



## HOMEOWNERS MANUAL



AquaSoft proudly uses the  
same technology used on board  
the **NASA** space shuttle orbiters  
to purify the water

**AQUASOFT SEVEN-STAGE  
BACTERIA INHIBITING  
WATER REFINER AND CONDITIONER**

## IMPORTANT NOTICE

This booklet is presented to:

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And contains valuable information about the operating procedures of your Seven-Stage Water Refiner. Also, it contains questions that are most asked about, special features, specifications, and copies of the warranty provided to you from Aquasoft, Inc. to protect your investment.



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DEALER NAME

## WHY CHOOSE AQUASOFT

Here at AquaSoft, Inc. we believe designing quality products that will serve our customer's water needs, is our utmost mission.

Concerned home owners are choosing AquaSoft water systems to clean up their water for so many reasons. The reasons we hear the most is our outstanding quality of service and support for our customers, and our unparalleled product quality. We pride ourselves on these great achievements, and love to exceed our customer's expectations!

AquaSoft specializes in many industries, including agriculture, beverage and foods, electronics, and even golf courses. Families and businesses all over the nation are not only realizing how bad our nation's water supply has become, but how effective AquaSoft is at treating and solving these problems.

The AquaSoft seven-stage filtration systems were in the design stages for three years. The designers of this system have been in the water business since 1996. At AquaSoft, we use state of the art point-of-entry water treatment technology in all of our water conditioning systems, as well as **NASA Spin-Off Technology**, to create the most advanced product on the market. Point-of- entry means that our system is designed to treat and condition our water at the source, before it enters your home. This ensures that every drop of water in our home, from the water heater to the sink, is nothing less than clean healthy water. We accomplish this by using two filtering processes to control bacteria, fungi and algae growth in the media tank. One process comes from the **NASA Spin-Off Technology Program**, which uses Silver-Ion Technology, and the second is the **Aqua-Redox Media**.

We're so confident in the quality of our systems, AquaSoft also serves its customers with a Lifetime Warranty, to ensure our system is in perfect working order for years to come.

**“At AquaSoft, we're not in the water treatment business serving people;  
we're in the people business providing clean healthy water!”**

## CONGRATULATIONS

AquaSoft, Inc. welcomes you to a new, carefree way of life with clean, healthy refined and conditioned water. You can take pride and satisfaction knowing that you own the most advanced water system available.

We are proud that you have selected the AquaSoft Seven-Stage Water Refiner and Conditioner for your home. More and more quality conscious homeowners are purchasing AquaSoft's water systems because of its superior performance and its premium quality workmanship and the seven-stage filtering process.

The following pages of this booklet will introduce you to your new AquaSoft Seven-Stage Water Refiner and Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.

Our primary mission is to provide our customers with the best quality of water treatment products possible and superior service on a timely basis. We intend to do this with good business systems and highly trained technicians and quality employees who recognize the customer is our reason for being in business. Our customers are our number one priority and all efforts will be made to continually, completely satisfy their needs. The owners of AquaSoft, Inc. began in the water business in 1996. Our office is in beautiful Lakeland, Fl. We have over 50 years of combined water treatment knowledge and specialize in Residential and Commercial water treatment.

AquaSoft, Inc.



MEMBER 2001  
WATER QUALITY  
ASSOCIATION  
*Your Water Treatment Professional*



MANUFACTURED BY AQUA SOFT, INC.

The AquaSoft Water Refiners were in the design stages for three years. Our systems are using technology developed by **NASA** for the space shuttles. The designers of these systems have been serving the water business since 1993.



These systems are the most advanced water systems on the market today with the SEVEN-STAGE filtering process providing **“BOTTLE WATER QUALITY”**



Here at AquaSoft:

We believe designing quality products is an investment in your family's future. Protecting your family's future today creates a satisfied customer tomorrow!



## **AQUA SOFT SPECIALIZES IN THE FOLLOWING INDUSTRIES**

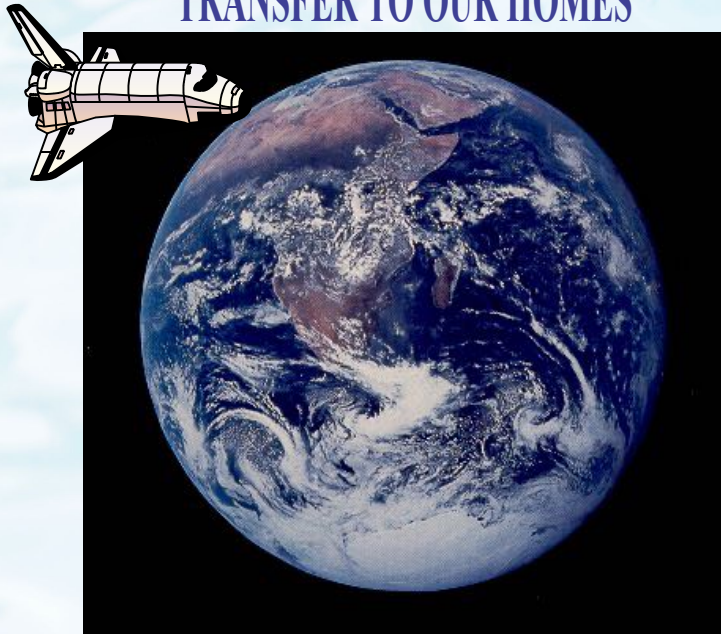
- ◆ AGRICULTURE
- ◆ CONSTRUCTION
- ◆ CHEMICAL PROCESSING
- ◆ BEVERAGE
- ◆ FOODS
- ◆ HOTELS
- ◆ POWER
- ◆ MANUFACTURING
- ◆ RESORTS
- ◆ PHARMACEUTICAL
- ◆ ELECTRONICS
- ◆ GOLF COURSES

