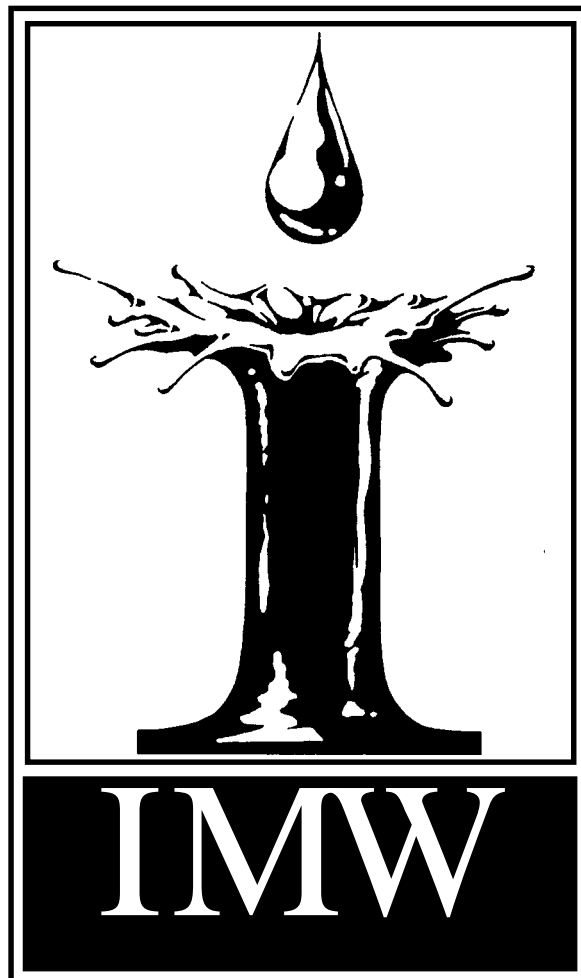




7 - C Y C L E

Electronic · Demand · Regeneration · Control

OPERATION & SERVICE MANUAL



The control you have purchased with your water conditioning system is the most up-to-date control valve produced today. The electronic controls feature a state-of-the-art electronic system. This system is designed to start operation and regenerate according to the user's exact needs. To ensure long, trouble-free service, we would request that you familiarize yourself with its features and proper operation.

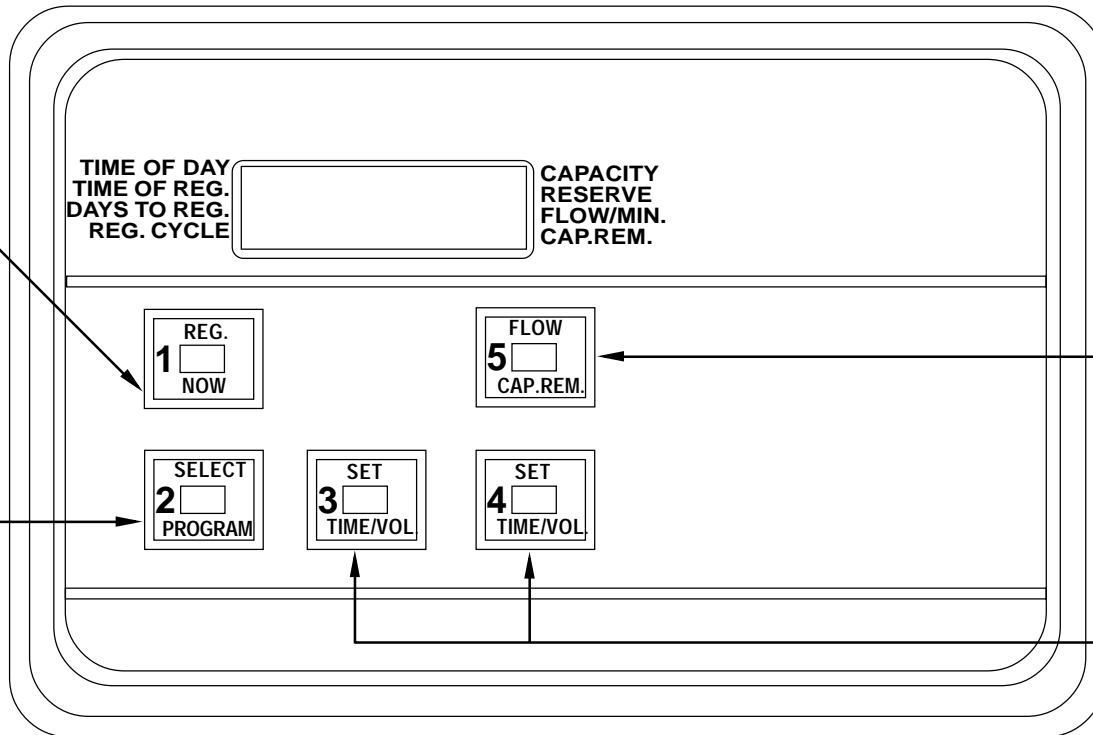
Exclusive electronic demand regeneration system includes choice of factory-set regeneration programs.

