SPA BOY
Owners Manual

Version 1 Revision 1 (R1)

For Arctic Spas Fitted With Spa Boy Version 1 Revision 1 components

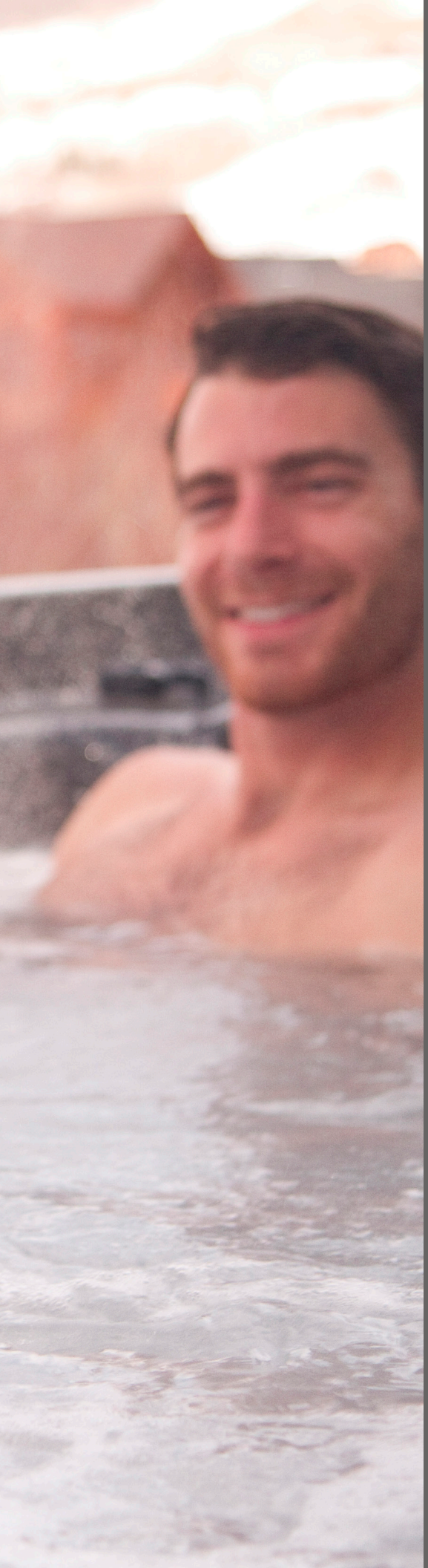


Table of Contents

1.1 Obtaining Technical Data For Your Spa

To ensure you have the current appropriate technical data for your spa it is recommended that you obtain such data from your authorised retailer or from the Arctic Spas Web Site http://arcticspas.com.

1.2 Revision Summary

This is the initial publication for Spa Boy and provides supporting details for Spa Boy Version 1 Revision 1, known as R1.

NOTE: If your spa is equipped with an Onzen system you will need to refer to the Onzen Technical Guide.

1.3 What is Spa Boy?

Spa Boy is an advanced salt water maintenance system designed to data log pH and ORP readings and self manage the ORP level within the specified range.

1.4 What Does Spa Boy Do?

- Data log spa water pH and ORP readings.
- Maintains ORP within the specified range by automatically producing sanitizer (Chlorine) agents.
- Displays current ORP and pH levels of your spa water.
- Softens water.
- Clarifies water.

1.5 What Are The Benefits of Spa Boy?

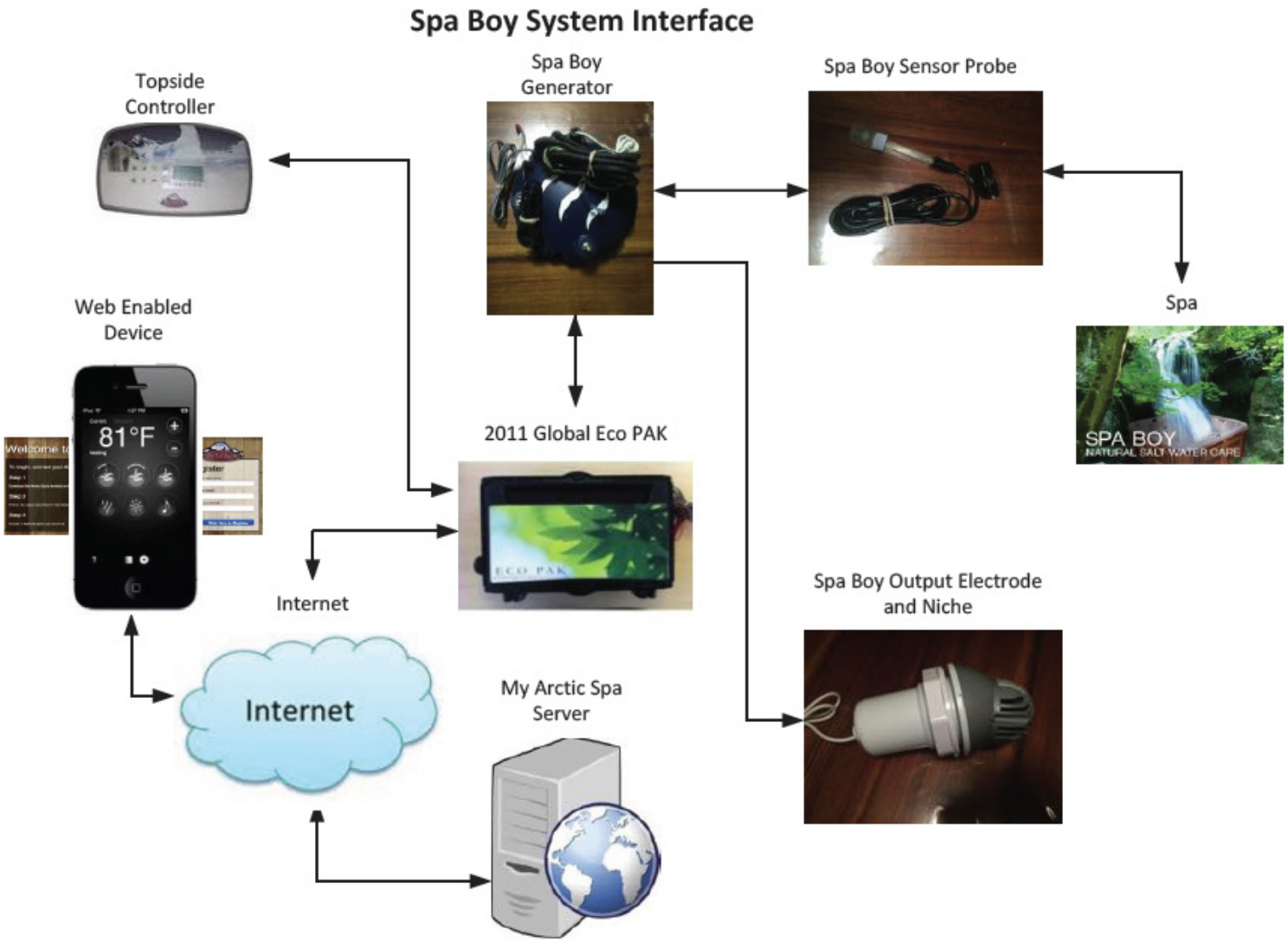
- Automatically maintains sanitizer (Chlorine) within the specified ORP range.
- Displays current ORP and pH levels of your spa water.
- Takes the guess work out of calculating how much Arctic Pure, Adjust Down is required to add to your spa water to lower the pH level within the required range.
- Makes skin feel soft and smooth.
- Makes water look sparkling clean.
- Reduces contact with harsh chemicals.
- Dramatically reduces time and money needed to maintain spa water.
- Reduces impact to the environment:
    1. Fewer trips to the spa store for supplies and having your water tested.
    2. Less packaging wasted on chemical containers.
    3. Less industrial waste produced making spa chemicals.

