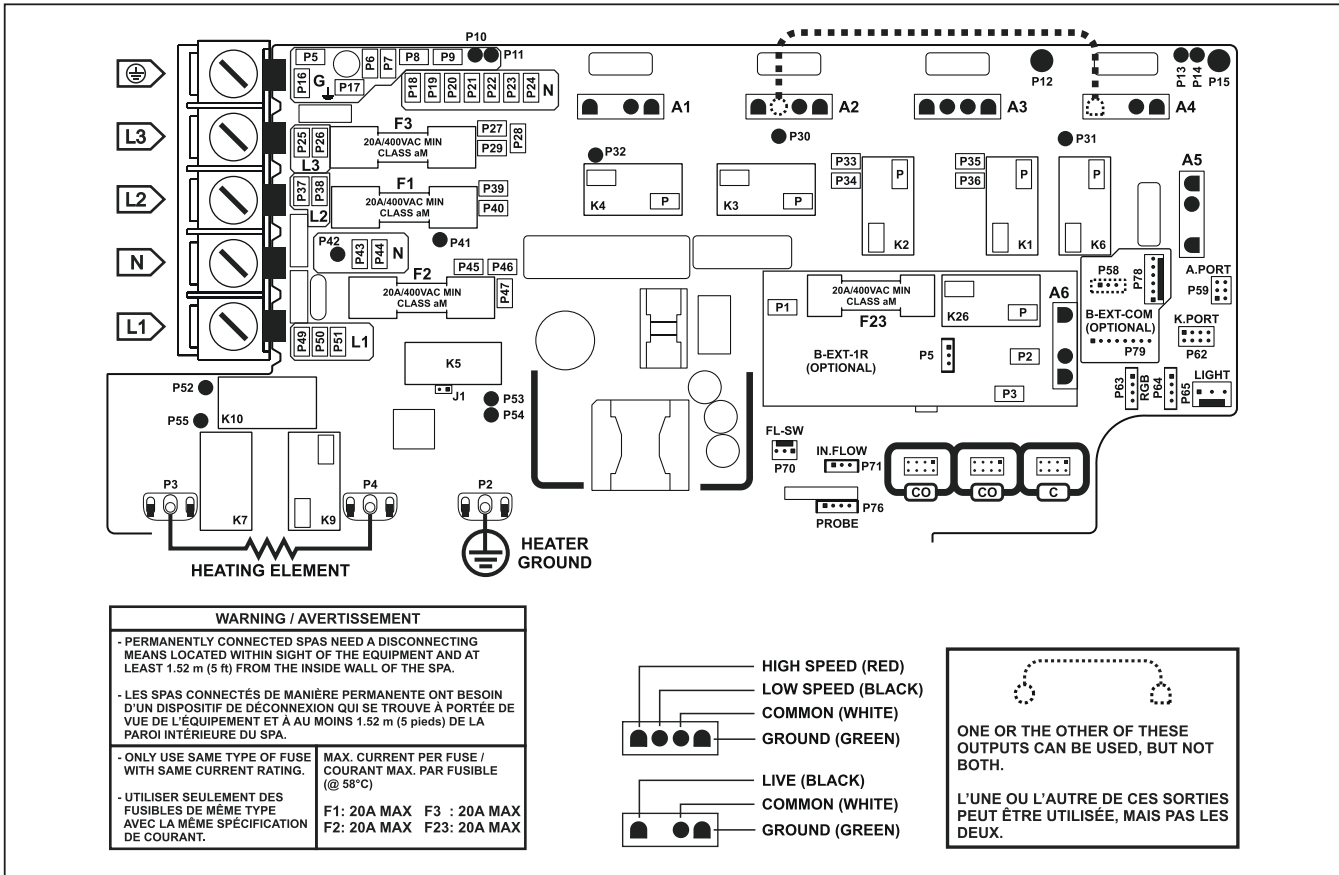
Direct output 1 (A5)			Pump 2 (A3)		
Voltage	120 V	240 V	Voltage	120 V	240 V
Green / ground	P11	P11	Green / ground	P8	P8
Black / line	P49	P49	Black / low speed	K2-P	K2-P
White / common	P44	P24	Red / high speed	K4-P	K4-P
			White / common	P38	P21

O3 (A6)			Circulation pump* (A1)			Pump 1 (A2)			Light (12 V dc, 1.3 A Max.)**
Voltage	120 V	240 V	Voltage	120 V	240 V	Voltage	120 V	240 V	
Green / ground	P12	P12	Green / ground	P7	P7	Green / ground	P8	P8	P65
Black / line	K26-P	K26-P	Black / line	K1-P	K1-P	Black / low speed	K2-P	K2-P	
White / common	P45	P26	White / common	P36	P19	White / common	P37	P20	

* Ozonator and circulation pump can be combined on the same output via the optional splitter PP1.

