



## 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.

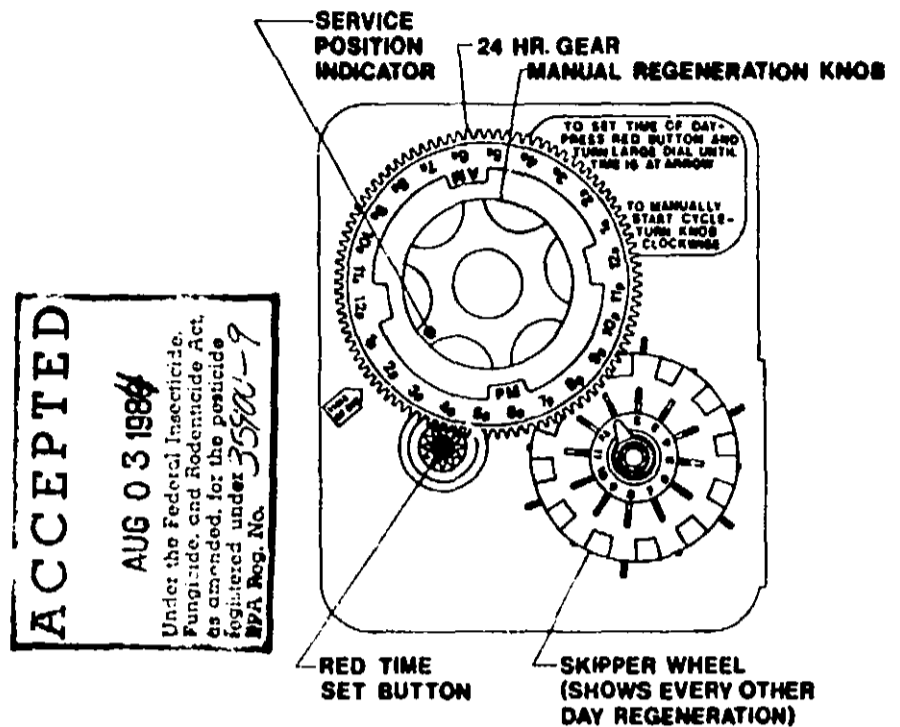
### High Usage Demand/Weekend Guests

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.

## 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.

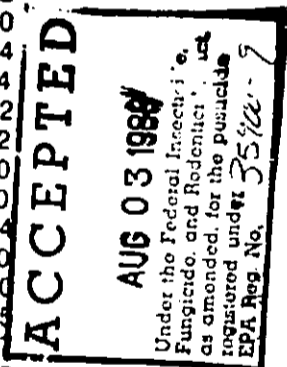
Initial Water Hardness	Sodium Added By Softening
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

### 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
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Frozen Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	450
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

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.



# General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner

## GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

## LIMITED LIFETIME WARRANTY ON MINERAL TANK

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.

## 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 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 be assignable to the original purchaser and applies only to the original equipment.

Model Number

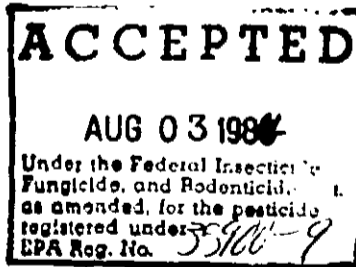
Tank Number

Date Installed

Dealer

Address

Telephone



# IONICS

IONICS, INCORPORATED  
P.O. Box 99 • Bridgeville, PA 15017

7

# GENERAL IONICS Model IQ Bacteriostatic

## METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

General Ionics presents the first **Bacteriostatic Water Conditioner** that not only softens municipally-treated water but also inhibits the growth of bacteria within the filter media bed. Additionally, the Model IQ — the unit with a brain — features state-of-the-art Metered Regeneration Control that provides salt savings of up to 40% over conventional timers.

The Model IQ Control monitors the conditioned water you use, and then initiates a regeneration cycle only when the ion exchange mineral is near exhaustion.

