



Floating System Operating Instructions



FROG Serene sanitizes your hot tub by creating




- Cleaner**
because it kills bacteria two ways
- Clearer**
because it helps keep pH balanced
- Softer**
because there's up to 50%* less bromine
- Easier**
with pre-filled cartridges for no mess, or measuring

* Compared to the minimum ANSI recommended bromine level of 2.0 in a residential hot tub.

Register your FROG Serene System at frogproducts.com

Step 1: Prepare the Hot Tub

1.



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

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 – 7.8
Total Alkalinity:	80 - 120 ppm
Calcium Hardness:	150-250
Total Dissolved Solids:	<1500

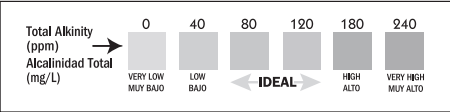
- a.



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

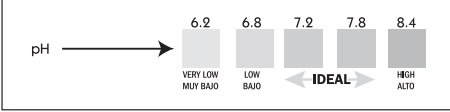
- b.

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 7.8**. If higher or lower, add a pH adjuster.




- d.

Lastly **test for Calcium 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! Establish an initial residual of 1.0-2.0 ppm bromine or chlorine. For best results use FROG Jump Start® (EPA Reg. #53735-12) that quickly dissolves with an effervescent action – one packet per 600 gallons. Do not use a non-chlorine shock. Confirm proper residual amount before employing FROG Serene Floating System.

5.

Heat water to the manufacturer's recommended temperature.

 **Manufactured by: King Technology**
530 11th Ave S, Hopkins, MN 55343 U.S.A.
952-933-6118 • Customer Service 800-222-0169
frogproducts.com

Made in U.S.A. Patents: kingtechnology.com/IP
EPA Est. No.: 071209-AZ-001 E083018553091843N 20-48-0173

Learn more at frogproducts.com or call 800.222.0169


Step 2: Set the Cartridges

1.



The FROG Serene Floating System has two replaceable cartridges.
- The combination provides the **Fresh Mineral Water®** benefits of **cleaner, clearer and softer water that's easier to take care of.**
- Blue = FROG Serene Mineral Cartridge
Yellow = FROG Serene Bromine Cartridge

2.



Set the mineral cartridge to #6 (hold the bottom and turn the top until 6 appears in the setting window). No further adjustments are necessary for the life of this cartridge.


3.

Set the bromine cartridge to the setting that matches your hot tub size in gallons.



System Setting Chart	
200 Gallons	0
250 Gallons	1
300 Gallons	1
350 Gallons	2
400 Gallons	3
450 Gallons	4
500 Gallons	5
550 Gallons	5
600 Gallons	6


4.



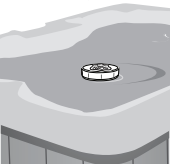
For one week test the water daily with FROG Test Strips and adjust cartridge up or down by 1 setting per day until the color on the test strip matches the ideal FROG bromine range of 1.0 to 2.0 ppm.

Step 3: Put the System to Work


1.



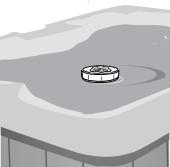
Insert both cartridges into the green floating holder by pushing them into the openings until they stay in place.
2.



Let the Floating System free-float in the hot tub.
3.



When using the hot tub, simply remove FROG Serene Floating System, drain the water into the hot tub and invert on the side of the hot tub.
4.



REMEMBER TO RETURN FROG SERENE FLOATING SYSTEM TO HOT TUB WHEN YOU GET OUT!

Replacing Cartridges

Replace blue **MINERAL CARTRIDGE** every four months.



- a. Discard it in the trash even if it appears to have media left inside.
- b. Don't attempt to reuse: the minerals are spent after 4 months.

Replace yellow **BROMINE CARTRIDGE** when empty.



- a. Life of cartridge varies depending on hot tub size and number of users.



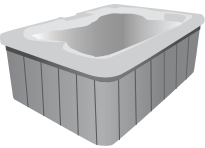
- b. Drain water from cartridge to ensure it is empty.




- c. 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 or every four months when FROG minerals need to be replaced.
2.




Run filtration system as recommended by your hot tub manufacturer.
3.




Regularly test water. Maintain pH, Total Alkalinity and Calcium Hardness levels with the precise FROG Test Strips.
- NOTE:** Water balance is affected by bather load, chemical usage, evaporation and the makeup of source water so maintaining water balance regularly is important.


