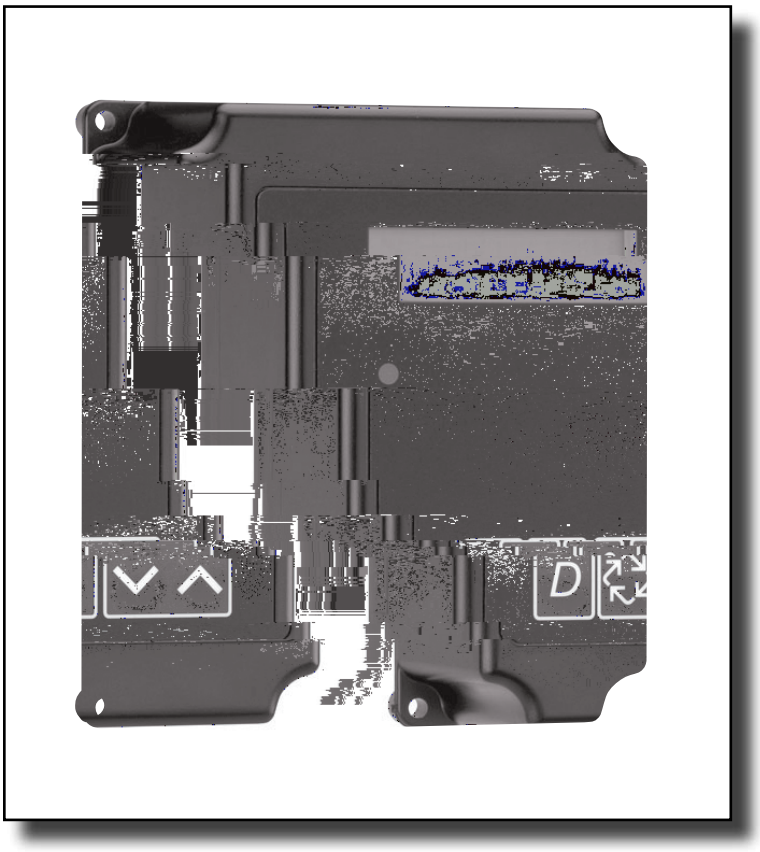

D

NOTICE

- The information, specifcations and illustrations in this manual are based on the latest information available at the time of printing. The manufacturer reserves the right to make changes at any time without notice.
- This manual is intended as a guide for service of the valve only. System installation requires information from a number of suppliers not known at the time of manufacture. This product should be installed by a plumbing professional.
- This unit is designed to be installed on potable water systems only.
- This product must be installed in compliance with all state and municipal plumbing and electrical codes. Permits may be required at the time of installation.
- If daytime operating pressure exceeds 80 psi, nighttime pressures may exceed pressure limits. A pressure reducing valve must be installed.
- Do not install the unit where temperatures may drop below 32°F (0°C) or above 110°F (43°C).
- Do not place the unit in direct sunlight. Black units will absorb radiant heat increasing internal temperatures.
- Do not strike the valve or any of the components.
- Warranty of this product extends to manufacturing defects. Misapplication of this product may result in failure to properly condition water, or damage to product.
- A prefIter should be used on installations in which free solids are present.
- In some applications local municipalities treat water with Chloramines. High Chloramine levels may damage valve components.
- Correct and constant voltage must be supplied to the control valve to maintain proper function.

Feed Water Hardness: _____ Grains per Gallon or Degrees

Regeneration Time: Delayed _____ AM/PM or _____ Immediate

Regeneration Day Override: Off or Every _____ Days

Time of Day: _____

Regenerant Flow: Downflow / Upflow Brine Draw First / Upflow Brine Fill First

Valve Address: #1 / #2 / #3 / #4

Display Format: US Gallons or Liters

Unit Capacity: _____ Grains or grams $CaCO_3$

Capacity Safety Factor: Zero or _____ %

Feed Water Hardness: _____ Grains or milligrams $CaCO_3$/L

System Size: 1 Valve / 2 Valves / 3 Valves / 4 Valves

Regeneration Cycle Step #1: _ _ : _ _ : _ _

Regeneration Cycle Step #2: _ _ : _ _ : _ _

Regeneration Cycle Step #3: _ _ : _ _ : _ _

Regeneration Cycle Step #4: _ _ : _ _ : _ _

Regeneration Cycle Step #5: _ _ : _ _ : _ _

Timed Auxiliary Relay Output Window:

Off or Start Time _ _ : _ _ : _ _

End Time _ _ : _ _ : _ _

Chemical Pump Output Auxiliary Relay: Off or Volume (Gallons or Liters)

Time: _ _ : _ _ : _ _

Fleck Flow Meter Size: Paddle: 1” 1.5” 2” 3”

Turbine: 1” 1.5”

Generic Flow Meter: Maximum Flow Rate:

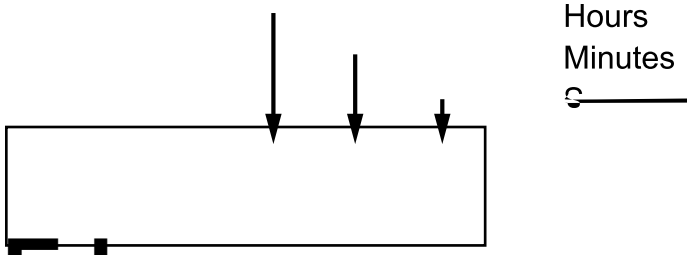
Add _ _ _ Gallons every _ _ _ Pulses

1. Press and hold the Up or Down button for 2 seconds.
2. Press the Shift button to select the digit you want to modify.
3. Press the Up or Down buttons to adjust the value.
4. [illegible] 5 second timeout.

1. When timer is in service or stand by, press the Extra Cycle button for 5 seconds on the main screen.
2. The timer advances to Regeneration Cycle Step #1, and begins programmed time count down.
3. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #2 (if active).
4. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #3 (if active).
5. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #4 (if active).
6. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #5 (if active).
7. Press the Extra Cycle button once more to advance the valve back to in service.

NOTE: A manually initiated or queued regeneration can be cleared by pressing the Extra Cycle button for less than 5 seconds. A system queued regeneration can only be cleared by stepping through a manual regeneration. If regeneration occurs for any reason prior to the delayed regeneration time, the manual regeneration request shall be cleared. Pressing the Extra Cycle button while in regeneration will cause the upper drive to advance to the next st[illegible]

In the Regeneration Cycle Step display, the timer shows the current regeneration cycle number the valve is on, or has reached, and the time remaining in that step. Once all regeneration steps are complete the timer returns to in Service and resumes normal operation.



[illegible]2 Minutes Remaining in Cycle 1 (Back Wash)

Press the Extra Cycle button during a Regeneration Cycle to immediately advance the valve to the next cycle step position and resume normal step timing.

- During normal operation, the Time of Day screen alternates with the error screen (if errors are present).
- As treated water is used, the Volume Remaining display counts down from the calculated system capacity to zero. When this occurs a Regeneration Cycle begins if no other units are in regeneration.

Programming

The timer enters the Program Mode in standby or service mode as long as it is not in regeneration. While in the Program Mode the timer continues to operate normally monitoring water usage. Timer programming is stored in memory permanently.

Power Failure

All program settings are stored in permanent memory. Current valve position, cycle step time elapsed, and time of day are stored during a power failure, and will be restored upon power re-application. Time is kept during a power failure and time of day is adjusted upon power up (as long as power is restored within 12 hours).

The time of day on the main display screen will flash for 5 minutes when there has been a power outage. This flashing of day can be stopped by pressing any button on the display.

