

MODEL 32-3010 & 48-3010

OWNER'S MANUAL

Congratulations on having purchased a quality and well built Superior Water Softener. On a normal installation, your water softener should be connected to all of your plumbing with the exceptions of your kitchen cold side and your outside faucets. The plumbing connection is made by using three valves that are generally located directly above the water softener. These three valves constitute the bypass, which look like the letter "H" when looking at it. In the event that you should have to shut the water off to the water softener due to a leak, continue with the following instructions.

TO SHUT THE WATER OFF ON THE SOFTENER

- 1.) Directly above the water softener are three valves. Turn the left and right valves in a clockwise direction until they are completely closed.
- 2.) Turn the middle valve open by turning it counter clockwise. The water should now be turned off on the water softener and you should have water to your house.

THE SALT AND WATER LEVEL INSIDE THE SALT TANK

It is recommended that the salt level not fall more than 3"(inches) below the water level inside the salt tank. The water level inside a round salt tank is generally one to one-half feet deep. The square salt tanks are generally about half to two-thirds full of water. Should the softener run out of salt or you allow the salt level to drop down too far, you may experience hard and/or salty water. To avoid this, we recommend keeping the salt tank full of salt or at least keeping the salt level above the water level at all times. Should you experience salty water coming through your plumbing, the quickest way to flush it out is running the cold water inside your bathtub until the salt is all flushed out.

Your water softener will function with any type of salt; however our experience has shown us that fewer problems will occur when using salt pellets. Salt pellets are cleaner, rarely have any debris and they do not have a tendency to form salt bridges as does rock salt. Also rock salt has a tendency to carry more dirt and debris with it, which in turns make your salt tank appear very dirty inside and at times cause it to have a foul odor. However, this dirt will not harm the water softener.


OPERATING THE WATER SOFTENER

GENERAL INFORMATION


The control valve is designed to initiate regeneration according to the installer's customized parameters. Following the instructions contained in this section will allow the homeowner to change the time of day, initiate the *Holiday Mode* program or to initiate a *Delayed Regeneration*. These instructions are also found on the front of the control valve, behind the flip down cover. The control valve utilizes a super capacitor to maintain time for minimum of 2 hours in the event of a power loss. Should the power be out longer than 2 hours, it may be necessary to reset the unit to the correct time of day.

NOTE: The control valve is an electronic item and therefore is sensitive to power surges just like any other electronic item. For this reason, it is recommended that you have a surge protector installed for the water softener.

PROGRAMMING THE TIME OF DAY

Pressing the **scroll**  button enters the Time of Day programming mode. Once pressed the time of day will start flashing. To adjust the time, press the up arrow or down arrow


IMMEDIATE REGENERATION

When the control valve is in service, the user requests an immediate regeneration by pushing the **scroll**  buttons three times. “*REGENERATION IN 10 SEC* “ message will show. The regeneration will occur when the second counter reaches zero

HOLIDAY MODE

Regeneration is not allowed when the control valve is in the *Holiday Mode*. The word *Holiday* will blink when scrolled to on the control board. After sixty seconds, the unit enters the *Holiday Mode*. The only way the unit comes out of *Holiday Mode* is a flow rate greater than 1.5 gallons per minute or if an immediate regeneration is started. Scrolling out of *Holiday Mode* is the last way to exit. After exiting, the unit will go into an immediate regeneration.

DELAYED REGENERATION

While in service mode, the user requests a delayed regeneration by scrolling to the “*REGENERATION AT 02:00* “ message, by pushing the **scroll**  button four times. Leave the setting in this mode in order to initiate a delayed regeneration. Regeneration will occur when the time clock reaches the delayed regeneration time. After the regeneration takes place, the clock will return to the time of day.

NOTE: If at any time you have experienced hard water due to a malfunction of the equipment or having ran low or out of salt, the water softener will need to be manually regenerated three nights in-a-row or three times in-a-row with a minimum of two hours in between each manual regeneration. To start a manual regeneration, follow the instructions for IMMEDIATE REGENERATION.

Visual Instructions for the End User's Level

1. Accessing the End-User's Level:

- Verify the control valve is in the service mode. The control will display the time of day and gallons remaining before regeneration.

TIME OF DAY	GL REMAINING
-------------	--------------

- Press the *SCROLL* Ⓢ button; the control will display:

SET	TIME OF DAY
-----	-------------

Press the *SCROLL* Ⓢ button to advance to the next setting.