1.6 How Does Spa Boy Work?

- Consumer registers their spa on the My Arctic Spa web based after sales support system.
- Arctic Pure Natural Mineral Sea Salt Blend is added to the spas water when the spa has been filled with water and water balanced.
- An ORP/pH probe fixed into the foot well area of your spa sends a signal to the Global Eco Pak through the Spa Boy Communication Cable. The Global Eco Pak then establishes a two-way communication channel between the Global Eco Pack and My Arctic Spa.
- Spa Boy data logs the spa water pH and ORP levels.
- Spa Boy automatically produces and maintains sanitizer (Chlorine) within the specified ORP range.
- Spa Boy displays current ORP and pH levels of your spa water within My Arctic Spa.
- As required the consumer adds the required amount of Arctic Pure Adjust Down to keep the pH within the required range.

1.6.1 Spa Boy System Interface

The following diagram reflects the Spa Boy System interface:



1.6.2 Spa Boy Main Components

The following table depicts the Spa Boy components referenced in this manual.

Term	Picture
2011 Global Eco PAK	
Spa Boy Generator	
Spa Boy Output Electrode	
Spa Boy Sensor	
Spa Boy Niche (Two piece the front section unscrews from the body section)	
Spa Boy Electrode Housing (Also known as Lippert Wallfitting Threaded)	
Spa Boy Housing Grate (Also known as Lippert Grate Threaded)	
Spa Boy Housing Plug	
Spa Boy Communication Cable	

1.7 Spa Boy Version Summary

Spa Boy Version 1 Revision 1 (R1)

When Arctic Spas first released their Onzen system back in 2009 the Arctic Spas vision was to provide the consumer with a spa that can self-manage water balance and sanitizer levels.

With the release of Spa Boy Version 1 R1, Arctic Spas have achieved their next milestone in realising their vision.

Spa Boy Version 1 R1 can be easily upgraded (retrofitted) into a spa that currently does not have Spa Boy installed, providing the spa is equipped with a Global ECO PAK. The Global EKO PAK was released in 2011. Spas built prior to 2011 that are not equipped with the Global Eco Pak can also be upgraded with Spa Boy by replacing your Spa Pak with the 2011 Global Eco Pak. For upgrade details, consult with your Arctic Spas Dealer.

1.8 Spa Boy Version Table

The following table is used to track a the release dates and provide a summary for any Spa Boy version releases.

SPA BOY VERSION	PRODUCTION RELEASE DATE	SUMMARY
Version 1	Nov 2014	Initial release

1.9 Spa Boy Version – Installed in Owners Spa

The following table provides for the owner to record the Spa Boy version details of their spa.

SPA BOY VERSION	SPA PRODUCTION DATE	SPA SERIAL NO.

1.10 How to Determine Spa Production Date

The Spa production date can be determined from the Spa Serial Number recorded on the Spa Identification Plate mounted on the cabinet usually under the topside controller.

Example : Spa Serial No. A10H131112

- The two digits following the first letter represent the year that the Spa was built

  10 = 2010.

- The letter following the first two digits represent the month that the Spa was built

  H = August.

1.11 Definitions of Terms

TERM	DEFINITION
Spa Boy	Spa Boy is an advanced salt water maintenance system designed to data log pH and ORP readings and self manage the ORP level within the specified range
Spa Boy Output Electrode	Five plate platinum-iridium Titanium electrode - equipped salt cell converts the saltwater solution to sanitizer, and as this solution reverts back to its natural form (salt) after sanitizing. Unless large volumes of water are added to the spa you never have to add more salt. The five plate electrode plastic outer casing is silver in color.
Spa Boy Output Electrode Version	Modification status of the electrode fitted to the spa.
Spa Boy Sensor	pH and ORP sensor (probe) used to measure pH and chlorine (ORP) readings along with many other reading and transfer the readings to the My Arctic Spa web site. The Sensor is connected to the Global Eco Pak with a Spa Boy Communication Cable.
Spa Boy Communication Cable	Cable that connects the Spa Boy Sensor to the Global Eco Pak. The communication cable is used to establish continous two-way communication between the Spa Boy System and My Arctic Spa.
Arctic Pure	Arctic Spas range of products developed especially for maintaining your spas water.
My Arctic Spa	My Arctic Spa is a Web based after sales support system designed and built by Arctic Spas especially for Arctic Spas owners that have Spa Boy installed in their spa. My Arctic Spa has been designed to receive data from your spa over the internet through the spas Wi-Fi system. The data is logged and saved by My Arctic Spa on a continual basis.
Calcium Hardness (CH)	Calcium Hardness is a measure of the total amount of dissolved calcium salts in the water. CH helps determine how scaling or corrosive the water is. It is believed that calcium helps control the corrosive nature of water. Calcium has two major problems in Hot Water Chemistry: 1. CH has a tendency to precipitate (fall out of suspension in high temperatures. 2. High pH will cause calcium to precipitate. The problem with calcium falling out of suspension is that it collects on the heater and pump, and shortens their life. Any natural corrosiveness in the water can be combated by maintaining a slightly higher Total Alkalinity Level.

TERM	DEFINITION
Alkalinity Total Alkalinity (TA)	A measure of how stable the pH is (a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water). TA is referred to as the water's ""pH buffer"". In other words, it's a measure of the ability of the water to resist changes in pH level. **If the TA is too low,** the pH level will fluctuate widely from high to low. Fluctuations in pH can cause corrosion or scaling of the spa components. **Low TA** can be corrected by adding Arctic Pure, Perfect Balance to the spa water. **If the Total Alkalinity is too high,** the water will be more susceptible to scale and high pH. High pH may be difficult to bring down. **Note:** Salt systems naturally drive pH levels to increase. **High TA** can be lowerd by adding Arctic Pure, Adjust Down to the spa water. Once the TA is Balanced, it normally remains stable, although some sanitizers, and the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.
Potential Hydrogen (pH)	The pH level is the measure of alkalinity. pH is measured between 0 and 14 denoting verious degrees of acidity or alkalinity. Neutral water has a pH of 7.0 Water below 7.0 is acidic and becomes more acidic as it approaches zero. Water above 7.0 is alkaline and alkalinity increases as it approaches 14. When the pH of water is 7.0 or below, chlorine will act primarily as a sanitizer. At this level, it is very effective at killing bacteria. At 7.4, chlorine will act equally as a sanitizer and oxidizer. Above 7.8, chlorine will act principally as an oxidizer. The pH of chlorine is 11.7ppm. **Spa water is considered balanced if the pH level is within the target range, between 7.2pH to 7.6pH.** Adding chlorine either automatically through a salt system or manually, into spa water with high pH, above 7.6pH, **will further increase the pH level and dramatically reduce the effectiveness of the chlorine as a sanitizer.** This must be evoided by first reducing the pH level into the target range 7.2pH - 7.6pH. The chart below reflects the loss of sanitizer effectiveness/sanitizer effectiveness based on the spas water pH level:

pH Level	Sanitizer (Chlorine) Loss of Effectiveness based on pH Level	Sanitizer (Chlorine) Effectiveness based on pH Level
6.0 pH	4%	96%
6.5 pH	10%	90%