## **SOME OF THE LARGEST CORPORATIONS IN AMERICA UNDERSTAND THE BENEFITS OF PURIFIED WATER**

- ◆ ALUMINUM COMPANY OF AMERICA
- ◆ COCA-COLA
- ◆ DOW CHEMICAL COMPANY
- ◆ DUPONT COMPANY
- ◆ GENERAL ELECTRIC COMPANY
- ◆ GENERAL MOTORS
- ◆ H. J. HEINZ
- ◆ IBM
- ◆ WESTINGHOUSE
- ◆ INTEL
- ◆ MICROSOFT



AQUASOFT PRESENTS  
**NASA** TECHNOLOGY  
TRANSFER TO OUR HOMES

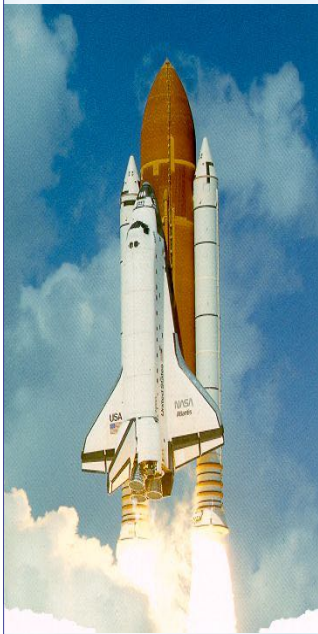


UTILIZING **NASA SPIN-OFF** TECHNOLOGY  
TO BRING CLEANER, HEALTHIER  
WATER INTO OUR HOMES





## AQUASOFT IS USING TECHNOLOGY DEVELOPED BY NASA FOR THE SPACE SHUTTLES TO PROVIDE CLEANER, HEALTHIER, WATER FOR OUR HOMES AND FAMILIES



Atlantis Space Shuttle

**SAME  
TECHNOLOGY  
USED ABOARD  
THE NASA SPACE  
SHUTTLES TO  
PURIFY WATER**

Featured at right is the most advanced water filtering system available. The AquaSoft Bacteria Inhibiting Seven-Stage Water Refiner is a whole house water filtration system. In addition to softening municipally treated water, it also inhibits the growth of bacteria in the filter media tank. This is a problem in all other water softeners. The bacteria inhibiting feature of the AquaSoft Water Refiner is based on two filtering processes. One is from the NASA Silver Ion Technology program developed to purify water aboard the space shuttles. The second is from the Aqua-Redox Media. The refiner will remove bad taste and odors, chlorine, chloramines, lead, mercury, chromium, nickel, cooper and other heavy metals, inorganic minerals, and approx. 1100 organic compounds from the water leaving you with clean, healthy drinking water for your family.



MODEL: AS1054CK



## **GENERAL INFORMATION ABOUT YOUR SEVEN-STAGE WATER REFINER**

Your AquaSoft Seven-Stage Water Refiner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank.

The Control Valve is set to “regenerate” your water Refiner at 2am while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the AquaSoft Seven-Stage Water Refiner and Conditioner you are never without water.

It is a good idea to wash the Refiner occasionally with a mild detergent and then wax with a car polish. This procedure will keep your water refiner looking bright and clean for a lifetime.

**In case some problem should arise, you can manually by-pass the unit by moving the by-pass valve to by-pass (see illustration on page 14). Then call your authorized AquaSoft dealer.**

You can also visit our web site to send us a service request  
at:

**[www.aquasoftwatersystems.com](http://www.aquasoftwatersystems.com)**

## PRINCIPLES OF SOFTENING WITH ION EXCHANGE

Softening of water by the ion exchange process involves the exchange or substitution of the hardness minerals, chiefly calcium and magnesium, for sodium minerals. The exchange is made possible because the minerals are ionic in nature (often called ionized impurities) which means they have an electrical charge. The ion exchange process is based on the fact that like charges repel one another, and unlike charges attract. Calcium and magnesium ions in water are actually dissolved rock. They have been dissolved by water, the “universal solvent”, as it trickles down through strata of rock and soil it dissolves the calcium and magnesium deposits. This dissolved rock eventually finds its way into an underground aquifer and when water from the aquifer is pumped to the surface, it contains the dissolved hardness minerals of calcium and magnesium and is said to be hard water. An ion exchange softener exchanges the hardness minerals, calcium and magnesium, for sodium, from the softener resin. Sodium is less objectionable because it does not build up on surfaces as scale deposits. This is what a standard water softener does.



However, a water refiner and conditioner, such as the AquaSoft Model AS1054CK will do more to treat the water by reducing the amount of chlorine and organic compounds. It also inhibits the growth of bacteria in the media tank by using NASA spin-off technology (derived from Silver Carbon) and controls odors and bad taste.

