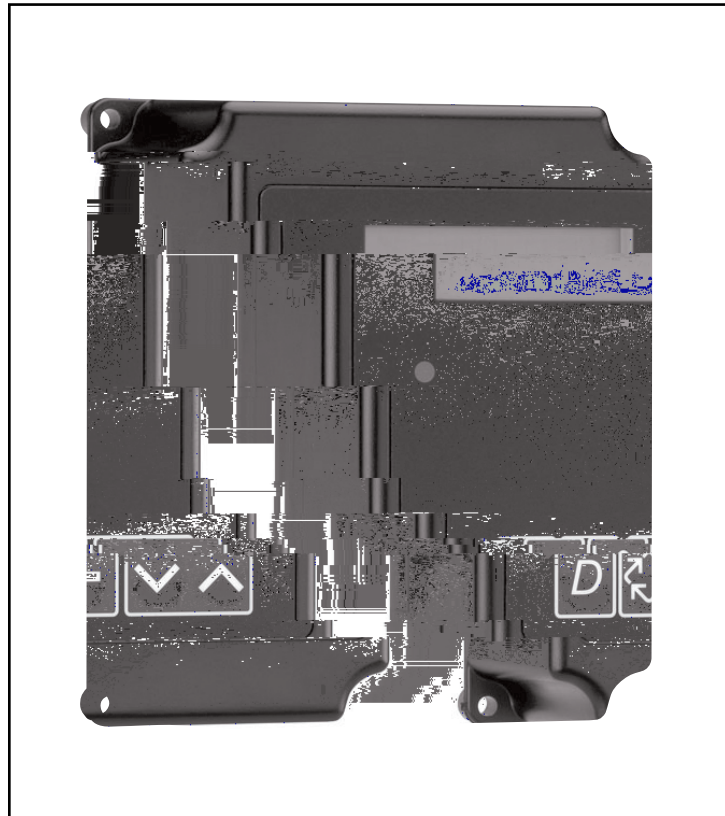




Job Specification Sheet
Timer Operation
Timer Display Features
Timer Display - Screen Examples
Network/Communication Cables & Connections
Master Programming Mode Flow Chart
Master Programming Guide
User Mode Programming Flow Chart
Diagnostic Mode Flow Chart
Diagnostic Programming Guide
2750/2850/2900 Upper & 2900 Lower Powerhead Assy
3150/3900 Upper & 3900 Lower Drive Powerhead Assy
2750/2850/3150 Input & Output Wiring
2900/3900 Input & Output Wiring
Troubleshooting

	D I S C L A I M E R : • The information, specifications 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 prefilter 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.
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Job Specification Sheet

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: Downfow / Upfow Brine Draw First / Upfow Brine Fill First
Valve Address: #1 / #2 / #3 / #4
Display Format: US Gallons or Liters
Unit Capacity: _____ Grains or grams CaCO₃
Capacity Safety Factor: Zero or _____ %
Feed Water Hardness: _____ Grains or milligrams CaCO₃ /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

y Di S

y Di n h S t n n t h e e T e n T t i e i a u l l p l e e l b s i t r t f s w e s s u o a e
 h n i t i n w 10 e n T a . f e o s s d

Press and hold the Up or Down button for 2 seconds.

Press the Shift button to select the digit you want to modify.

Press the Up or Down buttons to adjust the value.

Press the Extra Cycle button to return to the normal display screen, or after a 5 second timeout.

D n D "t h i n i t p (e) r t h x o g i b t a b v i c w a e e e l s s e . d o g a s

n i t i t n n i t u a a M g a g a e e e a o

When timer is in service or stand by, press the Extra Cycle button for 5 seconds on the main screen.

The timer advances to Regeneration Cycle Step #1, and begins programmed time count down.

Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #2 (if active).

Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #3 (if active).

Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #4 (if active).

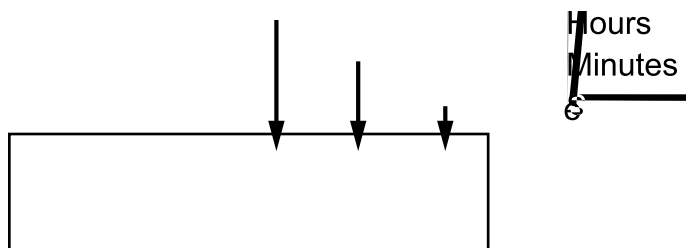
Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #5 (if active).

Press the Extra Cycle button once more to advance the valve back to in service.

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 step immediately.

n D r i n r i n r n i t r e m T e a o g g e e e a o

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.



pl x 12 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.

p p i r w i r o e e M q E e e m d T

- 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.

Standard Regeneration Mode

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.

Standard Regeneration Mode with Day Override

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. The flashing of the time of day can be stopped by pressing any button on the display.

Standard Regeneration Mode with Lockout

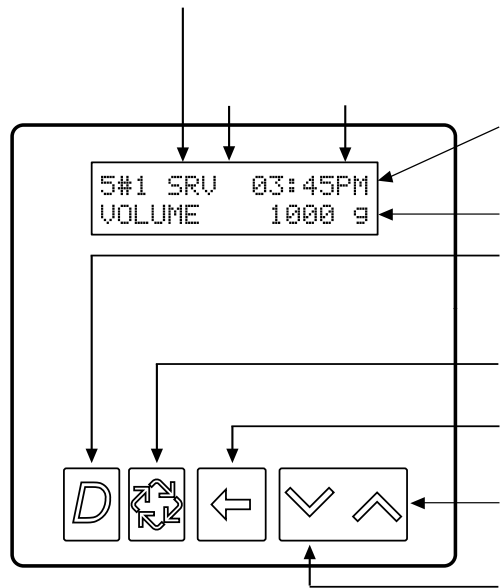
The timer does not allow the unit/system to go into Regeneration until the Regeneration Lockout Input signal to the unit is cleared. This requires a contact closure to activate the unit. The recommended gauge wire is 20 with a maximum length of 500 feet. See P4 remote inputs in the wiring diagrams in the service manual.

Standard Regeneration Mode with Day Override and Regeneration Queue

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 wire
--



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

In Service:
System 4 Time Clock

a Fre :

4# SRV* 03:45PM
VOLUME 1000 g

In Service:
System 4 Flow Meter Initiated

System 4 Flow Meter Delayed

a Fre :

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

In Service:
System 5 Flow Meter Initiated (Lead Unit)

a Fre :

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

In Service:
System 5 Flow Meter Initiated (Lag Unit #3)

a Fre :

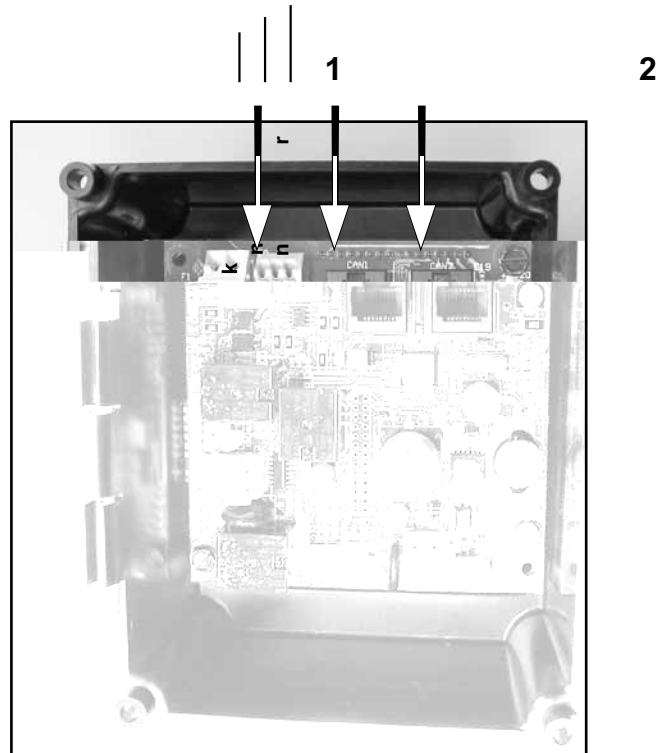
6#1 SRV* 03:45PM
SYSVOL 4000 g

In Service:
System 6 Flow Meter Initiated (Lead Unit)

a Fre :

Use either a CAT3 or CAT5 Network/Communication cable.

1. Connect the network/communication cable first before programming.
2. The maximum cable length 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.



N i 3 00 B r 2 u CcXT o a d

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

i t	t w	S	One network/communication cable
r t	t	S	Two network/communication cables
i tr	t	S	Three network/communication cables

Master Programming Mode Flow Chart

Press and hold the Shift and Up buttons for 5 seconds.

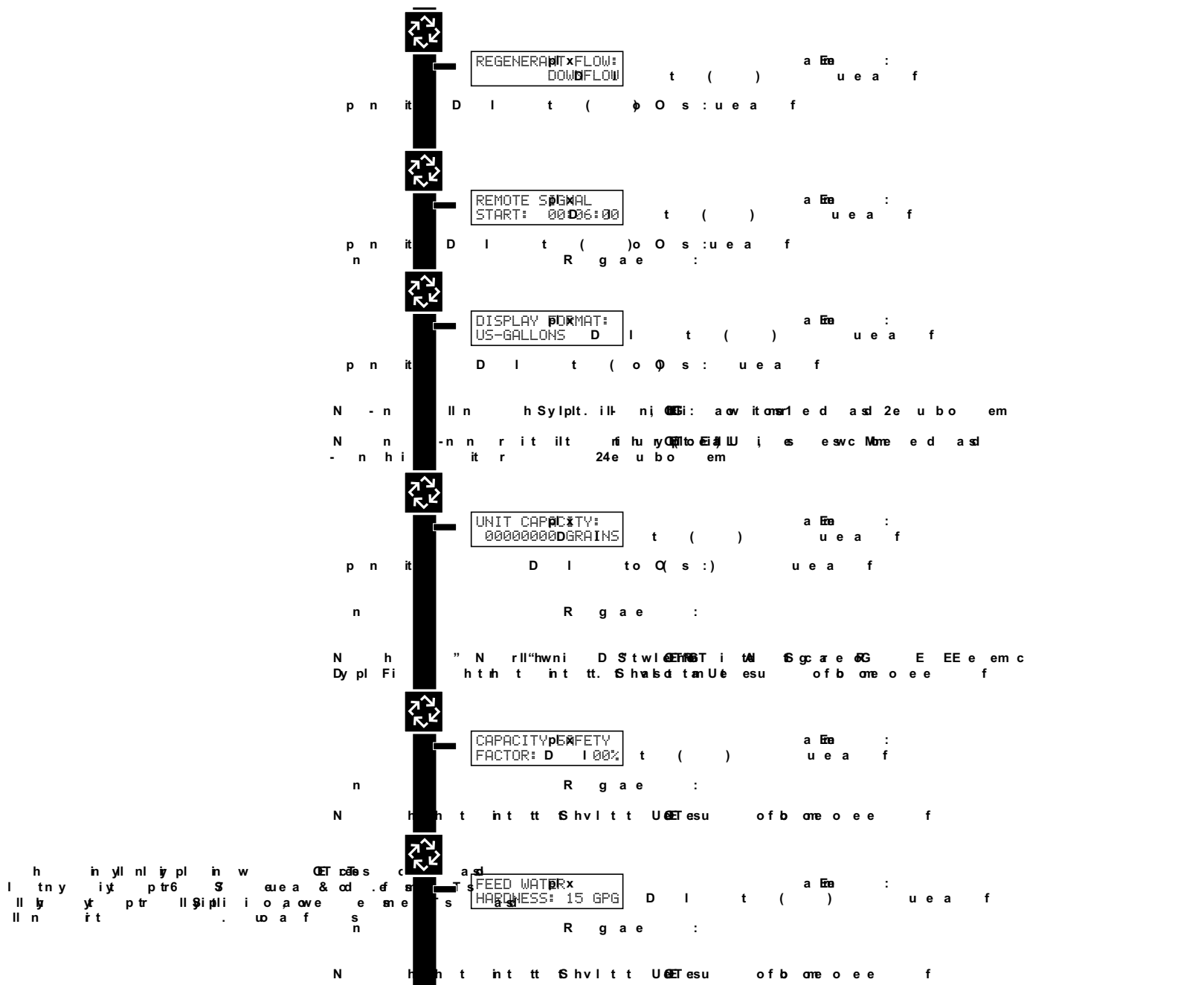
Press the Extra Cycle button once per display until all displays are viewed and Normal Display is resumed. Option setting displays may be changed as required by pressing either the Up or Down button. Use the Shift button to move one space to the left.

Depending on current valve programming, certain displays may not be viewed or set.