1.11 Definitions of Terms

<table>
<tr><th>TERM</th><th>DEFINITION</th></tr>
<tr><td>Potential Hydrogen
(pH)
(continued)</td><td>
<table>
<tr><th>pH Level</th><th>Sanitizer (Chlorine)
Loss of Effectiveness
based on pH Level</th><th>Sanitizer (Chlorine)
Effectiveness
based on pH Level</th></tr>
<tr><td>7.0 pH</td><td>27%</td><td>73%</td></tr>
<tr><td>7.2 pH</td><td>38%</td><td>62%</td></tr>
<tr><td>7.5 pH</td><td>50%</td><td>50%</td></tr>
<tr><td>8.0 pH</td><td>78%</td><td>21%</td></tr>
<tr><td>8.5 pH</td><td>90%</td><td>10%</td></tr>
</table>
Maintaining a Balanced pH level between 7.2pH and 7.6pH is extremely important for:
• Optimizing the effectiveness of the sanitizer.
• Maintaining water that is comfortable for the user.
• Preventing equipment deterioration.
• Note: Salt systems naturally drive pH levels to increase, strive to achieve a balanced pH level.
If the spa water's pH level is too low, the following may result:
• The sanitizer will dissipate rapidly.
• The water may become irritation to spa users.
• The spa's equipment may corrode.
Low pH can be raised by adding Arctic Pure, Adjust Up to the spa water.
If the pH level is too high, the following may result:
• The sanitizer is less effective.
• Scale will form on the spa shell surface and the equipment.
• High pH will cause calcium to precipitate (fall out of suspension).
• The water may become cloudy.
High pH can be lowered by adding Arctic Pure, Adjust Down to the spa water.
It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and the type of sanitizer used.</td></tr>
<tr><td>ORP</td><td>Oxidation–Reduction Potential.
This is simply a measurement of the water's ability to cleanse itself. ORP is measured in millivolts (mV). Also refer FCL</td></tr>
<tr><td>Free Chlorine (FCL)</td><td>FCL is the active form of chlorine that actually kills bacteria and algae (It is a Sanitizer).
Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms for growing in the spa. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs and eyes.
Always maintain the sanitizer level in your spa within the recommended range.
Also refer ORP</td></tr>
<tr><td>Chlorine Residual</td><td>The actual level of chlorine in the water after the chlorine demand has been satisfied.</td></tr>
</table>

TERM	DEFINITION
Sanitizer	Chemical used to kill bacteria. Generic names: Chlorine, Bromine and Biguanide. Arctic Pure, Boost or Refresh. Warning Adding a Chlorine agent such as Boost to the spas water should be avioded as this will poison the Spa Boy Sensor Probe which will cause inacurate ORP and pH readings to be sent to My Arctic Spa and registered with My Arctic Spa. If chlorine is added to the spas water it will take at least three days for the Spa Boy Sensor Probe to clense itself and start sending accurate readings to My Arctic Spa. Also Refer Section 1.16 Caring for your Spa Boy System, Question 3 If the Spa Boy System is not working, what should I do if I need to add Arctic Pure BOOST or other sanitizer to the spas water? Note; resetting the spas breaker could speed up sensor recovery.
Refresh	Oxidiser that is pH Neautral There should be no need to add Arctic Pure Refresh to your spas water when your spa is equiped with Spa Boy.
Parts Per Million (ppm)	ppm: parts per million, a standard measure of chemical or mineral concentration.
Organic waste	Debris such as microorganisms, perspiration, urine, etc. which needs to be burned up or "oxidized" regularly to prevent haze, algae, chloramines, etc.
Shock	An oxidizer that "burns off" the organic wastes which cause cloudiness and algae. It is a generic term for a chemical used to oxidize organic wastes. Arctic Pure, Boost. Warning Adding a Chlorine agent such as Boost to the spas water should be avioded as this will poison the Spa Boy Sensor Probe which will cause inacurate ORP and pH readings to be sent to My Arctic Spa and registered with My Arctic Spa. If chlorine is added to the spas water it will take at least three days for the Spa Boy Sensor Probe to clense itself and start sending accurate readings to My Arctic Spa. Also Refer Section 1.16 Caring for your Spa Boy System, Question 3 If the Spa Boy System is not working, what should I do if I need to add Arctic Pure BOOST or other sanitizer to the spas water? Note; resetting the spas breaker could speed up sensor recovery.

1.12 Water Chemistry Abbreviations/Acronyms & Ranges

ABBREVIATION/ACRONYMS	DEFINITION	CORRECT CHEMICAL LEVELS
CH	Calcium Hardness	50 - 150 ppm
TA	Total Alkalinity	80-100 ppm
pH	Potential Hydrogen	7.2 – 7.6 ppm
ORP	Oxidation–Reduction Potential	545 – 550 mV Spa Boy Optimum Range. (Optimum Range is the default factory setting, user may adjust higher if prefered). Depending on the water chemistry which will be effected by bather load and spa usage, at times the ORP value will overshoot or undershoot the Optimum Range.

1.13 Spa Boy Warranty

Arctic Spas warrants the Spa Boy system against malfunctions due to defects in materials and workmanship for 2 years from the original date of delivery to the original customer on factory installed systems, except the user replaceable Spa Boy Electrode which needs to be replaced annually. This warranty includes parts and on site labour necessary for the repair.

Spa water quality and other damages resulting from water imbalance are specifically not covered by this warranty.

Warranty work must be completed by authorized Arctic Spas retailers only.

When an Arctic Spa is retrofitted with the Spa Boy system post manufacture, Arctic Spas warrants the Spa Boy components for 12 months from date of installation, providing they have been installed by an Authorised Arctic Spas technician and registered accordingly. No labour warranty is provided by Arctic Spas for retrofitted Spa Boy systems.

Disclaimer: This is not an automatic water care system. The system is set up for typical spa use.

The spa user is ultimately responsible for maintaining proper sanitary water conditions. Use of salt other than Arctic Pure Sea Salt Blend will damage the Spa Boy components and void the warranty. The Arctic Pure Bea Salt blend has been developed to protect Spa Boy components from damage and the use of alternative salt blends will be easily detected by technicians.

1.14 Spa Boy start - up guide

1.14.1 Spa Boy Start-Up Overview Flowchart

NOTE:

This flowchart provides an overview of the Spa Boy start-up process.

The detailed support procedures are contained in this document.

All checks and test should be carried out in accordance with the Arctic Spas Spa Boy Owners Manual.

Spa has been positioned in accordance with the Arctic Spas Owners Manual.

↓

Fill Spa With Water, Power Up Spa and Set Water Temperature

Note: Spa Boy Sensor Probe Should have been installed.

Refer: Section 1.14.2

↔ **Have electrical power to Spa connected in accordance with Arctic Spas Owners Manual**

↓

Program Filtration Cycles/Filtration Duration.

Refer: Section 1.14.3

↓

Stabilize Spa Water.

Refer: Section 1.14.4

↓

Establishing Correct Water Chemistry.

Refer: Section 1.14.5

↔ Arctic Spas Spa Boy Salt Dose Guidance Table.

Refer: Section 1.14.6

↓

Connect Your Spa to the Home Network.