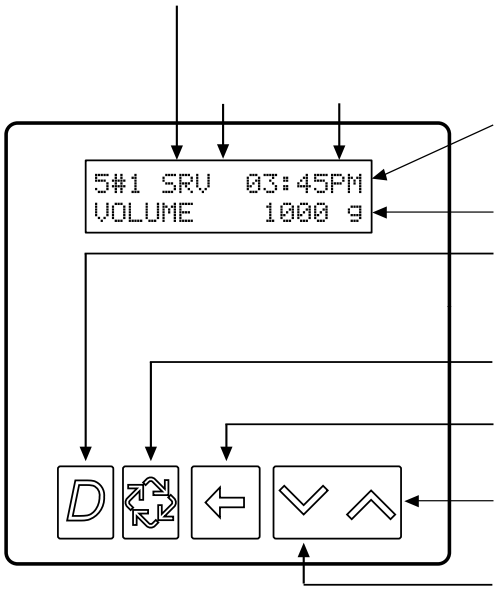
Regeneration Lockout

The timer does not allow the unit/system to go into Regeneration until the Regeneration Lockout Input signal to the unit is cleared. This requires a contact closure to activate the unit. The recommended gauge wire is 20 with a maximum length of 50 feet. See Remote inputs in the wiring diagrams in the service manual.

Regeneration Day Override

If the Day Override option is turned on and the valve reaches the set Regeneration Day Override value, the Regeneration Cycle starts if no other unit is in Regeneration. If other units are in regeneration, it is added to a regeneration queue. This occurs regardless of the remaining volume available.

	WARNING **Transformer must be grounded and ground wir**


5#1 SRV 03:45PM
VOLUME 1000 g
D

```
4#  SRV  03:45PM
REGEN IN 07 DAYS
```

In Service:

System 4 Time Clock

```
4#  SRV* 03:45PM
VOLUME    1000 g
```

In Service:

1. System 4 Flow Meter Initiated
   or
2. System 4 Flow Meter Delayed

```
5#1 SRV* 03:45PM
VOLUME    1000 g
```

In Service:

1. System 5 Flow Meter Initiated (Lead Unit)

```
5#3 SRV  03:45PM
VOLUME    1000 g
```

In Service:

1. System 5 Flow Meter Initiated (Lag Unit #3)

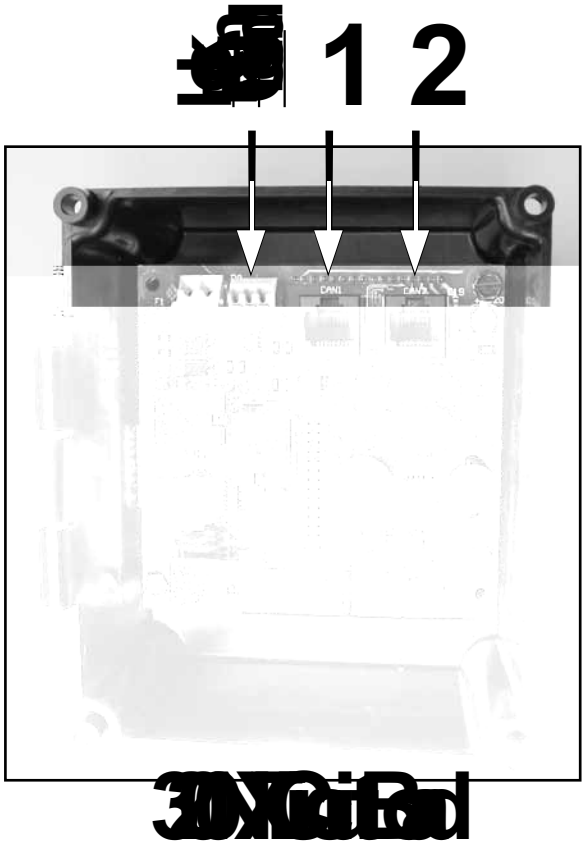
```
6#1 SRV* 03:45PM
SYSVOL    4000 g
```

In Service:

1. System 6 Flow Meter Initiated (Lead Unit)

Use either a CAT3 or CAT5 Network/Communication cable.

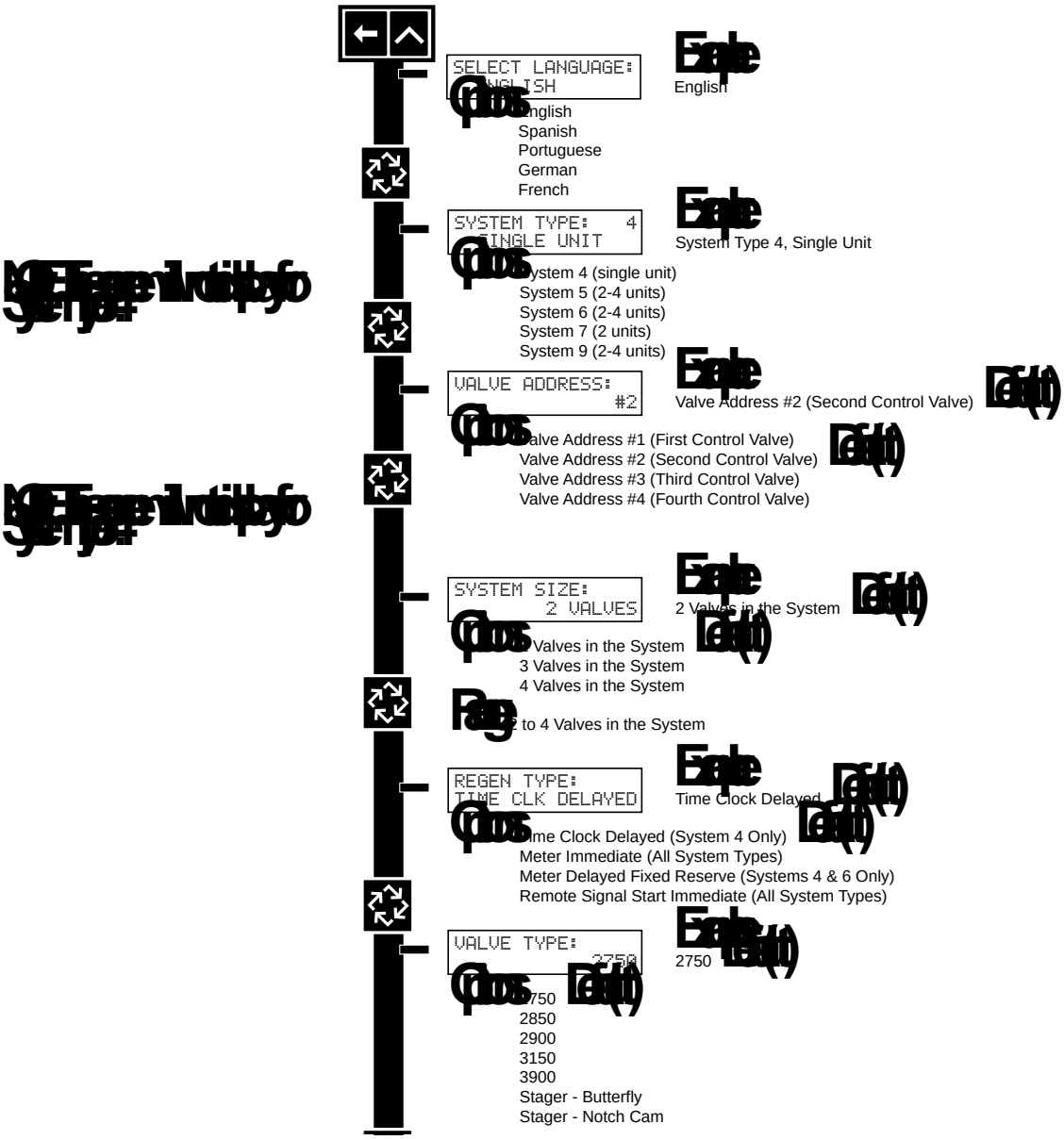
1. Connect the network/communication cable first before programming.
2. The maximum cable lenth between timers is 100 feet.
3. Connect each unit together from one communication port to the next communication port. It does not matter which one goes to the next one.



