

# PROGRAMMING THE 12 DAY AUTOMATIC CONTROL VALVE

**WARNING: ALWAYS TURN INDEXING KNOB CLOCKWISE, OTHERWISE DAMAGE TO THE VALVE MAY RESULT AND VOID WARRANTY.**

## A. SET CURRENT TIME OF DAY

1. Plug unit into a 115 volt grounded outlet that is independent from a wall switch or pull chain.
2. Set present time of day by depressing and holding in black button on left side of indexing knob (Figure A). Turn the large hour gear until the actual time of day is opposite the time of day pointer, noting AM and PM marking. The regeneration cycle is factory set to occur at 2 AM.

If a different regeneration time is desired, set the time of day on the large hour gear ahead or behind the actual time of day to compensate.

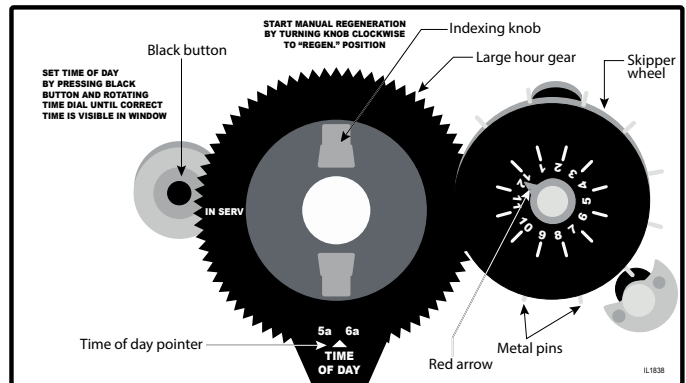


Figure A

## B. DETERMINING THE HARDNESS LEVEL OF THE WATER

Based upon the national water hardness level, the valve has been factory pre-set. However, water hardness will vary by location. For best efficiency, the valve should be programmed to each specific installation.

If the water source to be treated is city water, call the local water department for the water hardness level. If the water source is a private well; information concerning the mineral content (Hardness) can be obtained by purchasing a 136958 mail-in test kit from your dealer. Return a sample of untreated water in the bottle provided with the kit to our laboratory. The water sample will be professionally analyzed and results sent to you within ten working days following receipt of the sample.

**NOTE: For water with rust stains:** If iron is present in the water supply as indicated by red stains on clothes, fixtures, toilets, etc., add 12 grains per gallon to the actual water hardness.

To keep the softener resin bed iron free, mix two ounces of Iron Out® or similar iron cleaner with every 80 lbs. of salt added to the brine compartment, or use salt that contains an iron control agent.

## C. DETERMINING THE FREQUENCY OF REGENERATION

To determine the regeneration frequency, follow steps 1 through 3 below. As you proceed, fill in the work chart on page 2 with the appropriate information.

1. From Figure B, pick out the regeneration frequency schedule that refers to the size of the softener installed.
2. Follow along the line indicating the number of people in the family, to the column in which the water hardness lies.

The number in this box represents the regeneration frequency or the number of times that the timer should be set to regenerate in a 12 day period.

3. Locate the regeneration frequency number as determined above in the first column of Figure C. The dots correspond to which metal pins should be pulled outward.

Model	3/4 Cu. Ft. 24,000 Grain Units					1 Cu. Ft. 32,000 Grain Units						1-1/2 Cu. Ft. 48,000 Grain Units										
Hardness Range	0-10	11-20	21-30	31-40	41-50	0-10	11-20	21-30	31-40	41-50	51-60	61-70	0-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	
No. of People in Family	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	
	2	1	1	2	3	1	1	1	2	2	3	3	1	1	1	2	2	2	2	3	3	
	3	1	2	3	4	1	2	2	3	3	4	4	1	2	2	2	3	3	3	4	4	
	4	1	2	3	4	6	1	2	3	3	4	6	6	1	2	2	3	3	4	4	6	6
	5	2	3	4	6	6	1	2	3	4	6	6	12	2	2	3	4	4	6	6	6	12
	6	2	3	6	6	12	2	3	4	6	6	12	12	2	3	3	4	6	6	6	12	12
	7	2	4	6	12	12	2	3	4	6	12	12	12	2	3	4	6	6	6	12	12	12
	8	2	4	6	12	12	2	3	6	6	12	12	12	2	3	4	6	6	12	12	12	12
	9	3	6	12	12	12	2	4	6	12	12	12	12	3	4	6	6	12	12	12	12	12
	10	3	6	12	12		2	4	6	12	12	12		3	4	6	12	12	12	12	12	

Figure B

**Example:**

Softener Size	32,000
No. of People	2
Hardness Range	31-40 G.P.G.
Regenerating Frequency (From Figure B)	2 Times in 12 Days
Pins to be slid outward (From Figure C)	Pins Numbered 6 and 12

**D. SETTING THE REGENERATION FREQUENCY**

1. Since the timer was factory pre-set, push inward all metal pins that are in the outward position. The metal pins are located on the skipper wheel (Figure D).
2. Based on the work chart, pull the metal pins outward as required.