Refer: Section 1.14.7

↓

Register Spa With My Arctic Spa.

myarcticspa.com

Refer: Section 1.14.8

↓

Establishing Correct Water Chemistry.

Refer: Section 1.14.9

↓

Relax and Enjoy Your Spa →

↓

Maintain Correct Water Chemistry

↔ Caring For Your Spa Boy System.

Refer: Section 1.16

↓

Arctic Spas Spa Boy Version 1 R1 Maintenance Schedule.

Refer: Section 1.17 or, Arctic Spas Spa Boy Version 1 R1 Maintenance Schedule QRC

1.14.2 Fill Spa With Water Power Up Spa and Set Water Temperature

The following steps provide guidance to help establish correct chemically balanced water. To help ensure chemicals dissolve appropriately it is good practice to first mix/dissolve the chemical in an uncontaminated container of hot water before carefully adding to the spa water.

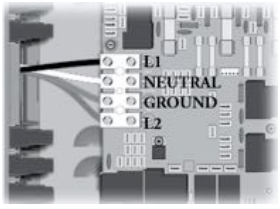
Note: The following steps take into account that the Spa Technician has filled your spa with water to above the Spa Boy Sensor Housing, removed the Spa Boy Sensor Plug, installed the Spa Boy Sensor Housing Grate and installed the Spa Boy Sensor.

Warning: Do not proceed until the Spa Technician has filled your spa with water to above the Spa Boy Sensor Housing, removed the Spa Boy Housing Plug, installed the Spa Boy Sensor Housing Grate and installed the Spa Boy Sensor. or you have obtained further direction from your Dealer.

Steps to Fill Spa With Water Power Up Spa and Set Water Temperature

STEP 1. FILL SPA

Fill your spa through the filter intake as shown to the appropriate level (just under the head rests). If you have sediment or high mineral content a "carbon filled pre-filter", as pictured, can help. (This is optional and will prolong the fill time).



STEP 2. CONNECT/TURN ON ELECTRICAL POWER TO THE SPA

Once the spa is filled to the proper level, connect power to the spa in accordance with the Arctic Spas Owners Manual, and turn the power on to the spa on.

STEP 3. SET WATER TEMPERATURE

Set the water temperature control on the Topside Controller to the desired temperature (between 100ºF and 104ºF or 38°C and 40°C).

1.14.3 Program Filtration Cycles/Filtration Duration

The system will automatically perform 4 one hour filtration cycles per day, 6 hours apart. The above system factory filtration settings can be adjusted by the consumer through:

- onSpa power management using your device such as smart phone or tablet that has been connected to your spa through WiFi. Refer onSpa user Guide.
- The topside controller low level programing. Refer Arctic Spas Quick Reference Card or Arctic Spas Owners Manual.

1.14.4 Stabilise Spa Water

Before you attempt to balance the water, the water temperature must first reach a minimum temperature of 85°F, (29°C).
Note: Do not be tempted to use your spa at this time.

Step to Stabilise Spa Water

Step 1. Stabilise Spa Water

Once the spa has been filled with water, powered up and filtration requirements set, place the insulated cover on the spa and allow the water temperature to stabilize **(approximately 16 hours).** Make sure you secure the cover in place using the cover locks. Periodically check the spa water temperature.

When the water temperature climbs above 85°F, (29°C) proceed to the next step.

Note: As heat impacts both Calcium and Total Alkalinity a little, it is highly recommended to heat the water above 29°C (85°F) before advancing to Establishing Correct Water Chemistry.

1.14.5 Establishing Correct Water Chemistry

The following steps provide guidance to help establish correct chemically balanced water.

To help ensure chemicals dissolve appropriately it is good practice to first mix/dissolve the chemical in an uncontaminated container of hot water before adding to the spa water.

Steps to Establish Chemically Balanced Water With Spa Boy

Step 1. Test and Adjust Calcium

Test Calcium hardness. Level should be between 50-150 ppm. If high, lower with a stain & scale controller such as Arctic Pure, Best Defence, to help hold the Calcium in suspension Test pH. Levels should be between 7.2 – 7.6.

NOTE: Salt systems perform best with Low Calcium levels. Do not increase Calcium hardness level.

WARNING: Skipping this step on Start-up can cause scaling problems and cloudy water that may not be covered under warranty.

NOTE: Use all products according to directions on the bottle.

Step 2. Test and Adjust Total Alkalinity

Test Total Alkalinity. It should be 80 – 100 ppm (100 max). If high, lower Total Alkalinity with Arctic Pure, Adjust Down (pH Down) or muriatic acid. Do not raise Total Alkalinity!

WARNING: Skipping this step on Start-up can cause scaling problems and cloudy water that may not be covered under warranty.

NOTE: Use all products according to directions on the bottle.

Step 3. Test and Adjust pH

Test pH. Levels should be between 7.2 – 7.6.

If pH is high, (over 7.6) add Arctic Pure, Adjust Down.

If pH is low, (under 7.2) add Arctic Pure, Adjust Up.

NOTE: Use all products according to directions on the bottle.
NOTE: Salt systems naturally drive pH levels to increase, strive to achieve a Balanced pH level.
NOTE: High pH will cause calcium to precipitate (fall out of suspension). The problem with calcium falling out of suspension is that it collects on the heater and pump, and shortens their life.

Step 4. Mix Salt Crystals

Dissolve 1/3 of the required recommended salt dosage in a 5 Gallon (20 litre) pail of hot water.
Refer Arctic Spas – Spa Boy Salt Dosage Chart contained in this guide.
WARNING: Salt causes pH to rise, to help ensure pH can be managed within the target range, it is most important not to add the entire salt dose in one step. If all the salt is added in one dose it may increase the pH level to an unmanageable level that requires the spas water to be drained.

Steps to Establish Chemically Balanced Water With Spa Boy

Step 5. Add Salt to Spa Water & Re-Test TA / pH

(a) Slowly pour the dissolved salt from the pail into the spa water.

(b) Run pumps for 5 minutes to help mix salt blend through.

(c) Wait 1 hour.

(d) Then re-test and adjust Total Alkalinity level accordingly.

(e) Then re-test and adjust pH level accordingly.

Refer: Steps 2 and 3 for correct TA/pH levels

Step 6. Repeat Steps 4 & 5

Repeat steps 4 and 5, ensuring all sub steps are carried out accordingly.

Step 7. Repeat Steps 5 & 6

Repeat steps 5 and 6, ensuring all sub steps are carried out accordingly.

Step 8. Test Sodium Chloride Level

You will now need to test sodium chloride levels. This can be carried out using a salt tests strip.

If sodium chloride levels are low, dissolve 1/2 lb (225 Grams) of salt (using cup provided) into hot water. Pour the dissolved salt into the spa water. Test sodium chloride level.

Repeat until required sodium chloride level is reached:

Spa Boy Version	Minimum	Maximum
Version 1 R1	2000ppm	2500ppm

Note: The Arctic Spas Spa Boy Salt Chart in this guide provides the estimated impact of adding ½ lb (225Grams) of salt to your spa.

Note: Having the correct dosage of salt concentration, will reduce potential corrosion and increase the life of the Spa Boy Output Electrode.

1.14.6 Arctic Spas Spa Boy Salt Dose Guidance Table

The following table identifies the dosage of **Arctic Pure Sea Salt Blend** that is required for each Arctic Spa model and estimated impact of adding 225g of salt.