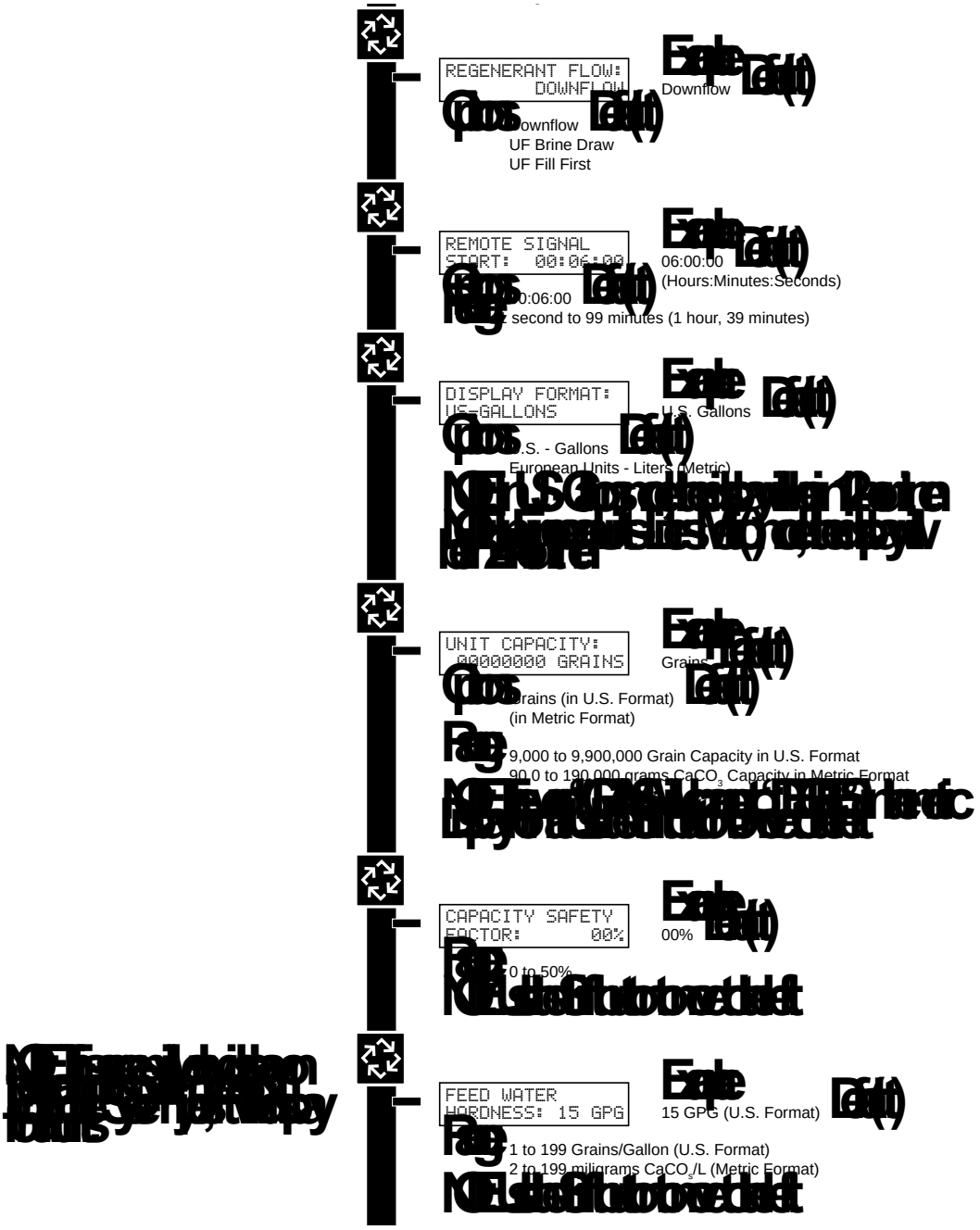
The number of network/communication cables needed for setup is one less than the total number of valves.

One network/communication cable
Two network/communication cables
Three network/communication cables

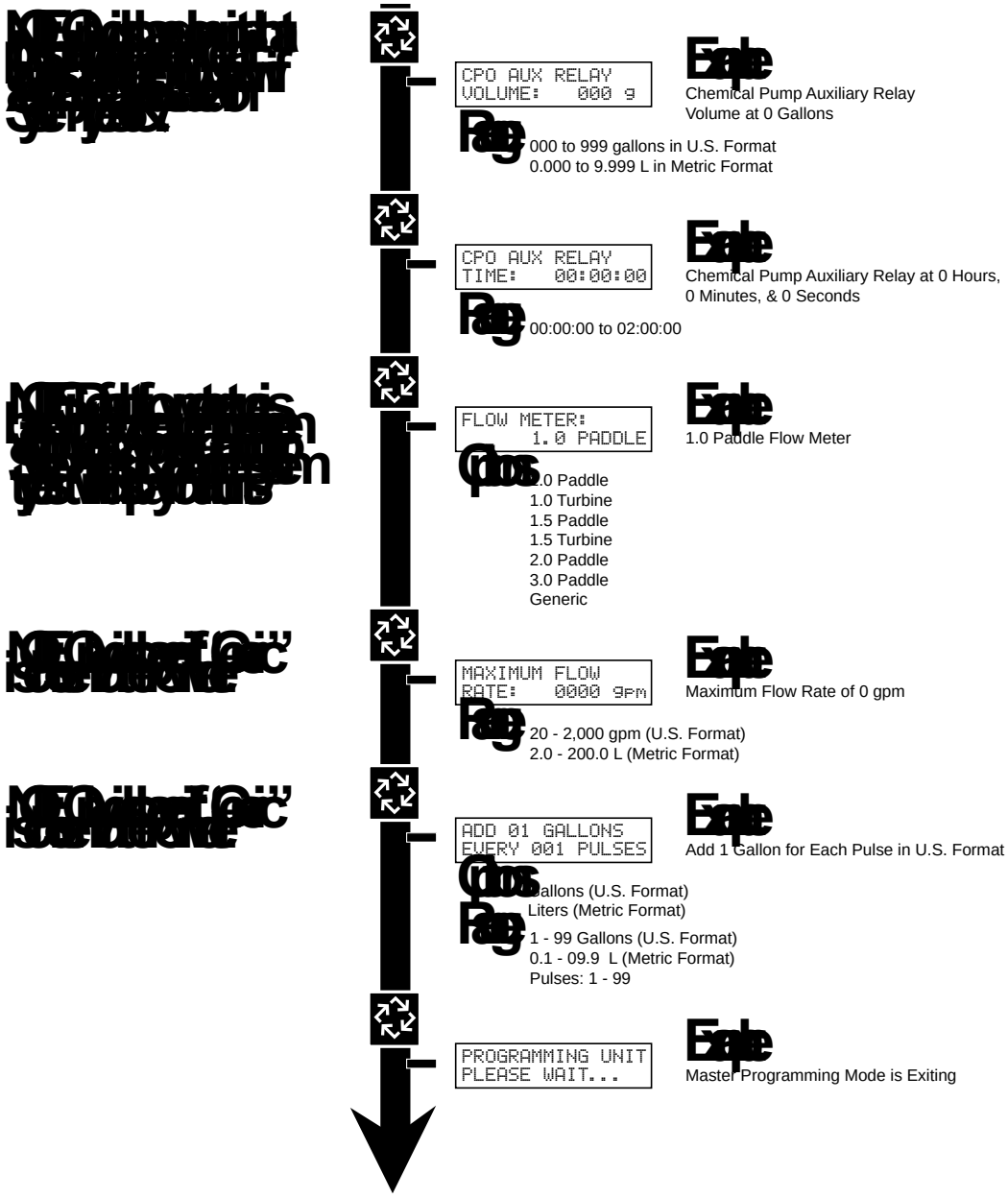
1. Press and hold the Shift and Up buttons for 5 seconds.
   Press the Extra Cycle button once per display until all displays are viewed and Normal Display is resumed.Option setting displays may be changed as required by pressing either the Up or Down button. Use the Shift button to move one space to the left.
2. Depending on current valve programming, certain displays may not be viewed or set.