2. Available Programming Parameters:

- **Time of Day Setting:** the control will display:

SET	TIME OF DAY
-----	-------------

- Press the *UP ARROW* ▲ or *DOWN ARROW* ▼ to program the time of day.

Press the *SCROLL* Ⓢ button to advance to the next setting.

- **Holiday Mode:** the control will display:

HOLIDAY	TIME
---------	------

When the control valve is left in this position for 60 seconds, the holiday mode is now activated. The unit will not regenerate.

- The holiday program ends when a flow rate greater than 1.5 gallons is measured with the meter or when the *SCROLL* Ⓢ button is pushed. In either of these cases the unit will start an immediate regeneration.

Press the *SCROLL* Ⓢ button to advance to the next setting.

3. Immediate Regeneration Mode:

- The control will display:

REGEN IN 10 SEC

- If the control valve is left in this position, the timer will countdown to 0, starting a regeneration.
- To avoid an immediate regeneration, push the *SCROLL* Ⓢ button before the timer has reached 0.

Press the *SCROLL* Ⓢ button to advance to the next setting.

4. Delayed Regeneration Mode: (not available in case regeneration type is programmed to "Immediate" in the Manufacturer's level):

- The control will display the programmed regeneration time:

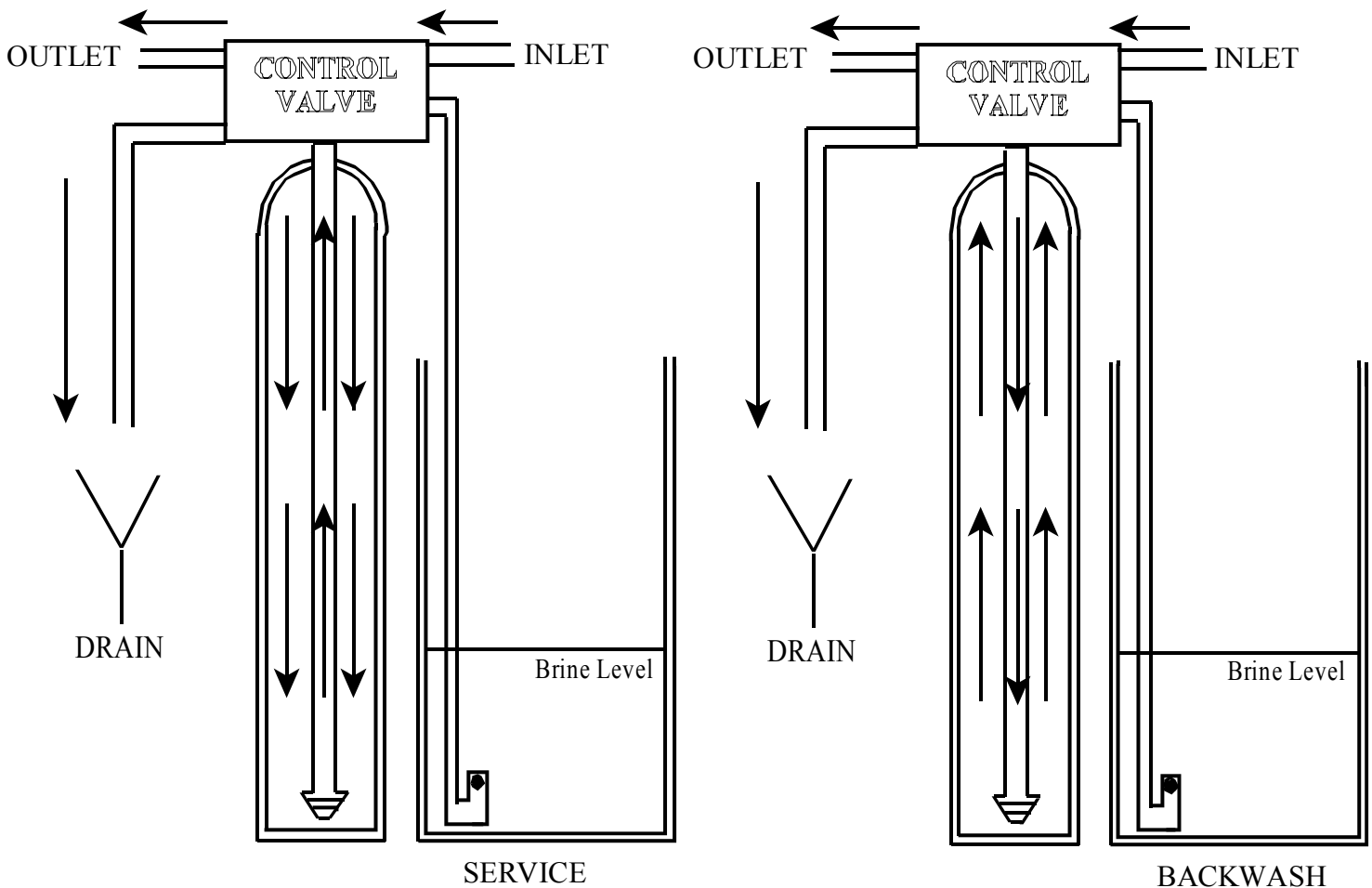
REGEN AT (CURRENT SETTING)