Erie's demand regeneration system **automatically begins** monitoring water usage and initiates regeneration as programmed.

Battery back-up system maintains timer program in the event of power interruption.

Depressing **Regen Now Button** initiates automatic system cycling for immediate regeneration.

Depressing select program will allow viewing or changing of programs.



Flashing Front-panel LCD warns of low battery condition.

Reserve in gallon indicated on LCD when **Flow Cap. Remaining Button** is depressed.

Depressing SET TIME/VOL All regeneration cycles can be **easily modified** by the consumer to suit exact water conditions and usage pattern requirements.

INITIAL START-UP

1. Attach a 9-volt battery for backup operation. The battery will prevent a loss of program and will maintain the correct time in the event of a power failure. To install battery, remove battery case retaining screw from upper half of battery case and place battery into upper half of case, *noting the proper polarity(+) terminal of the battery and corresponding(+) marking on the battery case. Replace battery case top and install screw.*
2. Plug in the AC power cord. The electronic display will display 1000 GAL(1000 gallons).
3. Depress button 1 (**REGEN NOW**). The electronic display will continue to display 1000 GAL.

NOTE: Step 3 must be completed within 30 seconds after the control is plugged into the AC power source. If step 3 is not completed within 30 seconds, the control will **START** a regeneration program. The control can be advanced through the regeneration cycles by depressing button 1 (**REGEN NOW**) every minute until 1000 GAL appears on the electronic display. Now proceed to Programming instructions.

PROGRAMMING INSTRUCTIONS

During the custom programming (steps 1-5) of the electronic system, it is necessary to enter the desired change within 30 seconds, otherwise, the computer will assume the programming action is complete and it will enter the service mode.

If this occurs, it will be necessary to initiate the programming process again. Please follow the procedures listed below for placing your system into operation.

1. SET TIME: Depress button 2(**SELECT PROGRAM**) and the time will appear on the electronic display. To set the correct time of day, depress button 3(**SET TIME/VOL**) to set hours, and button 4(**SET TIME/VOL**) to set minutes.

THE UNIT IS NOW OPERATIONAL USING THE FOLLOWING PROGRAMMED PARAMETERS:

Time of Regeneration	2:00AM
Capacity	1000 Gallons
Reserve Capacity	200 Gallons
Regeneration Cycles:	
7-Cycle controls(Time Brine Refill)	
1.Backwash	10 Minutes
2. Brine & Slow Rinse	60 Minutes
3. Fast Rinse(Backwash)	5 Minutes
4. Purge & Timed Brine Refill	5 Minutes

TO CHANGE ANY OR ALL OF THE ABOVE, PROCEED WITH STEPS 2,3,4 & 5 BELOW:

2. SET TIME REGENERATION: Depress button 2 (**SELECT PROGRAM**) again. The indicator arrow in the electronic display will move to (**TIME OF REGEN**) and 2:00 AM will appear. This time can be changed by depressing button 3 (**SET TIME/VOL**) to set hours & button 4 (**SET TIME/VOL**) to set minutes

3. SET CAPACITY: Depress button 2 (**SELECT PROGRAM**) again. The indicator arrow will move to (**CAPACITY**) and 1000 GAL will appear. This capacity can be changed by depressing button 3 and/or 4 (**SET TIME/VOL**)

To determine the amount of capacity to be used, divide the capacity of the water conditioner by the grains of hardness. For example: 32,000 grains capacity divided by 20 grains of hardness = 1600 gallons maximum capacity.

4. RESERVE CAPACITY - Depress button 2 (**SELECT PROGRAM**) again. The indicator will move to **RESERVE** and 200 GAL will appear. The Reserve can be changed to any amount desired by depressing button 3 and/or 4 (**SET TIME/VOL**).

To determine the amount of reserve, divide the capacity by $1/2$ ($1600 / 1/2$) = 400 gallons, PLUS the number of people multiplied by 125 gallons. For example: 4 people x 125 gallons per person = 500 gallons, plus 400 gallons. A total reserve of 900 gallons.

5. REGENERATION CYCLES - Regeneration cycles are programmed. To display the preprogrammed cycle times, depress button 2 (**SELECT PROGRAM**) and the electronic display will indicate 1-10. Pressing button 2 (**SELECT PROGRAM**) again will display preprogrammed cycles 1,2,3 & 4.

To change the cycle times, depress button 2 (**SELECT PROGRAM**) to access each cycle. Then depress buttons 3 and/or 4 (**SET TIME/VOL**) to set the desired time.

The unit is now capable of operating using the above "customer parameters". To place conditioner in service, depress button 2 (**SELECT PROGRAM**) until the time of day appears. After approximately (1) minute, the electronic display will change from the time of day readout to the capacity set point. If a continuous time of day readout is desired, depress button 5 (**FLOW/CAP REM**) until the time of day is displayed. **NOTE: REGENERATION WILL OCCUR AT THE TIME SET OR AT THE PREPROGRAMMED 2:00 AM, ASSUMING THE PROPER RESERVE SETTINGS ARE BEING USED; HOWEVER, THE WATER CONDITIONER WILL REGENERATE IMMEDIATELY WHEN THE CAPACITY SETTINGS HAVE BEEN REACHED. THIS FEATURE INSURES THAT YOUR CONDITIONER PROVIDES THE MAXIMUM AMOUNT OF CONDITIONED WATER.**

IMMEDIATE REGENERATION - To initiate an immediate regeneration, depress button 1 (**REGEN NOW**). The water conditioning control will initiate a regeneration within ONE minute.

To cancel an immediate regeneration from occurring after pressing button 1, Depress button 1 a second time.

CAPACITY REMAINING - The capacity remaining will normally appear on the electronic display. If the capacity remaining is not displayed, depress button 5 (**FLOW/CAP REM**).

FLOW RATE - The flow rate of conditioned water will appear on the electronic display (gallons per minute) by depressing button 5 (**FLOW/CAP REM**).

IF THE ELECTRONIC DISPLAY IS FOUND FLASHING - Replace battery. Follow Instructions for installation of battery, found in initial start-up instructions.