Master Programming Mode Flow Chart



Master Programming Mode Flow Chart



When the Master Programming Mode is entered, parameters can be set to make the timer(s) function as needed.

1. Press and hold the Shift and Up buttons for 5 seconds.
   OR
2. Set the time of day display to 12:00HR (See the “Setting the Time of Day” section on the “Timer Operation” page). Then go to the main display screen, press the Up and Down buttons at the same time for 5 seconds.

1. Press the Extra Cycle button once per display until all are viewed. Master Programming Mode is exited and the normal display screen appears.
2. To exit the Master Programming Mode without stepping, press the Diagnostic button.

1. Press and hold the Up and Down buttons for 25 seconds until 12:00PM (or 12:00HR) appears. This resets all parameters except for the flow meter totalizer volume.
2. Hold the Extra Cycle button while powering up the unit. This resets all of the parameters.
3. Check and verify the choices selected in Master Programming Mode.

This option selectS the language for programming and display.

1. Use Up or Down to select language.
2. Press the Extra Cycle buttom.

```
SELECT LANGUAGE
ENGLISH
```

This program type selects the system type (4, 5, 6, 7, or 9).

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

```
SYSTEM TYPE:    4
  SINGLE UNIT
```

This program step selects the valve address (1, 2, 3, or 4) within the network needed for each timer for communication. The #1 is the “master” or “lead” which contains programmed parameters, that will be used by all of the timer(s) in the network to control Regeneration, in Service, or Standby of all the valve(s) in the system.

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

```
VALVE ADDRESS:
              # 2
```

4 System Size

This program step is used to set up the number of valves (1, 2, 3, or 4) in the system.

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

```
SYSTEM SIZE:
      2 VALVES
```

5 Regeneration Type

This program step is used to set up the trigger type.

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

```
REGEN TYPE:
TIME
```

6 Valve Type

This program step selects the valve type (2750, 2850, 2900s, 3150, 3900, Stager-Butterfy, or Stager-Notch Cam)

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

```
VALVE TYPE:
          2750
```

7 Regenerant Flow

This program step selects the regenerant fow type (Downfow, Upfow, or Upfow Fill First)

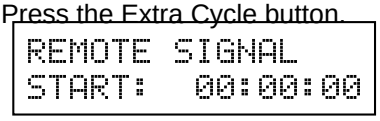
1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

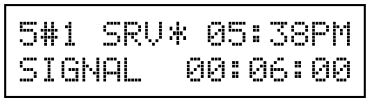
```
REGENERANT FLOW:
       DOWN FLOW
```

8. Remote Signal Start

This program step selects the remote signal start. Hours, minutes, and seconds can be changed. When Remote Signal Start is active, the main screen will display. The options are either Off or set to the desired time.

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.



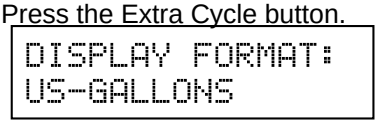


Example of setting Remote Signal Start to 6 minutes. The display counts down to 0. If Remote Signal Start is detected for 6 minutes, it will remotely signal start.

9. Display Format

This program step is used to set the desired volume display format. This option must be the same on all system units. U.S. will display volumes in gallons and is in 12 hour timekeeping. Metric will display volumes in liters and is in 24 hour timekeeping.

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.



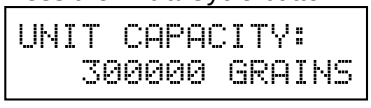
10. Unit Capacity

This program selects the individual timer's total capacity of hardness that can be removed. The unit capacity is measured in grains if in U.S. mode and grams $CaCO_3$ in Metric mode.

U.S. Range: 9,000 to 9,900,000 Grains (Default = 300,000 Grains)

Metric Range: 90.0 to 199,000.0 grams $CaCO_3$ (Default = 300.0 grams $CaCO_3$)

1. Use the Shift button to select the digit you want to modify.
2. Use Up or Down buttons to adjust this value.
3. Press the Extra Cycle button.



11. Factory Default Programming

11. Capacity Safety Factor

This program step is used to adjust the capacity of the system. This is a percentage by which the unit's capacity is reduced.

Range: 0 – 50% (Default = 0%)

1. Use the Shift button to select the digit you want to modify.
2. Use Up or Down buttons to adjust this value.
3. Press the Extra Cycle button.

```
CAPACITY SAFETY
FACTOR: 00%
```

12. Feed Water Hardness

This program step is used to set the feed water hardness. The system will automatically calculate volume remaining based on the Unit Capacity, Capacity Safety Factor and Feed Water Hardness entered.

US Range: – 199 gpg (Grains per Gallon)(Default = 15)

Metric Range: 2 – 199 milligrams $CaCO_3$/Liter (Default = 30)

1. Use the Shift button to select the digit you want to modify.
2. Use Up or Down buttons to adjust this value.
3. Press the Extra Cycle button.

```
FEED WATER
HARDNESS:015 GPG
```

13. Regeneration Day Override

This program step sets the maximum amount of time (in days) the unit can be In Service without a Regeneration.

Default: OFF

Range: 1 - 99 Days

Note: If "On," the screen for regeneration time will display.

1. Use the Shift button to select the digit you want to modify.
2. Use Up or Down buttons to adjust this value.
3. Press the Extra Cycle button.

```
REGENERATION DAY
OVERRIDE: OFF
```

```
REGENERATION DAY
OVERRIDE:01 DAYS
```

CAUTION: Before entering the Master Programming Mode, please contact your local professional water dealer.

sets time of day for a delayed regeneration to occur, or regeneration day override.

0 AM

:00 HR

utton to select the digit you want to modify.

n buttons to adjust this value.

Cycle button.

17. Timed Auxiliary Relay Output Window [illegible]

This option setting consists of two displays. The first display sets the turn-on time of the output, referenced to the start of the first Regeneration Cycle. The second display sets the output turn-off time, referenced again to the start of the first Regeneration Cycle.

Start Time

Anytime During Regeneration (Except Last Minute of the Regeneration Time)

End Time

At start time, and anytime during the regeneration cycle.

```
AUX RELAY OUTPUT
START   00:00:00
```

```
AUX RELAY OUTPUT
END     00:00:00
```

18. Chemical Pump Auxiliary Relay Output Window

This option setting consists of two displays. The first display sets the volume of water flow at which the output turns on. The second display sets the time of the output.