With the IQ Regeneration Control there is no need for "vacation" or

"guest" switches. This "brain" automatically meters any increase or decrease in water usage, and therefore regenerates only when necessary. As a result, you realize savings three ways: (1) salt consumption, (2) water usage, and (3) sewage taxes.

The General Ionics Model IQ Bacteriostatic Water Conditioner gives you absolutely carefree convenience and reliable performance, plus the unique polishing of your water with the silver-impregnated activated carbon that removes objectionable tastes and odors.

**The Water Conditioner with a brain gives you all these advantages:**

- Bacteriostatic feature inhibits

growth of bacteria within filter media bed while removing odors and tastes

- Meter-controlled regeneration for big savings
- Corrosion-resistant 6-cycle bronze control valve for trouble-free operation
- Beautifully polished chrome/nickel stainless steel mineral tank with a limited lifetime warranty
- High-density polypropylene brine tank with a 5-year limited warranty
- High-capacity S-759 resin for superior hardness removal as well as high recovery rates during regeneration

### GENERAL IONICS — THE MAGIC NAME IN WATER CONDITIONING SINCE 1947

SPECIFICATION	MODEL NUMBER		
	IQ 0820-B	IQ 1240-B	IQ 1690-B
Capacity (Grains)	20,000	40,000	90,000
Tank Size — Diameter by Height (Inches)	8 x 51	12 x 59	16 x 67
Salt Storage Capacity (Pounds)	250	200	400
Brine Tank Size — Diameter by Height (Inches)	18 x 30	18 x 30	24 x 40

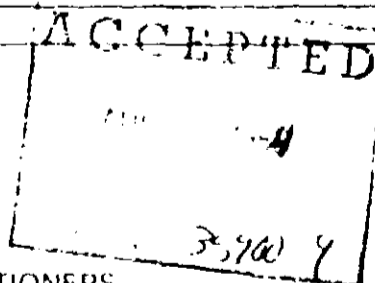
BEST DOCUMENT AVAILABLE



# IONICS

IONICS, INCORPORATED

MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS  
P.O. BOX 99 • BRIDGEVILLE, PA 15107 (PITTSBURGH DISTRICT)  
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS  
MEMBER WATER QUALITY ASSOCIATION