Maintenance Guide

Intermountain Water® Spectrum 360™ 7-cycle EM

PROBLEM	POSSIBLE CAUSE	CORRECTION
Unit will not cycle through a regeneration.	<ol style="list-style-type: none"> 1. High backwash rate at inlet pressures. 2. Bad electrical connection. 3. Defective timer board. 4. Defective head assembly. 	<ol style="list-style-type: none"> 1. Adjust backwash flow rate with backwash adjuster. 2. Check electrical outlet box & service cord. 3. Replace defective board. 4. Replaced head assembly
Drain Open but unit will not transfer.	<ol style="list-style-type: none"> 1. Low inlet water pressure. 2. Defective or torn diaphragm. 3. Retaining ring missing. 4. Foreign material on stem or internal seats. 5. Restricted drain line 	<ol style="list-style-type: none"> 1. Increase inlet water pressure 20psi/min. 2. Replace diaphragm. 3. Add retaining ring, part no. 19A3 4. Clean stem & seat on main body. Clean seat on item No.6. 5. See drain line spec.
No brine draw, unit transfers.	<ol style="list-style-type: none"> 1. Plugged injector screen. 2. Plugged or worn injector. 3. Inadequate backwash. 4. Low inlet water pressure. 5. Defective brine valve. 6. Fast rinse solenoid hangs up. 7. Restricted drain line. 8. No salt in brine tank. 9. Flow adjuster completely closed or adjustment too low. 	<ol style="list-style-type: none"> 1. Clean or replace. 2. Clean or replace. 3. Adjust backwash flow rate with backwash adjuster. 4. Increase water pressure 20psi/min. 5. Replace or clean. 6. Clean spring, plunger & diaphragm. Clean seat area 7. See drain line spec. 8. Fill with salt. 9. Adjust backwash flow rate with backwash adjuster.
Low or inadequate capacity after regeneration.	<ol style="list-style-type: none"> 1. Plugged injector screen. 2. Plugged injector. 3. Increase in water consumption. 4. Backwash rate too low. 5. Insufficient quantity of brine. 6. Restricted drain line. 	<ol style="list-style-type: none"> 1. Clean or Replace. 2. Clean or Replace. 3. Increase frequency of regeneration. 4. Adjust backwash flow rate with backwash adjuster. 5. Raise float level on brine valve. 6. See drain line spec.
Water chatter at unit during regeneration.	<ol style="list-style-type: none"> 1. High backwash rate. 2. Low water pressure. 3. Diaphragm spring not properly located on stem 4. Restricted drain line. 	<ol style="list-style-type: none"> 1. Adjust backwash flow rate with backwash adjuster. 2. Increase water pressure 20psi/min. 3. Locate spring on tip of stem assembly. 4. See drain line spec.
Water flows to drain during service.	<ol style="list-style-type: none"> 1. Foreign matter trapped under drain valve. 2. Drain seat out of adjustment or valve disk deformed. 	<ol style="list-style-type: none"> 1. Attempt to flush out by putting unit into regeneration. Remove head assembly & clean valve seat. 2. Remove head assembly & replace stem & paddle assembly.
Salt in lines after regeneration.	<ol style="list-style-type: none"> 1. Rinse rate too low. 2. Excessive amount of brine drawn. 3. Insufficient rinse time. 	<ol style="list-style-type: none"> 1. Change to larger injector disk. 2. Lower float setting on brine valve. 3. Increase length of regeneration.
Valve leaking between main body & head assembly or backcap	<ol style="list-style-type: none"> 1. Torn diaphragm or pinched outlet gasket. 	<ol style="list-style-type: none"> 1. Replace items.
No fast rinse or backwash on 5-cycle models.	<ol style="list-style-type: none"> 1. Burned out solenoid coil. 2. Plugged solenoid assembly. 	<ol style="list-style-type: none"> 1. Clean solenoid spring, plunger, diaphragm, & seat area. 2. Same as "1" above.
Too much water on 5 & 7-cycle controls	<ol style="list-style-type: none"> 1. Plugged injector. 2. Plugged solenoid diaphragm. 3. Plugged solenoid assembly. 4. Plugged or damaged check ball. 	<ol style="list-style-type: none"> 1. Clean injector disc & screen. 2. Clean solenoid diaphragm. 3. Clean solenoid assembly. 4. Remove backcap assembly & clean or replace check ball.
No water-low water level in brine tank on 5&7-cycle controls	<ol style="list-style-type: none"> 1. Same as above. 2. Burned out solenoid. 	<ol style="list-style-type: none"> 1. Same as above. 2. Replace coil.

