

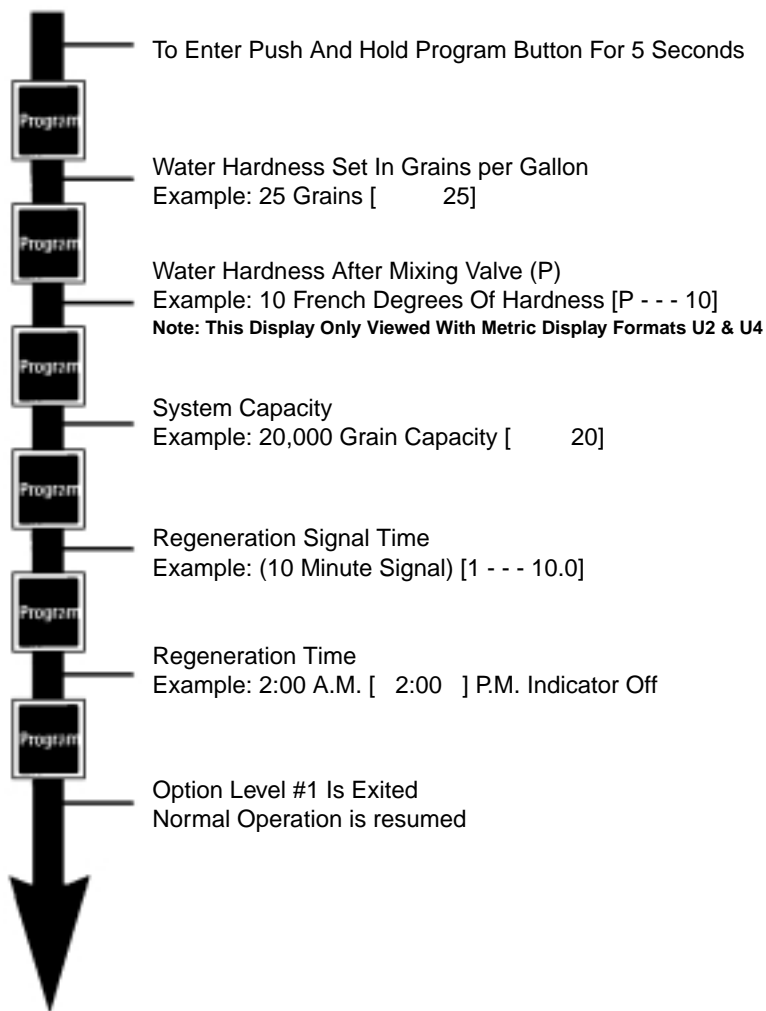
3200ET Remote Meter

Option Setting Level #1 Programming Chart

Level #1

Note:

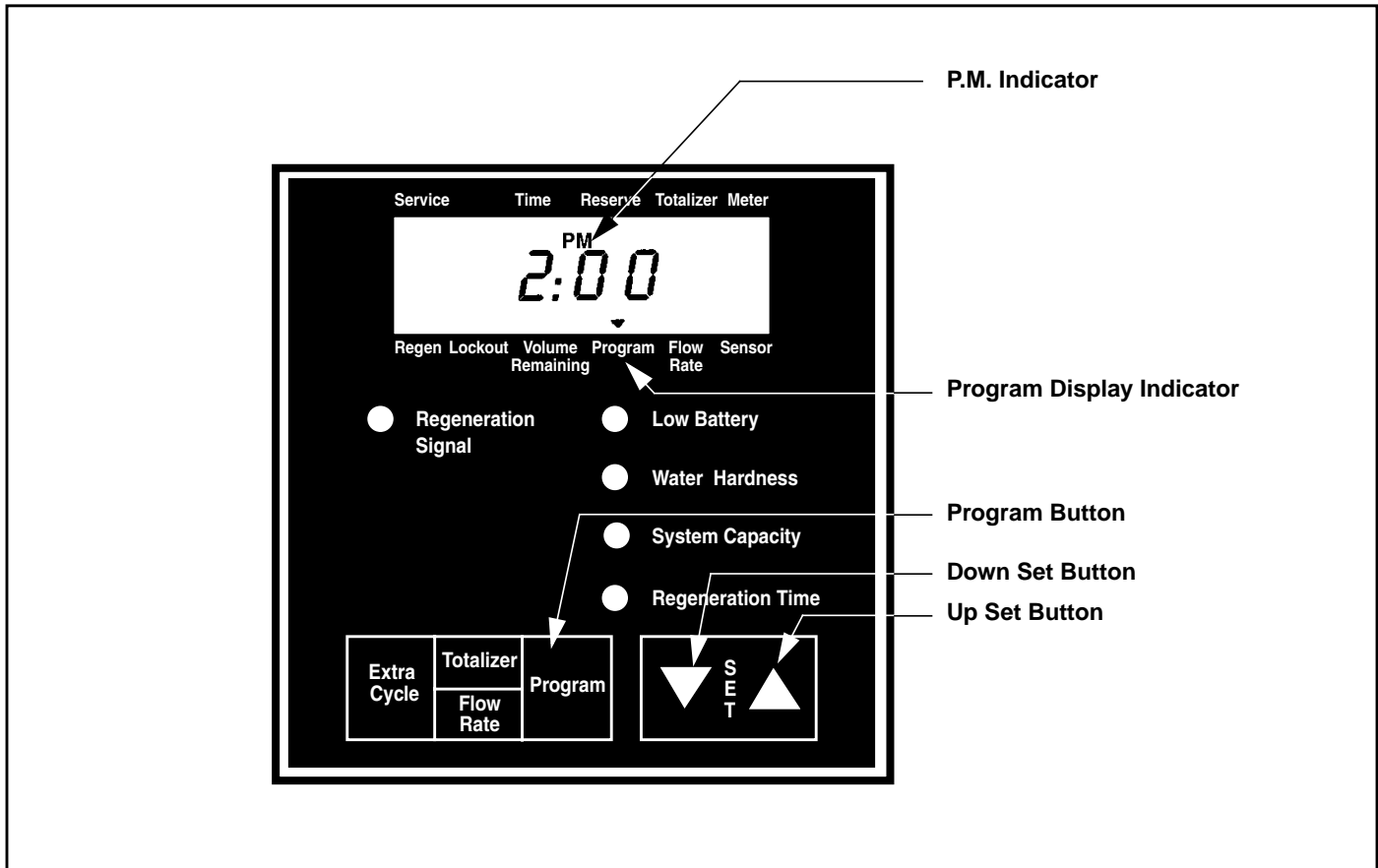
1. Push Program Button Once Per Display.
2. Option settings may be changed by pushing either the Up or Down Arrow Button.
3. Depending on current valve programming certain displays will not be able to be viewed or set.



3200ET Remote Meter

Option Setting Level #1 - Installer Programming

Setting up the system during installation requires access to the first level of option programming. If the Chemical Pump Output feature is used, first remove the flow meter harness from the meter cap before entering any program level.



Entering Option Level #1

Depress the Program Button for five seconds. The Program Arrow will turn on and the first display viewed is used to set the Inlet Water Hardness. Depending on current programming, certain displays or option settings will not be viewed.

1. Water Hardness

The unit of measure used for this setting is grains/French degrees/P.P.M./German degrees. This option setting is identified by the red LED next to the Water Hardness label.

Example: 25 grains [**25**]

The **UP** and **DOWN Set Buttons** will adjust this value.

2. Water Hardness After Mixing Valve (P)

Depress the Program Button. The next display viewed is the option setting for water hardness after the mixing valve. This option setting is identified by the letter P only. The unit of measure used for this setting is French degrees or P.P.M. This display will only be able to be viewed with US/metric Display Format set to U-2 or U-4 (metric formats).

Example: 10 French degrees of hardness [**P - - - - 10**]

The **UP** and **DOWN Set Buttons** will adjust this value.

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Option Setting Level #1 - Installer Programming (Cont'd.)

3. System Capacity

Depress the Program Button. The next display viewed is the option setting for Capacity. This option setting is identified by the red LED next to the System Capacity label. The unit of measurement used for this setting is kilograms/French degree x m³/grams/German degree x m³. The total capacity of the softener is set with this display. If required, the control will calculate a reserve.

Example: 20,000 grain capacity [**20**]

The **UP** and **DOWN Set Buttons** adjust this value.

4. Regeneration Time

Depress the Program Button. The next display viewed is the option setting for Regeneration Time. It is identified by the red LED next to the Regeneration Time label as well as a non-flashing colon.

Example: 2 o'clock A.M. regeneration time [**2:00**] (P.M. Indicator Off)

The **UP** and **DOWN Set Buttons** will adjust this value.

5. Regeneration Signal Time

Depress the Program Button. The next display viewed is the option setting for Regeneration Signal Time. It is identified by the red LED on next to the label Regeneration Signal. The unit of time used for this display is minutes.

