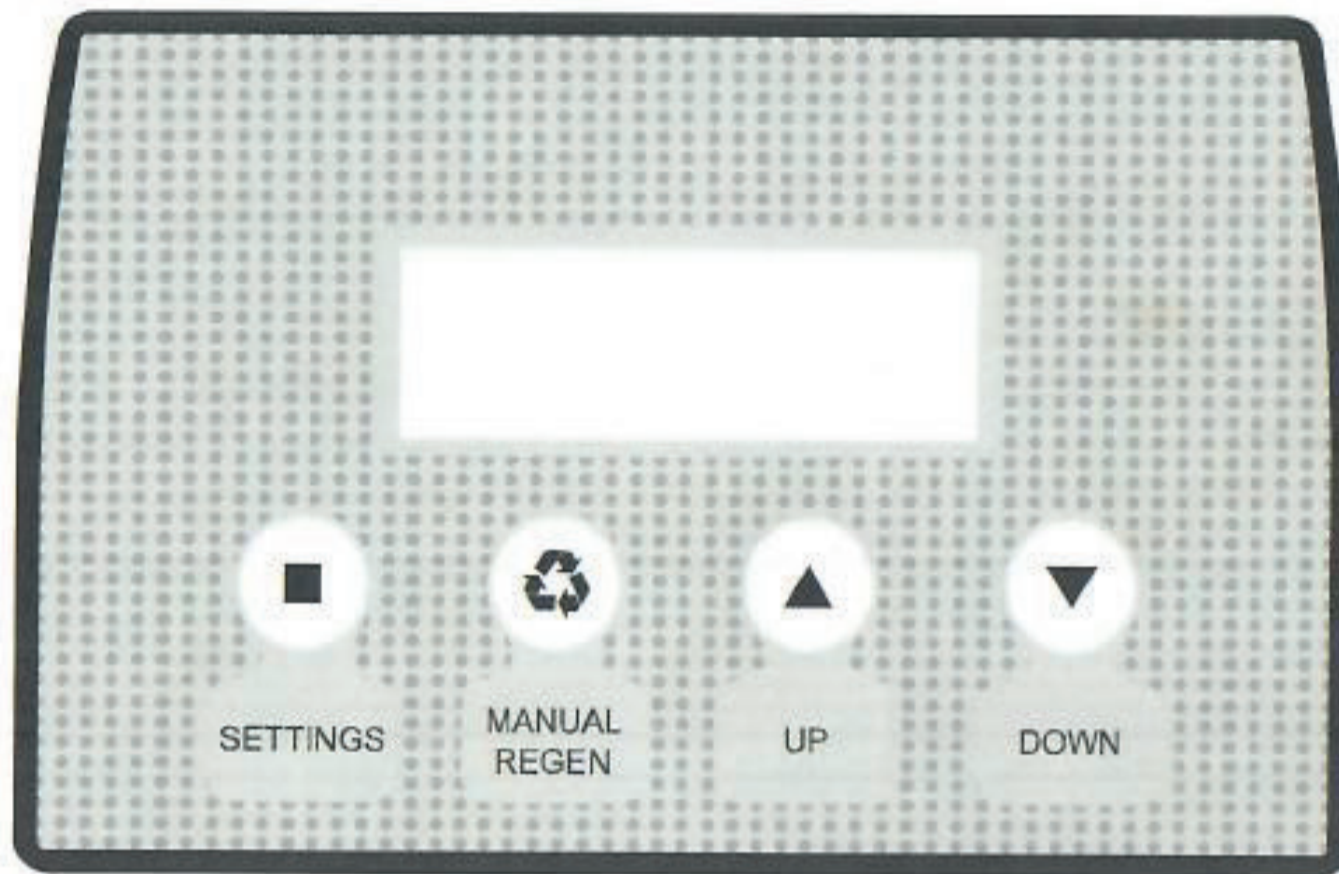




**485 HE  
PROGRAM  
GUIDE**

Programming Manual

## Button Configuration



### Key Pad Configuration

SETTINGS	This function is to enter the basic set up information required at the time of installation.
MANUAL REGEN / CYCLE	This function is to initiate an immediate or delayed manual regeneration.
DOWN / UP	These buttons are used to increase or decrease the value of the settings while in the programming mode.

## Programming Levels

There are 4 levels to the valve program. Master options and Factory options are typically adjusted at the factory. These options link the PCB function with the type of control valve and should not be tampered with. Advanced options are used to configure the unit when the valve is assembled to the tank so that it can function as the proper size and intended system operation. Settings are the final options chosen when the unit is installed to a specific location.

PROGRAM LEVEL	USER ACCESS
MASTER	These settings are programmed by the factory. The settings are important for the operation of the valve that should only be changed by a qualified person.
FACTORY	These settings are programmed by the factory and should be adjusted when the valve is assembled into a unit or system. It contains important settings so the valve will operate properly for the type of system it is intended for. The settings should only be changed by qualified person.
ADVANCED	These settings are programmed when the unit is assembled. The settings should only be adjusted by a qualified person.
SETTINGS	These settings are programmed when the unit is installed. The settings should only be adjusted by a qualified person.



## Main Display Options

The main display page will pause on the Date and Time page for 5 seconds. Then it will continually scroll through all of the system diagnostic display pages. Depending on the Valve Type some pages will not be displayed.

To manually scroll through the diagnostics, press the down or up key.

To reset the TOTAL REGENS, TOTAL GALLONS OVER RUN TOTAL, or PEAK flow rates, press and hold the MENU until the value changes to zero.

PARAMETER	DESCRIPTION
JULY/17/2012 8:30 PM	Month, Day, Year, Time
TOTAL 4 DAYS REMAIN 3 DAYS	The number of days remaining before regeneration. This option is only in filter mode.
TOTAL 1,500 GAL REMAIN 1,200 GAL	The total amount is the system capacity when fully regenerated. The remaining is the capacity left in the system.
PEOPLE 2 RESERVE 150 GAL	Number of people in the household and the calculated reserve capacity. When remaining reaches reserve capacity a regeneration will be scheduled.
EST. DAYS TO NEXT REGEN 06 DAYS	The estimated number of days until the next regeneration will occur.
LAST REGEN 9/24/12	The date of the last regeneration.
TOTAL REGENS 10	The total number of regenerations.
TOTAL GALLONS 001590 GAL	The total amount of gallons treated by the system.
OVER RUN TOTAL 0500 GAL	The total amount of water that has exceeded the system capacity over the last 4 regenerations. When remaining goes to zero, the gallons used will be added to over run total.
CURRENT 1.5 GPM PEAK 6.5 GPM	The current flow rate and the peak flow rate since the last regeneration.
DELAYED REGEN OFF	Advises whether a delayed regeneration has been scheduled manually or automatically.
REFILL TIME 3:00 MIN	The current calculated refill time.
REGEN TIME 2:00 AM	The current setting for regeneration time.
VALVEMODE SOFTENER UF	The current setting of the valve mode.

## Manual Regeneration

### **DELAYED REGENERATION**

Press and release the MANUAL REGEN Button to set a delayed regeneration that will occur at the regeneration time. To cancel the delayed regeneration, press and release the MANUAL REGEN button.

### **IMMEDIATE REGENERATION**

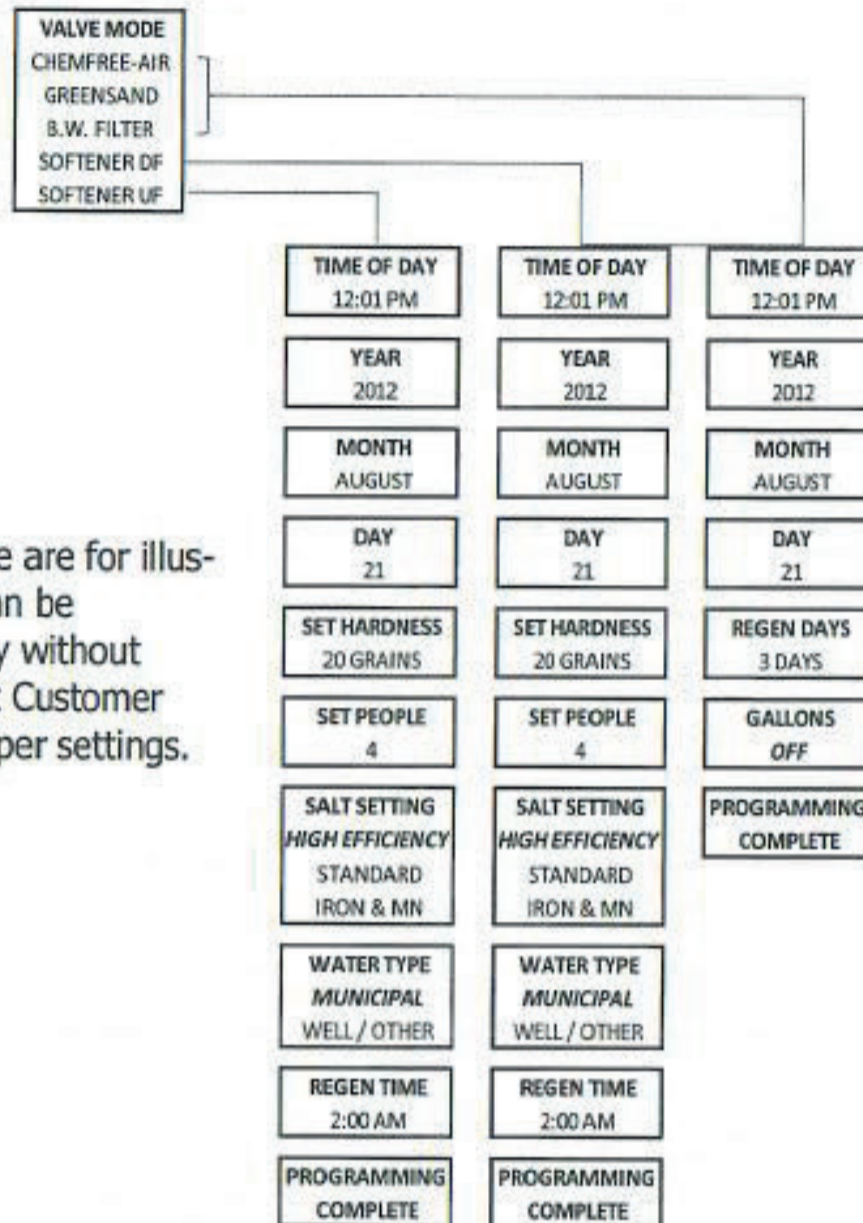
To start an immediate regeneration (or step valve through each position), press and hold the MANUAL REGEN Button for 3 seconds (until beeps). The valve will start an immediate regeneration. Press any key to skip to the next cycle.



## Settings

### Settings

Press SETTINGS key (3 SECONDS / BEEP)



#### CAUTION:

The values in this page are for illustration purpose and can be changed by the factory without notice. Please contact Customer Service to confirm proper settings.

#### **TIME OF DAY, YEAR, MONTH, DAY,**

Time of day is for normal operation of system and the scheduling of the regeneration time. The date is used in a diagnostic function to track the last time the system regenerated.

#### **SET HARDNESS**

This value is the maximum compensated water hardness in grains per gallon of the raw water supply. It is used to calculate the system capacity. If Ferrous Iron is present add 4 gpg for every 1 ppm of Ferrous Iron.

#### **SET PEOPLE**

This value is the number of people living in the home. It is used to calculate the amount of water needed for daily use and the reserve capacity of the system.

#### **SALT SETTING**

There are 3 settings to choose in the MENU SETTINGS. High Efficiency, Standard Capacity, and IRON & MN. These settings will determine the salt dosage and capacity for the system.

#### **WATER TYPE**

This setting will determine if the BACKWASH OVERRIDE function will be on or off. Select MUNICIPAL if the water source is clean (<1NTU turbidity) and the system will skip the back wash cycle based on the setting in BACKWASH OVERRIDE.

Select WELL / OTHER if any Iron or Manganese is present or if the water source is not clean (< 1NUT turbidity). The system will back wash every time.

#### **REGEN TIME**

This setting determines the time of day to perform a scheduled regeneration.

#### **REGEN DAYS**

This value is the number of days between regenerations or back washes to clean the filters.

#### **GALLONS**

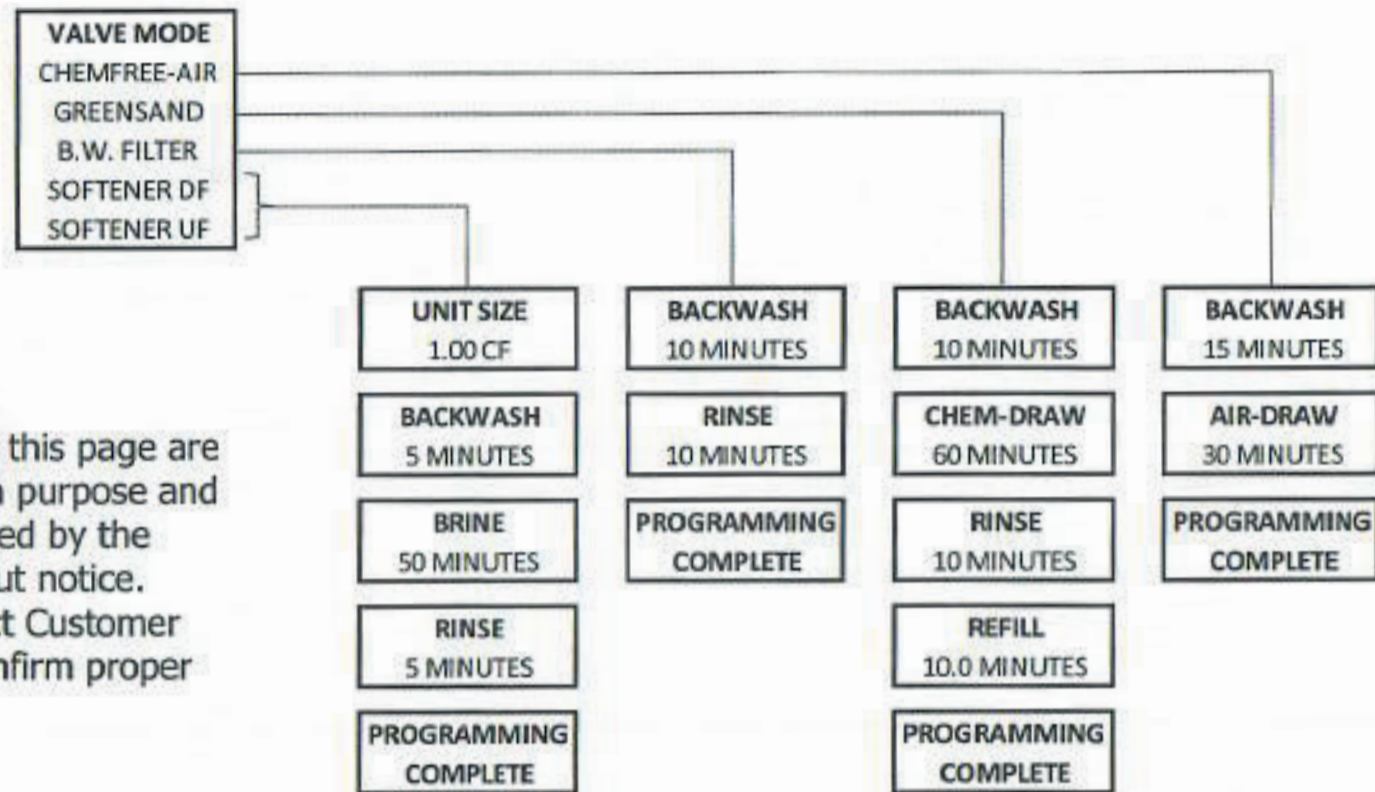
Default value is OFF. Adjust the GALLONS to set the capacity. This will cause the unit to regenerate either when the gallons remaining goes to zero or the days between regeneration is zero. Which ever occurs first.



## Advanced Options

### Advanced Options

Press UP + DOWN (3 SECONDS / BEEP)



#### CAUTION:

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#### **UNIT SIZE**

This setting is the amount of ion exchange media used in the system. The value is used to calculate system capacity and refill time. It is also used to select the pre-engineered valve cycle settings. "C" designates a cabinet model.

#### **CYCLE SETTINGS (BACKWASH, BRINE, RINSE)**

The system has pre-engineered default settings for every valve mode, unit size, and salt setting. The settings are optimized to maximize salt and water use efficiency. The settings can be manually adjusted. In SOFTENER UF or SOFTENER DF mode, refill is automatically calculated. In GREENSAND mode, the value should be manually adjusted.