Master Programming Mode Flow Chart

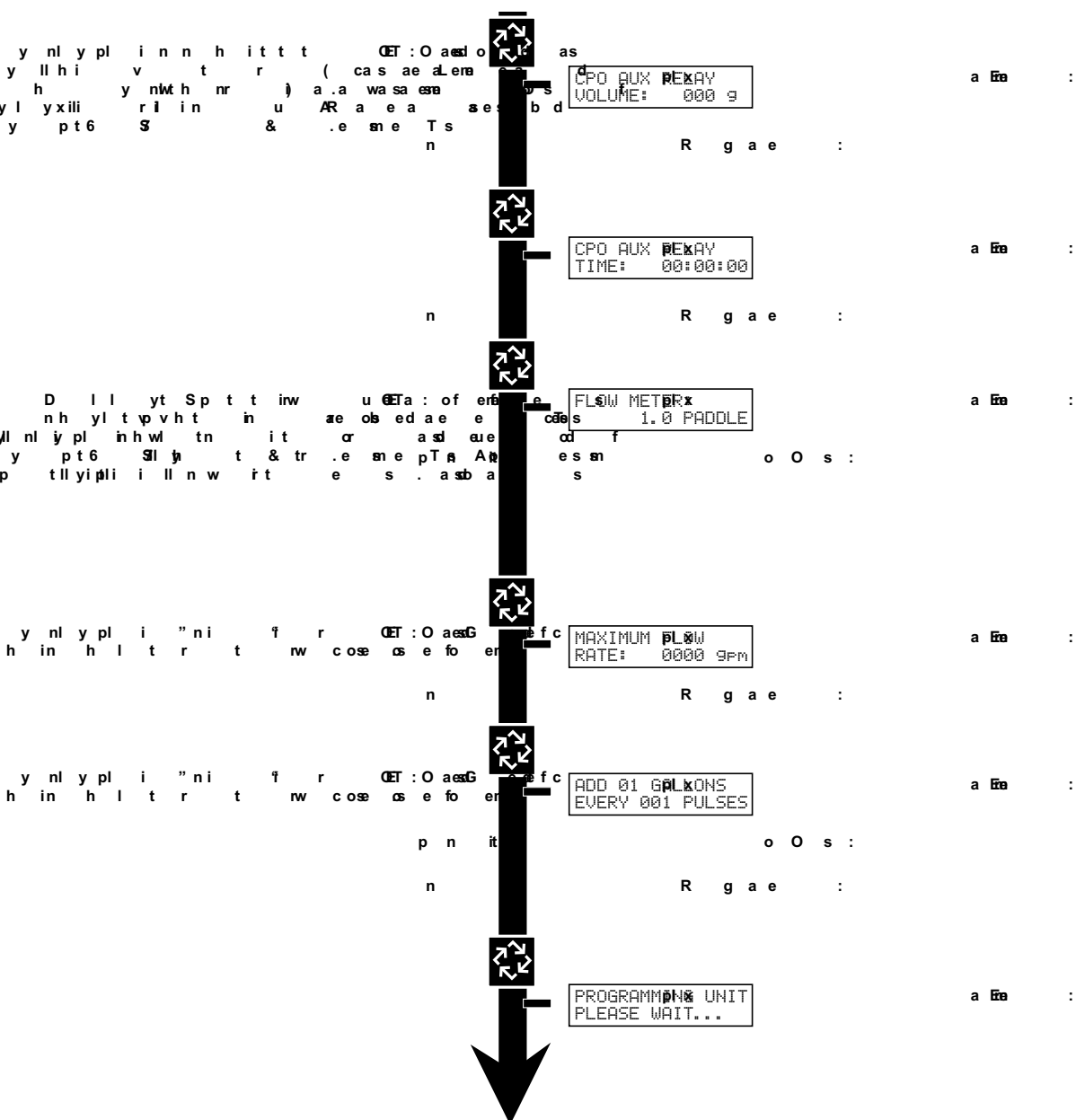
D p n n n i n p n t r r i n f t y c p : u a n d c e o t o w i g s o t s a w a s i c a s o . e e e b o e



n n B t r i l r t n c p i r t o e g f t l R a p e g M o r a g m i n e d e t c o s u a c w r o c a o e o s s a e

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.
2. Set the time of day display to 1 01 1 02. Press 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 saving, 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 in the unit. Check and verify the choices selected in Master Programming Mode.

This option selects the language for programming and display.

Use Up or Down to select language.

Press the Extra Cycle button.

SELECT LANGUAGE
ENGLISH

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

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

SYSTEM TYPE: 4
SINGLE UNIT

3. 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.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

VALVE ADDRESS:
2

System Size

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

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

SYSTEM SIZE:
2 VALVES

Regenerate Trigger

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

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

REGEN TYPE:
TIME

Valve Type

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

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

VALUE TYPE:
2750

Regenerant Flow

This program step selects the regenerant flow type (Downflow, Upflow, or Upflow Fill First)

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

REGENERANT FLOW:
DOWN FLOW

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.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

```
REMOTE SIGNAL
START: 00:00:00
```

```
5#1 SRV* 05:38PM
SIGNAL 00:06:00
```

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.

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.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

```
DISPLAY FORMAT:
US-GALLONS
```

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 CaCO₃ 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 CaCO₃ (Default = 300.0 grams CaCO₃)

Use the Shift button to select the digit you want to modify.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

```
UNIT CAPACITY:
300000 GRAINS
```

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.

0 – 50% (Default = 0%) :

Use the Shift button to select the digit you want to modify.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

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

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.

1 – 199 GPG (Grains per Gallon) (Default = 15)

2 – 199 mg/L CaCO₃ /Liter: (Default = 30)

Use the Shift button to select the digit you want to modify.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

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

Regeneration Day Override

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

OFF : u e a f :

1 - 99 Days : B y s g a e :

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

Use the Shift button to select the digit you want to modify.

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

```
REGENERATION DAY  
OVERRIDE: OFF
```

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

1. D i l r w y l t s p v (e c 9 o e e M u e a o f a e V e T

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

Use Up or Down buttons to adjust this value.

Press the Extra Cycle button.

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

2. 0 . t 2 w u a n M m o æ

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
```

3. I l n 1 r . i t 2 r P u e G e s k a o e

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
```

t n r r i 22 oEP ad eg Mb ag mm o e M d

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

D

ti

Diagnostic Mode Flow Chart

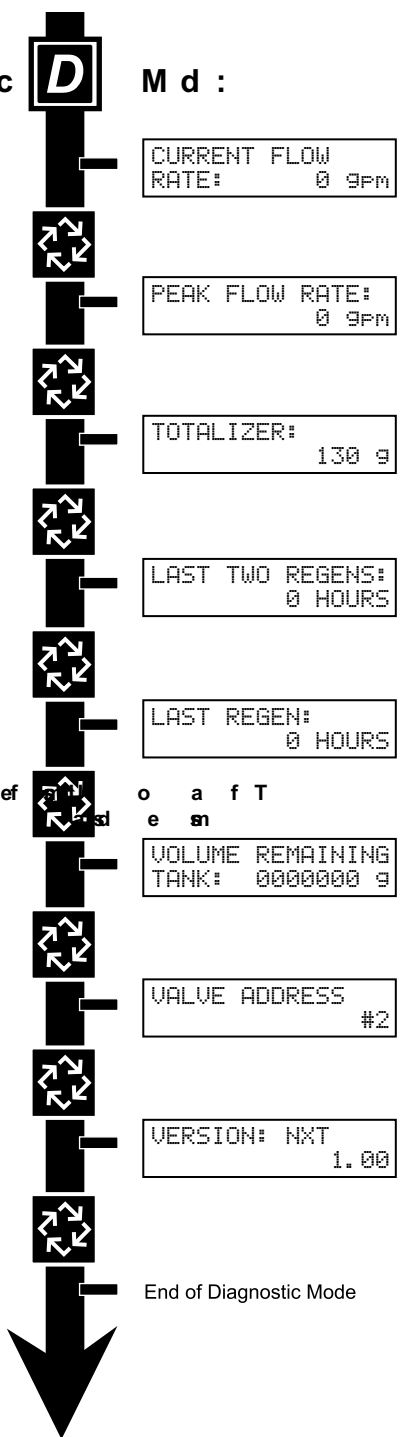
in ir it

ge Eg a o c

M d :

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

N y 6 it iStrk l , "# 1 0ET :ef
" n n i l l y p l i w R" eS gan o a f T
n n i i) R. e gan e sn



When the Diagnostics Mode is entered, all available displays are viewed as needed. Depending on current option settings, some displays cannot be viewed.

vin ri it w e e g a o c s e M d

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 been completed, the display will return to the normal Time of Day display.

i nr Dx i th i it ge E a g g a o c s e M d

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 display.

t rr t w u C e R o æ

Flow Rate for this particular Timer will be calculated and displayed. Flow rates will be calculated every second. The display updates once per second. Flow rates are dependent upon the meter used.

- l • 1 1/2" P t a w e d 75 gpm (2.8 m³/m) æ :
- l • 1 1/2" P t a w e d 90 gpm (3.4 m³/m) æ :
- l • 2" P t a w e d 175 gpm (6.6 m³/m) æ :
- l • 3" P t a w e d 350 gpm (13.2 m³/m) æ :
- n • 1 1/2" r a 75 gpm d e Te b M :

Press the Extra Cycle button.

CURRENT FLOW
RATE: 0 gpm

t w P e a R o æ

The Peak Flow Rate since the last regeneration will be captured.

- 0 to Maximum Number :

Press the Extra Cycle button.

PEAK FLOW RATE:
0 gpm

z r o a e T

The total volume of treated water that passes through a meter will be counted.

nn rlt i lt n lu e r e t c s o i e r e o d b c e u o e m e g n

Reset to zero by holding the Up and Down arrow keys for 5 seconds during the Totalizer display.

Press the Extra Cycle button.

TOTALIZER:
00000000 g

Hours Between Last Two Regenerations

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

Depress the Extra Cycle button.

LAS

Hours Since Last Regeneration

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

Depress the Extra Cycle button.

Volume Remaining in Current Tank

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

Maximum Volume of System

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

Press the Shift button to select the digit you want to modify.

Use Up or Down buttons is used to adjust this value.

Depress the Extra Cycle button

Volume Remaining in 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.

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).

Depress the Extra Cycle button.

