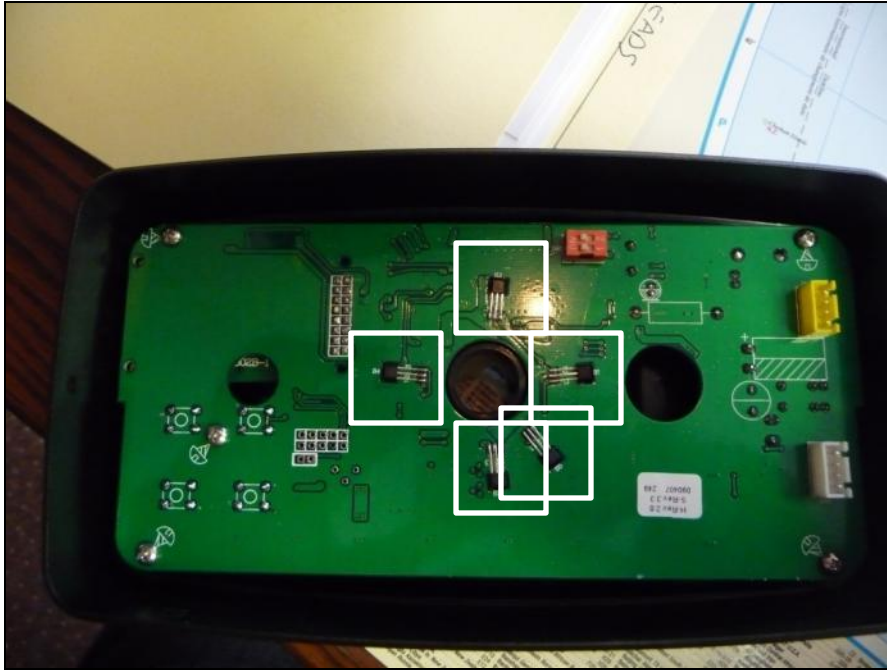




165 / 265 SOFTWARE

165 / 265 Circuit Boards

The main PCB contains sensors that contact with another sensor mounted on an arm of the main drive gear. This allows the computer chip located on the display PCB to stop the piston with precise accuracy in each step of the regeneration cycle.



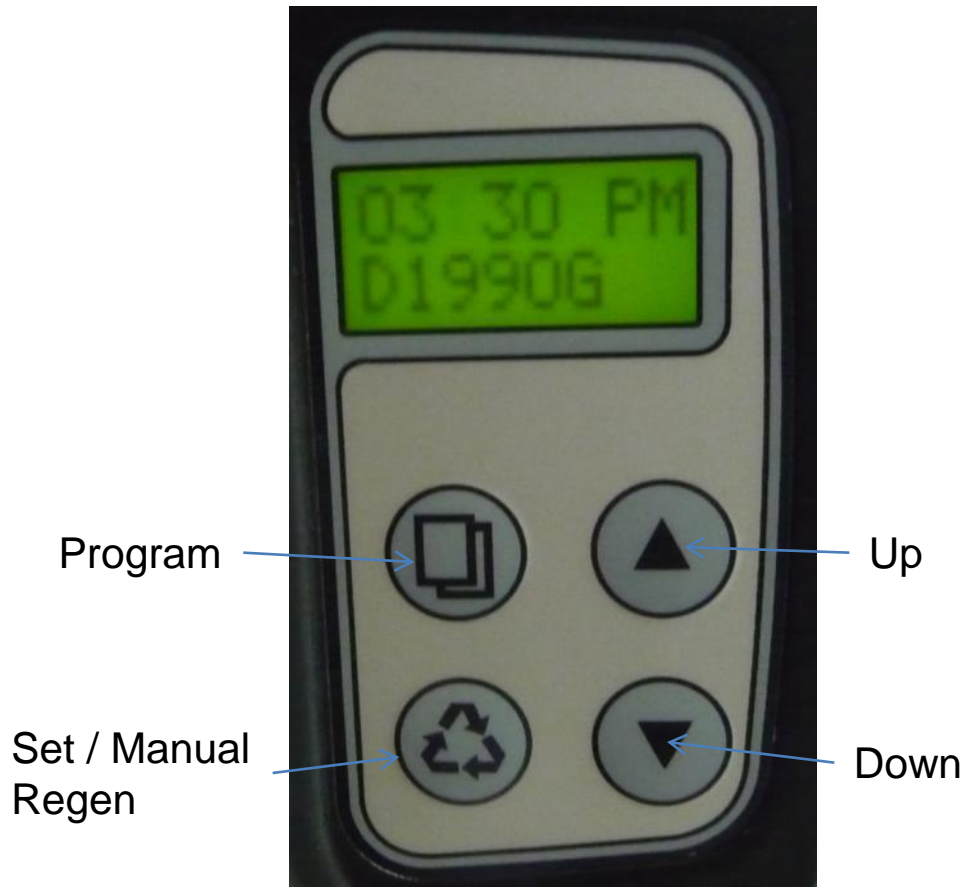
Main PCB Position Sensors



Main Drive Gear Sensor

165 / 265 Program Buttons

*The Canature 165 / 265 display features a 2 line x 8 character back lit LCD display.
The main page displays, time of day, regeneration mode, and unit of measure.*



Program

This button is used to enter or exit the programming mode.

Set / Manual Regen

This button serves two functions. When inside the programming area, pressing it allows that option to be edited.

From the main display, a manual regeneration can be started by pressing it

Up & Down

The up and down arrows are used to change values in edit mode.

165 / 265 Main Page Display

When the valve is in normal service, the display shows key information such as time of day, regeneration mode, unit of measure, and volume or days remaining.

TIME OF DAY 03:32 PM



F 1990 G



G – US Gallons
T – Metric Tonne

Remaining Volume

- F – Meter Immediate
- M – Meter Override (Mix Regen)
- D – Delayed Regeneration

D - 08



08 Days Remaining

D – Timer (Calendar Clock)

165 / 265 Other Features

The 165 / 265 valve has a feature that tracks to total amount of water treated by the system. During regeneration, the display will flash what the next cycle is.

Totalizer



→ Gallons remaining

→ Total gallons treated



Regeneration Display

When the regeneration cycle is started, the display will flash the next position. When the position is reached, the flashing will stop and the time will begin to count down for the duration of that cycle.

Programming Options

Programming the 165 / 265 control is easy. There is no need to memorize codes or complicated symbols. Simply press the program button and follow the English prompts.

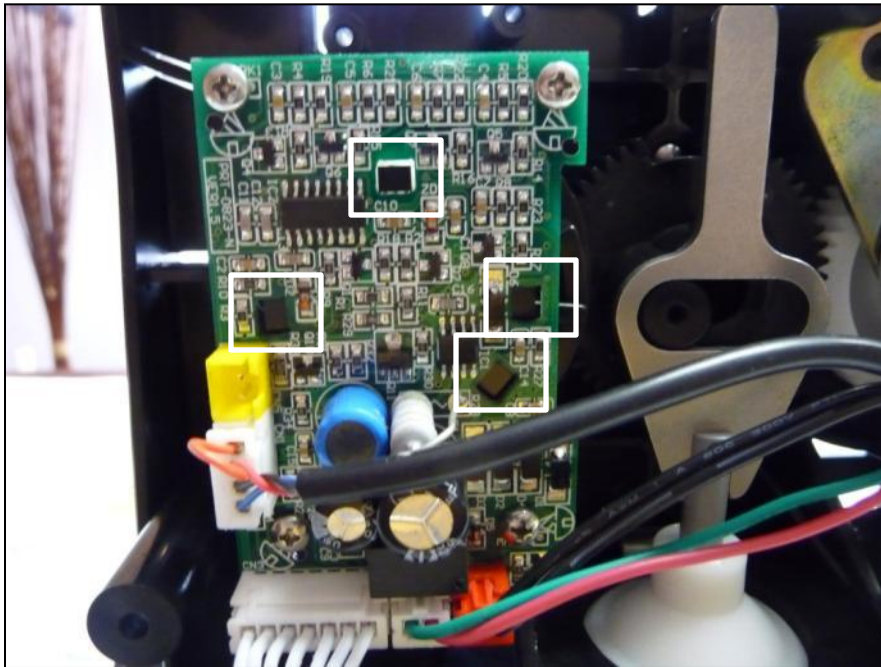
PARAMETER	OPTIONS	DESCRIPTION
REGIONAL	METRIC	Metric Tonnes or US Gallons
	US	
REGENERATION MODE	METER DELAYED	Regeneration delayed until regeneration time.
	METER IMMEDIATE	Regeneration starts immediately.
	TIMER	Regeneration schedule based on time (days).
	MIX REGEN	Meter initiated with Day Override.
DATE		Current date.
TIME		Current time.
REG. TIME		Regeneration time.
REG. DAYS		Number of days between regenerations.
REG. CAP.		System capacity (US Gallons or Cubic Meters)
BACKWASH		Back wash.
BRINE		Brine draw and slow rinse.
RINSE		Fast rinse.
REFILL		Brine tank refill
LOAD DEFAULT	L.CAPA.	Restore default settings.
	M.CAPA	
	S.CAPA	



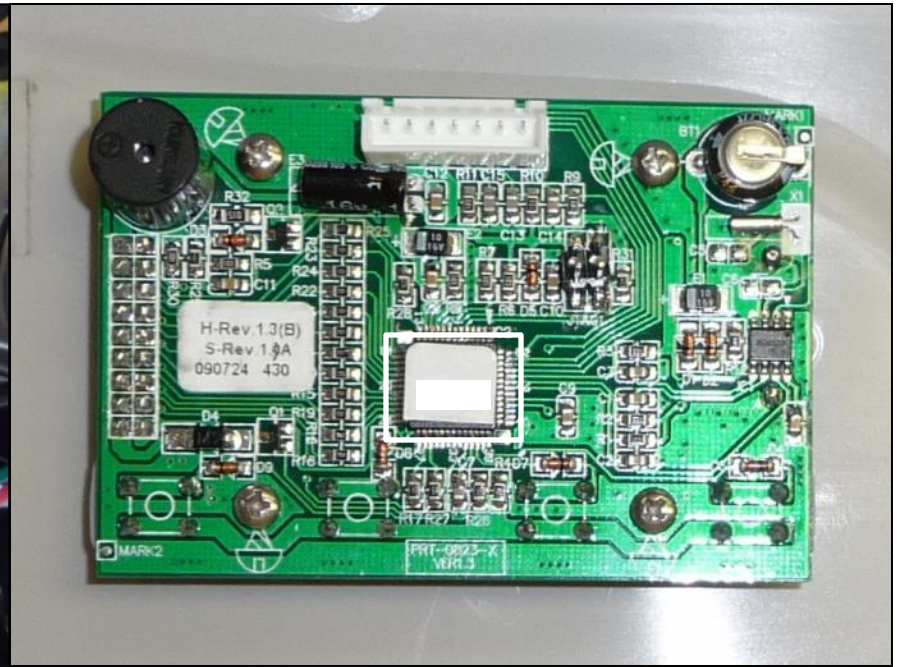
565 SOFTWARE

565 Circuit Boards

The main PCB contains sensors that contact with another sensor mounted on the brine cam. This allows the computer chip located on the display PCB to stop the piston with precise accuracy in each step of the regeneration cycle.