** Max. available current for Light and LEDs RGB together.

A Series Standard, 50Hz Equipment (YE-6)



Connection for model without AMP connectors:

Direct output 1 (A5)		Pump 2 (A3)	
Voltage	230 V	Voltage	230 V
Green / ground	P16	Green / ground	P8
Black / line	P45	Black / low speed	K2-P
White / common	P22	Red / high speed	K1-P
		White / common	P20

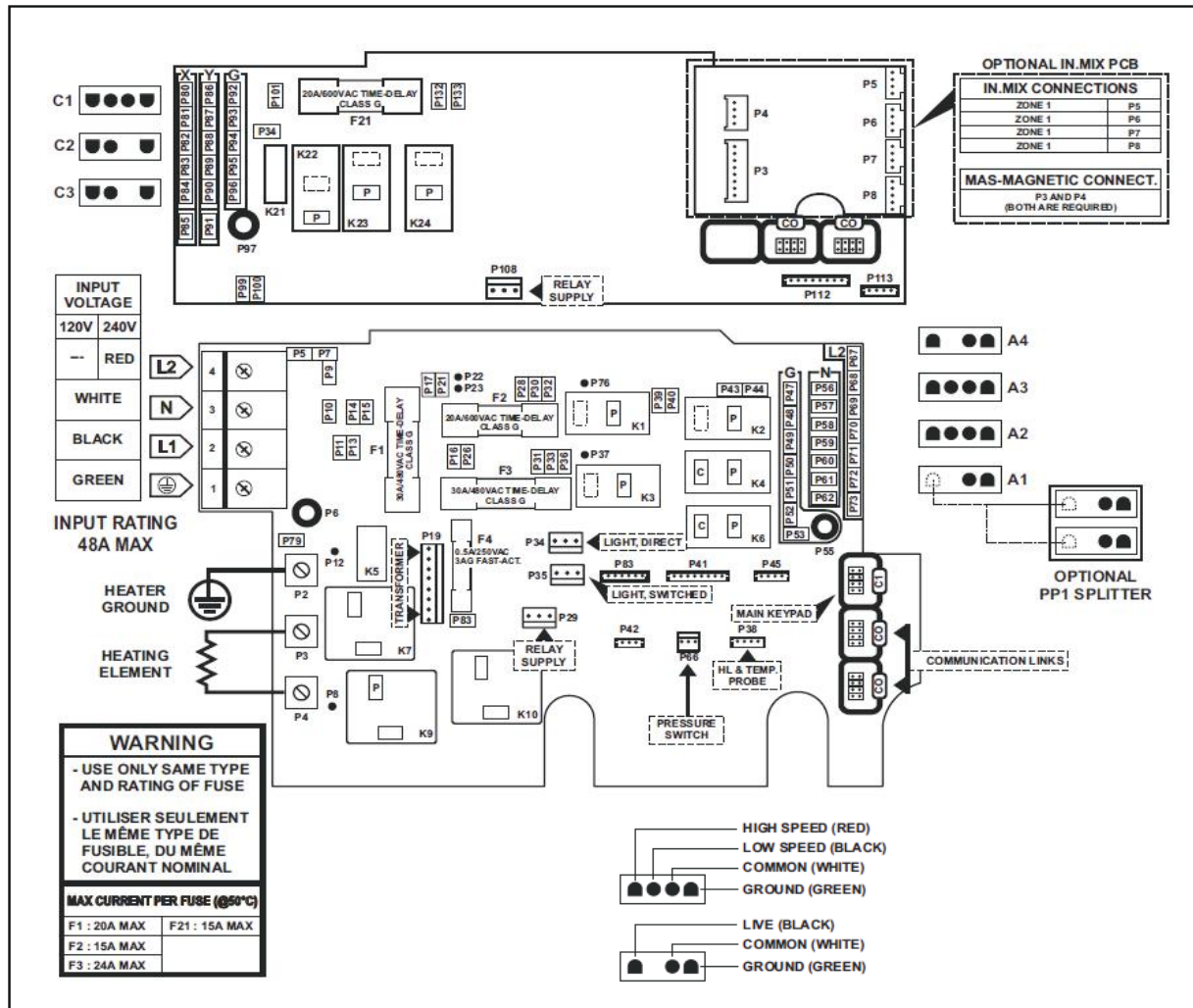
O3 (A6)		Pump 1 (A2)		Circulation pump* (A1)		Light (12 V dc, 1.3 A Max.)**
Voltage	230 V	Voltage	230 V	Voltage	230 V	
Green / ground	P17	Green / ground	P7	Green / ground	P6	P65
Black / line	K26-P	Black / low speed	K2-P	Black / line	K4-P	
White / common	P44	White / common	P19	White / common	P18	