US Setting: 0 – 999 Gallons (1 – 999 Seconds)

Metric Setting: 0.00 – 9.99 m3 (1 – 999 Seconds)

Activate Output After Volume Set is Reached.

Use the Shift button to move one space to the left for each number entered.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

```
CHEMICAL PUMP:
         ENABLED
```

```
CPO AUX RELAY
VOLUME:    000  g
```

```
CPO AUX RELAY
TIME:    00:00:00
```

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

19. Fleck Flow Meter Size (Default to Valve Type)

This program step sets the size of the Fleck flow meter.

- 1.0” Paddle (2750 Default)
- 1.5” Paddle (2850/2900 Default)
- 2.0” Paddle (3150 Default)
- 3.0” Paddle (3900 Default)
- 1.0” Turbine
- 1.5” Turbine
- Generic Flow Meter

1. Use Up or Down buttons to adjust this value.
2. Press the Extra Cycle button.

```
FLOW METER:
      .75 PADDLE
```

20. Maximum Flow Rate

This program step sets maximum flow rate of the generic flow meter.

1. Press the Shift button to select the digit you want to modify.
2. Press the Up or Down buttons to adjust this value.
3. Press the Extra Cycle button.

```
MAXIMUM FLOW
RATE:   0000  gpm
```

21. Pulses per Gallon/Liter

This program step sets the pulses per gallon/liter for generic flow meters.

1. Press the Shift button to select the digit you want to modify.
2. Press the Up or Down buttons to adjust this value.
3. Press the Extra Cycle button.

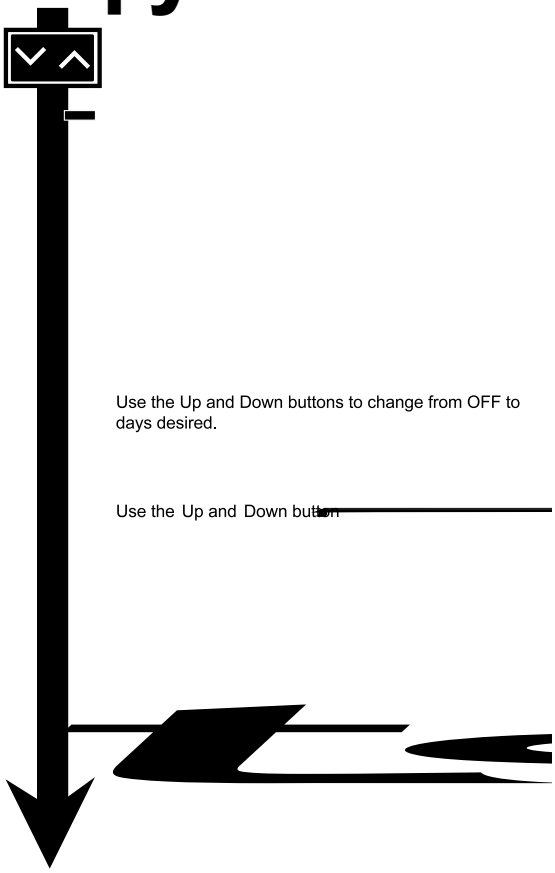
```
ADD  01 GALLONS
EVERY 001 PULSES
```

22. End of Master Programming Mode

```
PROGRAMMING UNIT
PLEASE WAIT...
```

CAUTION: Before exiting Master Programming, please contact your local professional water dealer.

User Mode Programming Flow Chart



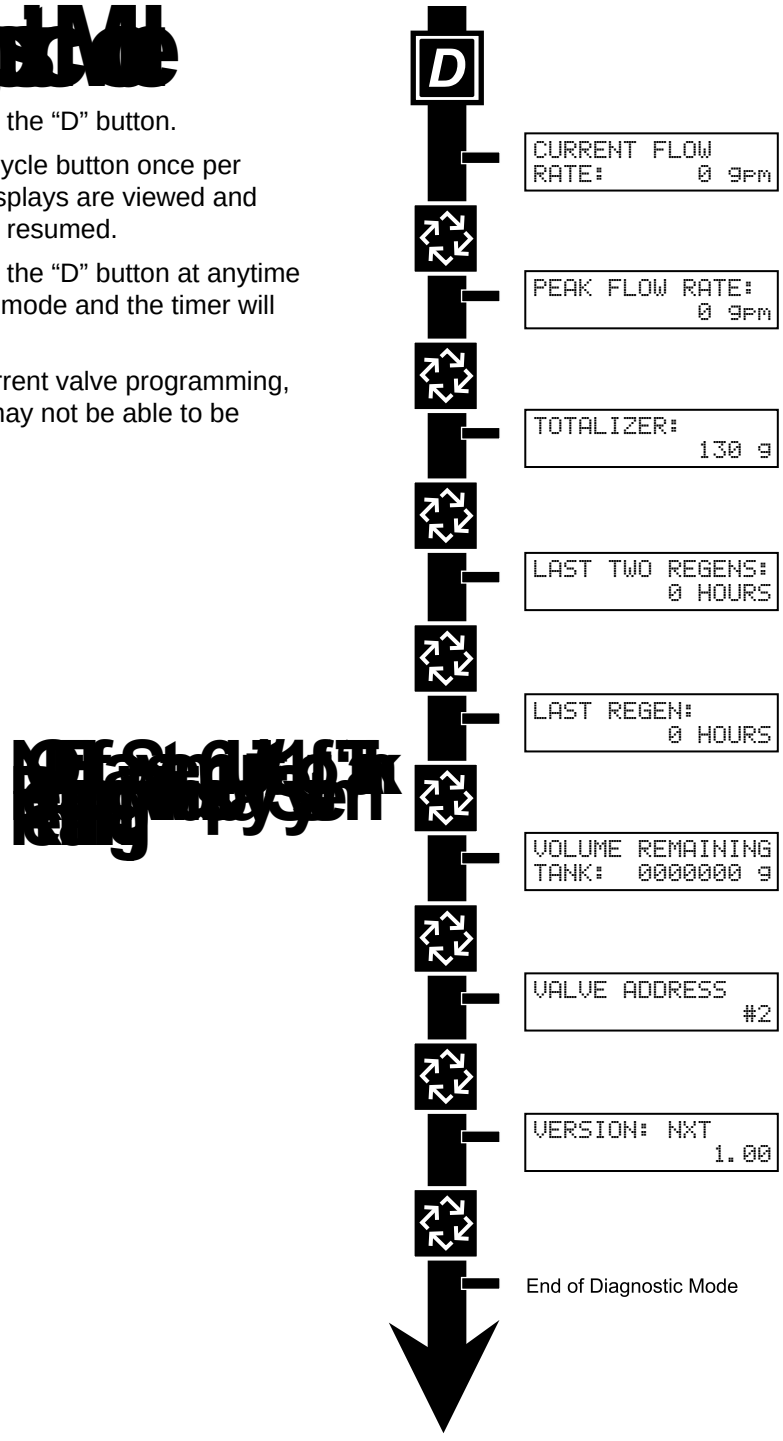
Hold the Up and Down buttons for 5 seconds.

Use the Up and Down buttons to change from OFF to days desired.

Use the Up and Down button

Entering Diagnostic Mode

1. Push and release the “D” button.
2. Press the Extra Cycle button once per display until all displays are viewed and Normal Display is resumed.
3. Push and release the “D” button at anytime during diagnostic mode and the timer will exit the mode.
4. Depending on current valve programming, certain displays may not be able to be viewed or set.