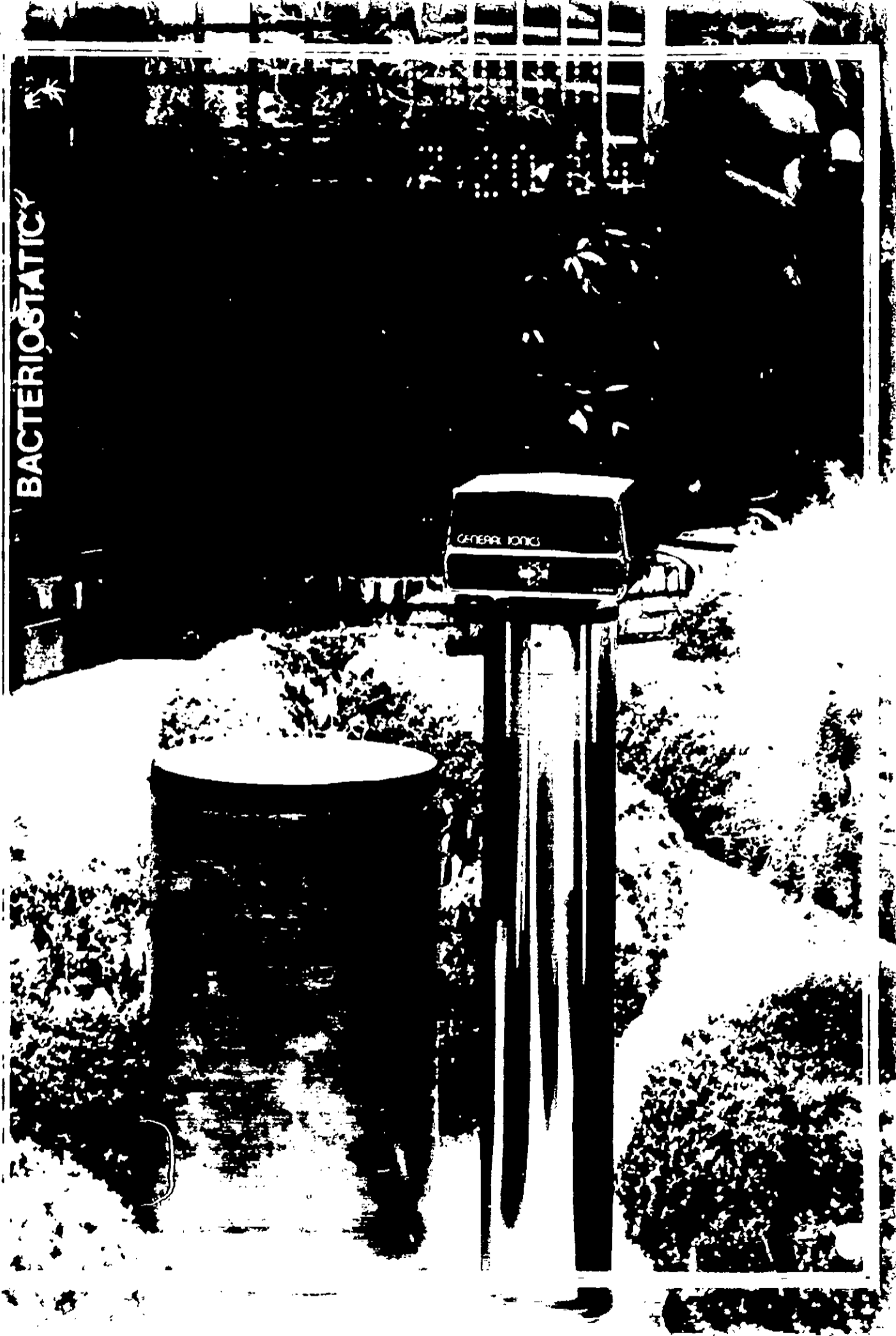
## E.P.A.

Environmental Protection Agency

REGISTERED  
No. 35900-3  
No. 35900-9

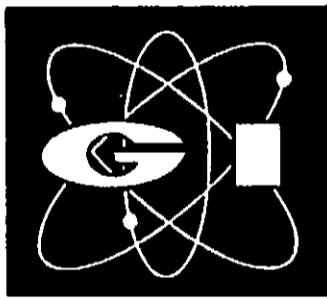
# GENERAL IONICS Model IQ

BACTERIOSTATIC



**HOMEOWNER'S  
MANUAL**

**GENERAL IONICS  
WATER CONDITIONER  
Model IQ and Model EE**



**ACCEPTED**  
AUG 03 1984  
Under the Federal Insecticide,  
Fungicide, and Herbicide Act,  
as amended for the pesticide  
registered under 35700-4  
EPA Reg. No. 35700-4

**IONICS, INCORPORATED**

# 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.



Chairman of Board and  
Chief Executive Officer  
Ionics, Incorporated

## IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filed 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...



### 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 of the cover of this booklet. Explain the problem as best you can. With this information, factory technicians can help solve the problem promptly with the least delay.*

### 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.

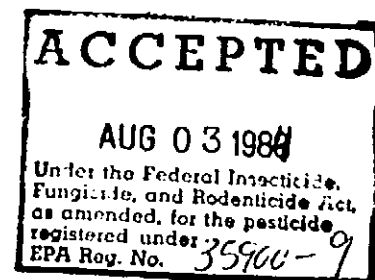
### What Salt To Use

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.