* Ozonator and circulation pump can be combined on the same output via the optional splitter PP1.

** Max. available current for Light and LEDs RGB together.

A Series Plus and Select Trim Package (yt 9)

Connecting high voltage accessories: (North America 60 Hz)



Pump 1 (A2)

Voltage	240 V
Green / ground	G
Black / low speed	K6
Red / high speed	K3
White / common	L2

Pump 2 (A3)

Voltage	240 V
Green / ground	G
Black / low speed	K2
Red / high speed	K4
White / common	L2

Pump 3 (C1)

Voltage	240 V
Green / ground	G
Black / low speed	K22
Red / high speed	K23
White / common	L2

Circulation pump / O3 (A1)

Voltage	240 V
Green / ground	G
Black / low speed	K1
White / common	L2

Internal Light (C2)

Voltage	240 V
Green / ground	G
Black / low speed	P34
White / common	L2

Waterfall Pump (C3)

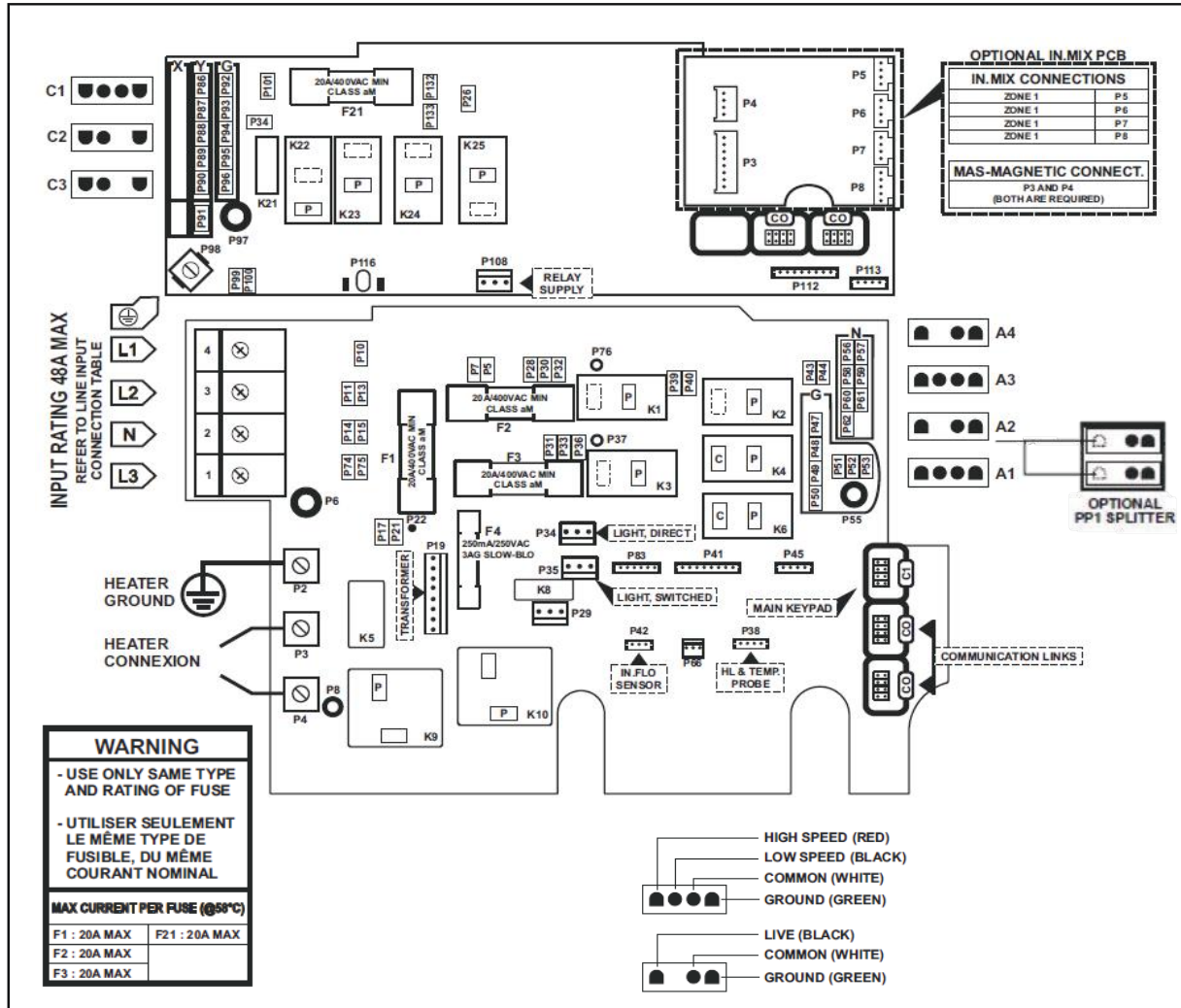
Voltage	240 V
Green / ground	G
Black / low speed	K24
White / common	L2