## AQUASOFT RECOMMENDS AT LEAST TWO GRADES OF WATER FOR OUR HOMES



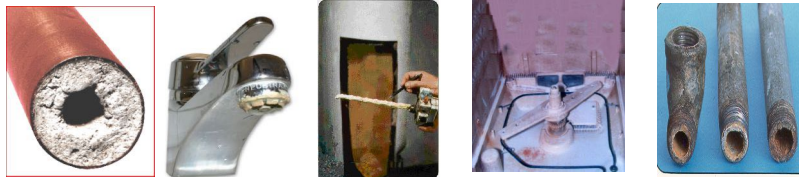
**UTILITY GRADE:** FOR OUTSIDE USE, LAWNS, FIGHTING FIRES, ETC.

**CONDITIONED GRADE:** FOR DRINKING, WASHING CLOTHES, DISHES, CARS, SHOWERS, ETC.

### WE DON'T RECOMMEND USING UTILITY GRADE WATER INSIDE OUR HOMES



When you use Utility Grade water inside your home it starts to destroy your investment. According to the Water Quality Association, hard water (Utility Grade) shortens the life of your appliances by 50%.





## Conditioned Water Advantages!



💧 Skin feels cleaner and healthier after a gentle bath



💧 Conditioned Water is a natural beauty aid



💧 Leaves your hair shiny and lustrous



💧 Soft and gentle for baby skin



💧 Soap lathers up faster and washes away with ease

💧 Smoother, softer, less irritated skin after shaving



💧 Clothes last longer, rinse cleaner and stay brighter



💧 Dishes sparkle like crystal---no spots

💧 No soap scum or bath tub ring



💧 Appliances last 50% longer

💧 No need for harsh, toxic chemical detergents



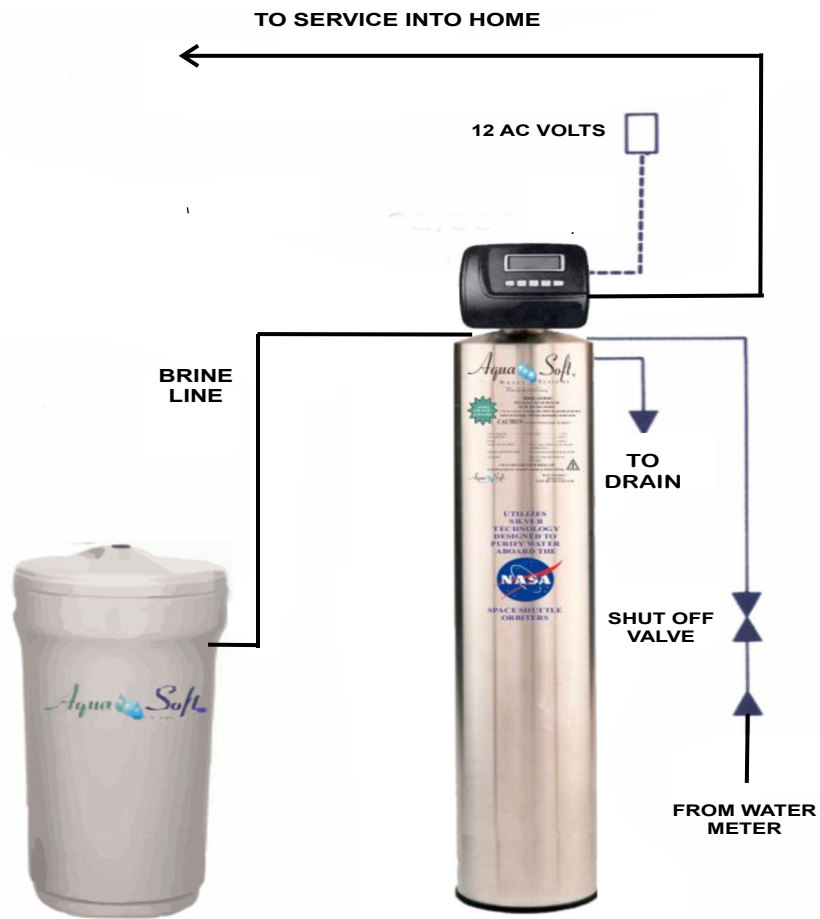
💧 Save up to 80% on soaps



## INSTALLATION INSTRUCTIONS

1. **Select Location**---The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
2. **Unpacking**---The Water Refiner has been shipped complete in two cartons. One carton contains the mineral tank which is preloaded with the Seven-Stage Filtering Media. The control valve is mounted on top of this tank. The second carton contains the salt storage tank and its components.
3. Turn main water supply off and wait for the pipes to drain.
4. Cut the main water line and remove approximately 6 inches of existing pipe.
5. Remove control valve cover. Place the mineral tank on three plastic leveling legs and level.
6. Move bypass valve to bypass position ( see page 14 ). Connect the main inlet line to the opening in the valve marked “In”. Connect the house service line to the opening marked “out”. Connect the drain line, providing a minimum of 2 inches for air gap between end of pipe and drain.
7. Turn main water supply on. Customer will have tap water while installation is being completed.
8. Install salt storage tank. Assemble brine valve—connect brine line to control valve —add water to the salt storage tank. Add salt.
9. (a) Move bypass valve to service position (see page 14) and then open a cold water faucet nearest to you. This will vent air from the system. When there is steady flow of water at the faucet, continue running for 15 minutes.  
  
(b) Press and hold the regeneration button on the computer valve until the valve cycles to backwash. This position will expel air compressed in the unit. When there is a steady flow of water at the drain, continue running for 10 minutes.  
  
(c) Again press and hold the regeneration button till the valve cycles to the next position. Continue pressing the regeneration button till the valve cycles to the service position. Let water run from the cold water faucet for 10 minutes. Unit is now purged and in service. Close the cold water faucet.

# TYPICAL INSTALLATION FOR THE AQUASOFT SEVEN-STAGE WATER REFINER



### **When to Add Salt**

The brine tank has a capacity of up to 300 lbs. of salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the salt is used up.

### **Bridging or Caking**

The salt in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions, these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt tank.

### **By-Pass Instruction**

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized AquaSoft dealer.

### **SWIMMING POOLS**

**When refilling the pool completely with new water, place system in by-pass until pool is completely full and then back into the service position.**

#### **MODEL: AS1054CK BY-PASS VALVE**



**IN SERVICE**



**IN BY-PASS**



## REGENERATION PROCEDURE

Your AquaSoft Seven-Stage Water Refiner and Conditioning unit consists of a tank filled with a premeasured amount of filtering medias, which is formulated for AquaSoft equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the ionic exchange medias. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment and to demonstrate the thoroughness of the automatic cycle:

1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain.
2. Salt, as brine, is injected into the unit to clean and revitalize the ionic resin. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.)
3. Slow rinse.
4. Fast rinse.
5. Brine Refill
6. Valve automatically returns to the service position to again supply you with good, conditioned water.

## What Salt to Use

Salt is your Water Refiner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only crystals type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Below is just a few examples of some of the brands of salt.



## BACTERIA INHIBITING FEATURE

**MODEL: AS1054CK**

The AquaSoft Seven-Stage Water Refiner and Conditioner is a whole house water filtration system. In addition to softening municipally treated water, it also inhibits the growth of bacteria, fungi and algae in the filter media, prolonging the life of the media. The bacteria inhibiting feature of the AquaSoft Water Refiner is based on two filtering processes. One is the **NASA** Silver Ion Technology developed to purify water aboard the space shuttles and the second is the Aqua-Redox media. Working together these two processes inhibit bacteria, fungi and algae growth in the tank. The Water Refiner also removes chlorine, chlorine by-products (THM), chloramines, inorganic minerals, pesticides, herbicides, insecticides, lead, mercury, chromium, copper, nickel, other water soluble heavy metals and approx. 1100 organic compounds from the water.



**SAME  
TECHNOLOGY  
USED ABOARD  
THE NASA SPACE  
SHUTTLES TO  
PURIFY WATER**

## HOW TO SET THE TIME OF DAY ON YOUR SEVEN-STAGE WATER REFINER AT ANY TIME

Push the **set clock button** on the front of the valve and hold the button in for 3-5 seconds or until the hour reading starts to blink. Use the **up or down button** to set the correct hour reading. Push the **next button** and the minutes reading will start to blink. Use the **up or down button** to set the correct minutes setting. Push the **clock button** when all settings are made and the correct time will show in the window.



## **SPECIAL FEATURES**

### **Computer Controlled Regeneration**

The computer valve controls and minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the ionic exchange resin is near exhaustion. The computer valve uses a downflow brining process to assure accurate cleaning and minimum water usage.

### **Vacation Periods**

There is no need to be concerned about disconnections or adjustments on your computer controlled water refiner before leaving your home for long periods of time. If the computer detects that no water is being used after 14 days it will turn on and refresh the water inside the tank to keep the water fresh, waiting for you to return.

### **High Usage Demand/Weekend Guests**

The computer controlled water Refiner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioned water. Unpredictable water demand is never a problem with the Aqua Soft Seven-Stage Water Refiner and Conditioner.

**LIFE EXPECTANCY OF THE MULTI-MEDIA  
CARBON MIXTURE**

**MODEL: AS1054CK**

The Water Refiner is loaded with twelve (12) lbs. of this Carbon Media Mixture. This will last for 550,000 gallons of water usage. The chart below shows approx. how many months it will last.