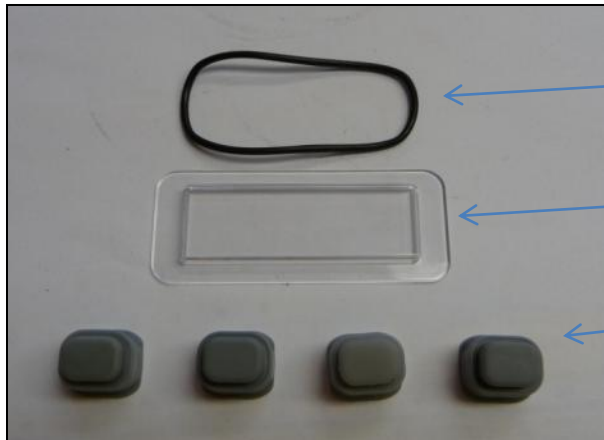
Sensor PCB



Main Display PCB

565 Water Proof Cover Design

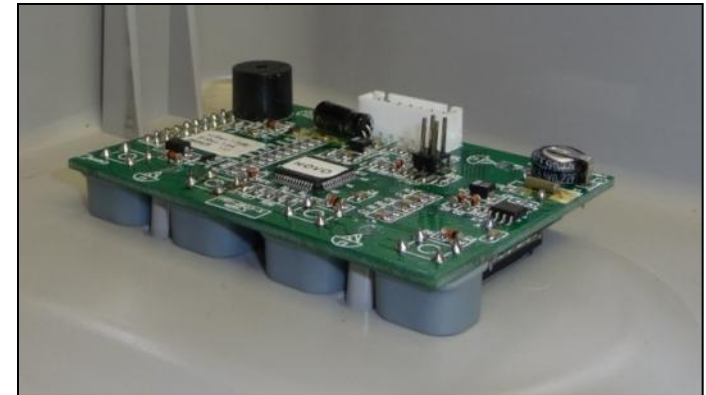
An o-ring seal between the display window and the cover along with individual rubber buttons makes the cover water proof.



Window O-ring

Main Window

Rubber Buttons



Easy Electronics

Programming and using a Canature valve is VERY easy! A blue back lit 2 line x 16 character display allows us to use full text. No more crazy symbols to memorize!



Level I Programming

All that is required to program a system is to update date and time, and then set the number of people and water hardness. Setting up a system has never been easier!



Level I User Program Mode		
PARAMETER		DESCRIPTION
1	CURRENT TIME	Set time of day.
2	CURRENT DATE	Set current month, day, year.
3	NUMBER PEOPLE	Set number of people in household.
4	WATER HARDNESS	Set grains per gallon of raw water hardness.

Enter Program Level I

First step is to enter Level I programming. Press the MENU button to enter the level I program level.



Change Time

Press the SET button to edit the CURRENT TIME. Use the UP or DOWN keys to change the values. The cursor will blink to let you know are in edit mode and will change to solid when you are out of edit mode. Press the SET button to accept the values and move to the next option.



Change Date

Press the SET button to edit the CURRENT DATE values. Use the UP or DOWN keys to change the values for the month. Press the SET button to accept the values and to advance to the days and then the year



Change Number of People

Press the SET button to edit the number of people living in the house. Use the UP or DOWN keys to change the values. Press the SET button to accept the values and move to the next option.



Change Water Hardness

Press the SET button to edit WATER HARDNESS. Use the UP or DOWN keys to change the values. Press the SET button to accept the values and move to the next option.



Vacation Mode Option

Congratulations! You are done. Your system has already made all of the necessary calculations to properly set up the system.



Leave this value at NO for the initial set up. This option is available if the system was not going to be in used for an extended period of time. Changing the value to YES will cause the system to periodically rinse itself.

No Touch Diagnostic Display

Many controls require complicated commands to view key diagnostic information. That is if they offer it at all!



When the Canature valve is in service, it continually monitors and tracks water flow and usage. The main page will display the current date and time for about 5 seconds before flashing useful diagnostic information.

Level II Program Mode

When you buy a unit fully assembled, all of these parameters will be pre-set at the factory and tailored to each type of system and size.