Direct output (A4)

Voltage	240 V
Green / ground	G
Black / low speed	P28,P30,P32
White / common	L2

A Series Plus and Select Trim Package (yt 9)

Connecting high voltage accessories: (European 50 Hz)



Pump 1 (A1)

Voltage	240 V
Green / ground	G
Black / low speed	K6
Red / high speed	K1
White / common	L2

Pump 2 (A3)

Voltage	240 V
Green / ground	G
Black / low speed	K2
Red / high speed	K4
White / common	L2

Pump 3 (C1)

Voltage	240 V
Green / ground	G
Black / low speed	K22
Red / high speed	K23
White / common	L2

Circulation pump / O3 (A2)

Voltage	240 V
Green / ground	G
Black / low speed	K3
White / common	L2

Internal Light (C2)

Voltage	240 V
Green / ground	G
Black / low speed	P34
White / common	L2

Waterfall Pump (C3)

Voltage	240 V
Green / ground	G
Black / low speed	K24
White / common	L2

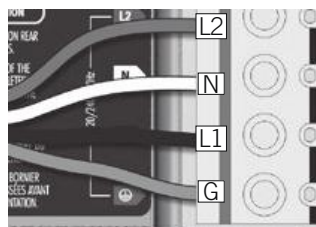
Direct output (A4)

Voltage	240 V
Green / ground	G
Black / low speed	P28, P30, P32
White / common	L2

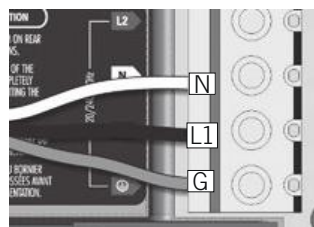
GFCI WIRING DIAGRAMS

Electrical wiring: North American model in.yt and in.ye

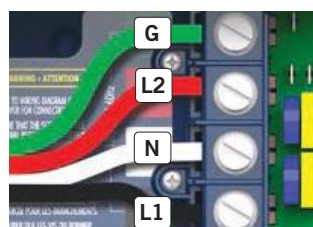
Refer to wiring diagram in the enclosure box lid for more information.



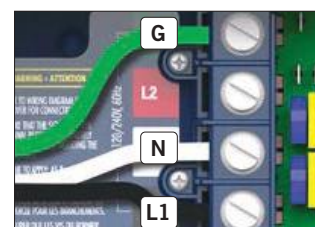
240 V (4 wires)



120 V (*3 wires)



240 V (4 wires)



120 V (*3 wires)

in.yt (left) / in.ye (right)

*If connected to a 3 wires system, the heat.wave and accessories will not operate at 240 V

Refer to the section « Connections for 120 V heaters »

Note: To convert model to a 120 V system, the white (common) accessory wire must be moved. See wiring diagram for details.

