INSTRUCTIONS
Programming the CUC2
Commercial Universal Control

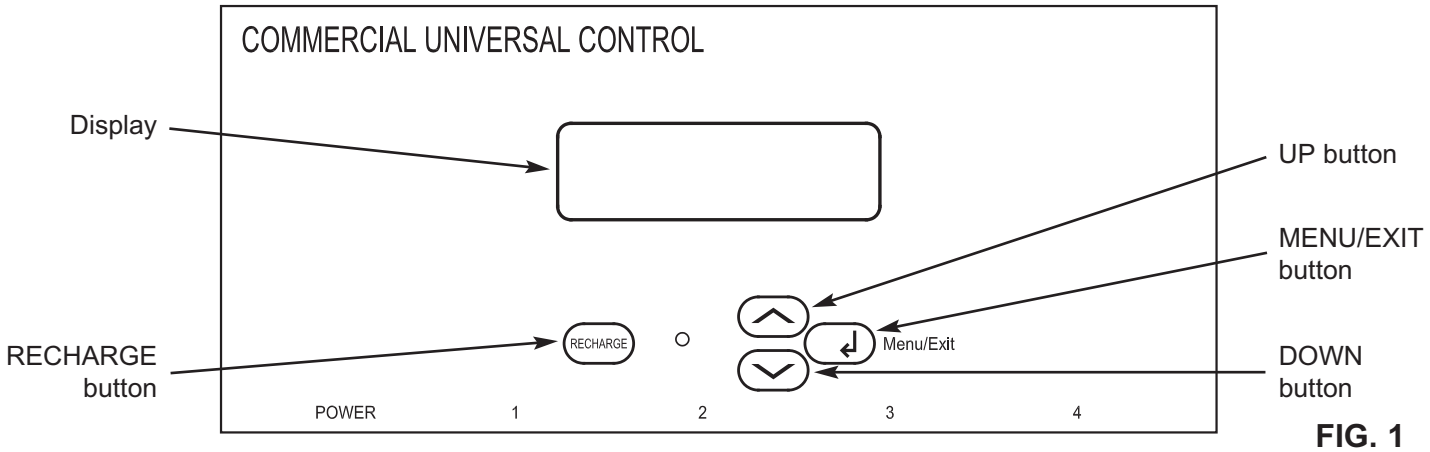

FIG. 1

The EcoWater Systems CUC2 is a menu-driven electronic controller with a dot matrix display. The UP (▲) and DOWN (▼) buttons move the cursor (>) up and down the menu choices. The MENU/EXIT (↵) button enters the value selected and returns the display back a level. The controller will return to the normal operating screen after 4 minutes, if left in a menu and no selection has been made.

A "beeper" sounds when controller buttons are pressed. One beep signals a change in the faceplate display. Repeated beeping means the controller will not accept a change from the button you have pressed, telling you to use another button.

```
--------------------
   Version : C5.0
```

FIG. 2

When the transformer is first plugged in, a screen is displayed for approximately 8 seconds showing the software version, then the following screens are displayed to program the controller.

```
>English
 Español
 Français
↑↓ Change      ↵ Exit
```

FIG. 3

1. SET LANGUAGE: Using the UP (▲) or DOWN (▼) buttons, move the cursor (>) next to the preferred language. Press the MENU/EXIT (↵) button to select and advance to the next setting.

```
Set English/Metric:

English
↑↓ Change      ↵ Exit
```

FIG. 4

2. SET ENGLISH/METRIC: Using the UP (▲) or DOWN (▼) buttons, set the controller to measure in either English or Metric units. Press the MENU/EXIT (↵) button to select and advance to the next setting.

```
Set 12/24 Hour
Clock:
12 Hour
↑↓ Change      ↵ Exit
```

FIG. 5

3. 12/24 HOUR CLOCK: Using the UP (▲) or DOWN (▼) buttons, set the time format to either a 12 or 24 hour clock. Press the MENU/EXIT (↵) button to select and advance to the next setting.

```
Set Valve
Type:
One Inch Single Disk
↑↓ Change      ↵ Next
```

FIG. 6

4. SET VALVE TYPE: Use the UP (▲) or DOWN (▼) buttons to display the valve type (1 inch single disk, 1 inch double disk, 2 inch upflow, etc.). When the correct valve type for the application is shown, press the MENU/EXIT (↵) button to select and advance to the next setting.

EcoWater Systems LLC
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Part No. 7363491 (Rev. A 7/24/17)

FIG. 7

5. SET NUMBER OF VALVES: If one softener or filter is installed, set Simplex in the display using the UP (▲) or DOWN (▼) buttons, then press the MENU/EXIT (↵) button to select and advance to the next setting. If multiple units are installed, set Duplex, Triplex or Quadplex, as appropriate for the installation.