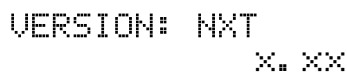


VALUE ADDRESS:
2

Software Version

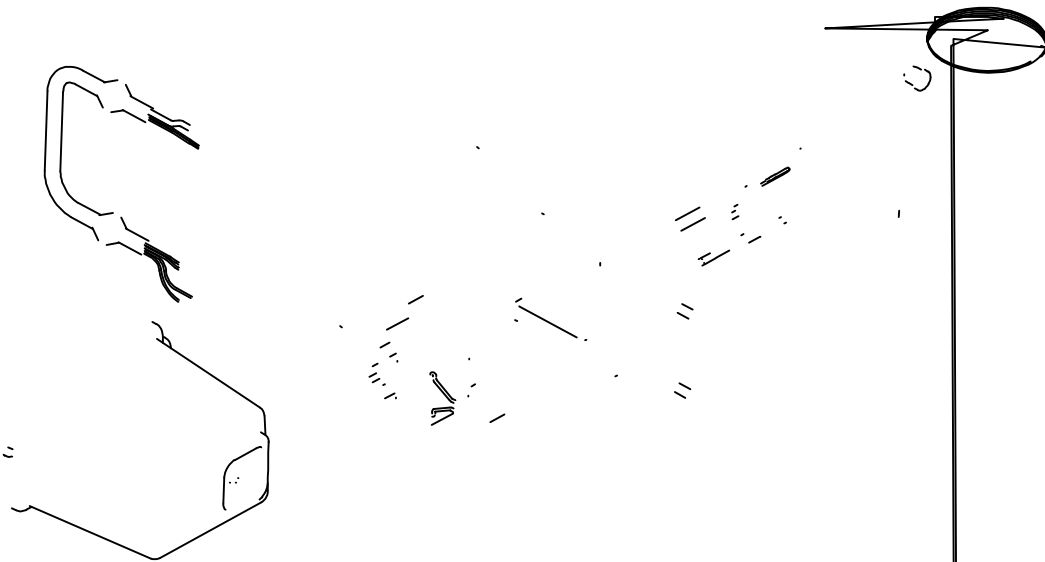
The electronic timer's software program version number will be displayed.

Depress the Extra Cycle button to exit.



VERSION: NXT
X.XX

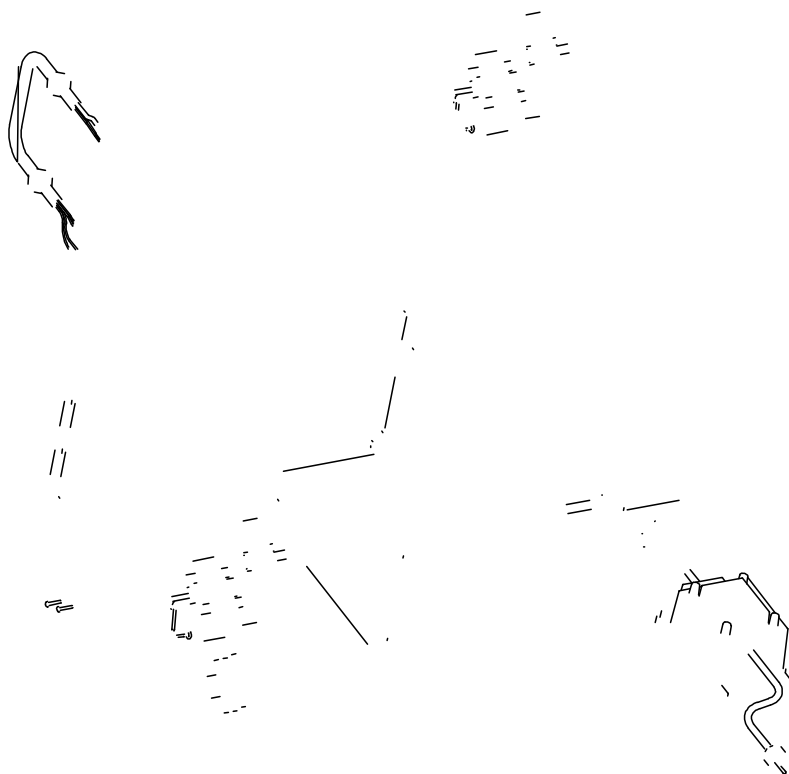
2750/2850/2900 Upper & 2900 Lower Powerhead Assy