Insert each wire into the appropriate socket of the main entry terminal block according to the color code indicated on the sticker. Use a flat-head screwdriver to tighten the screws on the terminal.

After making sure the wires are securely connected, push them back into the box and replace the cover. Do not over-tighten cover screws (torque to 8 in per lb max {0.9 N.m})

Connect the bonding conductor to the bonding lug on the front of the spa pack (a grounded electrode conductor should be used to connect the equipment grounding conductors).

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. On 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 Electrical Configuration instructions for your spa's specific control system. The "Input Amperage" for a 60A service is 48. The "Input Amperage" for a 50A service is 40. Electrical wiring: European model in.yt

RCD WIRING DIAGRAMS

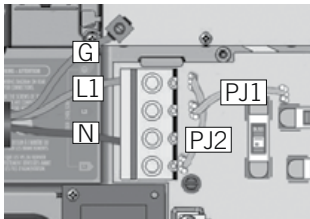
Electrical wiring: European model in.yt

Refer to wiring diagram in the enclosure box lid for more information.



Warning

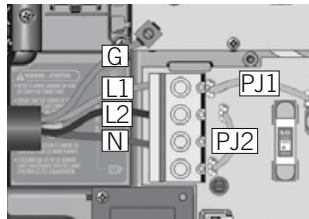
in.yt.ce models must always be connected to a circuit protected by a Residual-Current Device (RCD) having a rated operating residual-current not exceeding 30 mA. Correct wiring of the electrical service box, RCD, and pack terminal block is essential! Check your electrical code for local regulations. Only copper wire should be used, never aluminum.



1-phase

Connect PJ1 between P7 and P13.

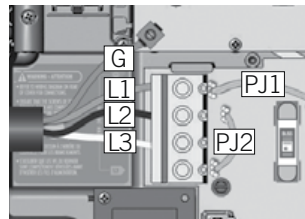
Connect PJ2 between P10 and P74.



2-phase

Connect PJ1 between P7 and P10.

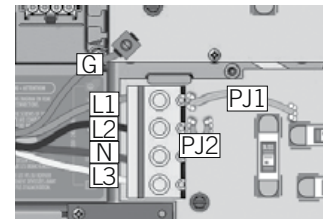
Connect PJ2 between P13 and P74.



3-phase Delta (no neutral)

Connect PJ1 between P7 and P10.

Connect PJ2 between P13 and P74.



3-phase with single neutral

Connect PJ1 between P7 and P10.

Connect PJ2 between P11 and P13.

Insert each wire into the appropriate socket of the main entry terminal block according to the color code indicated on the sticker. Use a flat-head screwdriver to tighten the screws on the terminal.

After making sure the wires are securely connected, push them back into the box and replace the cover. Do not over-tighten cover screws (torque to 8 in per lb max {0.9 N.m}).

Connect the bonding conductor to the bonding lug on the front of the spa pack (a grounded electrode conductor should be used to connect the equipment grounding conductors).

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 Electrical Configuration instructions for your spa's specific control system. The "Input Amperage" for a 60A service is 48. The "Input Amperage" for a 50A service is 40.

Electrical wiring: European model in.ye

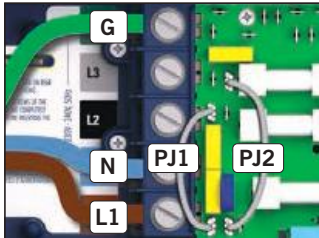
Refer to wiring diagram in the enclosure box lid for more information.



Warning

in.ye.ce models must always be connected to a circuit protected by a Residual-Current Device (RCD) having a rated operating residual-current not exceeding 30 mA.

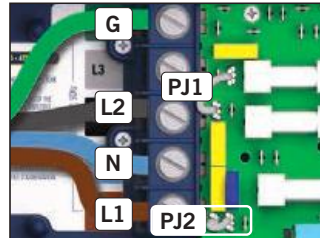
Correct wiring of the electrical service box, RCD, and pack terminal block is essential!
Check your electrical code for local regulations. Only copper wire should be used, never aluminum.