Use this table for Spa Boy Version 1 R1.

Operating at the desired salt concentration will reduce potential corrosion and increase the life of the Spa Boy Output Electrode.

Arctic Spas - Spa Boy Version 1 R1 Salt Dosage Chart

Water Volume Metered Fill Point *(Approximately Bottom of Head Rest)*	Required Salt Dosage to Achieve 2200ppm *(Salinity Range for Spa Boy Version 1 R1 must be between 2000 ppm - 2500 ppm)*	Estimated Impact of Adding Extra Salt

Spa Model	Litres	US Gal	Kg	Lb	225 Grams	1/2 lb
Fox	884	234	2.0	4.4	255 ppm	255 ppm
Glacier	1144	302	2.5	5.5	195ppm	195ppm
Glacier Xl	1300	343	3.0	6.6	190ppm	190ppm
Cub	1185	313	2.5	5.5	190ppm	190ppm
Klondiker	1431	378	3.0	6.6	175ppm	175ppm
Frontier	1330	351	3.0	6.6	175ppm	175ppm
Summit	1405	371	3.0	6.6	165ppm	165ppm
Summit XL	1988	525	4.5	10	120ppm	120ppm
Yukon	1360	359	3.0	6.6	163ppm	163ppm
Kodiak	1592	420	3.5	7.7	150ppm	150ppm
Norwegian	1565	413	3.5	7.7	138ppm	138ppm
Tundra	1700	449	3.7	8.0	138ppm	138ppm
Swim Spa (All)	5100	1347	11.3	25.0	37ppm	37ppm

1.14.7 Connect your Spa to the Home Network

To use My Arctic Spa Web based after sales support system you must first connect your spa to your home network.

To achieve this first connect to your spas Wifi with your web device such as Smart Phone or iPad. You should have received instructions from your Dealer on how to do this, if it was not done during the Spa installation process.

The following link takes you to the video that explains how to connect to your spas wifi.
http://www.arcticspas.com/support/faqs/how-to/how-to-connect-to-hot-tub-wifi-network/
Then connect your spa to your home network.

Follow the instruction provided to you by your Dealer, ***Home Network Connect via Web- Browser.***

The following link also shows you the methods of connecting to your spa through your home network.

http://www.arcticspas.com/arctic-news/2014/02/connecting-your-hot-tub-to-the-internetwith-arcticspas/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+arcticspas+%28arcticspas.com%29

1.14.8 Register Spa With My Arctic Spa

You will now need to register your spa through the internet with My Arctic Spa.

My Arctic Spa is a Web based after sales support system designed and built by Arctic Spas especially for Arctic Spas owners that have Spa Boy installed in their spa.

My Arctic Spa has been designed to receive data from your spa over the internet through the spas Wi-Fi system. The data is logged and saved by My Arctic Spa on a continual basis.

The web address is: www.myarcticspa.com

Refer Section 1.15 My Arctic Spa for registration details.

1.14.9 Sanitizer and pH Readings

The following provides guidance on the establishment and maintenance of sanitizer and pH readings.

Sanitizer Readings

You should have ORP sanitizer (Chlorine) readings within 24 hours.

24 hours post adding the salt to the spas water, My Arctic Spa will be able to provide accurate readings regarding the ORP sanitizer (chlorine) reading, and pH reading.

Important: Always check the pH and ORP (sanitizer) levels before each spa use.

If the pH reading is out of range (to high), adjust accordingly with Arctic Pure, Adjust Down

* Expect the pH to increase slowly over each week and when the pH gets too high use Arctic Pure, Adjust Down to correct it.

High pH will cause premature failure of the Spa Boy Output Electrode, cloudy water, and decreased effectiveness of the sanitizer.

1.15 My Arctic Spa

The following is a brief outline of My Arctic Spa.

My Arctic Spa is a Web based after sales support system designed and built by Arctic Spas especially for Arctic Spas owners that have Spa Boy installed in their spa.

My Arctic Spa has been designed to receive data from your spa over the Internet through the spas Wi-Fi system. The data is logged and saved by My Arctic Spa on a continual basis.

The data is translated into a format that allows:

The Spa Owner

To log into My Arctic Spa and check their spa water to confirm that it is safe for bathers to enter the spa by accurately confirming pH and ORP sanitizer (Chlorine) are in the required target range. If not the spa owner will know the exact pH and ORP readings and this is critical in ensuring the correct chemical volume is added to the spas water when needed. No need to interpret test strips, takes the guesswork out of maintaining water.

The following pages make up the My Arctic Spa Web site:

- Home.
- Register.
- Login.
- Settings.
- Documentation.
- Error Codes.
- About.
- Profile.
- Diagnostics.
- Logout.

As you can see from the above, My Arctic Spa clearly places Arctic Spas owners another milestone ahead of owners of other brand spas.

Register and enjoy the experience.

1.15.1 Home Page

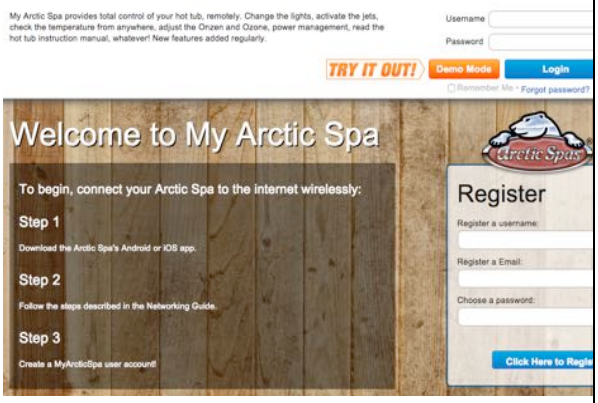
To access the My Arctic Spa Home page enter the following web address into your browser.

www.myarcticspa.com

For a **new user,** create a new user account by completing the details in the **Register** box located on the right hand side of the **Home Page.**

For a registered user, click on the Login button located on the upper right hand side of the Home Page.

My Arctic Spa: Home Page – Screen Shot

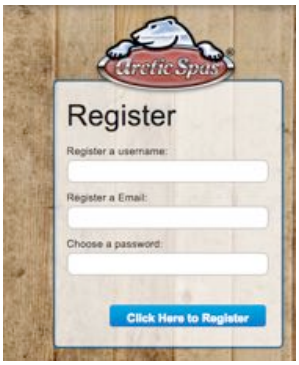


1.15.2 New User Registration

For a **new user,** to create a user account complete the details in the **Register** box located on the right hand side of the **Home Page.**

Once completed, press the **Click Here to Register** button at the bottom of the Register box on the Home Page.

My Arctic Spa: Register Box on Home Page – Screen Shot

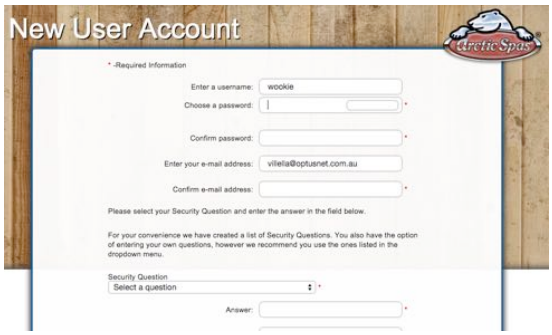


You will now have been directed to New User Account Tab.

Complete the data fields as required.

Once completed, press the **Register** button at the bottom of the New User Account tab.