**ACCEPTED**  
AUG 03 1984  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under 3596-9  
EPA Reg. No. 3596-9





**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.

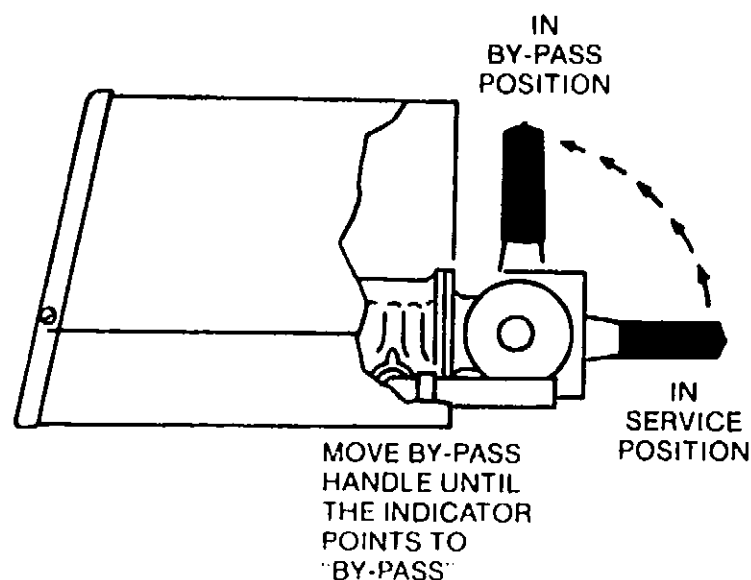
**Bacteriostatic — An Ionics Exclusive**

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.

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

**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.



## 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.

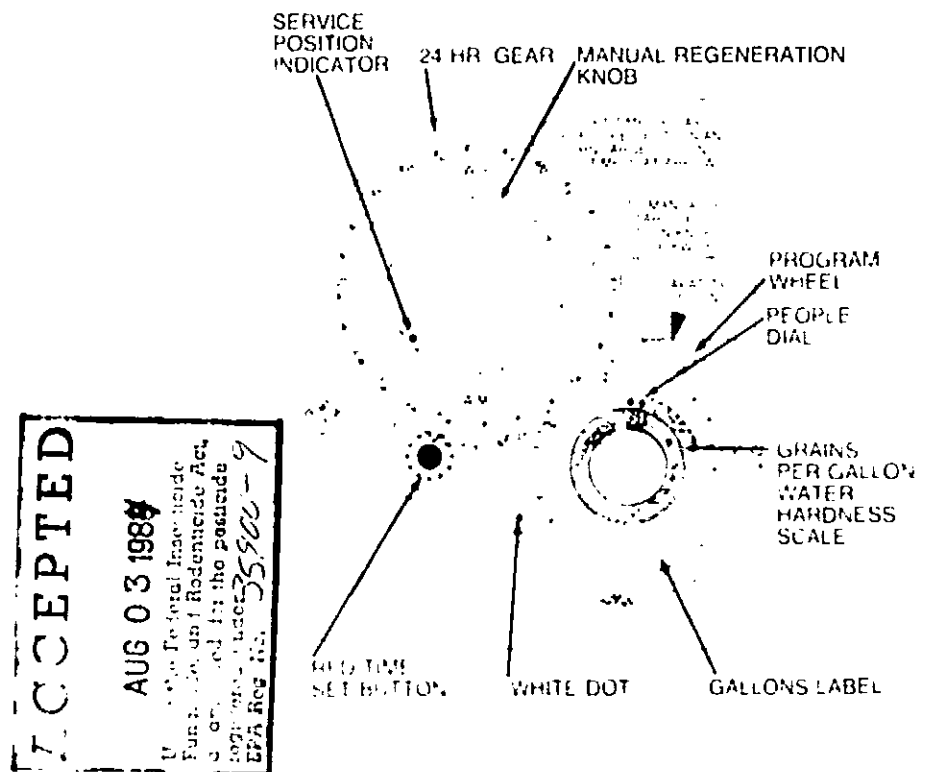
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