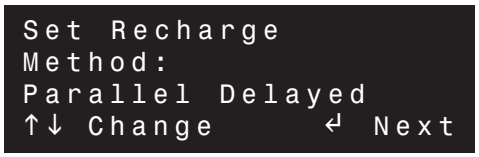

FIG. 8

6. SET RECHARGE METHOD (for multiple tank applications only): There are four choices for recharge method:

- When **Peak Flow** (see step 17) is selected, each tank recharges as capacity is used.
- **Alt. Immediate** initiates an immediate recharge on a tank as capacity is used. When that tank is finished recharging it is put into standby mode.
- **Parallel Immediate** recharges each tank in sequence immediately as capacity is used.
- **Parallel Delayed** recharges each tank in sequence at the scheduled recharge time.

Using the UP (▲) or DOWN (▼) buttons, select recharge method and press the MENU/EXIT (↵) button to select and advance to the next setting.

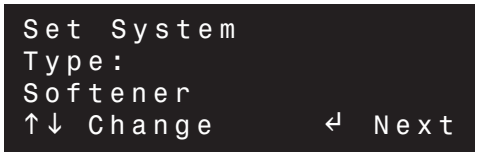

FIG. 9

7. SET SYSTEM TYPE: Using the UP (▲) or DOWN (▼) buttons, select either softener or filter system type, then press the MENU/EXIT (↵) button to select and advance to the next setting.

If filter is selected, go to Step 21 on Page 4, for further settings.

SOFTENERS ONLY (see Page 4 for filters)

FIG. 10

8. SET RESIN QUANTITY: Using the UP (▲) or DOWN (▼) buttons, select the amount of resin, in increments of .5 cubic feet (per tank), that will be used in the system. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 11

9. SET REFILL RATE: Using the UP (▲) or DOWN (▼) buttons, select the refill rate to the suggested gallons per minute flow rate table in your manual. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 12

10. SET EFFICIENCY MODE: Using the UP (▲) or DOWN (▼) buttons, select the salt efficiency mode:

- **Salt Efficient** will provide a salt efficiency of 4,000 grains or higher.
- **Boiler Option** will have 1 ppm soft water bleed or less.
- **Auto Adjusting** adjusts itself among 5 operating capacities, based on frequency of regenerations.
- **Actual Dose** allows the user to set actual salt dose in lbs/cu. ft. If Actual Dose is selected, the controller will continue to a Set Salt Dose screen (Fig. 13).

FIG. 13

Press the MENU/EXIT (↵) button to select and advance to the next setting.

NOTE: If Auto Adjusting is chosen, brine times will still need to be selected in Step 12.

SOFTENERS ONLY (continued)

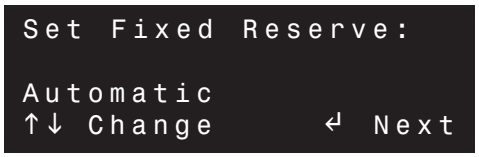

FIG. 14

11. SET FIXED RESERVE (Simplex or Parallel Delayed Systems only; only if Actual Dose is selected in Step 10): If a minimum capacity must be available on any given day, use the UP (▲) or DOWN (▼) buttons to select the percentage of operating capacity required. See the table in your manual to determine actual capacity available. If **Automatic** is selected, the fixed reserve percentage will vary, based on a weekly average of capacity used. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 15

12. SET BRINE TIME: Using the UP (▲) or DOWN (▼) buttons, select the brine time to the suggested minutes from the table in your manual. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 16

13. SET BACKWASH TIME: Using the UP (▲) or DOWN (▼) buttons, select the backwash time to the suggested minutes from the table in your manual. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 17

14. SET FAST RINSE TIME: Using the UP (▲) or DOWN (▼) buttons, select the fast rinse time to the suggested minutes from the table in your manual. Press the MENU/EXIT (↵) button to select and advance to the next setting.

SOFTENERS ONLY (continued)

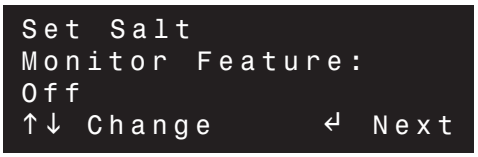

FIG. 18

15. SET SALT MONITOR FEATURE: Using the UP (▲) or DOWN (▼) buttons, display ON or OFF. If ON is selected, you must also enter the diameter of the brine tank. If this is a multiple valve application, and ON is selected, the number of Valves Per Brine Tank must be entered. Press the MENU/EXIT (↵) button to select and advance to the next setting.