My Arctic Spa: New User Account – Screen Shot



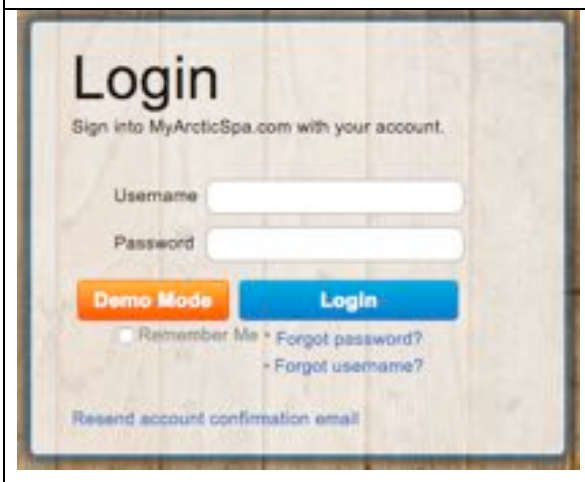
You will then receive an account registration email from My Arctic Spa.

Once you receive the email complete the registration by confirming your email address by clicking on the link in the received email.

You will be directed to the My Arctic Spa Web page and the confirmation will be displayed.

My Arctic Spa: Login Box Account Activation – Screen Shot

My Arctic Spa: Login Box – Screen Shot



1.15.3 Login First Time

Before you login for the first time you should first connect your spa to your home network.

The following link takes you to all the help videos that explain how to connect your Spa to the How Network.

http://www.arcticspas.com/?s=wifi+connection

You can now login by clicking the login link and entering your user name and password in the fields provided in the Login box.

Once you have access to the home page, you can log in by entering your user name and password in the fields on the upper right hand side of the home page.

Once entered press the Login button directly under the Username and Password fields.

You will automatically be directed to the Profile and Preferences Page, where you will need to register your spa details.

1.15.4 Register an Arctic Spa

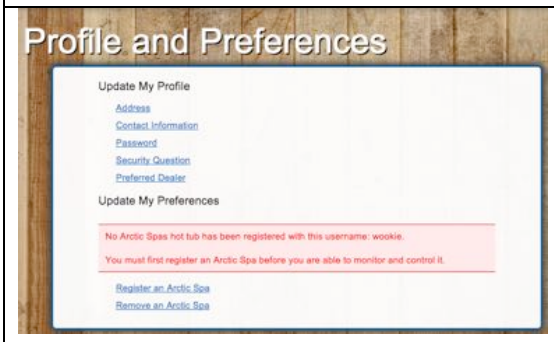
To register your Arctic Spa details click the **Register an Arctic Spa** link in the **Profile and Preferences** box.

You will receive a prompt to reflect that your spa must be connected to the Internet (Your Home Network). Click the Search button to find your spa. The **Spa Registration Confirmation** pop up box will be displayed advising you to press a button on your Spas Topside Controller to confirm the spa registration.

If you are not sure of how to register your spa you can click on the Help Video button to obtain further guidance.

Your spa will now be connected to the My Arctic Spa server

My Arctic Spa: Profile and Preferences – Screen Shot



1.15.5 Login

Once you have logged in for the first time and registered your spa details within My Arctic Spa logging into My Arctic Spa is achieved from accessing the My Arctic Spa home page. Login by entering your user name and password in the fields on the upper right hand side of the home page.

Once entered press the Login button directly under the Username and Password fields.

Once logged in, **My Arctic Spa** will automatically open your personal **My Arctic Spa** page.

Note: If you have forgotten your password you can press the Forgot Password button to reestablish your password.

My Arctic Spa: Login Box on Home Page – Screen Shot

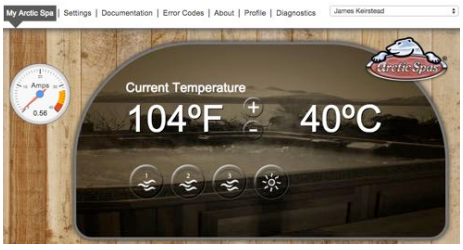
1.15.4 My Arctic Spa

Once you have logged in, My Arctic Spa will have automatically directed you to, your **My Arctic Spa** page.

If your spa is connected to the internet through your home network you can see if your spa is in use, adjust the temperature and turn on and off components if desired, see ORP and pH levels, etc

From this page you are able to explore the My Arctic Spa web pages by clicking the desired tab along the horizontal tool bar.

My Arctic Spa: My Arctic Spa – Screen Shot



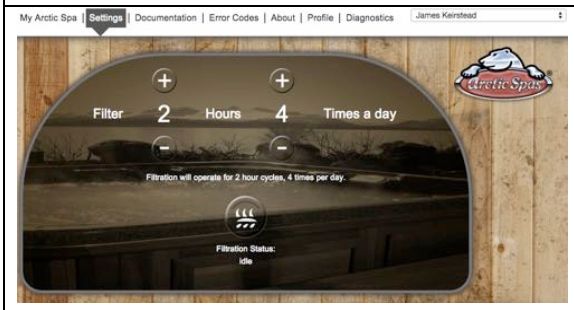
1.15.5 Settings

Click on this tab to access the Settings page.

From this page, you can see your spas pH and ORP readings, see if your Spa Boy System is currently producing Sanitizer (Sanitizing) adjust the following settings of your spa:

- Filtration.
- Spa Boy
  (Spa Boy must be set to run 24/7) doing so ensures sanitizer is produced when below the optimum range).
- Peak II Ozone.
- Power Management.
- Firmware Upgrade

My Arctic Spa: Settings – Screen Shot



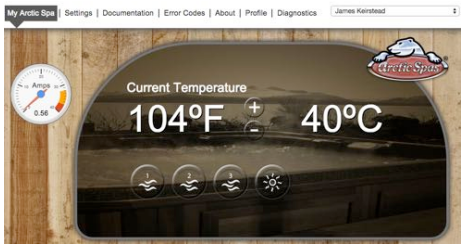
1.15.6 Documentation

Click on this tab to access the Documentation page.

This page provides you easy access to:

- Your owners manual.
- Networking guide.
- onSpa user guide.
- Spa Boy Owners Manual.
- Power Management.
- Quick Reference Cards.
- Other cool stuff.

My Arctic Spa: Documentation – Screen Shot



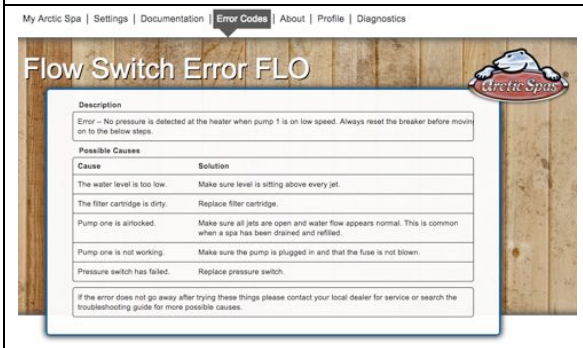
1.15.7 Error Codes

Click on this tab to access the Error Codes page.

This page provides you quick access to error code descriptions, possible causes and solutions for error codes that will be displayed on your spas topside controller, in the unlikely event of a system warning linked to a possible component fault, such as:

- Flow switch error - FLC.
- Flow switch error - FLO.
- High limit error - HL.
- High limit temp probe error - HL.
- Temp probe error - PRR.