When the Diagnostics Mode is entered, all available displays are viewed as needed. Depending on current option s[illegible] ewed.

[illegible]

The current diagnostic will be displayed until Extra Cycle key is pressed. There is no time limit on each display. The timer will display individual valve information, not system information. In the event of regeneration occurring while displaying diagnostics, the regeneration step and time remaining will be displayed. When regeneration has b[illegible] al Time of Day display.

[illegible]

Push and Release the "D" button to enter. Pressing the Extra Cycle button will move to the next diagnostic to be displayed. Push the Extra Cycle button once per display until all are viewed. Pressing the Diagnostic button, while in the Diagnostic Mode, will cause the unit to leave the Diagnostic Mode and return to the normal time of day d[illegible]

[illegible]

Flow Rate for this particular Timer will be calculated and displayed. Flow rates will be calculated every second. The [illegible] rates are dependent upon the meter used.

- [illegible] 75 gpm (.28 m3/m)
- [illegible] 0 gpm (.34 m3/m)
- [illegible] 175 gpm (.66 m3/m)
- [illegible] 350 gpm (1.32 m3/m)
- [illegible] 75 gpm

1. Press the Extra Cycle button.

```
CURRENT FLOW
RATE:        0 gpm
```

[illegible]

The [illegible] Flow Rate since the last regeneration will be captured.

- [illegible] to Maximum Number

1. Press the Extra Cycle button.

```
PEAK FLOW RATE:
             0 gpm
```

[illegible]

[illegible] unted.

1. Reset to zero by holding the Up and Down arrow keys for 5 seconds during the Totalizer display.
2. Press the Extra Cycle button.

```
TOTALIZER:
         0000000 g
```

Hours Between Last Two Regenerations

The hours between the last two regenerations will be saved and displayed.

1. Depress the Extra Cycle button.

Hours Since Last Regeneration

The hours since the last regeneration will be saved and displayed.

1. Depress the Extra Cycle button.

Volume Remaining Tank (Lead)

Volume remaining in the current tank will be adjustable when displayed in this mode. Regeneration will occur if s

Volume Remaining Tank (Lag)

The maximum ranges are the same as the maximum volume calculated on the main screen.

1. Press the Shift button to select the digit you want to modify.
2. Use Up or Down buttons is used to adjust this value.
3. Depress the Extra Cycle button

Volume Remaining System

Volume remaining in the system cannot be edited when displayed in this mode, except for the Lead unit. It can only be viewed on the Lag unit.

1. Depress the Extra Cycle button

Valve Address

This diagnostic display is for 2 control valves or more in a system (a single valve will not display).

1. Depress the Extra Cycle button.

```
VALVE ADDRESS:
           # 2
```

Software Version

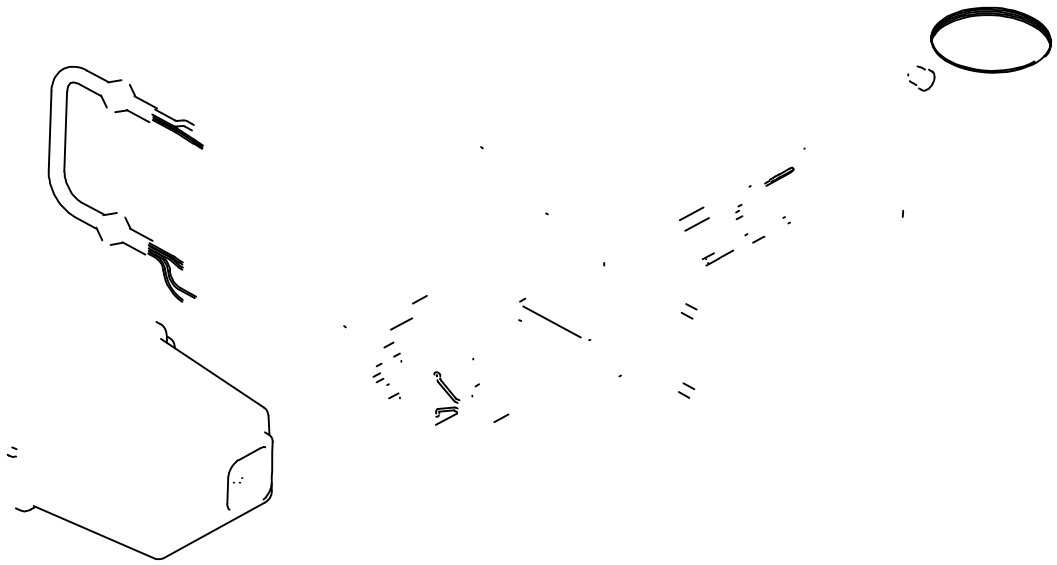
The electronic timer's software program version number will be displayed.

1. Depress the Extra Cycle button to exit.

```
VERSION: NXT
        X.XX
```

NOTE: Diagnostic Mode programming [illegible]

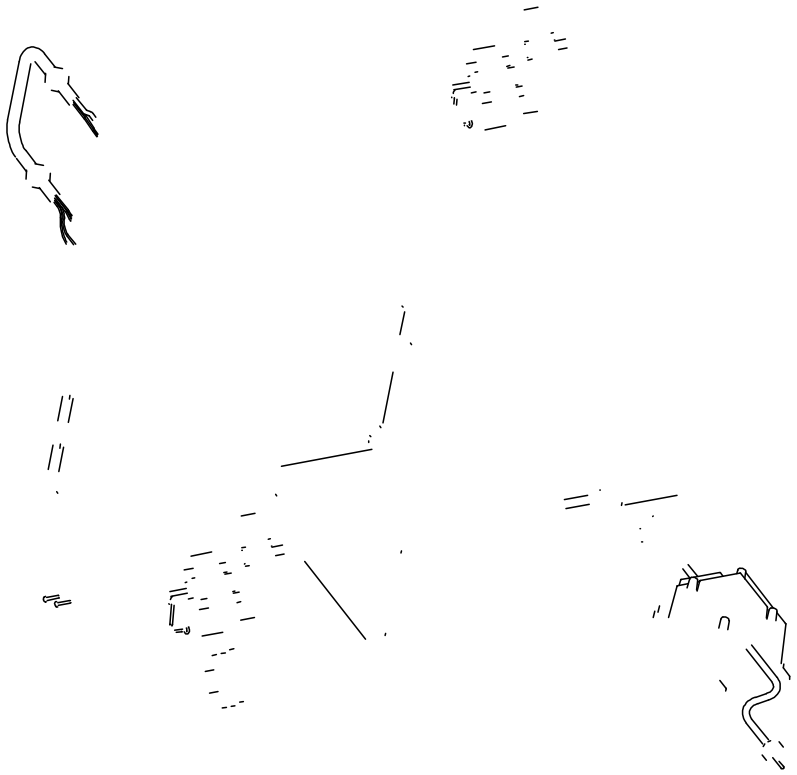
2750/2850/2900 Upper & 2900 Lower Powerhead Assy