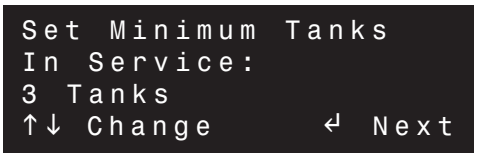

FIG. 19

16. SET MINIMUM TANKS IN SERVICE (Triplex and Quadplex units only): Using the UP (▲) or DOWN (▼) buttons, display the minimum number of tanks that are needed to be in service at a time. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 20

17. SET PEAK FLOW TRIP POINT: If Peak Flow was selected as the method of recharge in Step 6, this option is activated. Using the UP (▲) or DOWN (▼) buttons, select the flow rate (1.0 gallons per minute minimum to 750 gpm maximum) at which you will **temporarily** require another unit to come into service. The unit will come online when the flow rate reaches this trip point. The unit will return to standby when a minimum of 30 minutes has elapsed **and** the flow rate falls below the trip point. Press the MENU/EXIT (↵) button to select and advance to the next screen.

FIG. 21

After these initial settings are completed, the display will show that the controller is being reset. The display will then show a screen with the current settings before moving to the next screen and required setting.

continued on the next page

SOFTENERS ONLY (continued)

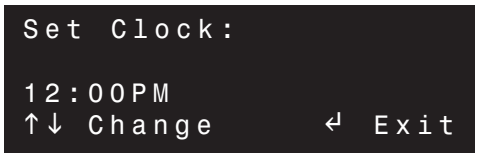

FIG. 22

18. SET CLOCK: Using the UP (▲) or DOWN (▼) buttons, set the present time, making sure that AM or PM is correct. By pressing and holding either the UP (▲) or DOWN (▼) button, the display will scroll at faster increments. Press the MENU/EXIT (↵) button to select and advance to the next setting.

NOTE: The clock will need to be reset only if power is out for a long time.

FIG. 23

19. SET HARDNESS: Using the UP (▲) or DOWN (▼) buttons, set the water hardness level, from 1 to 160 grains per gallon or 10 to 2740 PPM (parts per million). By pressing and holding either the UP (▲) or DOWN (▼) button, the display will scroll at faster increments. Press the MENU/EXIT (↵) button to select and advance to the next setting.

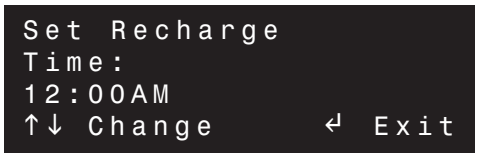

FIG. 24

20. SET RECHARGE TIME: This screen is shown only for a single valve system or if Parallel Delayed recharge setting has been selected. Using the UP (▲) or DOWN (▼) buttons, set the desired time for regenerations to start. Press the MENU/EXIT (↵) button to select and advance to the next screen.

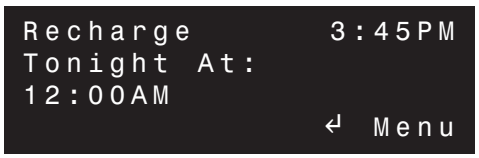

FIG. 25

The display returns to the normal he normal operating screen when programming has been completed.

The initial programming steps for softeners are complete.

FILTERS ONLY

FIG. 26

21. SET FILTER CAPACITY: Using the UP (▲) or DOWN (▼) buttons, select the number of gallons, in 1000 gallon increments, at which you want the filter to backwash. If **OFF** is selected, the filter will not backwash automatically, and it must be initiated manually. Press the MENU/EXIT (↵) button to select and advance to the next setting.

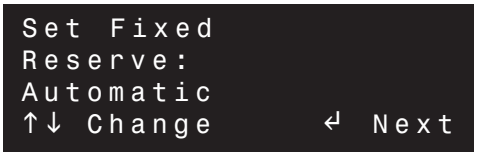

FIG. 27

22. SET FIXED RESERVE (Simplex or Parallel Delayed systems only): If a minimum capacity must be available on any given day, use the UP (▲) or DOWN (▼) buttons to select the percentage of filter operating capacity required. If **Automatic** is selected, the fixed reserve percentage varies, based on a weekly average of capacity used. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 28

23. SET BACKWASH TIME: Using the UP (▲) or DOWN (▼) buttons, select backwash time from 1 minute minimum to 30 minutes maximum. The minimum recommended time for filters is about 15 minutes. Increase the time as needed to thoroughly clean the filter bed. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 29

