



## Sanitizing System Operating Instructions for SUNDANCE® SPAS

FROG @ease® is a hot tub sanitizing system<sup>+</sup> custom designed for Sundance® Spas that takes the guesswork out of water care so you always feel at ease while enjoying your hot tub.

The FROG  
@ease System  
has two  
replaceable  
cartridges.



Blue - FROG @ease  
Mineral Cartridge



Silver - FROG @ease  
SmartChlor® Cartridge

The combination provides the Fresh Mineral Water<sup>™</sup> benefits of **cleaner, clearer, softer<sup>®</sup>** water that's easier to take care of.

### FROG @ease Mineral Cartridge

Active Ingredient:  
Silver Chloride ..... 0.5%  
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 FROG @ease Mineral Cartridge with the FROG @ease SmartChlor Cartridge in the FROG @ease Sanitizing System for Sundance® 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 or the cyanuric acid level is higher than 80 ppm. Then drain and fill the hot tub with fresh water before using this product.

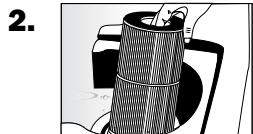
**Read entire operating instructions for complete directions for use.**

## Step 1: Prepare the Hot Tub

**1.** Have your dealer test your water before filling the hot tub. 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 the cyanuric acid 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 2 hours before testing again and adding any additional balancing chemicals.

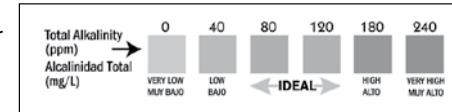
#### Water Balance Guidelines

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

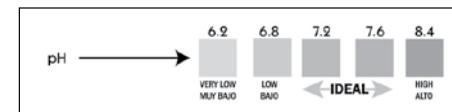
**a.** Take a water sample from the hot tub and dip a FROG @ease Test Strip into it.



**b.** Look at the **Total Alkalinity** reading first. Use FROG TArget™ or FROG JumpH™ 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. If your pH tends to fall, then maintain Total Alkalinity closer to 120 ppm.



**c.** After Total Alkalinity is in range, **test for pH**. It should be **between 7.2 and 7.6**. If higher, add FROG DropH™ (a pH down adjuster) or if lower, add FROG JumpH™ (a pH up adjuster).



**d.** Lastly, **test for Total Hardness** again. If you were able to use fill water low in hardness, you may now have to add FROG SooThe™ (hardness increaser) to maintain **between 150 and 250 ppm**.

**If balancing takes longer than 2 days shock the water with FROG Jump Start® start-up shock and maintain a chlorine level while continuing balancing.**



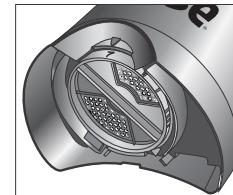
**4.** **Very Important!** After balancing and before using cartridges, if you haven't already added a shock during balancing, establish an initial residual of 0.5 - 1.0 ppm free chlorine with FROG Jump Start start-up shock, included in this package, that quickly dissolves with an effervescent fizzing action - one packet per 600 gallons.

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

## Step 2: Set the Cartridges

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

**2.** Set the FROG @ease Mineral Cartridge to #7 using the dial on the bottom of the cartridge. No further adjustments are necessary for the life of the cartridge.



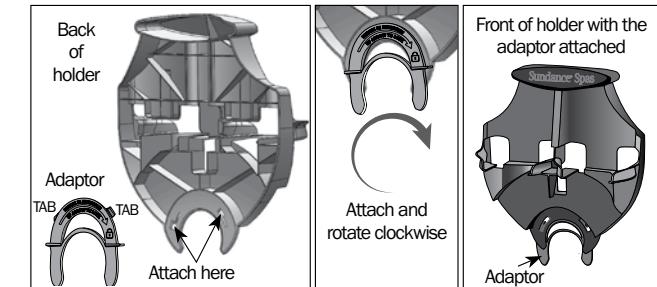
**3.** Set the FROG @ease SmartChlor Cartridge to the setting that matches your hot tub size in gallons. If needed, you may increase or decrease the dial setting.

