

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEP 24 1993

Ionics, Inc.
P. O. Box 99
Bridgeville, Pennsylvania 15017

Attention: John D. Collins

Gentlemen:

Subject: General Ionics Model IQ 0820 B Bacteriostatic Water
Conditioner
EPA Registration Number 35900-3
Your Submission Dated June 15, 1993
EPA Received Date June 22, 1993

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, to revise the Homeowner's Manual and product labeling, is acceptable provided that you make the following label revisions:

1. Place the statement "Keep Out of Reach of Children" directly above the signal word "Caution".
2. Revise the ingredient statement to read as follows:

Active Ingredient: Silver metallic.....0.07%
Inert Ingredient:.....99.93%
Total100%
3. Revise the Container Disposal Statement to read as follows, "Container Disposal: Remove HYgene media from top of filter bed, wrap in paper, and discard in trash".
4. Place the subheading "Direction For Use" on the top of page 8 of the Homeowner's Manual.

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

- 5. Place the misuse statement directly below the subheading "Directions For Use" which reads as follows:

"It is a violation of Federal Law to use this product in a manner inconsistent with its labeling".

- 6. Some indication must be given on the product labeling when the filter will reach the end of its useful life. The statement should read as follows:

"This unit will treat X gallons of water per day for X months".

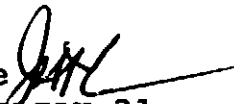
- 7. Revise the last section on page 4 of your Home Owner's Manual to read:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Only use EPA Registered Hygene silver-impregnated Carbon replacement media in this unit. Use of any media material other than Hygene silver carbon manufactured by Ionics, Incorporated is a violation of the improper operation of the unit, and voids the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "Hygene" manufactured by Ionics, Incorporated.

A stamped copy of the labeling is enclosed for your records.

If you have any questions concerning this letter, please contact Karen M. Leavy at (703)-305-6966.

Sincerely yours,

John H. Lee 
 Product Manager-31
 Antimicrobial Program Branch
 Registration Division (H7505-C)

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**GENERAL IONICS®
MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

Inhibits the growth of bacteria within the ion exchange softener filter medium for municipally treated water.

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

Storage of HYgene® Material: Store in closed container which excludes moisture and chemical fumes.

Active Ingredient: Silver as metallic	0.07%
Inert Ingredients: Cation Exchange Resin	80.00%
Gravel	13.33%
Activated Carbon	6.60%
Total Inert Ingredients	99.93%

Directions For Use: See Homeowner's Manual

Disposal Of Spent Media: Remove HYgene® media from top of filter bed and place in suitable container for disposing with trash.

Net Contents: One (1) Bacteriostatic Water Conditioner with HYgene®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



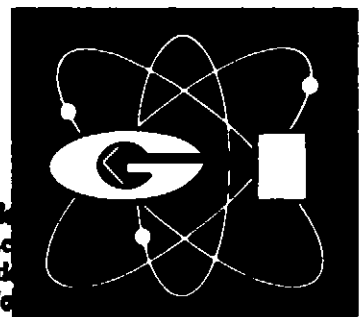
3039 Washington Pike, Bridgeville, PA 15017