Level II Master Program Mode			
PARAMETER	OPTIONS	DESCRIPTION	
1	SYSTEM LANGUAGE	ENGLISH	This option controls which language should be used in the valve display.
		FRENCH	
		SPANISH	
2	VALVE OPERATION	SOFTENER	There are three basic operating modes to choose depending on the system application.
		FILTER	
		IRON FILTER	
3	REGEN. MODE	METER DELAYED	This is the most common setting. When the volume remaining reaches zero gallons, the system will initiate a regeneration at the next pre-set regeneration time.
		METER IMMEDIATE	The unit will initiate a regeneration immediately after the volume remaining reaches zero.
		CALENDAR CLOCK	The unit will initiate a regeneration at the next pre-set regeneration time based on the interval of days between regeneration days.
		METER OVERRIDE	When the volume remaining reaches zero gallons, the system will initiate a regeneration at the next pre-set regeneration time. If the days between regeneration is reached before the remaining volume reaches zero, the system will override the meter setting and initiate a regeneration.
4	REGENERATION TIME		This setting controls the time of day when a regeneration cycle will start.
5	CAPACITY CALC.	AUTOMATIC	This option automatically calculates the capacity (in gallons for meter units), refill time (in minutes), or regeneration day intervals (days for calendar clock mode).
		MANUAL	The user can manually enter values for capacity, refill time, or regeneration day intervals.
6	RESIN VOLUME		This value should be the amount of resin in cubic feet that is loaded in to the tank. The value is used to calculate the system capacity and refill time.
7	SALT SETTING		This value is the salt dosage (pounds per cubic foot) to be used when regenerating the system.
8	REFILL FLOW RATE		This value is the flow rate(gallons per minute) of the brine line flow control (BLFC) button installed in the valve and is used to calculate the refill time to precisely measure the amount of water into the brine tank. (Note: This value is factory preset and should not be changed unless the BLFC button has been changed to a different size.)
9	UNIT CAPACITY		This value (GRAINS for softeners, PPM for IRON FILTERS) is the total capacity of the system. It is used to calculate the capacity of the system in gallons.
10	CAPACITY		In MANUAL CAPACITY CALC. mode, the CAPACITY can be adjusted by the user. In AUTOMATIC CAPACITY CALC. mode, the current calculated value is displayed but cannot be adjusted.
		FORMULA	$CAPACITY = (UNIT\ CAPACITY / WATER\ HARDNESS) - (NUMBER\ PEOPLE * DAILY\ USAGE)$

Level II Program Mode

If any parameters require changing, follow the step by step instructions in the operating manual.

Level II Master Program Mode		
PARAMETER	OPTIONS	DESCRIPTION
12	RESERVE CAPACITY	This value is the amount of water per person in gallons to be saved for a reserve capacity. It is used to calculate the CAPACITY of the system.
13	REGEN. DAYS	This value is the interval (days) between regenerations. It is used to determine how many days between regenerations in the CALENDAR CLOCK mode. It is also used as the value for the METER OVERRIDE mode. It can be set by the user in MANUAL CALC. MODE. In AUTOMATIC CAPACITY CALC. mode, the current calculated value is displayed but cannot be adjusted.
	FORMULA	$REGEN. DAYS = ((UNIT\ CAPACITY / WATER\ HARDNESS) / (NUMBER\ PEOPLE * DAILY\ USAGE)) - 1$
14	BACKWASH	This option controls the length of time in minutes for the unit to clean the bed by reversing the flow of water upwards through the bed and out to the drain.
15	BRINE / RINSE	This option controls the length if time in minutes for the unit to draw regenerant (brine for softeners) from the second tank and slowly rinse it from the top to bottom of the tank.
16	RINSE	This option controls the length of time to give the tank a final rinse from the top to the bottom in order to remove any last traces of the regenerant (brine) from the tank.
17	REFILL	This option controls the length of time the brine valve will open to refill the second tank (brine tank for softeners) with water in order to produce the regenerate solution (brine for softeners) for the next regeneration cycle. The water is accurately measured through the valves brine line flow control to make a precise quantity of regenerant solution. In MANUAL CAPACITY CALC. mode, the REFILL time can be adjusted by the user. In AUTOMATIC CAPACITY CALC. mode, the current calculated value is displayed but cannot be adjusted.
	FORMULA	$REFILL = 0.70 * SALT\ SETTING * RESIN\ VOLUME / REFILL\ FLOW\ RATE$
18	RESTORE DEFAULT	This option allows the current settings to be erased and changed back to the default settings.
	YES	
	NO	

Level II Diagnostics

Just because the programming is simple and easy to use doesn't mean we left out powerful diagnostic tools. By pressing and holding the down button, you can enter into the Level II diagnostic function where more key information is stored.



All values can be reset to zero by holding the set button until you hear a beep.

Regeneration Display

When an automatic regeneration occurs or a manual regeneration is started the valve displays key information.



When a regeneration sequence starts, the display will show what position the piston is moving to.



When the position is reached, the display shows the position on the top line and a graphical display of the time remaining in the cycle.



The top line alternates to also how the actual time remaining.