4.



Maintain at least 1.0 ppm bromine level at all times.
Note: Bromine or chlorine levels are lower only when used with FROG minerals.
5.



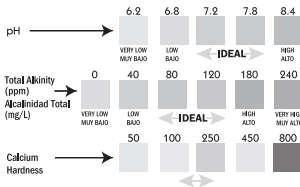
Shock the hot tub once a week or as needed with a non-chlorine shock.
Heavily used hot tubs may require more frequent shocking.
6.



Replace mineral cartridge and bromine cartridges as directed in Step 3.

Troubleshooting

• Cloudy Water or Low-Bromine Levels



- Check FROG Serene Bromine Cartridge. If empty, replace following directions in Step 3: Put the System to Work.

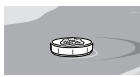
- Make sure your FROG Serene Mineral Cartridge is not older than 4 months as it will be ineffective and more bromine will be required to maintain the hot tub until you replace the minerals.

- Shock the hot tub with a non-chlorine shock to regain clarity.

• High Bromine Levels



- Remove the system from the hot tub until the bromine level is down to 2.0 ppm.



- Lower the Bromine Cartridge setting by 1 number and replace system in the hot tub.



- Test in 24 hours. Repeat process until bromine level stays within 1.0 to 2.0 ppm.



In-Line System Operating Instructions



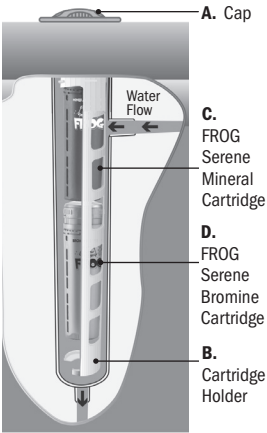
Cleaner
because it kills bacteria two ways
Clearer
because it helps keep pH balanced
Softer
because there's up to 50%* less bromine
Easier
with pre-filled cartridges for no mess, or measuring



FROG Serene Mineral Cartridge (Blue)

FROG Serene Bromine Cartridge (Green)

Register your
FROG Serene System at
frogproducts.com




Cut-away view of cartridges snapped into holder and placed into the In-Line System.

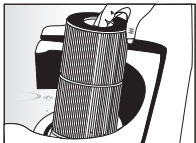
The In-Line System is made up of:

- (A) a **cap** that is easily distinguishable among the fittings on the top of the hot tub
- (B) a **cartridge holder** that pulls out of the system
- (C) a **FROG Serene Mineral Cartridge** that helps control bacteria in the water
- (D) a **FROG Serene Bromine Cartridge** that helps support the minerals while oxidizing contaminants like body oils and ammonia compounds responsible for smelly chloramines. The cartridges are adjustable to meet your specific hot tub water care needs.

Step 1: Prepare the Hot Tub

- 

Fill hot tub with fresh water.

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

Clean or replace filter cartridges when dirty.
(Follow manufacturer's instructions).
- Balance water by following STEPS a — d in order.**

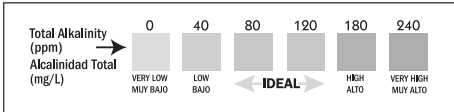
IMPORTANT: Always follow printed instructions on the balancing chemical packages. Add balancing chemicals in small increments one at a time with the jets on and wait 6 hours before testing again and adding any additional balancing chemicals.

Water Balance Guidelines	
pH:	7.2 – 7.8
Total Alkalinity:	80 - 120 ppm
Calcium Hardness:	150 - 250 ppm
Total Dissolved Solids:	<1500

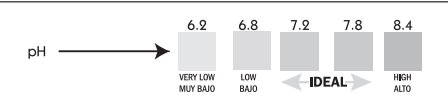
a. Take a water sample from the hot tub and dip a FROG® Test Strip into it.



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 7.8**. If higher or lower, add a pH adjuster.



d. Lastly **test for Calcium 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.

- 

Very Important! Before using cartridges, establish an initial residual of 0.5 - 1.0 ppm free chlorine with FROG® Jump Start® (EPA Reg. No.: 53735-12) start-up shock, included in this package, that quickly dissolves with an effervescent fizzing action – one packet per 600 gallons.
- Heat water to the manufacturer's recommended temperature.