- If the control valve is left in this position, the unit will regenerate at the programmed time.
- The display will remain in this mode until the regeneration is started.
- To cancel this mode, push the *SCROLL* Ⓢ button.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	CORRECTION
Softener will not regenerate.	A. Bad electrical connection. B. Broken motor C. Broken or stripped gears. D. Gallon counter not counting	A. Check electrical connection. B. Replace motor. C. Replace gears. D. Remove debris or replace part. (Located on outlet port of control valve)
Drain opens but water does not leave salt tank.	A. Low inlet water pressure. B. Broken or torn diaphragm. C. Retaining ring missing. D. Foreign material on stem or internal seats. E. Drain line kinked or restricted.	A. Increase inlet water pressure. B. Replace diaphragm. C. Add retaining ring. D. Clean stem and seat on main body. E. Straighten or unrestrict drain line.
Softener does not draw brine.	A. Plugged injector screen. B. Plugged or worn injector. C. Inadequate backwash. D. Low inlet water pressure. E. Broken or plugged brine float F. Kinked or restricted drain line.	A. Clean or replace. B. Clean or replace. C. Adjust backwash flow rate with backwash adjuster. D. Increase water pressure. E. Clean or replace. F. Straighten or unrestrict drain line.
Low or inadequate capacity after regeneration.	A. Plugged injector. B. Plugged injector screen. C. Increase in water consumption. D. Insufficient quantity of brine. E. Ran out of salt at one time. F. Leaking toilets or faucets.	A. Clean or replace. B. Clean or replace. C. Increase frequency of regeneration. D. Raise float level on brine valve. E. Regenerate softener 3 nights in-a-row. F. Repair leak.
Water chatter at unit during regeneration	A. High backwash rate. B. Low water pressure. C. Diaphragm spring not properly located on stem. D. Restricted drain line.	A. Adjust backwash flow adjuster B. Increase water pressure. C. Locate spring on tip of stem assembly. D. Straighten or unrestrict drain line.
Water flows to drain when not regenerating.	A. Foreign matter trapped in drain valve. B. Drain paddle out of adjustment.	A. Attempt to flush out by putting unit into regeneration. B. Replace drain paddle.
Salt in lines after regeneration.	A. Rinse rate to low. B. Excessive brine in salt tank. C. Insufficient rinse time.	A. Change to larger injector disk. B. Lower float setting or check for leak on float. C. Increase length of regeneration cycle.
Valve leaking between body and head assembly or back cap.	A. Torn diaphragm or pinched outlet gasket.	A. Replace items.
Too much water brine tank	A. Foreign matter in brine float. B. Loose brine float fittings.	A. Clean or replace brine float. B. Tighten or replace brine float fittings.
No water in brine tank	A. Brine float set to low	A. Adjust brine float to allow 1 ft. to 1½ ft. of water into Round and 15x15 Square salt tanks only. On 11x11 Square salt tanks, set float to approximately fill tank half full.