24. SET FAST RINSE TIME: Using the UP (▲) or DOWN (▼) buttons, select fast rinse time from 1 minute minimum to 30 minutes maximum. The factory setting of 5 minutes is usually adequate. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FILTERS ONLY (continued)

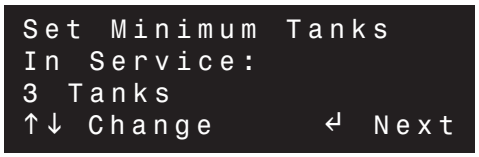

FIG. 30

25. SET MINIMUM TANKS IN SERVICE (Triplex and Quadplex units only): Using the UP (▲) or DOWN (▼) buttons, display the minimum number of tanks that are needed to be in service at a time. Press the MENU/EXIT (↵) button to select and advance to the next setting.

FIG. 31

26. SET PEAK FLOW TRIP POINT: If Peak Flow was selected as the method of recharge in Step 6, this option is activated. Using the UP (▲) or DOWN (▼) buttons, select the flow rate (1.0 gallons per minute minimum to 750 gpm maximum) at which you will **temporarily** require another unit to come into service. The unit will come online when the flow rate reaches this trip point. The unit will return to standby when a minimum of 30 minutes has elapsed **and** the flow rate falls below the trip point. Press the MENU/EXIT (↵) button to select and advance to the next screen.

FIG. 32

After these initial settings are completed, the display will show that the controller is being reset. The display will then show a screen with the current settings before moving to the next screen and required setting.

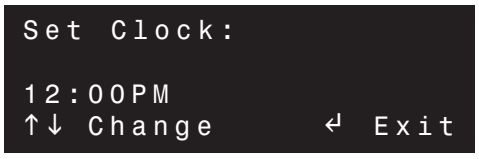

FIG. 33

27. SET CLOCK: Using the UP (▲) or DOWN (▼) buttons, set the present time, making sure that AM or PM is correct. By pressing and holding either the UP (▲) or DOWN (▼) button, the display will scroll at faster increments. Press the MENU/EXIT (↵) button to select and advance to the next setting.

NOTE: The clock will need to be reset only if power is out for a long time.

FILTERS ONLY (continued)

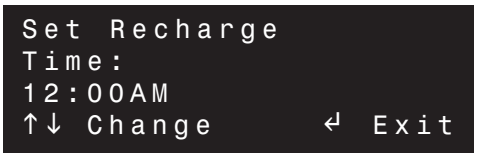

FIG. 34

28. SET RECHARGE TIME (Simplex or Parallel Delayed systems only): Using the UP (▲) or DOWN (▼) buttons, set the desired time for regenerations to start. Press the MENU/EXIT (↵) button to select and advance to the next screen.

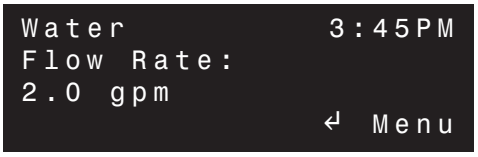

FIG. 35

The display returns to the normal he normal operating screen when programming has been completed.

The initial programming steps for filters are complete.

RESETTING TIME

To set the time if incorrect, or if the display is flashing after a long power outage (when power is lost, all other settings are maintained by the computer and do not require setting):

1. Press the MENU/EXIT (↵) button to enter the Primary Menu. Using the DOWN (▼) button, move the cursor (>) to **Set Clock** and press (↵) to enter this menu.

FIG. 36

2. Using the UP (▲) or DOWN (▼) buttons, set the present time, making sure that AM or PM is correct. By pressing and holding either the UP (▲) or DOWN (▼) button, the display will scroll at faster increments.

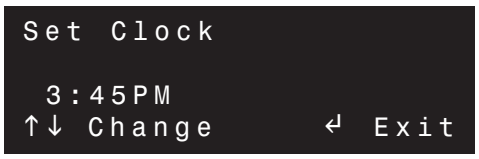

FIG. 37

3. When the correct time shows, press the MENU/EXIT (↵) button to select and return to the primary menu. Using the UP (▲) button, move the cursor (>) to **EXIT** and press the MENU/EXIT (↵) button to return to the normal operating screen.

FIG. 38

RECHARGE

By pressing the RECHARGE button, the controller enters into the recharge menu. The options are **Online/Offline**, **Recharge Now** or **Recharge Tonight**. Move the cursor (>) next to selection and press the MENU/EXIT (↵) button.

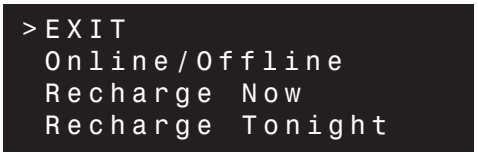

FIG. 39

The **Online/Offline** menu allows a specific tank to be put online or taken offline. Move the cursor (>) next to the specific tank and press the MENU/EXIT (↵) button. This will toggle between “Online” and “Offline”.

In the **Recharge Now** menu, you can select one or all tanks to start an immediate recharge. Move the cursor (>) next to the specific tank and press the MENU/EXIT (↵) button. This will toggle between “Service” and “Scheduled”.

In the **Recharge Tonight** menu, you can schedule a recharge or cancel a recharge tonight. Move the cursor (>) next to the specific tank and press the MENU/EXIT (↵) button. This will toggle between “Service” and “Tonight”.

PRIMARY MENU

The following is a description of the features and options in the Primary Menu. To enter the Primary Menu, press the MENU/EXIT (↵) button.

FIG. 40

Using the UP (▲) or DOWN (▼) buttons, move the cursor to the feature or option that you would like to change and press the MENU/EXIT (↵) button to enter screen. To return to the normal operating screen, move the cursor (>) to EXIT and press the MENU/EXIT (↵) button.

FIG. 41

SET SALT LEVEL (Softeners only): This screen only appears if the "Salt Monitor" feature is set to ON (Step 15). Using the UP (▲) or DOWN (▼) buttons, set the salt level number from 0 to 10. Or, pressing the DOWN (▼) button past 0 will toggle "Salt Monitor" to OFF. This number corresponds with the numbersl on the brinewell that the salt level is closest to. Press the MENU/EXIT (↵) button to select and return to the Primary Menu.

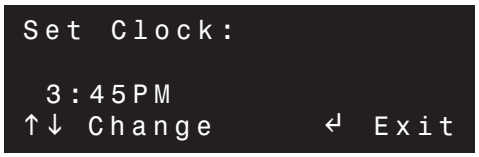

FIG. 42

SET CLOCK: Use the UP (▲) or DOWN (▼) buttons to set the present time, making sure that AM or PM is correct. By pressing and holding either the UP (▲) or DOWN (▼) button, the display will scroll at faster increments. Press the MENU/EXIT (↵) button to select and return to the Primary Menu.

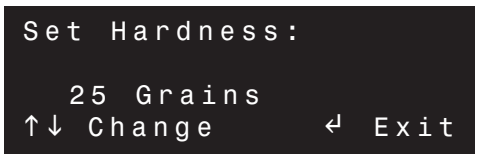

FIG. 43

SET HARDNESS (Softeners only): Using the UP (▲) or DOWN (▼) buttons, set the water hardness level, from 1 to 160 grains per gallon or 10 to 2740 PPM (parts per million). By pressing and holding either the UP (▲) or DOWN (▼) button, the display will scroll at faster increments. Press the MENU/EXIT (↵) button to select and return to the Primary Menu.

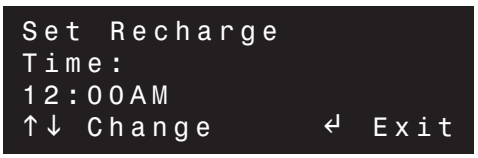

FIG. 44

SET RECHARGE TIME (Simplex or Parallel Delayed systems only): Using the UP (▲) or DOWN (▼) buttons, set the desired time for regenerations to start. Press the MENU/EXIT (↵) button to select and return to the Primary Menu.

NOTE: If a softener and filter are both being used, no more than one unit should backwash at a time.

FIG. 45

FLOW RATE: This screen is for viewing the flow rate, in GPM or LPM, through each individual tank, depending on the configuration (simplex, duplex, etc.). Press the MENU/EXIT (↵) button to return to the Primary Menu.

FIG. 46

WATER USED TODAY: This screen displays the number of gallons or liters that have been used in each individual tank per 24 hour time period, depending on the configuration (simplex, duplex, etc.). Press the MENU/EXIT (↵) button to return to the Primary Menu.

FIG. 47

AVERAGE DAILY WATER USE: This screen displays the **average** number of gallons or liters that have been used in a 24 hour time period. Press the MENU/EXIT (↵) button to return to the Primary Menu.

continued on the next page

PRIMARY MENU (continued)

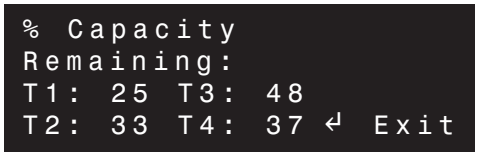

FIG. 48

CAPACITY REMAINING: This screen displays the percent capacity remaining in each individual tank, depending on the configuration (simplex, duplex, etc.). Press the MENU/EXIT (↵) button to return to the Primary Menu.

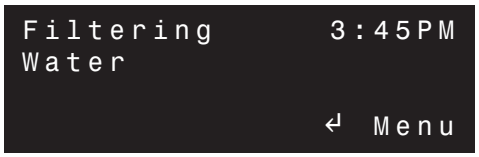

FIG. 49

NOTE: “Capacity Remaining” is not available for filters that have “Filter Capacity” set to OFF (Step 21). Screen will show “Filtering Water”.

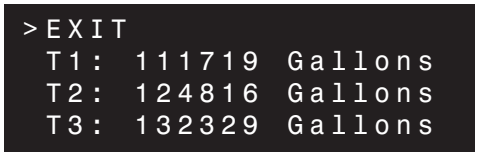

FIG. 50

WATER TOTALIZER: This screen displays the number of gallons or liters that have flowed through each individual tank since the last time the totalizer was reset. To reset (zero) the total for a particular tank, move the cursor (>) next to the tank number and press the MENU/EXIT (↵) button. Move the cursor (>) to EXIT and press the MENU/EXIT (↵) button to return to the Primary Menu.

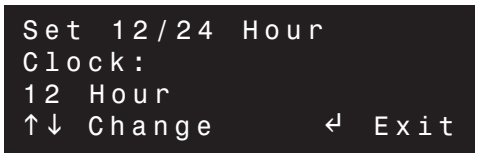

FIG. 51

SET 12/24 HOUR CLOCK: Using the UP (▲) or DOWN (▼) buttons, set the time format to either a 12 or 24 hour clock. Press the MENU/EXIT (↵) button to return to the Primary Menu.

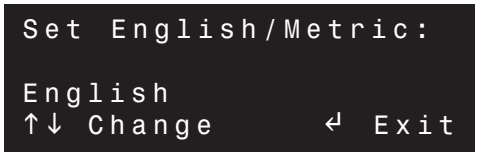

FIG. 52

SET ENGLISH/METRIC: Using the UP (▲) or DOWN (▼) buttons, set the controller to measure in either English or Metric units. Press the MENU/EXIT (↵) button to return to the Primary Menu.

FIG. 53

SET ROLLING SCREEN: Using the UP (▲) or DOWN (▼) buttons, set this feature ON or OFF. If set to ON, the normal operating screen will scroll from “Soft Water Available”, which shows the capacity remaining in each tank, to “Water Flow Rate” and “Salt Level is Low” (if applicable). If there is a recharge scheduled, “Recharge Tonight” will also be displayed. Press the MENU/EXIT (↵) button to return to the Primary Menu.

ADVANCED / SERVICE MENU

By entering these menus, a warning screen will first be displayed. Only technicians or knowledgeable users should access these menus.

The following is a description of the features and options in the Advanced / Service Menu. To enter the Advanced / Service Menu, press the MENU/EXIT (↵) button. Using the UP (▲) or DOWN (▼) buttons, move the cursor to **Advanced / Service** and press the MENU/EXIT (↵) button.

```
  Set English/Metric
  Set Rolling Screen
>Advanced/Service
  EXIT
```

FIG. 54

```
WARNING: Changes
could affect unit
performance.
↑ Continue   ↲ Cancel
```

FIG. 55

The warning screen will show, press the UP (▲) button to continue. To return to the Primary Menu, move the cursor (>) to EXIT and press the MENU/EXIT (↵) button.

```
>English
 Español
 Français
↑↓ Change      ↲ Exit
```

FIG. 56

SET LANGUAGE: Using the UP (▲) or DOWN (▼) buttons, move the cursor (>) next to the preferred language. The choices are: English, Spanish, French, German, Italian and Dutch. Press the MENU/EXIT (↵) button to select and return to the Advanced / Service Menu.

TO SET THE SYSTEM TO YOUR NATIVE LANGUAGE IF ANOTHER LANGUAGE IS DISPLAYED:

From the run status (time of day) screen, press the MENU/EXIT (↵) button. Scroll to the bottom line of the menu. Press UP (▲) once, then press MENU/EXIT (↵). Press UP (▲) once. Press DOWN (▼) once, then press MENU/EXIT (↵). Scroll to your native language, then press MENU/EXIT (↵).

```
 EXIT
>Tank 1: Online
 Tank 2: Online
 Tank 3: Online
```

FIG. 57

DIAGNOSTICS: This screen is for viewing only and will show any error codes plus information on each individual tank, depending on the configuration (simplex, duplex, etc.). Move the cursor (>) next to the specific tank and press the MENU/EXIT (↵) button.

```
12:34:56PM Error0   ↑
Pos: Service 0:00
Req Pos: Service
Motor:Off Sw:Open   ↓
```

FIG. 58

Press the RECHARGE button and the valve will step through each cycle of the valve. Use the UP (▲) or DOWN (▼) buttons to view all lines of the screen. Press the MENU/EXIT (↵) button to return to the diagnostics screen, then press the MENU/EXIT (↵) button again to return to the Advanced / Service Menu.

```
Set Low Salt
Alert Level:
2
↑↓ Change      ↲ Exit
```

FIG. 59

SET LOW SALT ALERT (Softeners only): Use the UP (▲) or DOWN (▼) buttons to change the Alert Level on a scale of 0 to 4, corresponding to the numbers on the brinewell. When the salt level falls below this level, the controller will signal that salt needs to be added to the brine tank. Press the MENU/EXIT (↵) button to select and return to the Advanced / Service Menu.

```
Set Max Days Between
Recharges:
Automatic
↑↓ Change      ↲ Exit
```

FIG. 60

SET MAX DAYS BETWEEN RECHARGES: Use the UP (▲) or DOWN (▼) buttons to change Max Days Between Recharges. If Automatic is selected, the electronic controller will determine when to recharge, based on water usage. If 1 to 99 is selected, the unit will never go past that number of days set for a recharge, but could recharge before. Press the MENU/EXIT (↵) button to select and return to the Advanced / Service Menu.

continued on the next page

ADVANCED / SERVICE MENU (continued)

FIG. 61

SET 97% FEATURE (Simplex or Parallel Delayed systems only): Use the UP (▲) or DOWN (▼) buttons to set either OFF or ON. If ON is selected, the unit will automatically recharge when 97% of capacity has been used, at any time of the day. Press the MENU/EXIT (↵) button to select and return to the Advanced / Service Menu.

FIG. 62

SET CHLORINE / BYPASS: This feature can be used to operate external equipment, such as a chlorine generator, with a 24V DC signal from the auxiliary output. Use the UP (▲) or DOWN (▼) buttons to set to Bypass (on during the entire recharge cycle) or Chlorine (on during Brining only). Press the MENU/EXIT (↵) button to select and return to the Advanced / Service Menu.

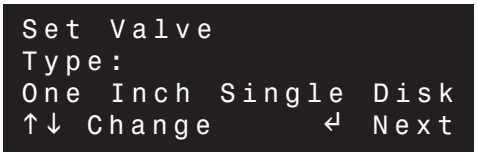

FIG. 63

VALVE CONFIGURATION: This option allows you to reprogram the controller. After all valve configuration selections have been made, all other settings (clock, water hardness, etc.) will need to be reset.

NOTE: The controller will also reset all counts back to zero (number of recharges, etc.), except for the number of days in service.

LOCKOUT FEATURE

This feature is available to prevent unauthorized modification of parameters that affect performance. The unit is shipped from the factory with the lockout feature off. After programming is complete, the lockout feature can be turned on to prevent changes to the following:

- **Hardness**
- **Recharge start time**
- **12/24 hour time format**
- **English/metric units**
- **Rolling screens (on/off)**
- **Language**
- **Salt level trip point**
- **Max days between recharges**
- **97% feature (on/off)**
- **Chlorine/bypass**
- **Valve configuration**
- **Water totalizer (reset to 0)**

To turn on the lockout feature:

From any status screen, press the MENU/EXIT (↵) button to display the Primary Menu. Using the DOWN (▼) button, move the cursor to **Advanced / Service** and press the MENU/EXIT (↵) button.

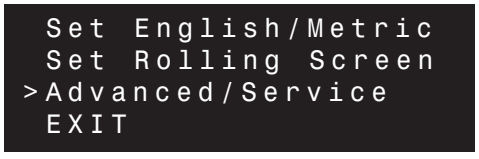

FIG. 64

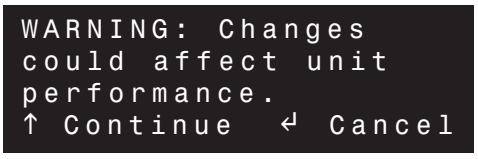

FIG. 65

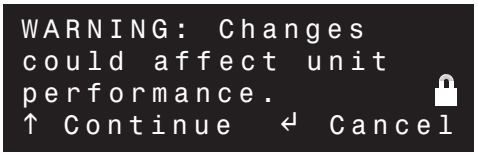

FIG. 66

The warning screen will show. Press the RECHARGE button to toggle the padlock icon. Press the MENU/EXIT (↵) button to select and return to the Primary Menu.