My Arctic Spa: Error Codes – Screen Shot



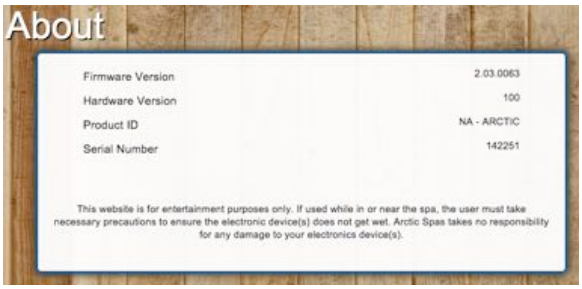
1.15.8 About

Click on this tab to access the About page.

This page displays the following details about your spa:

- Firmware version load.
- Hardware version.
- Product ID.
- Spa serial number.

My Arctic Spa: About – Screen Shot



1.15.9 Profile

Click on this tab to access the Profile page.

This page is used to:

- Update your personal details such as email and password.
- Update your preferences such as register and remove an Arctic Spa from My Arctic Spa.

My Arctic Spa: Profile – Screen Shot

1.15.10 Diagnostics

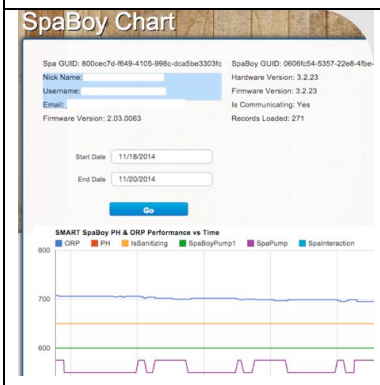
Click on this tab to access the Diagnostics page.

This page is used to access the data that has been transmitted from your spa to My Arctic Spa. Data such as, but not limited to the following is captured:

- Spa Boy chart.
- Spa Boy Table.
- Spa Boy Controls.
- Spa Boy Report.

The data can be used by the Spas owner to graphically check pH and ORP readings determine power usage.

My Arctic Spa: Diagnostics – Screen Shot



1.15.11 Logout

To **logout** of My Arctic Spa press the Logout button on the horizontal tool bar in the right hand upper corner of the screen.

Once out, **enjoy your spa!**

1.16 Caring for your Spa Boy System

Spa Boy Maintenance

Question 1 How do I Replace the Spa Boy Output Electrode?

The Spa Boy Output Electrode should be replaced every 12 months. Doing this ensures Sanitizer will be produced and sanitizer remains in the required range.

The Spa Boy Output Electrode can be replaced without draining the spas water providing these steps are followed.

Steps:

- Turn the breaker off to isolate power to your Spa.
- Unscrew the Spa Boy Niche out of its housing.
- Raise the Niche completely out of the spas water and dry off any water on the Niche and Electrode.
- To help prevent galvanic corrosion, it is critical to ensure that spa water does not come into contact with the Spa Boy Electrode Electrical Pin or female matting connection located on the Spa Boy Niche when disconnecting the Niche from the Spa Boy Electrode.

* **Keep them high and keep them dry, when replacing the Spa Boy Output Electrode!**

- With a small Phillips screwdriver unscrew the set screw that secures the Spa Boy Output Electrode to the Niche.
- Remove the Spa Boy Output Electrode from the Niche by Unscrewing the Electrode anticlockwise and ensure the small O-ring has not dislodged from the Electrode and remained behind inside the Niche.
- Ensure the new Electrode has the small O-ring correctly seated into the groove that is positioned around the electrical pin.
- Inspect the male electrical connection plug in the Niche to ensure it is not corroded. If corroded the dealer will need to be contacted as the Spa Boy Niche Assembly will require replacement.
- Apply Dielectric Grease to the electrical pin on the new Spa Boy Electrode.
- Insert the Spa Boy Electrode back into the Niche and turning clockwise screw the Electrode into the Niche until tight and the locating hole has aligned (approximately 4 revolutions).
- Insert the set screw into the Electrode and using a Phillips screwdriver tighten the set screw.
- Tuck the wiring loom back into the Housing.
- Screw the Niche back into its Housing ensuring the Electrode points upwards when tight. This ensures maximum output from the Electrode.
- Turn the breaker back on to repower your spa.

Question 2 How do I Replace the Spa Boy Output Electrode?

The Spa Boy Sensor must never be permitted to freeze and must always remain in contact with water. If the Sensor freezes or is not left in contact with water at all times the sensor will fail and will require replacement!

1.16 Caring for your Spa Boy System

Spa Boy Maintenance

Question 3 How do I Care for the Spa Boy Sensor when Draining the Spas Water?

As the Spa Boy Sensor must always remain in contact with water, when the spas water is being drained the Spa Boy Sensor Housing must be sealed before the water is drained.

The Spa Boy Sensor Housing is usually located in the foot well or other area of the spa that is not in the way of bathers or impacted by water turbulence from jets. The Spa Boy Housing has a Grate screwed into the front of the Housing.

Steps for caring for your Spa Boy Sensor when draining the spas water:

- Obtain the Spa Boy Housing Plug provided with the Spa.
- Check to ensure the Housing Plug has an O-ring in place.
- Turn the breaker off to isolate power to your Spa.
- Turning anticlockwise, unscrew the Grate located on the front of the Spa Boy Sensor Housing.
- Screw the Spa Boy Housing Plug provided with your spa into the front of the Spa Boy Sensor Housing. This will seal the water that is in the Housing and prevent the water in the Housing from draining when you drain your spas water.

Warning: The Spa Boy Sensor must never be permitted to freeze and must always remain in contact with water. If the Sensor freezes or is not left in contact with water at all times the sensor will fail and will require replacement!

- You can now drain your spas water.
- When refilling your spa with water, leave the Spa Boy Sensor Plug secured in place until the water line is higher than the Spa Boy Housing.
- The Spa Boy Housing Plug can now be unscrewed from the Housing and the Housing Grate can be screwed back into the Housing.
- Once the water level has been reached you can turn the breaker back on to repower your spa.

1.16 Caring for your Spa Boy System

Spa Boy Questions

Question 1 Does adding salt to the spas water impact pH?

Yes adding salt to the spas water will increase the pH level.

The chlorine that is produced by a salt chlorinator plays a role in the water chemistry of a salt spa. Salt is sodium chloride. When an electric charge is passed through salt water, the sodium chloride is turned into sodium hypochlorite. This is the same kind of chlorine that is sold by the gallon as liquid chlorine. The most important feature of sodium hypochlorite is a high pH. When the salt chlorinator produces chlorine, it raises the pH of the spas water. Strive to achieve a Low pH level 7.2. pH must not exceed 7.6.

Question 2 What do I do if my ORP Reading is below the Optimum Range?

If Spa Boy reflects that the ORP is below the Optimum Range of 545 – 550 mV you must first consider that water chemistry may have been affected by recent bather load and spa usage, at times the ORP value will overshoot or undershoot the Optimum Range.

If the Spa Boy Dashboard on My Arctic Spa reflects that the ORP is below 545 mV do the following:

Check Spa Boy Dashboard through My Arctic Spa to see if the Dashboard reflects **sanitizing YES**, if yes Spa Boy is currently producing sanitizer. Re-check ORP in a few hours to confirm ORP is increasing.

If Dashboard reflects **Sanitizing NO**:

Trip the spas breaker to isolate the power to the spa and then turn the breaker back on to repower the spa.