2750/2850/2900 Upper & 2900 Lower Powerhead Assy

Part Number	Description
18697-15	backplate, hinged
60219-02	cover assy, environmental, black
60160-15	drive cam assy, stf, blue
	pin, link
	screw, pan hd mach, 4-40 x 1
	insulator, limit switch
	switch, micro
	screw, slot hex, 1/4 - 20 x 1/2
	motor, drive, 24V, 50/60 Hz
	cam, shut-off valve
	pin, roll, 3/32 x 7/8
	transformer, US, 120V, 24V, 108VA
	transformer, euro, 230V/24V 108VA
	transformer, aust, 230V/24V, 108VA
	plug, .750 dia, recessed, black
	plug, .140 dia, white
	plug, hole, heyco #2693
	plug, .190 dia, white, heyco #0307
	fitting assy, liquid tight, blk
	switch, micro
	screw, rd hd, 4-40 x 5/8 type 1
	wire harness, lower drive, w/molded strain relief
	strain relief, fat cord, heyco #30-1
	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
14202-01	screw, hex wsh mach, 8-32 x 5/16
	wire harness, upper drive
	plug, 1.20 hole, heyco #2733
	plug, hole, .125 dia, white
60217-02	cover assy, 2900, lower, black, environmental
	spacer, indicator
	bearing, connecting rod
	screw, hex hd 5/16 - 18 x 5/8, SS
	ring, retaining
	screw, hex wsh, 8-32 x 17/64
	backplate, lower
	pin, roll, 2900/3900
	link, piston rod
	bracket, motor, 2900
	cam, drive, 2900
	nut, hex, jam, 5/16-18, 18-8-SS
	indicator, service/standby
	motor, drive, 24V, 50/60Hz, SP
	pin, spring, connecting rod
	label, 3200NT, ground
	nut, jam, 3/4 - 16
	fitting, brine valve
	kit, can communication cable
42466-11	timer assy, NXT, right hand

3150/3900 Upper & 3900 Lower Drive Powerhead Assy



3150/3900 Upper & 3900 Lower Drive Powerhead Assy

Q t	y n	it t	. N	e m o D	pa n i. R r	a o	e c so
				19304-04		backplate, 3150/3900	
						bracket, motor mtg, 3150/3900	
						motor, drive, 24V, 50/60 hz, sp	
						screw, hex hd, 5/16 - 18 x 5/8, ss	
						nut, hex, jam, 5/16 - 18, 18-8-ss	
						bracket, switch, mounting, 3150/3900	
						insulator, limit switch	
						switch, micro	
						bracket, brine side	
						screw, phil pan, 40 x 1 1/2	
						bushin, 3150/3900	
						screw, hex, wsh hd, 8 x 1/2	
						cam assy, 3150/3900	
						screw, slot hex, 1/4 - 20 x 1/2 18-8 ss	
						gear, drive	
						ring, retaining	
						link, drive	
						pin, drive link	
						bearing, drive link	
						clip, 3150/3900	
						pinion, drive	
						pin, roll, 2900/3900	
						screw, hex wsh, 8-32 x 17/64	
						nut, hex, 1/4 - 20	
						ring, retaining	
						washer, ss, .88, 3150/3900	
						ring, retaining, bowed	
						plug, .140, white	
						plug, hole, heyco, #2693	
						plug, .8750 hole, recessed, black	
						screw, ft hd mach, 8-32 x 3/8	
						ftting assy, liquid tight, blk	
						wire harness, upper drive	
						wire harness, lower drive w/molded strain relief	
						transformer, US, 120V, 24V, 108VA	
						transformer, euro, 230V/24V 108VA	
						transformer, aust, 230V/24V, 108VA	
						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	
				14202-01		screw, hex wsh, 8-32 x 5/16	
						plug, 1.20 hole	
				60240-02		cover assy, 3150/3900, env, black	
						motor, drive, 115V, 50/60Hz, sp	
						backplate, 3900, lower, env	
						bracket, motor mounting	
						indicator, service/standby, 3900	
						spacer, indicator	
						bearing, drive link	
						screw, rd hd, 4-40 x 5/8, type 1	
						cam assy, 3900, lower	
						label, 3200NT, ground	
						plug, .190 dia, white	
						plug, .750 dia, recessed, black	
						kit, can communication cable	
				42466-11		timer assy, NXT, right hand	