Example: 6.0 minute regeneration signal [**1 - - - 6.0**]

The **UP** and **DOWN Set Buttons** adjust these settings.

Exiting This Option Setting Level

Depress the Program Button once per display until all option setting displays have been viewed.

Installer Notes:

1. Control Calculations - With Delayed Regeneration Timers, the control is designed to automatically calculate its reserve capacity based on daily water usage. There is no need to program in a reserve capacity. The System Capacity Option Setting should be set to the resin bed manufacturer's capacity recommendations for a given amount of salt to be used during regeneration.
2. With Immediate Regeneration Timers, the System Capacity Option Setting should also be set to the resin bed manufacturer's capacity recommendations for a given amount of salt to be used during regeneration.
3. System Capacity and Water Hardness displays will not be able to be viewed or set with non-metered systems or if Volume Override is set.
4. Regeneration Time will not be able to be viewed or set with immediate regeneration timers.
5. Acceptable Voltage Ranges For Reliable Control Operation:
 - A. 24 Vac Timers + or - 10% 50/60Hz
 - B. 120/240 Vac Timers + 10% or - 25% 50/60Hz
 - C. 240 Vac Timers + 10% or - 25% 50/60Hz

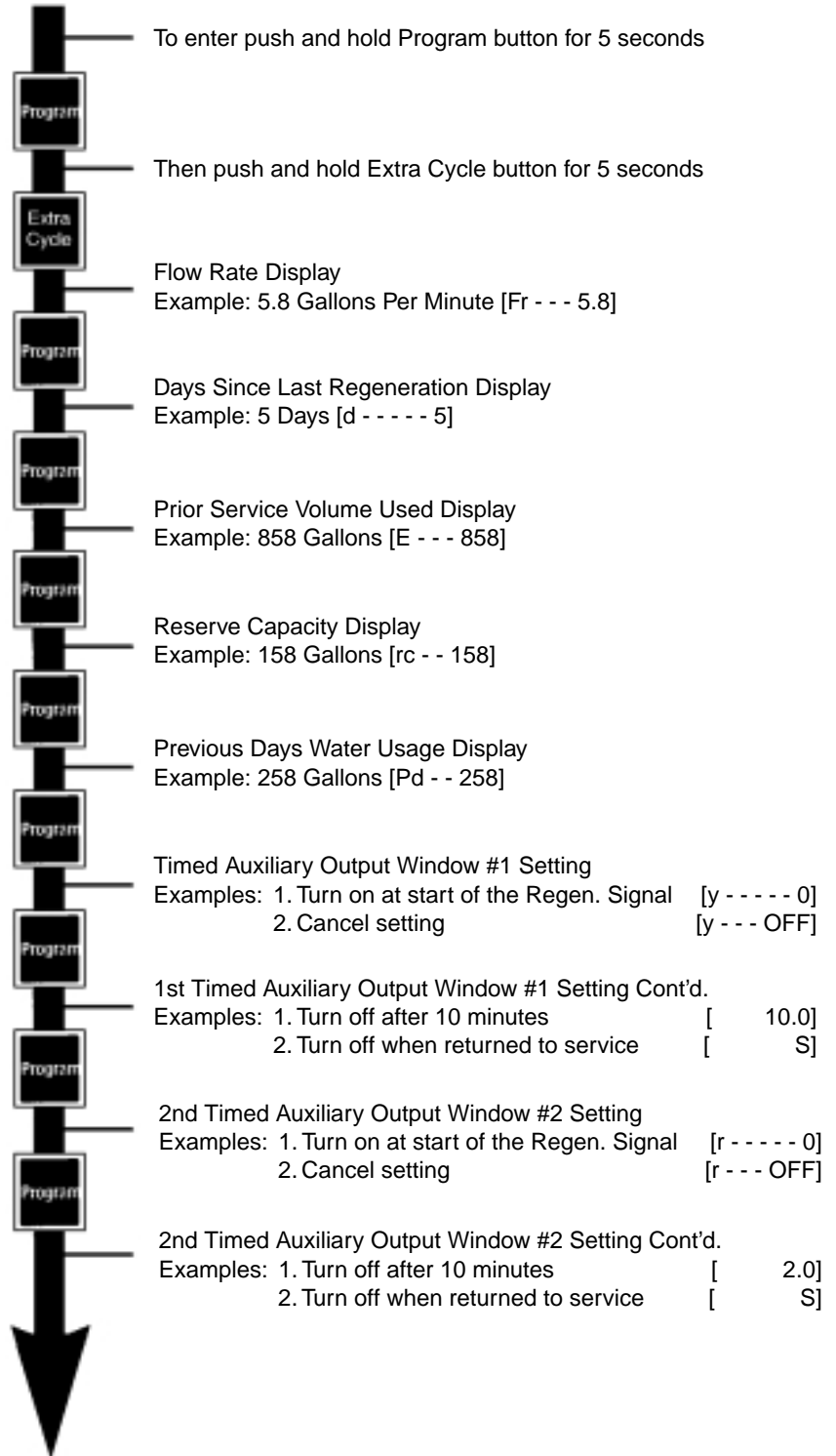
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Option Setting Level #2 Programming Chart

Level #2

Note:

1. Push Program Button Once Per Display.
2. Option settings may be changed by pushing either the Up or Down Arrow Button.
3. Depending on current timer programming certain displays will not be able to be viewed or set.



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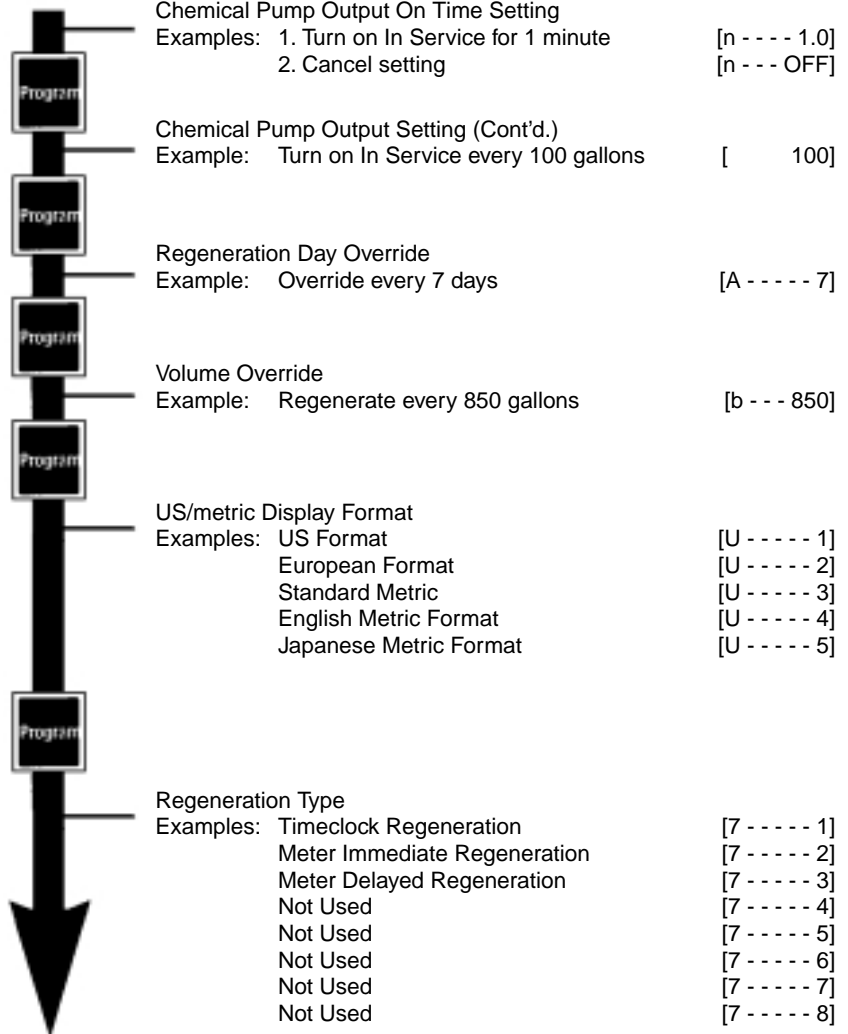
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Option Setting Level #2 Programming Chart (Cont'd.)

Level #2 Continued

Note:

1. Push Program Button Once Per Display.
2. Option settings may be changed by pushing either the Up or Down Arrow Button.
3. Depending on current timer programming certain displays will not be able to be viewed or set.



Push Program Button once per Regeneration Type Display until all required settings have been viewed

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Option Setting Level #2 Programming Chart (Cont'd.)

Level #2 Continued

Note:

1. Push Program Button Once Per Display.
2. Option settings may be changed by pushing either the Up or Down Arrow Button.
3. Depending on current timer programming certain displays will not be able to be viewed or set.



Flow Meter Size
 Examples: Standard 3/8" Flow Meter [F - - - - 0]
 Standard 3/4" Flow Meter [F - - - - 1]
 Standard 1.0" Flow Meter [F - - - - 2]
 Standard 1.5" Flow Meter [F - - - - 3]
 Standard 2.0" Flow Meter [F - - - - 4]
 Standard 3.0" Flow Meter [F - - - - 5]
 Not Typically Used [F - - - - 6]

Mixing Valve Location
 Examples: No Mixing Valve [8 - - - - 1]
 Mixing Valve Before Flow Meter [8 - - - - 2]
 Mixing Valve After Flow Meter [8 - - - - 3]

Note: This display only viewed with metric display formats U2 & U4

System Type
 Examples: Single Remote Meter / Timer Regen. [9 - - - - 4]
 Not Typically Used [9 - - - - 5]
 Not Typically Used [9 - - - - 6]
 Not Typically Used [9 - - - - 7]
 Not Typically Used [9 - - - - 8]
 Not Typically Used [9 - - - - 9]

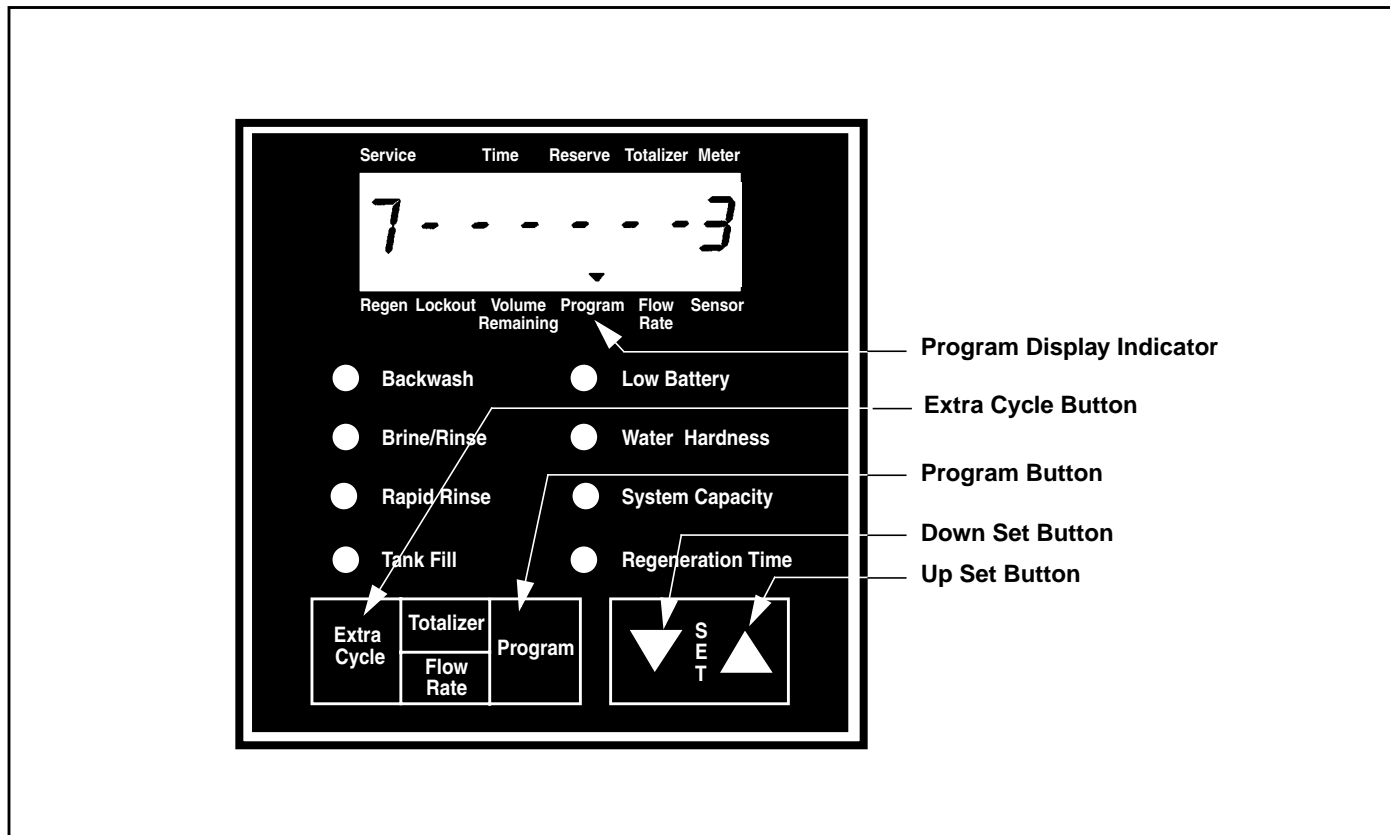
Program Lock
 Examples: Lock Cancelled [PL - - - OFF]
 Lock Active [PL - - - On]

Option Level #2 Is Exited
 Normal Operation is resumed

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Option Setting Level #2 - Softener Mfg. Programming

Setting up the system during manufacturing of the conditioner requires access to the second level of option programming. This level includes the functioning parameters of the softener, related to actual system configuration.



Entering Option Level #2

Depress the Program Button for 5 seconds. The Program Arrow will turn on and the first display viewed is used to set the Inlet Water Hardness. Next, depress the Extra Cycle Button for 5 seconds. Depending on current programming, certain displays or option settings will not be viewed.

1. Flow Rate Display (Fr)

The first display viewed is the current flow rate of treated water through the softener. The unit of measurement used is gallons/liters per minute.

Example: 8.5 Gallons Per Minute [Fr - - - 8.5]

2. Days Since Last Regeneration Display (d)

Depress the Program Button. The next display viewed is not an option setting. This display is used as an aid to the serviceperson in diagnosing a timer malfunction. The number of days since the last regeneration is recorded in this display by the control. This display is identified by the letter d in the first digit.

Example: 4 days [d - - - - 4]

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Option Setting Level #2 - Softener Mfg. Programming (Cont'd.)

3. Prior Service Volume Used Display (E)

Depress the Program Button. The next display viewed is not an option setting. This display is used as an aid to the serviceperson in diagnosing a control malfunction. The amount of water used the last time the softener was in service is recorded in this display by the control. The unit of measurement used is gallons/liters/cubic meters.

Example: 850 Gallons [E - - - 850]

4. Reserve Capacity Display (rc)

Depress the Program Button. The next display viewed is not an option setting. This display is used as an aid to the serviceperson in diagnosing a control malfunction. The calculated reserve capacity (in gallons/liters/cubic meters) for the present day is recorded in this display by the control. This option setting is identified by the letters rc in the first two digits.

Example: 277 gallons [rc - - 277]

5. Previous Days Water Usage Display (Pd)

Depress the Program Button. The next display viewed is not an option setting. This display is used as an aid to the serviceperson in diagnosing a control malfunction. The previous days water usage (in gallons/liters/cubic meters) is recorded in this display by the control. This option setting is identified by the letters Pd in the first two digits.

Example: 200 gallons [Pd - - 200]

6. Timed Auxiliary Output Programming (y) (r) (n)

Depress the Program Button. The next three displays viewed are part of a series of option settings used to program the auxiliary relay output. These displays will not be viewed if the optional relay output is not installed.

The first two settings (**y** and **r**) turn the output on / off **during a regeneration signal only**. Up to two separate signal on / off times may be programmed from the single relay output during a regeneration signal. Depending on the valve system used with this control, the regeneration signal time may be increased from the standard 6.0 minute requirement to accommodate greater Timed Auxiliary Output Activation times. Please consult the factory for suitability.

The third (**n**) turns the output on during Service only, when a set volume of water used has accumulated. This setting will not be viewed on non-metered controls.

When more than one of these settings are used, it will be up to the operator to supply the switching logic necessary to operate two or three separate pieces of equipment at a time from a single relay output.

7. Timed Auxiliary Output Window #1 Setting (y)

This setting is the first to be viewed. The option code **y** is used to identify this setting. This option setting consists of two displays. The first display is used to set the turn on time of the output, referenced to the start of a regen signal. The second display is used to set the turn off time of the output, referenced again to the start of a regen signal. An OFF setting cancels this setting. A set on time with a set off time of S will turn the output off at the start of Service. All settings are in minutes and output timing is synchronized with regeneration signal timing. The Timed Auxiliary Output can not be set to be on longer than the Regeneration Signal Time.

Examples: Turn on output at start of Regen Signal/ [y - - - - 0] (Start Time Display)
Turn off after 10 minutes

[10.0] (Stop Time Display)

Cancel setting [y - - - OFF]

The UP and DOWN Set Buttons adjust these settings.

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Option Setting Level #2 - Softener Mfg. Programming (Cont'd.)

8. Timed Auxiliary Output Window #2 Setting (r)

Depress the Program Button. This setting is the second to be viewed. The option code **r** is used to identify this setting. This option setting consists of two displays. The first display is used to set the turn on time of the output, referenced to the start of a regen signal. The second display is used to set the turn off time of the output, referenced again to the start of a regen signal. An OFF setting cancels this setting. A set on time with a set off time of S will turn the output off at the start of Service. All settings are in minutes and output timing is synchronized with regeneration signal timing. The Timed Auxiliary Output can not be set to be on longer than the Regeneration Signal Time.

Examples: Turn on output 1.5 min. after the start of a regen signal/Turn off when in Service [r - - - -1.5]
[- - - - - 5]
Cancel setting [r - - - OFF]

The **UP** and **DOWN Set Buttons** adjust these settings.

9. Chemical Pump Output (n)

Depress the Program Button. This setting is the third to be viewed. The option code **n** is used to identify this setting. This option setting consists of two displays. The first display is used to set the turn on time (in minutes) of the output. The second display is used to set the volume of water flow at which the output will turn on.

Examples: Turn on output 1.0 min. after every 200 gallons [n - - - - 1.0]
[200]
Activate Output 1 Second after every 200 gallons [n - - - - P] (Pulse Mode)
[200]
Cancel setting [n - - - OFF]

The **UP** and **DOWN Set Buttons** adjust these settings.

10. Regeneration Day Override (A)

Depress the Program Button. The next display viewed is an option setting. This display is used to set the Regeneration Day Override Option Setting. It is identified by the letter A on the first display digit. The Regeneration Day Override Option Setting sets the maximum amount of time (in days) the softener can be in service without a regeneration, regardless of the volume of water used or the lack of a sensor signal. Regeneration begins at the set regeneration time. An OFF setting will cancel this option with all regeneration types except Timeclock Regeneration.

Examples: Override every 7 days [A - - - - 7]
Cancel setting [A - - - OFF]

The **UP** and **DOWN Set Buttons** adjust this value.

11. Volume Override (b)

Depress the Program Button. The next display viewed is an option setting. This display is used to set the Volume Override Option Setting. The Volume Override Option Setting is used to set the maximum amount of water, in gallons, that can be used before a regeneration cycle is called for. When this feature is used with delayed regeneration systems, it will be up to the programmer to determine a reserve capacity. This option is typically used to bypass standard reserve or capacity calculations made by the control. The control will no longer keep track of the reserve capacity.

Examples: Override every 700 gallons - [b - - - 700]
Override cancelled - [b - - - OFF]

The **UP** and **DOWN Set Buttons** adjust this value.

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Option Setting Level #2 - Softener Mfg. Programming (Cont'd.)

12. US/Metric Display Format (U)

Depress the Program Button. The next display viewed is an option setting. This display is used to set the desired display format. There are five possible settings:

The US Format uses gallons for volume and gallons per minute for flow rate related data / displays with a 12 hour timekeeping format. Water Hardness units will be grains per gallon and Capacity in kilograins. Mixing valve related option settings P and 8 as well as Regeneration Types #7 and #8 will not be displayed.

Example - [U - - - - - 1]

The European Metric Format uses liters for volume and liters per minute for flow rate related data / displays with a 24 hour timekeeping format. Water Hardness units will be French Degrees and Capacity in French Degree x m³.

Example - [U - - - - - 2]

The Standard Metric Format uses liters for volume and liters per minute for flow rate related data / displays with a 24 hour timekeeping format. Water Hardness units will be French Degrees and Capacity in French Degree x m³. Mixing valve related option settings P and 8 as well as Regeneration Types #7 and #8 will not be displayed.

Example - [U - - - - - 3]

The Cubic Meter Metric Format uses m³ for volume and liters per minute for flow rate related data / displays with a 24 hour timekeeping format. Water Hardness units will be P.P.M. (mg/liter or g/m³) and Capacity in grams. Regeneration Types #7 and #8 will not be displayed.

Example - [U - - - - - 4]

The Japanese Metric Format uses liters for volume and liters per minute for flow rate related data / displays with a 24 hour timekeeping format. Water Hardness units will be German Degrees and Capacity in German Degree x m³. Mixing valve related option settings P and 8 as well as Regeneration Types #7 and #8 will not be displayed.

Example - [U - - - - - 5]

The **UP** and **DOWN Set Buttons** adjust this value.

13. Regeneration Type (7)

Depress the Program Button. The next display viewed is an option setting. This display is used to set the Regeneration Type. There are eight possible settings:

Timeclock Delayed. The control will determine that regeneration is required when the set Regeneration Time has been reached. Example - [7 - - - - - 1]

Meter Immediate. The control will determine that regeneration is required when the available volume of softened water drops to or below zero. Regeneration to begin immediately.

Example - [7 - - - - - 2]

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Option Setting Level #2 - Softener Mfg. Programming (Cont'd.)

Meter Delayed. The control will determine that a regeneration is required when the available volume of softened water drops to or below the reserve capacity. Regeneration is to begin immediately at the set Regeneration Time only when service flow has not been detected. Regeneration is to be delayed, in two 10 minute sections, for up to an additional 20 minutes, with service flow. Regeneration then to begin immediately. There will not be a delay if the Volume Remaining is zero.

Example - [7 - - - - - 3]

Example - [7 - - - - - 5] Not Typically Used

Example - [7 - - - - - 6] Not Typically Used

Example - [7 - - - - - 7] Not Used

Example - [7 - - - - - 8] Not Used

The **UP** and **DOWN Set Buttons** adjust this value.

14. Flow Meter Size (F)

Depress the Program Button. The next display viewed is an option setting. This display is used to set the Flow Meter Size. This setting will not be viewed on non-metered systems. There are six settings available:

- Examples: [F - - - - - 0] Standard 3/8" Flow Meter
[F - - - - - 1] Standard 3/4" Flow Meter
[F - - - - - 2] Standard 1.0" Flow Meter
[F - - - - - 3] Standard 1.5" Flow Meter
[F - - - - - 4] Standard 2.0" Flow Meter
[F - - - - - 5] Standard 3.0" Flow Meter
[F - - - - - 6] Non-Standard Flow Meter
[F - 6 -1.25] 1.25 Pulses Per Gallon/Liter

The **UP** and **DOWN Set Buttons** adjust this value.

15. Mixing Valve Location (8)

Depress the Program Button. This option is used to indicate where the mixing valve is located. There are three different options available:

- Examples: [8 - - - - - 1] No Mixing Valve
[8 - - - - - 2] Not Typically Used
[8 - - - - - 3] Not Typically Used

The **UP** and **DOWN Set Buttons** adjust this value.

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Option Setting Level #2 - Softener Mfg. Programming (Cont'd.)

16. System Type (9)

Depress the Program Button. The next display viewed is an option setting. This display is used to set the type of system the valve is operating in. There are four settings available:

Standard Remote Meter or Timer Regeneration - When this option is selected, the control will operate as a single remote meter/timer in conjunction with a single or multivalve system. The control will initiate a regeneration whenever needed. When a Lockout Signal is received, the control will delay the start of regeneration cycle until that signal is removed.

Examples: **[9 - - - - 4]** Standard Remote Meter Operation

[9 - - - - 5] Option Typically Not Used

[9 - - - - 6] Option Typically Not Used

[9 - - - - 7] Option Typically Not Used

[9 - - - - 8] Option Typically Not Used

[9 - - - - 9] Option Typically Not Used

The **UP** and **DOWN Set Buttons** adjust this value.

17. Program Lock (PL)

Depress the Program Button. The next display viewed is an option setting. This display is used to prevent certain programming displays from being viewed or set. There are two settings available:

Examples- **[PL - - - OFF]** Protection Cancelled

[PL- - - On] Protection Active

Settings Able To Be Reset With Lock Active -

Water Hardness
Water Hardness After Mixing Valve
Regeneration Time
Time Of Day

Displays Able To Be Viewed With Lock Active -

Flow Rate Display
Days Since Regeneration Display
Prior Service Volume Used Display
Reserve Capacity Display
Previous Days Water Usage Display

Unlocking Programming -

The only way to deactivate this feature is to push and hold the Program Button for 25 seconds. This procedure will unlock the control and permit all valid program settings to be viewed and reset as needed.

The **UP** and **DOWN Set Buttons** adjust this value.

Exiting This Option Setting Level

Push the Program Button once per display until all have been viewed.

Resetting Permanent Programming Memory -

Push and hold the Program Button for about 50 seconds. This procedure will reset all displays and settings to default values. Control programming will then have to be reset as necessary.