Check Spa Boy Dashboard through My Arctic Spa to see if the Dashboard reflects **sanitizing YES**, if yes Spa Boy is currently producing sanitizer. Re-check ORP in a few hours to confirm ORP is increasing.

If Dashboard reflects **Sanitizing NO:** Contact your Arctic Spas Dealer who will request a Master Technician to log onto your spa to determine the possible cause, such as depleted Spa Boy Output Electrode, Poisoned Spa Boy Sensor or corroded Spa Boy Output Electrode electrical connections.

Question 3 If the Spa Boy System is not working, what should I do if I need to add Arctic Pure BOOST or other sanitizer to the spas water?

Adding any type of chlorine sanitizer directly to the spas water will poison the Spa Boys Sensor Probe which will cause inaccurate ORP and pH readings to be sent to My Arctic Spa and registered with My Arctic Spa.

Before adding chlorine sanitizer to the spas water, protect the Spa Boy Sensor Probe from becoming poisoned by Obtain the Spa Boy Housing Plug provided with the Spa.

Check to ensure the Housing Plug has an O-ring in place.

Turning anticlockwise, unscrew the Grate located on the front of the Spa Boy Sensor Housing.

Screw the Spa Boy Housing Plug provided with your spa into the front of the Spa Boy Sensor Housing. This will seal the water that is in the Housing and prevent the Spa Boy Sensor Probe from becoming poisoned from adding sanitizer to the spas water.

You can now add the sanitizer.

After adding the sanitizer to the spas water, ensure the Spa Boy Housing Plug remains in place for three days.

Once three days have past , the Spa Boy Housing Plug can be unscrewed from the Housing and the Housing

Grate can be screwed back into the Housing.

1.16 Caring for your Spa Boy System

Spa Boy Questions

Question 4 Is it permitted to add Arctic Pure Refresh directly to the spas water?

There should be no need to add Arctic Pure Refresh to your spas water.

Arctic Pure Refresh has little effect on the Spa Boy Sensor Probe

Question 5 How do I help prevent impedance increase at the Spa Boy Electrode?

Maintain the pH level within the target range 7.2 pH – 7.6 pH.

As salt systems naturally drive pH levels upwards, it is most critical to the performance/life of the salt system to

maintain the pH within the target range.

High pH reduces the effectiveness of chlorine.

- pH level of 7 makes chlorine 70% effective (30% loss of effectiveness).
- pH level of 8 makes chlorine 21% effective (79% loss of effectiveness).

Therefore, high pH causes your Spa Boy system to produce more chlorine unnecessarily thus increasing pH even higher and reducing the effectiveness of chlorine even further.

Strive to achieve a Low pH level 7.2. pH must not exceed 7.6.

Question 6 Why is my water bright yellow, or bright green, or a rusty colour suddenly?

This can happen if the pH gets too high.

Maintain the pH level within the target range 7.2 pH – 7.6 pH.

Lower the pH using 'Adjust Down'. If the colour of the water does not normalize you may need to replace the water.

* **Keep an eye on the pH and adjust it weekly to avoid this problem in the future.**

Question 7 What happens if my water becomes cloudy?

1. Check you pH level to ensure it is in the target range. If high Lower the pH using 'Adjust Down'

2. Check/Test the water for chlorine content. If the level is low or there is no reading the Spa Boy Output Electrode may be exhausted and require replacement.

3. Check your filters as they may require replacement.

Question 8 Should I use Best Defence or another scale remover?

It is recommended that calcium be removed from the water in advance, during the fill process with the aid of a pre-filter and when establishing initial correct water chemistry, rather than adding a scale remover after the fact.

1.16 Caring for your Spa Boy System

Spa Boy Questions

Question 9 What is the impact of phosphates on the Spa Boy system?

High levels of phosphates (above 250 ppb) may reduce the effectiveness of sanitizer output.

Question 10 Can I use softened water with my Spa Boy system?

Yes.

You probably have a water softener because your water is quite hard. Your water-softener removes calcium from your water and helps you achieve water with calcium content near the target range, between 50 - 150ppm.

Question 11 Prior to draining spa water for refill purposes, should a system flush be carried out?

Yes you can, Arctic Pure 'Fresh Start'. Use in accordance with the instructions on the container. Flushing the system components and hoses is helpful when you get biofilm and calcium build-up.

It is good practice to do this at least once a year.

1.17 Arctic Spas Spa Boy Version 1 R1 Maintenance Schedule

The following table outlines the typical water maintenance program required for an Arctic Spa fitted with Spa Boy Version 1 R1.

To help ensure chemicals dissolve appropriately it is good practice to first mix/dissolve the chemical in an uncontaminated container of hot water before carefully adding to the spa water. There are two methods to check the target range:

- My Arctic Spa Application, if your spa has Wi-Fi and access to the internet through your home network or portable device such as iPad or smart phone, you can log onto My Arctic Spa and open the **Settings or Diagnostics** Page to review the readings (To access My Arctic Spa you must first register your details on the My Arctic Spa web site: www.myarcticspa.com.
- Conventional test strips, test kit or by taking a water sample to your local spa dealer

Item	Frequency	Maintenance Task	Target Range
pH	Weekly	Check the Potential Hydrogen (pH) to ensure it is in the target range. Always first check to ensure the pH is within the target range. If the pH is out of the target range pH must be adjusted before making any adjustments to chlorine levels	7.2 – 7.6 pH
ORP	Weekly (& before each use)	Check the Free Chlorine Level to ensure it is in the target range.	545–550 mV
Sodium Chloride	Monthly	Check the Sodium Chloride Level to ensure it is in the target range.	Version 1 R1 2000 – 2500 ppm
Filter	3 Monthly	Change the filter(s)	N/A
Water	6 Monthly	Change the water	N/A

	Maintenance Action to Adjust/Correct
	As Salt systems naturally drive pH levels upwards, it is most critical to the performance/life of the salt system to maintain the pH within the target range. **High pH reduces the effectiveness of chlorine.** **• pH level of 7.2 makes chlorine 62% effective (38% loss of effectiveness).** **• pH level of 7.5 makes chlorine 50% effective (50% loss of effectiveness).** **• pH level of 8 makes chlorine 21% effective (79% loss of effectiveness).** Therefore, high pH causes your Spa Boy system to produce more chlorine thus increasing pH even higher and reducing the effectiveness of chlorine even further. Strive to achieve a Low pH level 7.2. pH must not exceed 7.6. **Low pH** - Can be raised by adding Arctic Pure, Adjust Up to the spa water. **High pH** - Can be lowered by adding Arctic Pure, Adjust Down to spa water.
	545-550 mV is the Optimum Range factory default setting. The user may adjust higher if preferred through the My Arctic Spa Web Page. Spa Boy will strive to maintain ORP within the Optimum Range. **Depending on the water chemistry which will be affected by bather load and spa usage, at times the ORP value will overshoot or undershoot the Optimum Range.**
	Once Sodium Chloride reading is in the target range salt concentration will only change if water is splashed or drained out. Do not add salt unless this test confirms the level is below the chemical acceptable range. **High Sodium Chloride** - add water. **Low Sodium Chloride** - add salt.
	Change the filter(s) in accordance with Owners Manual instructions.
	Change the water in accordance with Owners Manual instructions.

Spa Boy Technical Support Line:
1-780-789-2646
or E-mail: spaboy@goarctic.com

15046 Version 1 Revision 1 (R1)