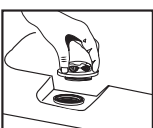
Manufactured by: **King Technology, Inc.**
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frogproducts.com

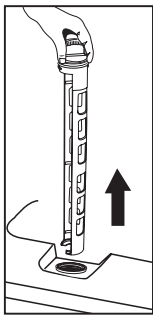
Step 2: Set the Cartridges

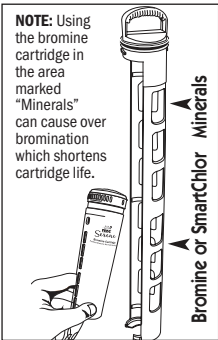
Set the **blue FROG Serene Mineral Cartridge** to #6 (hold the bottom and turn the top until 6 appears in the window). No further adjustments are necessary for the life of the cartridge.



Step 3: Put the System to Work

- 

Open cap of In-Line System and set aside.
DO NOT OPEN CAP WHILE JETS ARE ON.
- 

Remove holder by pushing down and turning counter clockwise before pulling out.
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NOTE: Using the bromine cartridge in the area marked "Minerals" can cause over bromination which shortens cartridge life.

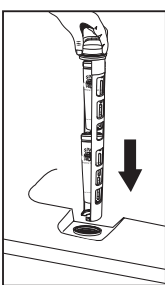
Indent on cartridges

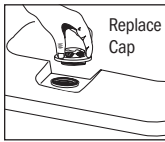
Raised area inside holder, one for each cartridge

System Setting Chart	
200 Gallons	0
250 Gallons	1
300 Gallons	1
350 Gallons	2
400 Gallons	3
450 Gallons	4
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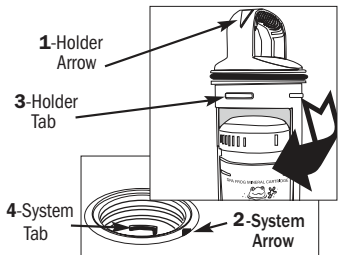
Set the **green FROG Serene Bromine Cartridge** to the setting that matches your hot tub size in gallons.

For one week test the water daily with FROG Test Strips and adjust cartridge up or down by 1 setting per day until the color on the test strip matches the ideal FROG bromine range of 1.0 to 2.0 ppm.

- 

Slowly insert holder into system (see diagrams). Line up holder arrow-(1) with system arrow-(2). Push down until holder tabs-(3) go past system tabs-(4) and turn holder to the right (clockwise) until it stops. To ensure a locked position, attempt to pull holder up. If it stays in place, the lock is secure.
- 


Replace Cap





Replacing Cartridges

- Replace blue Mineral Cartridge every four months.**
- Discard it in the trash even if it appears to have media left inside.
 - Don't attempt to reuse: the minerals are spent after 4 months.
- Replace green Bromine Cartridge when empty.**
- Life of cartridge varies depending on hot tub size and number of users.
 - Drain water from cartridge to ensure it is empty.
 - Discard in trash or offer for recycling if available.

Step 4: Routine Hot Tub Care

- 

Drain and refill hot tub as directed by your hot tub manufacturer or every four months when FROG minerals need to be replaced.
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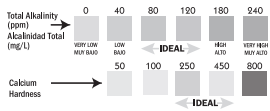
Run filtration system as the manufacturer recommends to maintain proper water flow through the In-Line System.
- 

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


Troubleshooting

• Cloudy Water or Low-Bromine Levels

- 
- Check water balance. pH and Total Alkalinity need to be in the proper ranges for the FROG Serene In-Line System to work correctly.
 - Check FROG Serene Bromine Cartridge and replace if empty—see instructions under “Put the System to Work”.

- Make sure your FROG Serene Mineral Cartridge is not older than 4 months as it will be ineffective and more bromine will be required to maintain the hot tub until you replace the minerals.
- Shock the hot tub with a non-chlorine shock to regain clarity.

• High Bromine Levels

- 
- Remove the FROG Serene Bromine Cartridge from the In-Line System until the bromine level is down to 2.0 ppm.
 - Lower the FROG Serene Bromine Cartridge setting by 1 number and replace cartridge in the In-Line System.
 - Test in 24 hours. Repeat process until bromine level stays within 1.0 to 2.0 ppm.

Learn more at frogproducts.com or call 800.222.0169

* Compared to the minimum ANSI recommended bromine level of 2.0 in a residential hot tub.