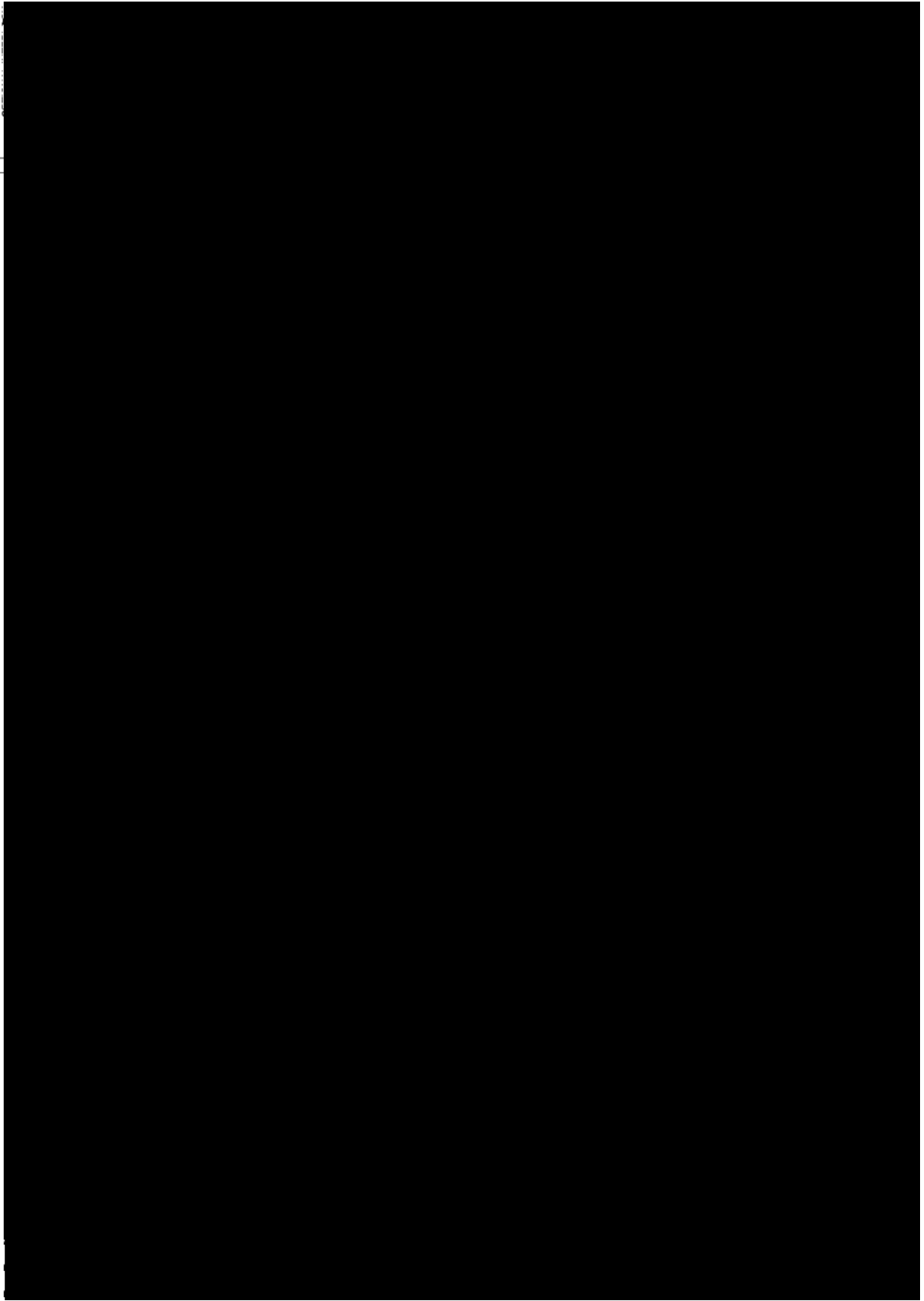
Il h t p vir r t r h a o vi, hr e 8 at p n h e i s t l e l a v a r a Ma a c o n a e . e s o o a e

NO OUTPUT

- NEUTRAL
- 24VAC/3A MAX. RESISTIVE
- 30VDC/3A MAX. RESISTIVE
- UNSWITCHED HOT

OPTIONAL MOTOR/PUMP ON DURING REGENERATION

OR CPO DEVICE ON DURING SERVICE
SWITCHED HOT



Troubleshooting

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.

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.

u e	s n it rr e c o
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.

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.

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

- 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.

Troubleshooting

u a e	s n it rr	o e c o
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	

n rr r r S

a E o E cee s

DETECTED ERROR=
E2 RESET UNIT

rr r e e o
Go through Master Programming to program the unit.

DETECTED ERROR=
NO MESSAGE #1

1 o g a e
Make sure all communication cables are connected.
If "No Message #1" ensure it is the lead unit.
Ensure #1 is configured for the correct system type.

DETECTED ERROR=
NO MESSAGE #3

3 o g a e
Make sure all communication cables are connected.
If "No Message #3" ensure it is unit #3.
Ensure #3 is configured for the correct system type.

DETECTED ERROR=
PROGRAM MISMATCH

rhir t P g o a m and
Ensure the units on the network are not configured the same as #1/the Lead unit.

DETECTED ERROR=
EXCEED UNIT SIZE

i t iz S e E U de
There are more units on the system than the Lead is programmed for.

DETECTED ERROR=
MATCHING ADDRESS

r g c M A e d s
The unit is programmed the same # as another unit.
y h t r t l l t l l i n i t n h i t w e l l t o t s e v e t s m u s c o f i o u