Item No	Quantity	Part No	Description
1	1	18697-15	backplate, hinged
2	1	60219-02	cover assy, environmental, black
3	1	60160-15	drive cam assy, stf, blue
4	1	10909	pin, link
5	2	14923	screw, pan hd mach, 4-40 x 1
6	5	10302	insulator, limit switch
7	3	10218	switch, micro
8	2	10231	screw, slot hex, 1/4 - 20 x 1/2
9	1	41544	motor, drive, 24V, 50/60 Hz
10	1	12777	cam, shut-off valve
11	2	10338	pin, roll, 3/32 x 7/8
12	1	41034	transformer, US, 120V, 24V, 108VA
		41049	transformer, euro, 230V/24V 108VA
		41050	transformer, aust, 230V/24V, 108VA
13	1	19691	plug, .750 dia, recessed, black
14	2	19800	plug, .140 dia, white
15	1	15806	plug, hole, heyco #2693
16	9	19801	plug, .190 dia, white, heyco #0307
17	1	17967	fitting assy, liquid tight, blk
18	1	10896	switch, micro
19	4	11805	screw, rd hd, 4-40 x 5/8 type 1
20	1	40943	wire harness, lower drive, w/molded strain relief
21	1	13547	strain relief, flat cord, heyco #30-1
22	1	19121	meter cable assy, 3200NT
		19121-08	meter cable assy, NT, 35” w/connector
		19121-09	meter cable assy, NT, 99.5” w/connector
		19121-10	meter cable assy, NT, 303.5” w/connector
23	1	14202-01	screw, hex wsh mach, 8-32 x 5/16
24	1	40941	wire harness, upper drive
25	1	17421	plug, 1.20 hole, heyco #2733
26	2	41581	plug, hole, .125 dia, white
27	1	60217-02	cover assy, 2900, lower, black, environmental
28	1	18626	spacer, indicator
29	1	18746	bearing, connecting rod
30	2	11224	screw, hex hd 5/16 - 18 x 5/8, SS
31	1	10250	ring, retaining
32	7	10872	screw, hex wsh, 8-32 x 17/64
33	1	18709	backplate, lower
34	1	11381	pin, roll, 2900/3900
35	1	14759	link, piston rod
36	1	14769	bracket, motor, 2900
37	1	14775	cam, drive, 2900
38	2	16346	nut, hex, jam, 5/16-18, 18-8-SS
39	1	18725	indicator, service/standby
40	1	40388	motor, drive, 24V, 50/60Hz, SP
41	1	14813	pin, spring, connecting rod
42	1	41102	label, 3200NT, ground
43	1	10269	nut, jam, 3/4 - 16
44	1	10712	fitting, brine valve
45	1	41692	kit, can communication cable
46	1	42466-11	timer assy, NXT, right hand

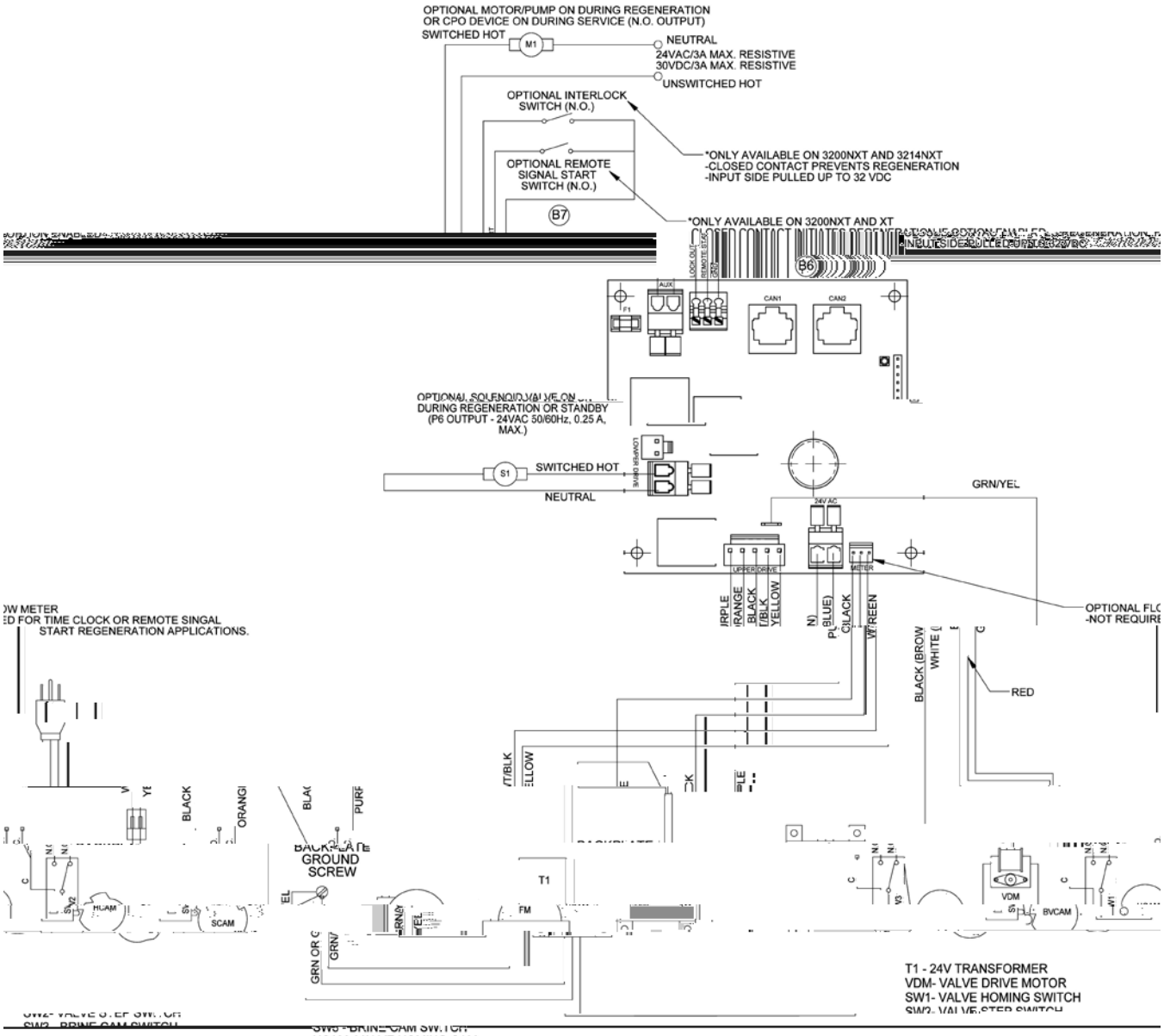
[illegible]