FIG. 67

While the lockout feature is on, a padlock icon will appear instead of the usual arrow (>) in front of locked items in the Primary and Advanced/Service menus.

To turn off the lockout feature:

Repeat the procedure just described. Pressing the RECHARGE button while in the warning screen will toggle on/off the lockout feature.

AUTOMATIC ELECTRONIC DIAGNOSTICS

The electronic controller has a self-diagnostic function for the electrical system (except input power and water meter). The controller monitors electronic components and circuits for correct operation. If a malfunction occurs, an error code appears in the display.

FIG. 68

The troubleshooting chart in your manual shows the error codes that could appear, and the possible reasons for each code.

While an error code appears in the display, the tank is taken offline and either the RECHARGE or MENU/EXIT (↵) buttons can be used. The MENU/EXIT (↵) button remains operational so the service person can perform the Manual Electronic Diagnostics to further isolate the problem, and check the water meter.

If RECHARGE is pressed, the display will show the diagnostics screen and cycle the valve through all positions to try to correct the error. After it is done retrying, the display returns to the run screen (either showing error code again or normal run screens).

If the controller successfully fixes the problem in the diagnostics display, the unit automatically is placed back online. There would be no need to go into the online/offline screen to put the unit back online.

MANUAL ELECTRONIC DIAGNOSTICS

1. Do the initial checks shown in your manual first.

2. From the controller's **Advanced / Service** menu, enter the **Diagnostics** screen (See page 9), select a specific tank and, using the DOWN (▼) button, view the turbine information.

FIG. 69

The 3 digits after "Trbn:" indicate water meter operation as follows:

000 (steady) = Conditioned water not in use. No flow through the meter.

Open a nearby conditioned water faucet.

000 to 140* (continual) = Repeats for each gallon of water passing through the meter.

* 140 for Single Disk Valve, 151 for Dual Disk Valve, 45 for 2" Valve

If you don't get a reading in the display, check the turbine connection to the electronic box. If the connection is okay and good contact is made, pull the sensor from the valve outlet port. Pass a small magnet back and forth in front of the sensor. You should get a reading in the display. If you get a reading, unhook the in and out plumbing and check the turbine for binding.

NOTE: The position switch is closed when the plunger is depressed, open when extended.

MANUAL ADVANCE REGENERATION CHECK

This check verifies proper operation of the gear-motor, regeneration flow rates, and other controller functions. Always make the initial checks, and the manual initiated diagnostics first.

NOTE: A steady time (not flashing) must show in the display.

In this procedure you will use the RECHARGE button to manually advance the valve into each position and check the various valve cycles.

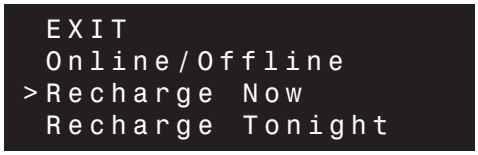

FIG. 70

FIG. 71

1. Press the RECHARGE button to enter the recharge menu, move the cursor (>) to Recharge Now and press the MENU/EXIT (↵) button.

2. Move the cursor (>) to the tank you wish to check.

3. Press the RECHARGE button to advance the valve through each position in the recharge sequence.

FILL: Remove the brinewell cover and, using a flashlight, observe fill water entering the tank. If water does not enter the tank, look for an obstructed nozzle and venturi, fill flow control, screen(s) or brine tubing.

CAUTION: Softener must be depressurized before removing aspirator assembly.

BRINING: A slow flow of water to the drain will begin. Verify brine draw from the brine tank by shining the flashlight into the brinewell and observing a noticeable drop in the liquid level.

NOTE: Be sure water is in contact with the salt, and not separated by a salt bridge (see page 23).

If the unit does not draw brine, check for:

- Dirty or defective nozzle and venturi (see page 24)
- Restriction in valve drain, causing back-pressure (bends, kinks, elevated too high, etc.)
- Obstruction in brine valve or brine tubing
- Inner valve failure (obstructed or defective o-ring seals, rotor or disc)

BACKWASH: Look for a fast flow of water from the drain. If flow is slow, check for a plugged internal riser pipe, backwash flow controls, drain piping, fouled filter bed, etc.

FAST RINSE: Again look for a fast drain flow. Allow the unit to rinse for several minutes to flush out any brine that may remain from the brining cycle test.

4. To return the valve to service position, press the RECHARGE button once again.

NOTE: On multiple tank systems, if you use the "Recharge All Now" option, the first tank advances to the service position before the second tank begins the regeneration cycle.