1-phase

Connect PJ1 between P37 and P49.

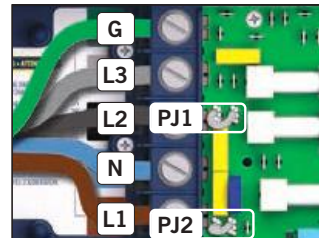
Connect PJ2 between P50 and P26.



2-phase

Connect PJ1 between P37 and P26.

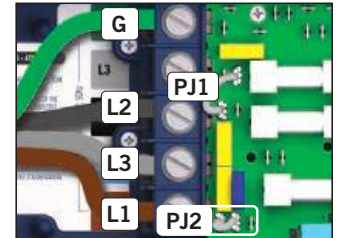
Connect PJ2 between P50 and P49.



3-phase with single neutral

Connect PJ1 between P37 and P38.

Connect PJ2 between P50 and P49.



3-phase Delta (no neutral)

Connect PJ1 between P37 and P26.

Connect PJ2 between P50 and P49.

input voltage: 230V, 50Hz (Line-to-Neutral)

Only for countries where
Line-to-Line input voltage:
230V, 50Hz.

Insert each wire into the appropriate socket of the main entry terminal block according to the color code indicated on the sticker. Use a flat-head screwdriver to tighten the screws on the terminal.

After making sure the wires are securely connected, push them back into the box and replace the cover. Do not over-tighten cover screws (torque to 8 in per lb max {0.9 N.m}).

Connect the bonding conductor to the bonding lug on the front of the spa pack (a grounded electrode conductor should be used to connect the equipment grounding conductors).

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) A Series are partially or fully closed. Valves are closed A Series 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

M Series, A Series & STIL for United States and Canada

Bullfrog International, LC (“Bullfrog” or “we”) extends the following coverage under this Limited Warranty solely to the original end-user purchaser (“Owner” or “you”) of any 2023 model year and later M Series, A Series or STIL Bullfrog Spas hot tub manufactured on or after February 1, 2023 and installed for residential use in the United States or Canada.

LIFETIME WARRANTY

ENDURAFRAME™

Bullfrog warrants the EnduraFrame (injection-molded spa frame) against degradation for the life of the original retail purchaser of the spa.

10 YEAR WARRANTY

SHELL STRUCTURE

Bullfrog warrants the Bullfrog Spa shell will not leak for ten years from the original spa purchase date.

7 YEAR WARRANTY

SHELL SURFACE

Bullfrog warrants the surface finish of the Bullfrog Spa will not crack, craze wrinkle, blister, peel or delaminate for seven years from the original spa purchase date.

5 YEAR WARRANTY

EQUIPMENT

This warranty specifically covers the pump(s), heater, control system, Snap Caps™, FilterCap™, other Bullfrog mechanical equipment (excluding any equipment listed in other sections), and leaks from any component or plumbing fitting located beneath the spa shell.

Electrical and mechanical equipment with its associated piping and fittings are warranted against defects in materials and workmanship for five years from purchase date.

Defective components that are easily removed from the spa and that can be readily replaced by the customer and do not require specialized tools or knowledge or create personal safety issues, all of which are referred to as “Easily Removed Components,” will be repaired or replaced free of charge at your authorized Bullfrog Spas dealer or retail store or by sending the defective component(s) to Bullfrog. This warranty excludes audio systems, water care systems, and the interior and exterior spa lighting systems.

SPA CABINET and BASE

This warranty specifically covers the cabinet corners, door and side panels, and the molded spa base.

Cabinet sections (corners, doors, side panels) are warranted against material degradation and cracking for five years from purchase date.

JETPAK THERAPY SYSTEM®

This warranty specifically covers the jets, any leaks from JetPak jet fittings, and the JetPak manifold system.

The JetPak manifold system is warranted for five years from purchase date.

Color availability on replacement and aftermarket JetPaks may vary and will depend upon market demand and availability of the color to Bullfrog.

3 YEAR WARRANTY

PATIO PERFORMANCE™ SPA COVER

Bullfrog warrants the Patio Performance spa cover against defects in materials or workmanship, unless determined to be normal fading or wear, for three years from the original spa purchase date.

1 YEAR WARRANTY

LIGHTING SYSTEMS

Bullfrog warrants the interior and exterior spa lighting systems against defects in materials and workmanship for one year from the original spa purchase date. Lighting components that are Easily Removed Components, such as exterior sconce lights, will be repaired or replaced free of charge at your authorized Bullfrog Spa dealer or retail store or by sending the defective component(s) to Bullfrog.

AUDIO SYSTEMS

Bullfrog warrants audio systems against defects in materials and workmanship for one year from the original spa purchase date.

WATER CARE SYSTEMS

Bullfrog warrants water care systems against defects in materials and workmanship for one year from the original spa purchase date.

OTHER WARRANTIES

Bullfrog warrants the Bullfrog Spa pillows, metal jet faces, and filters against defects in materials and workmanship through time of delivery.

WARRANTY PERFORMANCE and TERMS

Bullfrog or its authorized agent (i.e., personnel of Bullfrog, its retail dealers, or its authorized third-party service companies) will repair or replace any malfunctioning or defective component on the spa that is covered under the terms of this Limited Warranty and was purchased from an authorized Bullfrog Spas dealer or retail store. Bullfrog reserves the right, at its option, to either repair or replace a defective spa or component. Owner is required to maintain clear access for spa repairs and is responsible for any non-standard costs of accessing spa equipment or spa plumbing. When warranty service requires removal of the spa, Owner will be responsible for any

non-standard costs of spa removal and replacement, such as for spas located in a vault, spas located on an upper deck where a crane is required, or repair or replacement of decking or surrounding stone or concrete.

If a replacement spa or component is provided by Bullfrog, Owner will be responsible for all costs for removal and replacement of the defective product, mileage charges, shipping costs of the replacement product, and delivery. In the event of a structure or frame failure after seven years from the original spa purchase date, the defective spa must be sent to Bullfrog for repair at Owner's expense. In some situations, the servicing dealer or Bullfrog may charge Owner a reasonable service fee.

Bullfrog reserves the right to use either new or reconditioned replacement components. Any repair or replacement component or spa does not receive new or extended warranty coverage but is covered only under the remaining portion of the original product's warranty term.

Bullfrog's Lifetime warranties last for the lifetime of the original retail purchaser of the spa. If the original retail purchaser is a company or entity rather than a natural person (e.g., corporation, limited liability company, family trust, etc.), "life of the original retail purchaser" shall mean ten years.

To obtain warranty service, contact your authorized Bullfrog Spas dealer or Bullfrog and submit proof of purchase. The proof of purchase requirement may be waived if Bullfrog's or the dealer's records can confirm the original spa purchase date and that you are the original purchaser. Any defective spa or component sent directly to the factory for warranty repair must be pre-authorized by Bullfrog and must be freight prepaid. Return freight will be paid by Bullfrog on all warranted components and spas, except that Owner is responsible for all shipping charges for any spa returned for repairs more than seven years after its purchase date. When the entire spa is sent to the factory for repair, all costs of removing and re-installing the spa at Owner's location will be the responsibility of Owner. Repair or replacement, as described above, shall be Bullfrog's sole liability for any breach of this Limited Warranty.

EXCLUSIONS

This Bullfrog Spa Limited Warranty is void in the following circumstances:

- The spa has been subject to neglect, misuse or abuse, or to alterations that cause the damage.
- Damage is caused by repair or maintenance work that has been attempted or done by anyone other than an authorized agent of Bullfrog.
- The spa has been used in a non-residential or commercial location (including where a spa may be used by multiple residents of an apartment or townhome complex) or in any way for which it was not designed.
- Damage is caused by an act of God (fire, earthquake, hail, etc.) or any other cause beyond the control of Bullfrog.
- Damage is caused by the addition or use of any non-approved mechanical or electrical component, or chemical substance.
- Damage is caused by shipping, moving, mishandling, improper installation or electrical hook-up by someone other than an authorized agent of Bullfrog.