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.

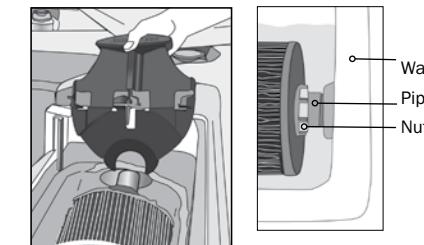
Sundance® Spas - Gallons	Setting #
200-350	3
350-450	4
450-600	5

## Step 3: Put the System to Work

1. Remove the filter lid.
2. Attach the adaptor to the back of the holder by inserting the tabs on the adaptor into the large opening in the holder and rotating clockwise until it clicks in place.

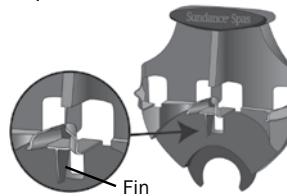
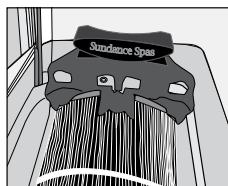


3. **Installing the FROG @ease Cartridge Holder:** With the filter cartridge in place, slide the holder down over the pipe where the nut is that holds the filter cartridge on.



### Step 3 Continued . . .

4. Make sure the openings for the FROG @ease cartridges are facing the filter area and the fin on the holder goes between two pleats on the filter cartridge. Push the holder down using the top handle until it snaps in place.



### 5. Inserting the FROG @ease Mineral Cartridge into the Holder:

Place the bottom of the rounded edge of the cartridge into the front of the holder opening closest to the outside of the hot tub and push the cartridge back until it locks into place.

6. Follow the same procedure to insert the FROG @ease SmartChlor Cartridge in the opening closest to the inside of the hot tub.

**Note:** To remove cartridges tilt away from the holder by pulling at the center top of the cartridge rather than the sides.

7. Make sure the cartridges are completely under water. If not, add water to the hot tub until the cartridges are covered.

8. Re-install the filter lid.

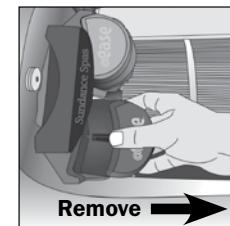
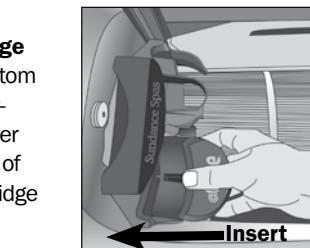
### Replacing Cartridges

**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.



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## 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 Total 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 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 single dose shocking when you replace the FROG @ease SmartChlor Cartridge or once a month. Do not use a dichlor shock due to the buildup of cyanuric acid that will negatively affect SmartChlor's effectiveness.

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.

7. Parts of the filter may discolor during use. This is normal. Follow manufacturer guidelines for filter replacement.

## Troubleshooting

### Cloudy Water or Low-Chlorine Levels

- Shock the hot tub with FROG Maintain or a non-chlorine shock. Do not use a dichlor shock due to the buildup of cyanuric acid that will negatively affect SmartChlor's effectiveness.
- 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.

+ 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.

∞ Cleaner, Clearer and Softer water for pools, hot tubs and swim spas.

Learn more at [frogproducts.com](http://frogproducts.com) or call 800.222.0169  
Register your FROG @ease Sanitizing System at [frogproducts.com](http://frogproducts.com)



Manufactured for King Technology, Inc.

6000 Clearwater Dr, Minnetonka, MN 55343 U.S.A.  
800-222-0169 | [frogproducts.com](http://frogproducts.com)

Assembled in USA Patents: [kingtechnology.com/IP](http://kingtechnology.com/IP)



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