NOTE: The metal pins are numbered from 1 to 12.

Number from Above Chart	Pin Numbers to be slid outward											
	1	2	3	4	5	6	7	8	9	10	11	12
12	•	•	•	•	•	•	•	•	•	•	•	•
6		•		•		•		•		•		•
4			•			•			•			•
3				•				•				•
2						•						•
1												•

Figure C

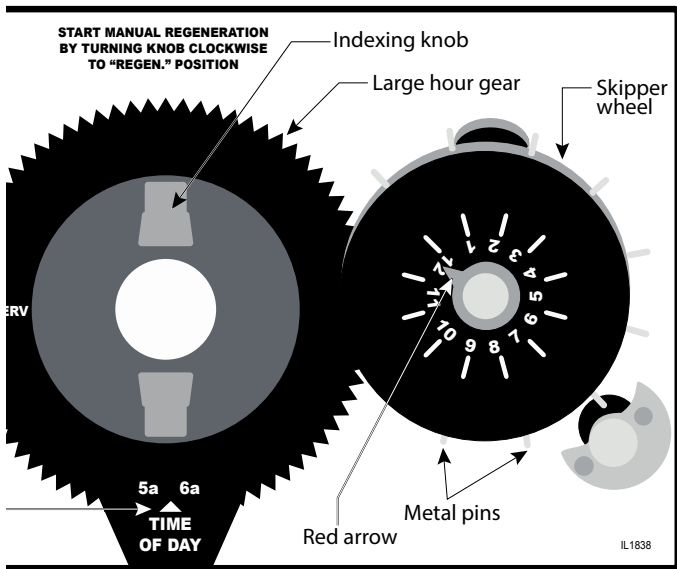


Figure D

**E. THE REGENERATION CYCLE**

The regeneration cycle will take between 84 and 104 minutes and will go through 8 different cycles. It will be normal to hear water flowing during this time. Water will be available for use during the regeneration process, but it will not be softened. Figure E shows approximate cycle time for each process.

**F. STARTING THE UNIT**

1. To ensure unit is installed and working properly, briefly (about 60 seconds for each cycle) rotate the indexing knob clockwise through the following cycles: "Backwash", "Brine Rinse", and "Brine Refill". While in each cycle, listen for water flow, and check system for any leaks. (Figure F).
2. Return indexing knob to "Service" position and water flow should stop. Turn skipper wheel clockwise until red arrow covers the number 1. (See Figure F). The unit is now ready to provide you with softened water.

**Cycle Time Chart**

Dial Reading	Cycle Time in Minutes
1. In Serv	
2. Regeneration	
3. Rinse	5 Min. Rinse
4. Backwash	10 Min. Backwash
5. Brine + Rinse	50 Min. Brine + Rinse
6. Rapid Rinse	10 Min. Rapid Rinse
7. Settle Rinse	5 Min. Settling Rinse
8. Brine Refill	4 - 24 Min. Brine Refill

Figure E

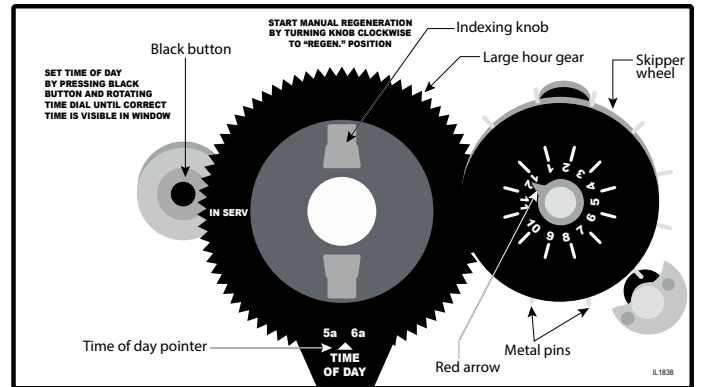


Figure F