3150/3900 Upper & 3900 Lower Drive Powerhead Assy



Item No	Quantity	Part No	Description
1	1	19304-04	backplate, 3150/3900
2	1	15120	bracket, motor mtg, 3150/3900
3	1	40391	motor, drive, 24V, 50/60 hz, sp
4	8	11224	screw, hex hd, 5/16 - 18 x 5/8, ss
5	4	16346	nut, hex, jam, 5/16 - 18, 18-8-ss
6	2	17797	bracket, switch, mounting, 3150/3900
7	5	10302	insulator, limit switch
8	4	10218	switch, micro
9	2	16053	bracket, brine side
10	2	12624	screw, phil pan, 40 x 1 1/2
11	4	16052	bushin, 3150/3900
12	4	17567	screw, hex, wsh hd, 8 x 1/2
13	1	16494	cam assy, 3150/3900
14	8	10231	screw, slot hex, 1/4 - 20 x 1/2 18-8 ss
15	2	16046	gear, drive
16	3	11774	ring, retaining
17	2	16047	link, drive
18	2	11709	pin, drive link
19	1	16048	bearing, drive link
20	2	11898	clip, 3150/3900
21	2	16045	pinion, drive
22	2	11381	pin, roll, 2900/3900
23	7	10872	screw, hex wsh, 8-32 x 17/64
24	8	11235	nut, hex, 1/4 - 20
25	2	16050	ring, retaining
26	2	16059	washer, ss, .88, 3150/3900
27	2	16051	ring, retaining, bowed
28	8	19800	plug, .140, white
29	1	15806	plug, hole, heyco, #2693
30	1	19591	plug, .8750 hole, recessed, black
31	3	11080	screw, flt hd mach, 8-32 x 3/8
32	2	17967	fitting assy, liquid tight, blk
33	1	40941	wire harness, upper drive
34	1	40943	wire harness, lower drive w/molded strain relief
35	1	41034	transformer, US, 120V, 24V, 108VA
		41049	transformer, euro, 230V/24V 108VA
		41050	transformer, aust, 230V/24V, 108VA
36	1	19121	meter cable assy, 3200NT
		19121-08	meter cable assy, NT, 35” w/connector
		19121-09	meter cable assy, NT, 99.5” w/connector
		19121-10	meter cable assy, NT, 303.5” w/connector
37	1	14202-01	screw, hex wsh, 8-32 x 5/16
38	1	17421	plug, 1.20 hole
39	2	60240-02	cover assy, 3150/3900, env, black
40	1	40392	motor, drive, 115V, 50/60Hz, sp
41	1	19305	backplate, 3900, lower, env
42	1	16086	bracket, motor mounting
43	1	19315	indicator, service/standby, 3900
44	1	18726	spacer, indicator
45	1	16048	bearing, drive link
46	2	11805	screw, rd hd, 4-40 x 5/8, type 1
47	1	16495	cam assy, 3900, lower
48	1	41102	label, 3200NT, ground
49	1	19801	plug, .190 dia, white
50	1	19691	plug, .750 dia, recessed, black
51	1	41692	kit, can communication cable
52	1	42466-11	timer assy, NXT, right hand

[illegible]


OPTIONAL MOTOR/PUMP ON DURING REGENERATION
OR CPO DEVICE ON DURING SERVICE (N.O. OUTPUT)
SWITCHED HOT
M1
NEUTRAL
24VAC/3A MAX. RESISTIVE
30VDC/3A MAX. RESISTIVE
UNSWITCHED HOT
OPTIONAL INTERLOCK
SWITCH (N.O.)
*ONLY AVAILABLE ON 3200NXT AND 3214NXT
-CLOSED CONTACT PREVENTS REGENERATION
-INPUT SIDE PULLED UP TO 32 VDC
OPTIONAL REMOTE
SIGNAL START
SWITCH (N.O.)
B7
*ONLY AVAILABLE ON 3200NXT AND XT
B6
AUX
CAN1
CAN2
DURING REGENERATION OR STANDBY
(P6 OUTPUT - 24VAC 50/60Hz, 0.25 A,
MAX.)
S1
SWITCHED HOT
NEUTRAL
GRN/YEL
24V AC
UPPER DRIVE
METER
OPTIONAL FLO
-NOT REQUIRE
START REGENERATION APPLICATIONS.
BLACK
RED
GROUND
SCREW
T1
FM
HCAM
SCAM
VDM
BVCAM
T1 - 24V TRANSFORMER
VDM- VALVE DRIVE MOTOR
SW1- VALVE HOMING SWITCH
HCAM- VALVE HOMING CAM
SCAM- VALVE STEP CAM
BVCAM - BRINE VALVE CAM
M1 - MOTOR OR PUMP (OPTIONAL)
NOTE:
1. TRANSFORMER FUSE - 5A 250V SLOW-BLOW P/N 41143
2. VALVE SHOWN IN SERVICE
42140_REVD


OPTIONAL MOTOR/PUMP ON DURING REGENERATION
OR CPO DEVICE ON DURING SERVICE(N.O.OUTPUT)
SWITCHED HOT
M1
NEUTRAL
24VAC/3A MAX. RESISTIVE
30VDC/3A MAX. RESISTIVE
UNSWITCHED HOT

[illegible]

If a communication error is detected, an Error Screen will alternate with the main (time of day) screen every few seconds.

- All units In Service remain in the In Service position.
- All units in Standby go to In Service.
- Any unit in Regeneration when the error occurs completes Regeneration and goes to In Service.
- No units are allowed to start a Regeneration Cycle while the error condition exists, unless they are manually forced into Regeneration.
- When an error is corrected and the error no longer displays (it may take several seconds for all of the units in a system to stop displaying the error message), the system returns to normal operation.

NOTE: During the error condition the control continues to monitor the flow meter and update the volume remaining. Once the error condition is corrected all units return to the operating status they were in prior to the error. Regeneration queue is rebuilt according to the normal system operation. Or, if more than one unit has been queued for regeneration, then the queue is rebuilt according to which one communicates first.

[illegible]	[illegible]
A. One or more units have a missing or bad communication cable.	A. Connect the communication cables and/or replace.
B. One or more units has a communication cable plugged into the wrong receptacle.	B. Connect the communication cable as shown in the wiring diagrams.
C. One or more units is not powered.	C. Power all units.

[illegible]

During the error condition the control continues to monitor the flow meter and update the remaining capacity. Once the error condition is corrected all units return to the operating status they were in prior to the error and regeneration is queued according to the normal system operation. If reprogramming the unit in the Master Programming Mode clears the error, the volume remaining may be reset to the full unit capacity (i.e. as though it were just regenerated).

1. All units in standby go In Service.
2. Any unit in regeneration when the error occurs completes regeneration and goes to In Service.
3. No units are allowed to start a regeneration cycle while the error condition exists.

When the problem is corrected and the error no longer displays (it may take several seconds for all of the units in a system to stop displaying the error message), the system returns to normal operation.

[illegible]

- Duplicate unit addresses or numbers
- Size of system (ex: if sized for a 4 units, and only have 2 units)
- Display format mismatches

[illegible]

NOTE: Program the units correctly in the Master Programming Mode.

If these errors are detected, numbers 1 through 3 become true, and the main screen (time of day) will alternate with an error screen.

Cause	Correction
A. Any or all of two or more units programmed with the same unit number (Matching Address Error)	A. Program the units correctly in the Master Programming Mode
B. Flashing/blinking display	B. Power outage has occurred
C. Format Mismatch (Units have both U.S. and Metric Formats)	C. Verify all units have same Format selected (all U.S. or all Metric)
D. No messages displayed/small black squares appear in display	D. Turn the contrast button on the back of unit until text appears (see “Problems Viewing Display/Changing Contrast of Display” below)
E. Size Error (Units not correctly numbered/more than one unit has the same number assigned)	E. Check each unit and verify each as the correct number, and that only one unit has that number
F. Com Error (Communication Error)	F. Check the wiring of the system and verify it is correct and that all are connected

Explanation Error Codes

```
DETECTED ERROR=
E2    RESET UNIT
```

Detected Error

1. Go through Master Programming to program the unit.

```
DETECTED ERROR=
NO MESSAGE #1
```

No Message #1

1. Make sure all communication cables are connected.
2. If “No Message #1” ensure it is the lead unit.
3. Ensure #1 is confgured for the correct system type.

```
DETECTED ERROR=
NO MESSAGE #3
```

No Message #3

1. Make sure all communication cables are connected.
2. If “No Message #3” ensure it is unit #3.
3. Ensure #3 is confgured for the correct system type.

```
DETECTED ERROR=
PROGRAM MISMATCH
```

Program Mismatch

1. Ensure the units on the network are not confgured the same as #1/the Lead unit.

```
DETECTED ERROR=
EXCEED UNIT SIZE
```

Exceed Unit Size

1. There are more units on the system than the Lead is programmed for.

```
DETECTED ERROR=
MATCHING ADDRESS
```

Matching Address

1. T[illegible]