WATER FLOW

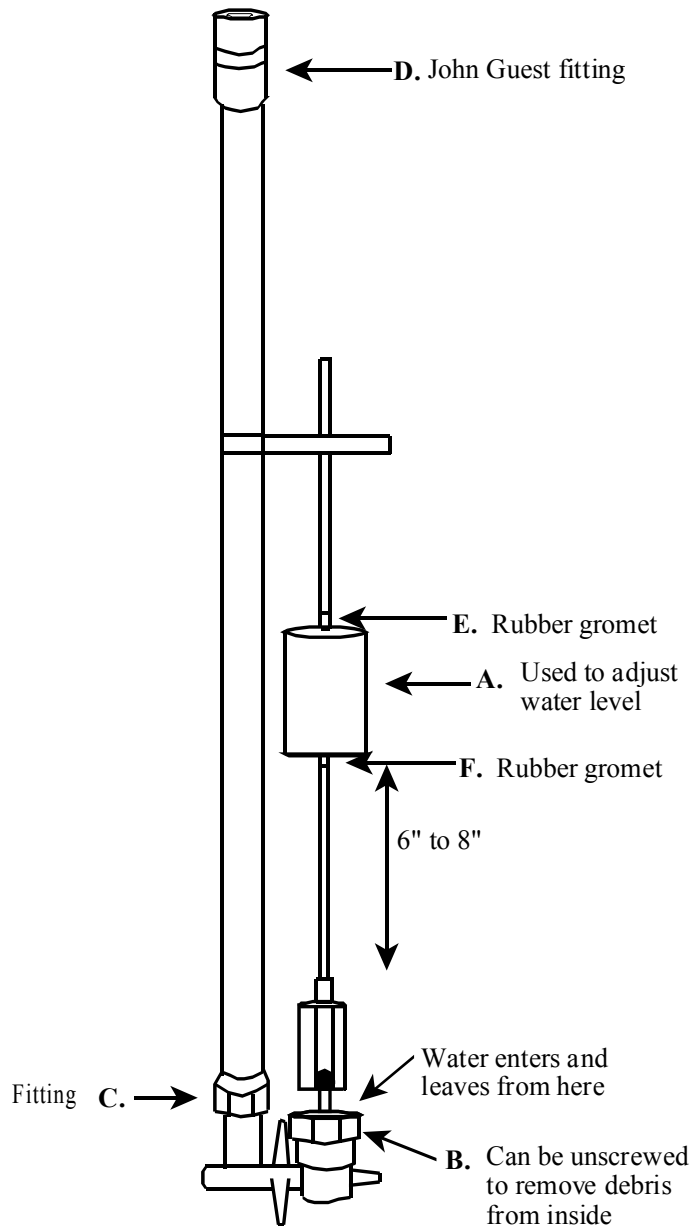


The service cycle position directs untreated water to flow down through the filter media in the mineral tank and up through the distributor tube. The water is conditioned when passing through the media.

The backwash cycle position directs water to flow down through the distributor tube and up through the filter media and to drain. Foreign material and media fines are flushed from the mineral tank during this cycle to prepare the media for filtering.

BRINE FLOAT

- A. Used to adjust water level. In round salt tanks, and 15x15 square salt tanks the water level should be anywhere from 1 ft. to 1½ ft. In 11x11 square tanks, the tank should be ½ to 2/3 full of water.
- B. Unscrewing this nut allows you enter the chamber where debris can be easily removed
- C. Compression fitting.
- D. John Guest fitting.
- E & F. Rubber gromets that hold float ball in place on the fiberglass rod.



Checking the Diagnostics

Diagnostic Mode (Viewing Only)

Press the *UP ARROW* ▲ and hold for 5 seconds.

The diagnostics menu will display beginning with *REGEN DAYS AGO*. Use the *SCROLL* Ⓢ button to advance to each diagnostic. If no button is pressed within 60 seconds, the display will return back to the time of the day.