- Damage to the spa shell is caused by excessive heat build-up due to failure to properly cover the spa when it is empty of water or exposed to direct sunlight or other weather conditions.
- Damage is caused by operating the spa outside the water temperature range of 40°F-110°F (4°C-43°C).
- Damage is caused by improper maintenance of spa water chemistry or by allowing undissolved spa chemicals to lie on the spa's surface.
- Damage is caused by failure to install, maintain and operate the spa in accordance with the recommendations contained in the Bullfrog Owner's Manual, Pre-Delivery Guide or any other printed instructions, notice or bulletin from Bullfrog.
- Damage is caused by failure to provide a proper spa foundation as described in the Pre-Delivery Guide.

Any person or company may perform necessary maintenance or repairs on a Bullfrog spa. However, any damages caused by you or anyone other than Bullfrog or its authorized agents are not covered and may void this Limited Warranty.

LIMITATIONS

THIS LIMITED WARRANTY STATES BULLFROG'S SOLE LIABILITY AND OBLIGATION FOR ANY SPA PROBLEMS OR MALFUNCTIONS AND FOR ANY WARRANTY BREACHES. THIS LIMITED WARRANTY TAKES THE PLACE OF ALL OTHER WARRANTIES, INCLUDING ANY EXPRESS OR STATUTORY WARRANTIES. ANY IMPLIED WARRANTIES (SUCH AS IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED TO THE STATUTORY PERIOD OR THE DURATION OF THE APPLICABLE WARRANTY STATED ABOVE, WHICHEVER IS SHORTER. NO AGENT, DEALER, DISTRIBUTOR, SERVICE COMPANY OR OTHER PARTY IS AUTHORIZED TO CHANGE, MODIFY OR EXTEND THE TERMS OF THIS LIMITED WARRANTY IN ANY MANNER WHATSOEVER. THIS LIMITED WARRANTY TERMINATES UPON TRANSFER OF SPA OWNERSHIP. BULLFROG MAY, AT ITS OPTION, EITHER REPAIR OR REPLACE A DEFECTIVE PRODUCT (SPA OR A COMPONENT). IF THE SPA NEEDS TO BE REPLACED BUT THE CURRENT MARKET PRICE OF THE REPLACEMENT SPA IS GREATER THAN THE ORIGINAL SPA'S MARKET PRICE, OWNER WILL BE REQUIRED TO EITHER PAY AN UPGRADE FEE OR CHOOSE A REPLACEMENT SPA COMPARABLE TO THE MARKET PRICE OF THE ORIGINAL SPA AT THE TIME OF ITS PURCHASE. THE ORIGINAL WARRANTY PERIOD WILL CONTINUE TO APPLY TO ALL REPAIRED AND REPLACEMENT SPAS AND COMPONENTS AND WILL NOT BE RENEWED OR EXTENDED FOR ANY REASON.

DISCLAIMERS

EXCEPT AS SET FORTH IN THIS LIMITED WARRANTY OR OTHERWISE REQUIRED BY APPLICABLE LAW, BULLFROG AND ITS AUTHORIZED AGENTS SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY, DEATH, DAMAGES TO PROPERTY, LOSS, COST OR OTHER DAMAGE, WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE, ARISING OUT OF THE SPAS, BULLFROG'S OR ITS AGENTS' SERVICES, OR ANY DEFECT COVERED BY THIS LIMITED WARRANTY, INCLUDING WITHOUT LIMITATION LOSS OF USE OF THE SPA AND COST FOR REMOVAL OF DEFECTIVE PRODUCTS, EVEN IF BULLFROG HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. EXCEPT AS REQUIRED BY LAW, THE TOTAL LIABILITY OF BULLFROG AND ITS AUTHORIZED

AGENTS TO YOU OR THIRD PARTIES SHALL NOT EXCEED THE ORIGINAL AMOUNT PAID FOR THE DEFECTIVE PRODUCT.

LEGAL RIGHTS

This Limited Warranty gives you specific legal rights. You may also have other rights under the laws of your country, state, or province. Some jurisdictions do not allow limitations on certain implied or statutory warranties or other warranty terms and conditions, so these limitations may not apply to you. Prompt return of a completed warranty registration form will help protect your warranty rights. Registration requirements do not apply to residents of California or other jurisdictions where prohibited by law.

Updated 1/2024

Pat. www.bullfrogspas.com/patents

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v 1.6

Register your spa online by visiting:
bullfrogspas.com/warranty-registration

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Bullfrog International LC