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HOMEOWNER'S MANUAL

GENERAL IONICS WATER CONDITIONER Model IQ and Model EE

ACCEPTED
with COMMENTS
EPA Letter Dated
SEP 24 1993



Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
35900-3



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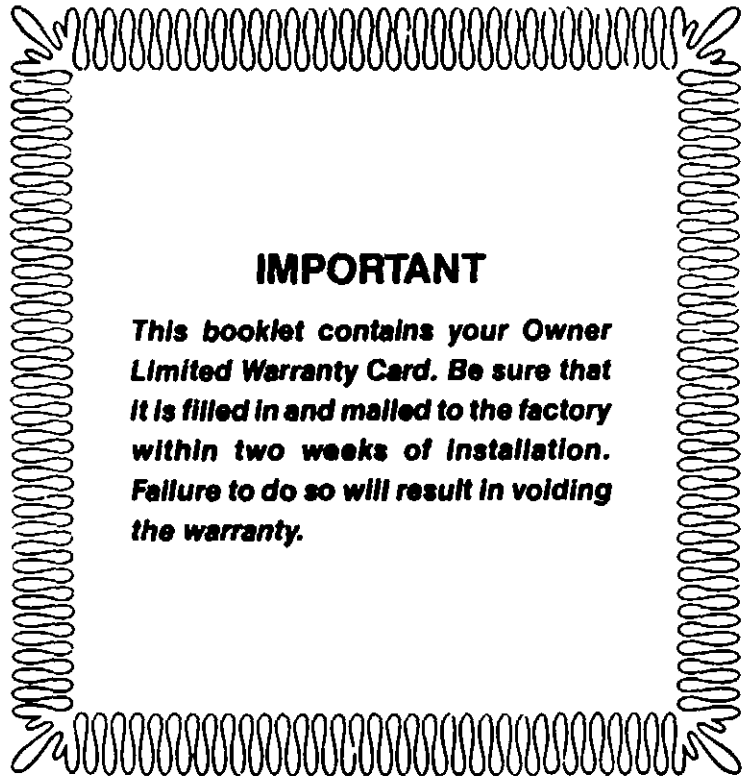
P.O. Box 99
Bridgeville, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION

IONICS, INCORPORATED

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IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

Your General Ionics Dealer is...

Congratulations

Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water 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.

Walter Polans

Vice President
Household Water Conditioning
Ionics, Incorporated

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General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation.

The automatic timer is set to "regenerate" your water conditioner at night 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 General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

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Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics 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 special S-759 mineral. 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 S-759 mineral. (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. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner'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 nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.

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When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform 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 platform.

Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene® silver-impregnated activated carbon (EPA-Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.



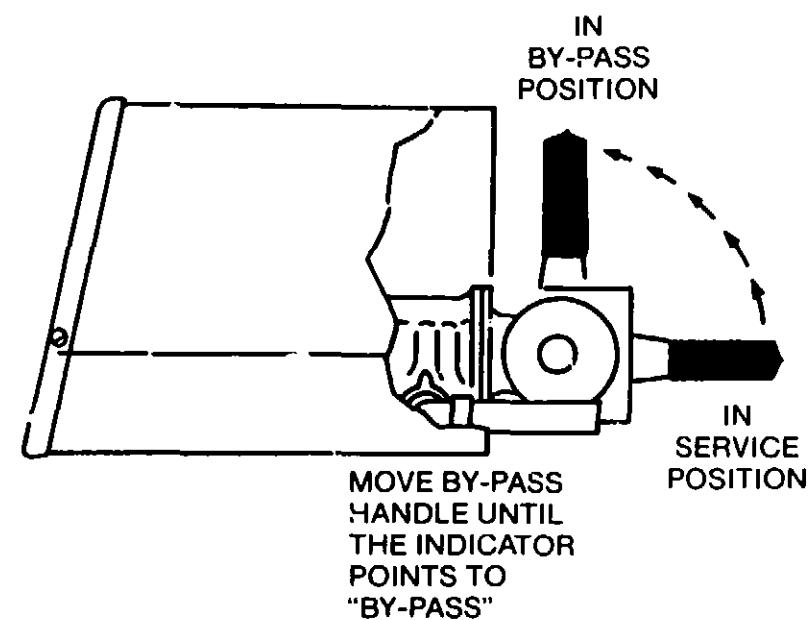
IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.

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MODELS IQ AND EE



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 General Ionics dealer.

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Model IQ Special Features

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

How To Set The Time Of Day

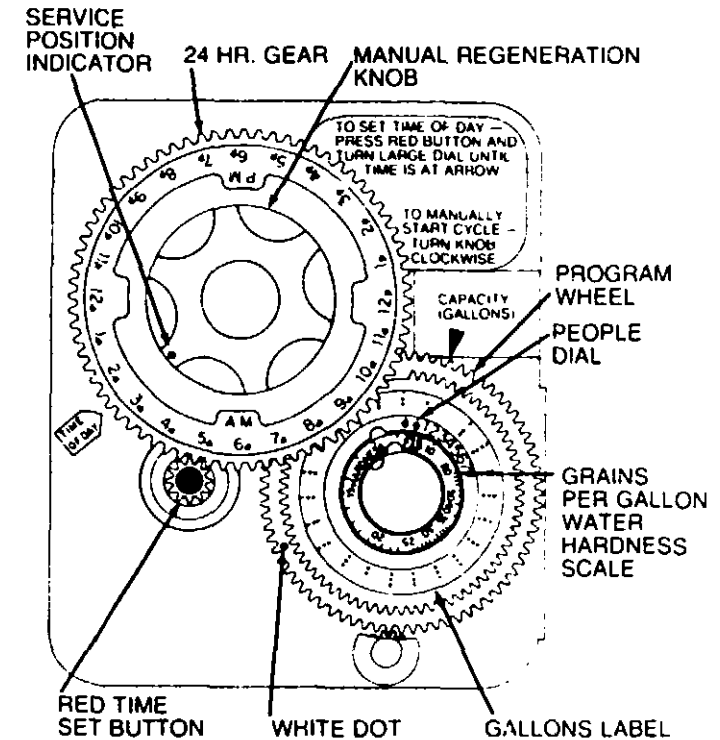
If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

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How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

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Model EE Special Features

Energy Efficient Control

This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

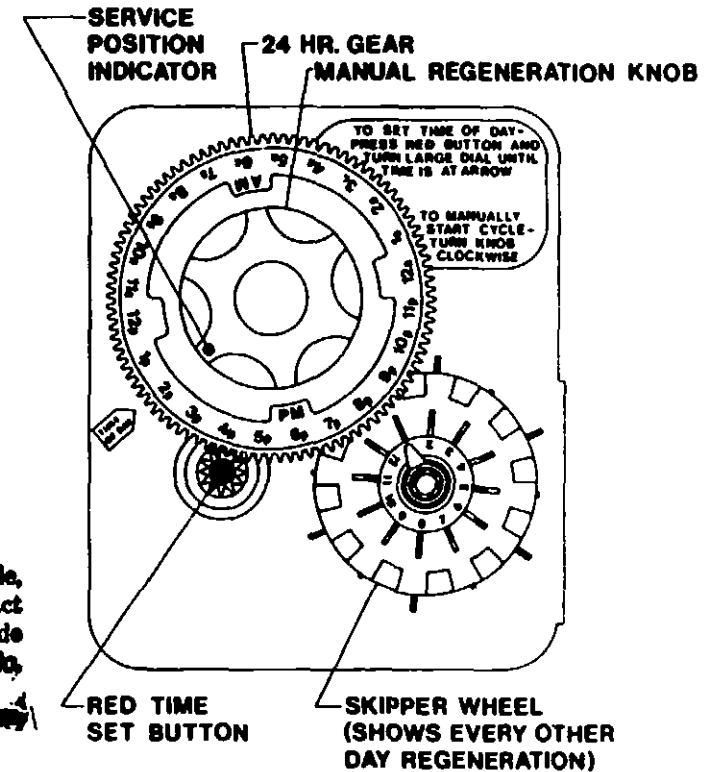
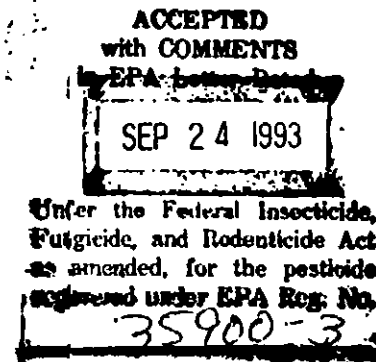
High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.



Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

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Questions And 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 so as 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, as it were, 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 a 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 60 to 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 build-up 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 are 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 a 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 8.4 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.

Initial Water Hardness	Sodium Added By Softening
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?

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

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Ketchup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Canned Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

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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.

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This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS — LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK — LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

ION EXCHANGE RESIN — LIMITED WARRANTY

The S-759 high capacity ion exchange resin housed in the mineral tank carries a limited warranty of one (1) year. A resin sample must be sent to Ionics, Incorporated for testing prior to its replacement under warranty. If the resin is found to be incapable of softening the water because of a flaw in its manufacture, it will be replaced. Warranty does not apply to resin which has been frozen, has become fouled by iron due to improper maintenance, or is found to be ineffective due to any other outside form of neglect.

BACTERIOSTATIC MODELS — SILVER CARBON REPLACEMENT

IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void this warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EXTENT OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with the local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____

Date Installed _____

Dealer _____

Address _____

Telephone _____



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P.O. Box 99 • Bridgeville, PA 15017