- **Regeneration Days Ago:** Displays how many days ago the unit last regenerated.
- **In Service:** Displays how many days the control has been in service.
- **Number of Regenerations:** Displays the number of regenerations that have taken place since the control was installed.
- **Total Volume:** Displays the total volume of water used since installation.
- **Last Regeneration:** Displays the amount of water used before the last regeneration.
- **Peak Flow:** Displays the peak flow rate since the last regeneration. This function resets back to zero after every regeneration.
Note: Will not display when control is programmed for Volume/Pulse.
- **Average Daily Volume:** Displays the average daily water consumption.
- **Capacity/System:** If the control is programmed for Volume, the display will read *CAPACITY* along with the maximum volume of water to be used. When the control is programmed for hardness, the display will read *SYSTEM* along with the maximum grain capacity of the system.
- **Hardness:** Displays the amount of hardness programmed into the control (will not display when control is programmed for volume).
- **Reserve:** Displays whether the control is programmed for fixed or variable reserve.
Note: Will not display when programmed for immediate regeneration.
- **Regeneration Time:** Displays the time of day the unit will regenerate.
- **Override:** Displays the override mode by reading *OFF*, or the number of days programmed into the control.
- **Backwash:** Displays the minutes of backwash programmed into the control. If the control is programmed for metric units this position will display as *CYCLE 1*.
Note: Not applicable on all models.
- **Brine and Rinse:** Displays the minutes of brine and rinse programmed into the control. If the control is programmed for metric units this position will display as *CYCLE 2*.
- **Fill and Rinse:** Displays the minutes of fill and rinse programmed into the control. If the control is programmed for metric units this position will display as *CYCLE 3*.
Note: Not applicable on all models.
- **Units:** Displays the mode of measurement, *ENGLISH* or *METRIC*.
- **Meter:** Displays whether the control is programmed as *STANDARD METER*, *NO METER* or *VOLUME/PULSE* setting.
- **Capacity Volume/Hardness:** Displays whether the control is programmed for a *CAPACITY VOLUME* or *CAPACITY HARDNESS* setting.
- **Regeneration:** Displays the programmed regeneration type. *DELAYED*, *IMMEDIATE* or *DELAYED/IMMEDIATE*.
- **Valve Type:** Displays the type of valve the factory programmed into the control.
- **M P Resets:** Displays how many times the programs have been reset.
- **Corrupt Memory:** For factory information only.
- **4000 VTL REV:** For factory information only.

PARTS LIST DIAPHRAGM STYLE

Item	Qty	Aquion Part #	Erie Ref. Part #	Description
1	1	72252, 72253	-	Front Cover Subassembly
2	1	SEE BELOW	-	Factory Programmed Board Assembly
3	1	70618	15-102	Screw #4-24 x 3/8 lg, Self-Threading (incl. in it. 1)
4	1	71675	34-57	Motor and Terminal Assembly, 24V, 60HZ
5	1	72244	-	Motor Plate
6	1	71753	467-339	Gear Assembly
7	1	71755	467-349	Torsion Spring
8	2	71507	15-76	Screw #5-20 x 3/8 lg, Type BT, Self-Threading
9	1	70971	4000-207	Lead Power
10	1	70980	4000-210	Sensor Housing, Potted Cable Assembly
11	1	71681	4000-211-1	Solenoid Cord Set, Black
12	1	71682	4000-211-2	Solenoid Cord Set, White
13	2	71641 (71611)	28-8-8 (28-244-4)	Heyco Bushing, SR 6P-4 (Heyco Plug, DP-625)
14	1	71687	4000-301	Backplate, Electronic Control
15	3	71502	15-236-6	Screw #8-18 x 3/8 lg., Type BT, Self-Threading
16	3	71507	15-76	Screw #5-20 x 3/8 lg., Type BT, Self-Threading
17	1	71550	19-3	Retaining Ring
18	4	71509	15-87	Screw #8-18 x 1-7/8 lg. Type BT, Self-Threading
19	1	72045, 72046	567-206-1, -2	Valve Head, 1/2-14 NPT - Rp 1/2 (1/2-14 BSP)
20	1	71734	467-230	Stem Subassembly, Drain Paddle
21	2	13366	-	O-Ring, Stem
22	1	71698	409-192	Valve Seat
23	2	71539	185-109	O-Ring, Valve Seat
24	1	70627	15-198-4	Screw #5-40 x 1/4 lg.
25	1	72245	-	Washer, .125 x .437 x .040, SS
26	1	70312	28-8-29	Heyco Bushing, SR 2P-4
27	1	72134	28-8-7	Heyco Bushing, SR 5P-4
28	1	71971 thru 71976	541-300-1.6-3.5	Flow Controller Assembly (Optional)
29	1	72192	28-234-3	Transformer, 120VAC, 1A

Valve Type	Valve Function	Program Code	Aquion Factory Programmed Board Part Number
2	Softener Demand	D2SD	72272
	Filter Demand	D2FD	72273
	Softener Timer	D2ST	72274
	Filter Timer	D2FT	72275
3	Softener Demand	D3SD	72276
	Softener Timer	D3ST	72277
4	Softener Demand	D4SD	72278
	Filter Demand	D4FD	72279
	Softener Timer	D4ST	72280
	Filter Timer	D4FT	72281
5	Softener Demand	D5SD	72282
	Softener Timer	D5ST	72283