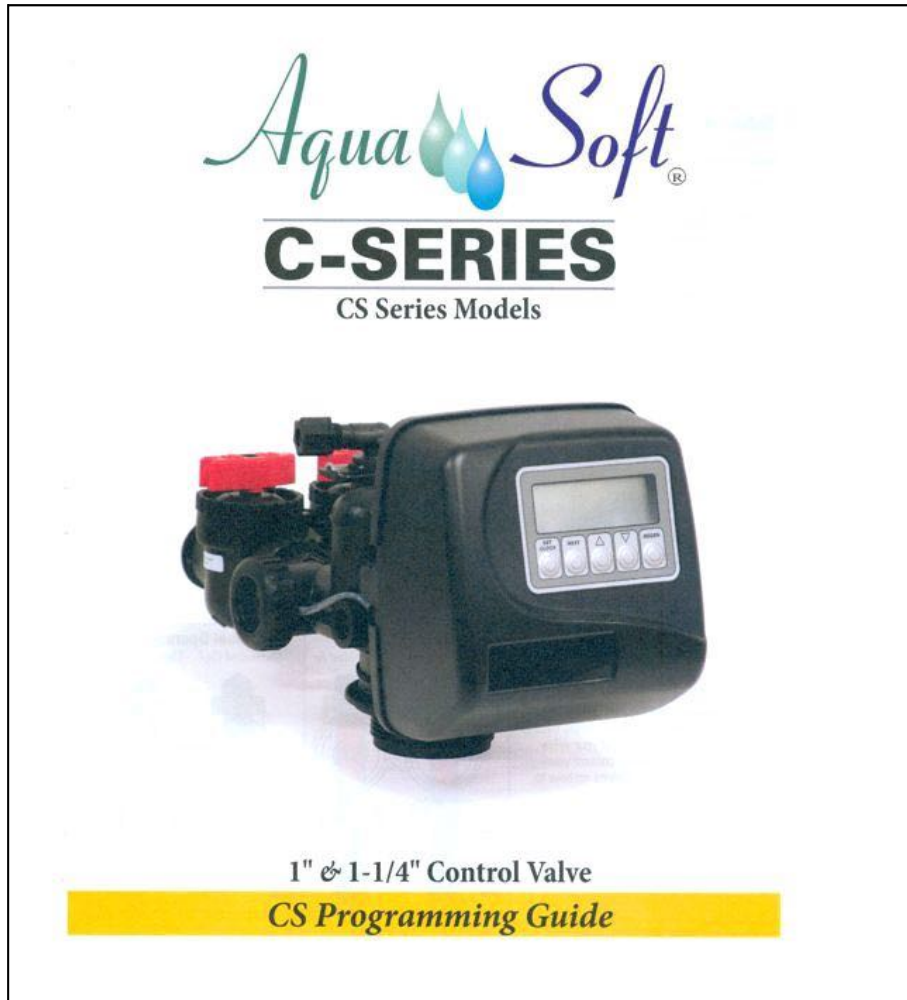
2 IN FAMILY	60 MONTHS
3 IN FAMILY	42 MONTHS
4 IN FAMILY	34 MONTHS
5 IN FAMILY	24 MONTHS
6 IN FAMILY	18 MONTHS
7 IN FAMILY	13 MONTHS
8 IN FAMILY	12 MONTHS

When it is time to replace the Carbon Mixture media you will see Tea colored water coming out of your faucets for a period of about 20 seconds and it will disappear until the system regenerates itself. This process will happen every time the system regenerates. The water is safe to drink when this occurs. This Tea color is just to alert you to call for service and have the Carbon Media replaced.

## COMPUTER VALVE

The start-up of this system is relatively simple and should be easily accomplished. It is suggested that the start-up procedure be reviewed thoroughly until each step is fully understood.

**Refer to the valve manual**



## START UP INSTRUCTIONS

PLEASE REFER TO YOUR VALVE MANUAL



1" & 1-1/4" Control Valve  
*CS Programming Guide*



## HOW TO MANUALLY REGENERATE YOUR WATER REFINER AT ANY TIME

Push the **Regen button** ( ON THE FAR RIGHT) for 3-5 seconds and wait until you see the “Regen Today” flashing in the left upper part of the screen. The system will regenerate at 2 am. If you want it immediately to regenerate push the **regen button** again for 3-5 seconds.



### Potassium Substitute for Salt

**Q. How much potassium will be added to my water?**

A. Assuming you drink 2 quarts of water per day, you would add the following amounts of potassium to your diet, depending on the initial hardness of your water.

#### **Initial Water Hardness**

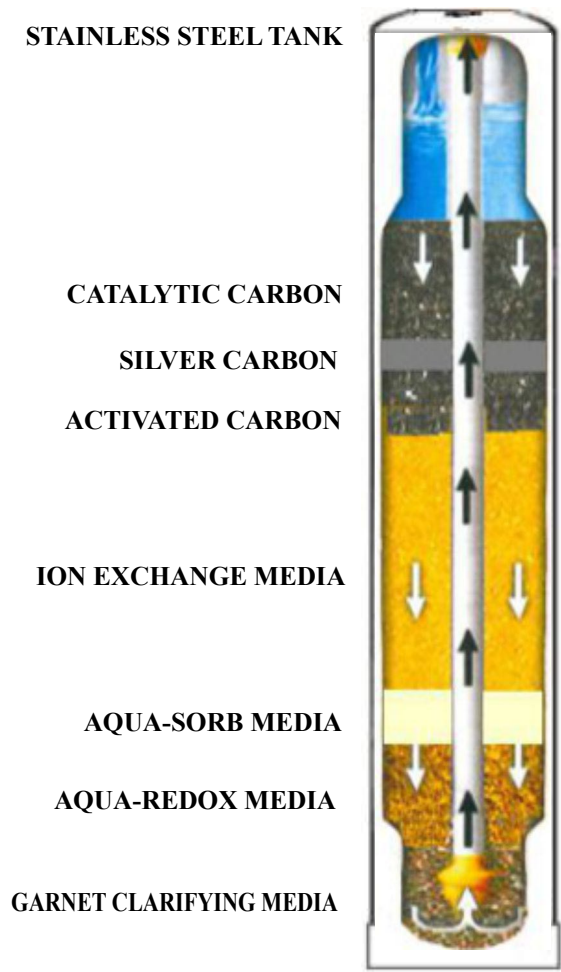
<u>Grains Per Gallon</u>	<u>Potassium (mg)</u>
5	133
10	266
15	400
20	533

The following amounts of potassium would be present in some common fruits and vegetables:

<u>Fruit or Vegetable</u>	<u>Potassium (mg)</u>
Apple	152
Banana (1 medium)	440
Cantaloupe (1/2 small)	682
Beans (1/2 cup)	390
Broccoli (1 cup)	232
Potato (1 medium)	782

# AQUASOFT SEVEN-STAGE WATER REFINER

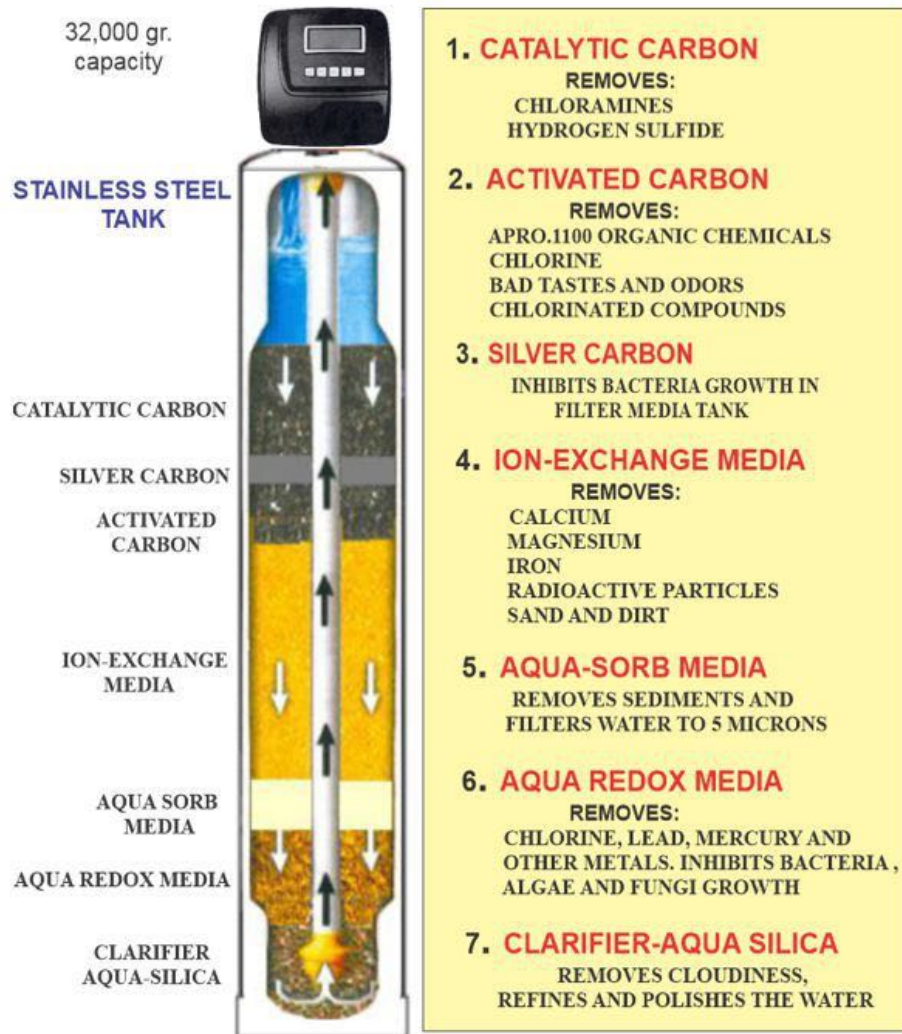
## WHAT IS INSIDE THE TANK



**THE MOST ADVANCED WATER SYSTEM  
AVAILABLE WITH IT'S SEVEN-STAGE  
FILTERING PROCESS**

**SEVEN-STAGE FILTRATION PROCESS**

*"water for the 21st century"*



## QUESTIONS & ANSWERS

**Q. What is water conditioning?**

A. Water conditioning is that branch of engineering that determines the chemical characteristics of a tap water supply as it enters your home, and treats these characteristics to provide water more suitable and economical for household use.

**Q. Why is it essential to improve water quality?**

A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

**Q. Does the conditioned water have a “different” taste?**

A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you cleaner, better tasting water.

**Q. Will conditioned water give a cleaner, brighter wash?**

A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 70%-80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on: (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

**Q. What effect will conditioned water have on plumbing?**

A. Before the water was conditioned, the hard water caused a scale buildup in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel, and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

**Q. Are the minerals which a conditioner removes from hard water essential to health?**

A. No. The quantity of minerals found in hard water is not essential to good health.

**Q. Is the sodium in softened water harmful to people on restrictive diets?**

A. Much depends on the strictness of the diet itself. When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods. Such patients are commonly hospitalized. In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount of complete analysis of the water is necessary.

**Q. How much sodium is added to softened water?**

A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking one quart of softened water.

<b>Initial Water Hardness</b>	<b>Sodium Added By Softening</b>
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

**Q. How does this sodium content of conditioned water compare to sodium found in common foods?**

The data in the following table demonstrate the approx. range of sodium in common foods.

Food	Amount	Milligrams of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Frankfurter	1 Medium	610
Hamburger	¼ Pound	1,510
Catsup	1 Tablespoon	204
Baked Beans	¾ Cup	1,130
Frozen Peas	½ Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	¼ Pound	1,925
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152

It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

# THE FACTS ABOUT SILVER CARBON WATER TREATMENT

Public acceptance of silver carbon has bestowed upon the industry its greatest sales growth in history. Consumers have found that silver impregnated activated carbon filters provide high quality water with low bacteria counts (See Table 1).

The present dollar sales of silver-impregnated carbon units exceed total water softener sales. Industry leaders estimate point-of-use (POU) unit sales will increase about 15 to 20 percent over the previous year. More companies should take advantage of this worldwide growth phenomenon.

The fastest growing segment of this market is the POU bacteriostatic drinking water filter. It is the

least expensive way to treat water at the tap. The units can be housed under or on the kitchen counter. Bacteriostatic water softeners or filters are viable solutions at the point-of-entry (POE). These units must have EPA registration.

### Bacteria Control

Water Quality Association-funded studies have confirmed that all water softeners and carbon filters breed bacteria. Potable municipally treated water can by law contain a number of harmless bacteria, which can cause the buildup or growth of bacteria in the ion exchange softening filter medium.

This problem is even more prevalent in a carbon filter because the activated carbon does a better job of removing organic contaminants.

The filter becomes a breeding place for bacterial growth in the presence of organic compounds, which become a source of nutrients for bacteria. The greatest buildup of bacteria occurs in nonflowing water, such as that left standing overnight, on weekends or during vacations.

Carbon removes organic contaminants and unpleasant tastes and odors from water, but it also strips bacteria-inhibiting chlorine from municipal water and allows bacteria growth. When you use silver-impregnated activated carbon, as in a bacteriostatic softener, the silver becomes an antibacterial agent that prevents bacteria from colonizing.

There are no scientific studies indicating that a large number of non-pathogenic bacteria in drinking water is harmful, but most consumers want to shower, cook and drink from a water supply with the smaller number of bacteria. Since only one-half of one percent of all the water used in the home is ingested, homeowners prefer the highest quality.

### EPA and Toxicity

The EPA has removed silver from its list of 83 drinking water contaminants that can adversely affect people's health. The silver in a bacteriostatic water filter is no more toxic than silver tooth fillings. There is silver in the effluent water supply coming from a bacteriostatic unit in the range of 10 to 20 parts per billion (ppb). The US Drinking Water Standards set a limit of 50-ppb silver in drinking water. Silver concentrations from the silver-impregnated activated

**TABLE 1**  
**Effectiveness of 2-lb. Silver-Carbon on top of Ion Exchange Resin**  
**Bacteria Count per Milliliter**

Silver-Carbon ion Exchange resin	Percent of Media Life			
	25%	50%	75%	100%
Test unit #1	45	100	180	240
Test unit #2	63	78	200	200
Test unit #3	72	120	170	310
<b>Water softener with No Silver</b>				
Control #1	4700	12000	16000	660000
Control #2	3800	19000	20000	520000
Control #3	2100	24000	19000	930000

Influent water in both Test and Control units was 0.3 bacteria count per milliliter. Note the high growth rates in the control units versus the silver-carbon test units.

Carbon media are well within this limitation. The 50 ppb limit is not based on human toxicity. Rather, it guards against argyrosis, a gray skin discoloration that has only cosmetic significance. If one person could ingest all the metallic silver contained within as average bacteriostatic unit, he would not have swallowed a fraction of the amount required to bring on argyrosis.

The EPA sponsored Gulf South Research Institute (GSRD) study on home water treatment units reports that silver-impregnated carbon filters show no more significant difference in bacteria growth reduction than nonsilver carbon filters. What the GSRD report failed to mention was that the New Orleans tap water used in the study had a pH of between 9.5 and 10.0. The rate of bacteria kill with silver like chlorine and other disinfection processes, is greatly reduced

At high pH levels. The recommended range for the best germicidal action is pH 5.0 to 8.5. Most US water supplies fall within this range.

There is a question whether disinfection, even with chlorine, could be effective at the high pH levels used in the GSRD study. Wherever a problem exists, such as in parts of Europe, Central and South America and some areas of the US, local water authorities often add increased amounts of chlorine to kill the bacteria. The high chlorine concentration gives water a nasty and an offensive odor.

The water companies do a good job providing bacteriologically safe drinking water, even though this water may contain some total count bacteria. Viable solutions in reducing the bacteria count are any of the following: a point-of-entry

Bacteriostatic water softener, POE filters for whole-house usage, or a POU bacteriostatic drinking water filter.



# TROUBLESHOOTING

<b>PROBLEM</b>	<b>CAUSE</b>
1. Refiner fails to regenerate	Electric off to unit Timer defective Power failure Transformer burned out
2. Hard water	By-pass valve open No salt in tank Internal problem
3. Unit used too much salt	Improper salt setting Excessive water in brine tank
4. Loss of water pressure	Iron buildup in conditioner Plugged lines going to conditioner Inlet of control valve plugged with foreign material
5. Control valve cycles continuously	Broken switch
6. Water tastes salty in the morning	Timer set at the wrong hour of the day

**PROBLEM**

**CAUSE**

- |                                  |   |
|----------------------------------|---|
| 7. Excessive water in brine tank | Plugged drain line flow control<br>Plugged injector system<br>Foreign material in brine valve<br>Foreign material in brine control<br>Clogged drain |
| 8. Refiner fails to draw brine   | Drain line flow control is plugged<br>Injector is plugged<br>Injector screen is plugged<br>Line pressure is too low<br>Internal control leak        |
| 9. Control cycles continuously   | Broken or shorted switch  |
| 10. Drain flows continuously     | Piston is not positioned<br>Foreign material in control<br>Internal control leak, bad seals   |

**MODEL AS1054CK  
LIFETIME WARRANTY**

AQUASOFT, INC. WARRANTS MODEL AS1054CK WATER REFINER TO WHICH THE WARRANTY APPLIES. TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FROM THE DATE OF PURCHASE AS FOLLOWS:

**MINERAL TANK--- LIFETIME WARRANTY**

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**MUTI-MEDIA MIXTURE--- LIFETIME WARRANTY**

**SALT STORAGE TANK--- LIFETIME WARRANTY**

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**CONTROL VALVE BODY--- LIFETIME WARRANTY**

**ELECTRICAL PARTS-----LIFETIME WARRANTY**

THIS WARRANTY IS A LIFETIME WARRANTY. THE OBLIGATION OF AQUASOFT, INC. HEREUNDER IS LIMITED TO REPAIRING OR REPLACING, AT THE OPTION OF AQUASOFT, ANY PART WHICH IS OR MAY BECOME DEFECTIVE WITHIN THE APPROPRIATE COVERED PERIOD DESCRIBED ABOVE. LABOR CHARGES INCIDENTAL TO THE REPAIR AND/OR REPLACEMENT OF PARTS ARE PAID FOR BY AQUASOFT, INC. THIS WARRANTY SHALL NOT APPLY TO ANY SYSTEM WHICH HAS BEEN DAMAGED BY ACCIDENT, FIRE, FLOOD, ACT OF GOD, ABUSE, NEGLIGENCE, FREEZING, MISUSE, OR ALTERATION, OR INSTALLATION OR OPERATION NOT IN ACCORDANCE WITH AQUASOFT'S INSTRUCTIONS AND APPLICABLE PLUMBING CODES AND ORDINANCES. ALL MAINTAINANCE AND SERVICE MUST BE PROVIDED BY AUTHORIZED SERVICE PERSONNEL OTHERWISE THIS WARRANTY WILL BE VOIDED.

THIS LIFETIME WARRANTY IS EXTENDED DIRECTLY BY AQUASOFT TO THE ORIGINAL HOMEOWNER AND IS THE SOLE WARRANTY APPLICABLE FOR RESIDENTIAL USE ONLY. ANY OTHER WARRANTIES OR GUARANTEES, ORAL OR WRITTEN, EXPRESSED OR IMPLIED, ARE NOT RECOGNIZED.

AQUASOFT, INC  
LAKELAND, FL 33813



## REFNER SPECIFICATIONS

<b>MODEL:</b>	<b>AS1054CK</b>
<b>Softening Capacity</b>	<b>32,000 Gr.</b>
<b>Tank Size</b>	<b>10" Dia. 54" Ht.</b>
<b>Brine Tank</b>	<b>18" Dia. 33" Ht.</b>
<b>Salt Capacity</b>	<b>300 lbs</b>
<b>Salt Usage Per Regeneration</b>	<b>9lbs. - 15lbs.</b>
<b>Voltage</b>	<b>12 volts AC</b>



## AQUASOFT SEVEN-STAGE WATER REFINER

**THE MOST ADVANCED SYSTEM  
YOUR MONEY CAN BUY!**

**32,000 gr.  
Capacity**

### SEVEN-STAGE WATER REFINER

**REMOVES:**

BAD TASTE, ODORS, CHLORINE, CHLORAMINES, CHLORINE BY-PRODUCTS, CHROMIUM, LEAD, IRON, NICKEL, MERCURY, OTHER WATER SOLUBLE HEAVY METALS, PESTICIDES, HERBICIDES, INSECTICIDES, AND APPROX. 1100 ORGANIC CHEMICALS.

USES **TWO FILTERING PROCESSES** TO INHIBIT THE GROWTH OF BACTERIA, ALGAE AND FUNGI, FROM GROWING IN THE FILTER MEDIA TANK WHEN SETTING OUT IN THE HOT SUN OR IN A HOT GARAGE.

**WATER TASTE BETTER THAN BOTTLED WATER**

**SAME TECHNOLOGY USED  
ON NASA SPACE SHUTTLES  
TO PURIFY WATER**



- ◆ LIFETIME WARRANTY
- ◆ SOLID STAINLESS STEEL TANK
- ◆ UTILIZES SILVER CARBON AND AQUA-REDOX MEDIA TO CONTROL BACTERIA, FUNGI AND ALGAE GROWTH
- ◆ 32,000 GRAIN CAPACITY
- ◆ COMPUTER CONTROL VALVE

**MODEL: AS1054CK**



[www.aquasoftwatersystems.com](http://www.aquasoftwatersystems.com)



**QUALITY WATER  
FOR YOUR FAMILY AND FRIENDS  
BECAUSE THEY DESERVE THE BEST**

**AQUASOFT, INC.  
LAKELAND, FL.33813  
888-511-0599**