Maintenance Guide

Intermountain Water[®] Spectrum 360[™] 7-cycle EM

CONTROL SETTINGS

Capacity:	_____ gallons
Reserve:	_____ gallons

Date:	_____
Hardness:	_____
Conditioner Capacity:	_____

CYCLE

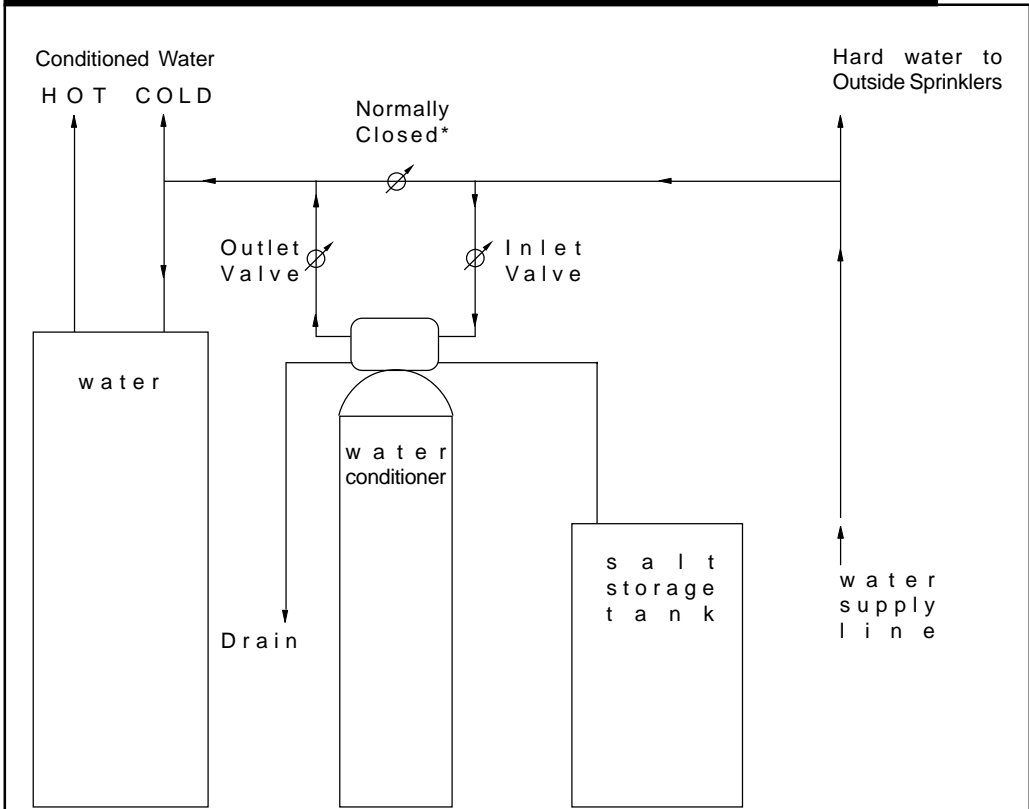
Backwash:	_____ minutes
Brine & Slow Rinse:	_____ minutes
Fast Rinse Backwash:	_____ minutes
Purge & Brine Refill:	_____ minutes

BRINE TANK

Recommended Salt:
 1st choice Cubed Salt
 2nd choice Pellet Salt
 3rd choice Extra Coarse

1. If you run out of salt, First dip out 2 gallons of water before adding new salt.
2. Maintain salt level at one half to full capacity

TYPICAL WATER CONDITIONER INSTALLATION



*Center by-pass valve is normally in closed position while unit is in operation.

For Service Call:
Intermountain Water, Inc.
 424 West 1200 North Orem
 Utah 84057

Orem(801)225-5233
 S.L.C(801)533-0886

For information 24 hours a day
 visit us on the world wide web
www.intermountain-water.com

For more information Contact
 Your Local Dealer: