

# **FREEDOM WATER SYSTEMS**

Aqua-Tech Hybrid System



# **OWNER'S MANUAL**













Congratulations on the purchase of your Aqua-Tech Premium Well Water Filtration and Softening System

You have purchased one of the finest water softeners on the market today. This manual is designed to provide owners, installers, and service technicians with detailed information about the installation, start-up, and operation of your new water treatment system.

Your Aqua-Tech water treatment system is designed to offer low maintenance operation. The control valve will perform regular backwash functions automatically, however, you will need to periodically add salt to your brine tank as it is consumed by the system. For your convenience, your system has been pre-programmed for you at our factory, however it is recommended to verify settings for your particular water quality, in order to achieve ideal water quality.

## **IMPORTANT SAFETY SYMBOLS**



Hazards or unsafe practices that may result in personal injury and/or severe property damage.



Hazards or unsafe practices that may cause operational problems with your water treatment system.

## **Table of Contents:**

| GENERAL WARNINGS  | 4  |
|---|----|
| OPERATING CONDITIONS  | 5  |
| INSTALLATION  | 7  |
| Step 1 – Pre-Installation Inspection                              | 7  |
| Step 2 – Selecting an Installation Location                       | 8  |
| Step 3 – Prepare Treatment Tank                                   | 10 |
| Step 4 – Turn off the Water & Electric Water Heaters              | 12 |
| Step 5 - Prepare and Install Inlet and Outlet Plumbing Connection | 13 |
| Step 6 – Drain Line Installation                                  | 15 |
| Step 7 – Brine Tank Connections                                   | 16 |
| Step 8 - Connect the Brine Tank Overflow to Drain                 | 18 |
| Step 9 – Control Valve Set-up                                     | 19 |
| Step 10 - Initial Start-up and Leak Testing                       | 20 |
| REGENERATION  | 23 |
| SALT  | 25 |
| CHANGING TIME OF DAY  | 26 |
| USER PROGRAMMING MODE   | 27 |
| MASTER PROGRAMMING MODE   | 29 |
| RESETS  | 30 |
| OPERATION DURING A POWER FAILURE                                  | 30 |
| DIAGNOSTIC DATA   | 31 |
| MAINTENANCE & TROUBLESHOOTING                                     | 31 |
| SHIPPING  | 35 |
| RETURNS   | 36 |
| WARRANTY INFORMATION  | 38 |
| WARRANTY REGISTRATION   | 39 |

## **GENERAL WARNINGS**



- Do not allow children or pets to play on or around the water filter.
- Do not install or store this filter system where it will be exposed to freezing temperatures.
- Do not tamper with controls.
- Do <u>not</u> repair, replace, or attempt to service any part of the system unless specifically
  instructed to in this manual <u>and</u> you have the understanding, tools, and skills necessary to
  carry out the procedure.
- Packing materials can be dangerous to children. Keep all packing material (plastic bags, polystyrene, boxes, etc.) well out of the reach of children.
- Individual components of this water treatment system, and the installed system, are heavy.
   Precautions should be taken to prevent personal injury or strain. Do <u>not</u> move heavy components without assistance if you are not physically capable of safely carrying out the procedure.
- If the water treatment system is to be left unattended for an extended period of time (vacation, etc.), we strongly recommend that you turn off the water supply to the system, or the whole house, while you are away.
- All state, provincial, and local government codes governing installation of water softeners should be observed.
- If your water pipes are metal (galvanized or copper), they may be used to ground electrical systems, appliances, or your phone line. If this is the case, be sure to install regulation ground clamps to the metal pipe on each side of the control valve and connect a jumper wire between the 2 clamps (#4 gauge solid copper wire recommended). Consult a certified electrician or plumber if you are unsure.

## **OPERATING CONDITIONS**

The following chart provides guidance on the conditions required for successful operation of your Aqua-Tech system.



USE OF THIS EQUIPMENT OUTSIDE OF THESE OPERATING CONDITIONS MAY
ADVERSELY AFFECT THE PERFORMANCE OF YOUR SYSTEM, RESULT IN SYSTEM
DAMAGE INCLUDING WATER LEAKS AND CORRESPONDING PROPERTY DAMAGE, AND
MAY VOID YOUR WARRANTY.

| Minimum Water Pressure               | 20 PSI                   |
|--------------------------------------|--------------------------|
| Maximum Water Pressure               | 90 PSI*                  |
| Recommended Water Pressure           | 40-70 PSI                |
| Water Temperature                    | 36F to 100F (2 to 38C)   |
| Air Temperature                      | 32F to 125F (0 to 52C)** |
| pH Range                             | 5.0 to 9.0               |
| Maximum Recommended Hardness         | 90 grains per gallon     |
| Maximum Recommended Iron             | 10 ppm (mg/l)            |
| Maximum Recommended Manganese        | 5 ppm (mg/l)             |
| Maximum Total Organic Carbon         | 5 ppm (mg/l)             |
| Maximum Tannin                       | 2 ppm (mg/l)             |
| Maximum Ammonium                     | 4 ppm (mg/l)             |
| Maximum Free Chlorine                | 5 ppm (mg/l)             |
| Maximum Total Dissolved Solids (TDS) | 4,000 ppm (mg/l)         |
| Maximum Hydrogen Sulfide             | No Limit****             |

<sup>\*</sup> While the Aqua-Tech system is built to withstand pressures exceeding 90 PSI, if your water pressure is greater than 70 PSI, we recommend that you have a certified plumber install a pressure reducing valve ahead of the Aqua-Tech system.

<sup>\*\*</sup> The system cannot be subjected to freezing conditions or severe damage to the system and your property could occur.

<sup>\*\*\*</sup> pH correction is strongly recommended where pH levels are less than 6.5 to prevent damage to your control valve and plumbing system, and to prevent leaching of metals from

copper and brass plumbing components and solder in your home. Contact your dealer for recommendations.

\*\*\*\* While there is no limit on hydrogen sulfide concentration (rotten egg odor), the system will not remove this contaminant.

**Aqua-Tech Specifications Flow Rates & Backwash Requirements:** 

| Model  | 9-48                 | 10-54                | 12-52            | 13-54            | 14-65                 |
|--|----------------------|----------------------|------------------|------------------|-----------------------|
| Capacity at Salt  Dose of 6.3 Pounds /  Cubic Foot  (Recommended): | <b>32,000</b> grains | <b>48,000</b> grains | 64,000<br>grains | 80,000<br>grains | <b>112,000</b> grains |
| Lbs of Salt Per<br>Regeneration<br>@ dose of 6.3<br>lbs/CF:        | 15.0                 | 20.8                 | 28.8             | 35.1             | 49.0                  |
| Resin Volume<br>(Cubic Feet):                                      | 0.88                 | 1.32                 | 1.76             | 2.20             | 2.64                  |
| Optimal Service<br>Flow Rate* (GPM)                                | 8                    | 12                   | 15               | 18               | 25                    |
| Maximum Service<br>Flow* Rate (GPM)                                | 10                   | 18                   | 20               | 25               | 32                    |
| Backwash Flow<br>Rate at 40F Water<br>Temp (GPM)                   | 3                    | 5                    | 6                | 7                | 12                    |
|  |                      |                      |                  |                  |                       |

<sup>\*</sup> For the best performance of your system, the optimal service flow rate should not be exceeded on a continuous basis. Satisfactory to good performance can generally be achieved up to the recommended maximum service flow rate as long as this level of flow rate is not sustained continuously. Above Calculations are based on 10 grains per gallon of hardness.





CONFIRM THAT YOUR WATER CONDITIONS, SERVICE FLOW RATE NEEDS, AND AVAILABLE BACKWASH FLOW RATES MEET THE ABOVE SPECIFICATIONS FOR THE MODEL YOU ARE INSTALLING BEFORE COMMENCING THE INSTALLATION PROCESS. IF IN DOUBT, CALL YOUR DEALER FOR ADVICE. INSTALLED UNITS CANNOT BE RETURNED.

## **INSTALLATION**

WE RECOMMEND THAT YOU READ THIS ENTIRE MANUAL BEFORE STARTING THE ACTUAL INSTALLATION. WHILE WE STRONGLY RECOMMEND THAT A LICENSED PLUMBER PERFORM ALL INSTALLATION WORK, A MECHANICALLY-INCLINED HOMEOWNER WITH SUITABLE PLUMBING KNOWLEDGE CAN INSTALL THIS SYSTEM. IN ALL CASES, IT IS CRITICAL THAT THE INSTALLATION BE DONE IN ACCORDANCE WITH THESE INSTRUCTIONS AND ALL APPLICABLE PLUMBING AND ELECTRICAL CODES. BE SURE TO OBTAIN ALL REQUIRED PERMITS. IF THESE INSTRUCTIONS AND THE APPLICABLE CODES ARE IN CONFLICT, THE RELEVANT PLUMBING/ELECTRICAL CODE SHALL BE FOLLOWED. EQUIPMENT FAILURE, PERSONAL INJURY, OR PROPERTY DAMAGE CAN RESULT IF THIS EQUIPMENT IS NOT INSTALLED PROPERLY.

## Step 1. - Pre-Installation Inspection and Included Parts

Inspect all of the components that you received with your unit. You should have received the following:

- 1. Fleck 5800/5810 SXT Control Valve
- 2. Media Tank
- 3. Upper Screen
- 4. Bypass Assembly w/ Bypass Valve and 1" Stainless Steel Bypass
- 5. Riser tube and Lower Distributor
- 6. Small Parts Bag (contains food grade silicone O-ring lubricant, and parts for the brine tubing connections)
- 7. Drain Line Flow Control DLFC (attached to #1)
- 8. Brine Tank with Brine Well, Brine Valve assembly, Salt Grid, and Overflow Elbow
- 9. Brine Tubing (10 feet)



One (1) Fleck 5800SXT Downflow/Upflow Valve



Two (2) Adapter Coupling Assemblies with O-Ring



One (1) 1" Stainless Steel Bypass Valve



One (1) Drain Barb Fitting



Two (2) 18" x 1" M-F Stainless Flex Lines

## Step 2. – Selecting an Installation Location

While exterior installation in warm climate areas is possible, we strongly recommend interior installation only. The system cannot be allowed to freeze or severe system damage could occur. The system should not be exposed to rain and it should not be installed in direct sunlight, as long-term exposure to UV light could damage components of the system. Furthermore, direct sunlight could raise the internal water temperature in the treatment tank and reduce backwash effectiveness.

In most cases, the system should be located AFTER your water pump and pressure tank, AFTER the branch line to exterior irrigation, and BEFORE your hot water heater.



IF YOU HAVE OTHER WATER TREATMENT EQUIPMENT, YOU SHOULD DISCUSS THE ORDER OF YOUR TREATMENT EQUIPMENT WITH YOUR DEALER PRIOR TO INSTALLATION.

Select a location for installation of your water filter that is within close proximity to the main incoming water line of the home. The location should have a firm, level surface with enough space for the unit itself including the brine tank and sufficient space surrounding the unit to facilitate maintenance. We recommend that the brine tank be located immediately beside your treatment tank and control valve (it can be beside or in front). Frequent access to the brine tank is necessary to add salt so it should be located in a readily accessible location. Although not ideal, if it is necessary, the brine tank can be located up to about 10 feet away from the treatment tank and control valve (max. tubing length).



WHILE WATER LEAKS ARE VERY RARE AND UNEXPECTED, YOUR WATER FILTER SYSTEM SHOULD BE LOCATED NEXT TO A FLOOR DRAIN OR PROTECTED BY A WATER LEAK DETECTION SYSTEM WITH AUTOMATIC SHUT-OFF VALVE TO PREVENT WATER DAMAGE TO YOUR PROPERTY IN THE UNLIKELY EVENT OF A WATER LEAK. RECOMMENDED WATER LEAK DETECTION SYSTEMS ARE AVAILABLE AT WWW.A-LEAK-DETECTOR.COM.

You will also require a suitable drain to discharge waste water from the backwash cycle. A drain standpipe for a washing machine, floor drain, or sump pump are excellent drain options. We recommend that the drain line be connected to a minimum 1½" drain standpipe or floor drain located ideally below the top of the head of your water filter. If possible, the drain should be no farther than 20 feet from the system.



NOTE: NEVER CONNECT THE DRAIN LINE DIRECTLY INTO A DRAIN PIPE. ALLOW AN AIR GAP BETWEEN THE DRAIN TUBING AND WASTE LINE TO PREVENT THE POSSIBILITY OF BACK-SIPHONING. WE DO NOT RECOMMEND USE OF A CHECK VALVE AS IT MAY BECOME CLOGGED WITH CONTAMINANTS EJECTED FROM THE SYSTEM DURING BACKWASH.

You will also need access to a standard, non-switched, grounded 120 volt (60 Hz) electrical outlet. An extension cord may be used to reach a suitable electrical outlet. If this option is used, ensure that the extension cord is UL/CSA certified and of an appropriate wire gauge for the application.

## Step 3. - Prepare Treatment Tank

Place the tank in the location where it will sit when the installation is complete. Note that the black base of your tank is not permanently attached to the rest of the tank. If your tank appears to be crooked, the base has likely been knocked out of alignment during shipping. This can be correct by picking the tank up and tapping it on a hard surface while holding it perpendicular to the floor. A few light taps will generally straighten it out.

## Step 4. - Turn off the Water & Electric Water Heaters



# FAILURE TO FOLLOW THIS PROCEDURE COULD RESULT IN SERIOUS, PERMANENT DAMAGE TO THE HEATING ELEMENTS IN YOUR WATER HEATER.

If you have a conventional electric water heater or an on-demand (tankless) electric water heater, we highly recommend that you turn off the power to the heater while installing any water treatment equipment. Turn off power to your water heater now.

Turn off the household main water shutoff valve. Open several plumbing fixtures inside the home as well as the outside faucets to drain as much water out of the plumbing system as possible.

Following completion of the entire installation, restore the water flow by turning on the household main water valve and allow all air to be purged from the plumbing system before turning the power back on to your water heater.

## Step 5. - Prepare and Install Inlet and Outlet Plumbing Connections



TEFLON® TAPE IS THE ONLY SEALANT TO BE USED ON THE 1" NPT CONNECTOR YOKES AND DRAIN FITTINGS.



IF YOU WISH TO USE COPPER PIPING FOR YOUR INSTALLATION AND WILL BE SOLDERING THE JOINTS, DO NOT APPLY HEAT NEAR YOUR CONTROL VALVE, BYPASS ASSEMBLY, 1" NPT CONNECTOR YOKES, OR THE DRAIN FITTINGS; OTHERWISE SERIOUS DAMAGE TO THESE PARTS COULD OCCUR. ALWAYS SOLDER JOINTS WITH THESE COMPONENTS DETACHED. IF YOU ARE USING COPPER ADAPTERS TO CONNECT TO THE 1" NPT CONNECTOR YOKES, IT IS RECOMMENDED THAT YOU SOLDER A 6" PIECE OF COPPER PIPE INTO EACH OF THE CONNECTION ADAPTERS AWAY FROM THE VALVE, THEN LET THEM COOL OFF BEFORE THREADING THEM ONTO THE 1" NPT CONNECTORS.

## **Key Control Valve Components:**

- 1. Control Valve Body
- 2. Bypass Valve
- 3. 1" FNPT (Male) Connector Yokes
- 4. Drain Line Flow Control (DLFC)
- 5. Valve Cover
- 6. DLFC Retention Clip

The system's control valve is connected to your incoming and outgoing water lines by way of a bypass assembly with 1"NPT threaded fittings. This assembly is composed of the bypass valve and two 1"NPT stainless flex lines.

Locate the inlet and outlet ports on the back of the co are marked with arrows indicating the correct directic the back of the control valve, the inlet is on the left and the outlet is on the right. Check the corresponding markings on the bypass to ensure the correct direction of water flow and attach the bypass valve to the control valve. The in and out arrows on the bypass should be pointing the same direction as the in and out arrows on the outside of the control valve.



#### BE VERY CAREFUL TO MAKE SURE YOU PLUMB THE SYSTEM IN THE RIGHT DIRECTION.

The bypass assembly is secured to the control valve using threaded fittings. Thread sealant tape should not be used on these threads. The seal is made by way of o-rings. To attach the bypass to the control valve, simply thread the 2 nuts on the bypass onto the valve until the nuts bottom out on the valve body. Do not overtighten - it is normal for some "play" to exist when the bypass assembly is properly seated. This allows for minor misalignment of the piping connections and relieves stress on the valve. The 1" NPT connector yokes are connected to the bypass in the same manner (they are normally shipped to you pre-connected to the bypass, but you can separate them to make the plumbing to your main water lines easier if you want).

You will need to purchase the appropriate NPT threaded fittings to connect the connector yokes to the material and size of your main inlet and outlet water lines.

Plumb your main incoming and outgoing water lines using suitable pipe, fittings, elbows, etc. as necessary to create a tidy, secure installation up to the back of the bypass valve (including the correct connection adapters to mate with the threaded fittings on the bypass assembly's connection yokes.) Be sure to follow all local plumbing codes.



WE HIGHLY RECOMMEND
THAT YOU REMOVE THE
BYPASS ASSEMBLY FROM
THE CONTROL VALVE BEFORE
MAKING THESE FINAL
CONNECTIONS AS YOU MAY
INADVERTENTLY APPLY TOO
MUCH PRESSURE ON THE
VALVE WHILE SECURING THE
ADAPTERS, CAUSING DAMAGE
TO THE VALVE BODY.



**BYPASS** 

**SERVICE** 

Place the bypass in the "bypass" position as pictured.

## Step 6. - Drain Line Installation



NOTE: NEVER CONNECT THE DRAIN LINE DIRECTLY INTO A DRAIN. ALLOW AN AIR-GAP OF A MINIMUM OF 1 INCH (CHECK LOCAL CODES) BETWEEN THE DRAIN LINE AND WASTE LINE TO PREVENT THE POSSIBILITY OF BACK-SIPHONING. ALWAYS FOLLOW LOCAL CODES. THE DRAIN LINE SHOULD NOT BE EXPOSED TO FREEZING TEMPERATURES.

During the regeneration cycle, your Aqua-Tech system will send water and contaminants out the drain port. This port needs to be connected to a suitable household drain, ideally within 20 feet of your media tank. A nearby floor drain, sump pump, or a standpipe for a washing machine is an excellent option. We recommend that the drain line be connected to a minimum 1½" drain standpipe or floor drain located ideally below the top of the head of your water filter.

Locate the drain port on the back of your control valve. The drain line flow control assembly (DLFC) is pre-attached to the control valve - it has black plastic housing with 3/4 inch male NPT threads.

You will need to purchase suitable pipe or tubing for the drain line. The minimum drain line diameter is 1/2 inch although 3/4" is preferred. Polyethylene tubing, PEX, PVC, CPVC, and copper pipe are all acceptable material choices for the drain line. If you are using flexible tubing, be sure that there are no "kinks" or "crimps" in the tubing after installation that may cause a flow restriction. If used, overhead drain lines are not to exceed a height of 5 feet above the control valve and should be not more than 50 feet in length. Should an overhead drain line be utilized, it is recommended that the drain line diameter be not less than 3/4", and that it not be fastened flush to the bottom of a floor joist to minimize noise transfer to the upstairs of the building during regeneration.

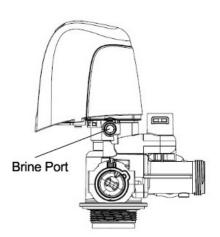
Using an appropriate fitting, connect the drain line flow control to your drain line tubing/pipe. The DLFC can be removed from the control valve to facilitate easier plumbing if desired. To remove the drain line flow control, pull on the retaining clip to remove it and then grasp the drain line flow control and pull upward. You may wish to dry-fit the fitting first to make sure you line up the drain line properly with the drain port on the control valve if you are using rigid pipe.

Re-insert the DLFC into the control valve and securely lock into place with the retaining clip when done.

Ensure that the drain line is thoroughly secured along its route to the drain. The drain line will be under pressure when the backwash cycle is working. If not adequately secured, the drain line could vibrate during backwash causing excessive noise. If this is experienced, use additional fixtures to better secure the drain line.

## **Step 7 – Brine Tank Connections**

- 1. Brine Tank Lid
- 2. Brine Valve
- 3. Safety Float
- 4. Air Check Valve
- 5. Salt Grid
- 6. Brine Overflow Elbow
- 7. Brine Tubing



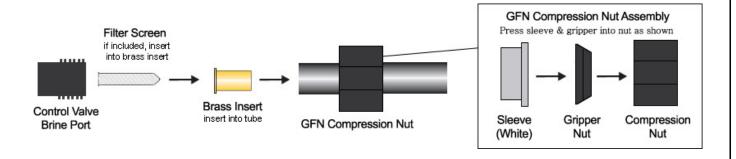


To complete the connection of the control valve to the brine tank, you will require the black brine tubing and numerous parts from the small parts bag. We recommend that the brine tank be located as close as possible to the treatment tank and control valve, however, it can be up to 10 feet away if necessary.

Locate the brine port on the right side of your Fleck 5810 control valve (when facing the front of the control valve).

1. Make sure that the end of the brine tubing is cut square and that the tubing coating is smooth, unmarred, and undamaged.

- 2. Slide the GFN compression nut onto the end of the brine tubing with the open end facing the end of the tubing.
- 3. Insert the brass tubing insert into the end of the brine tubing.
- 4. Insert the filter screen into the brass insert.
- 5. Center the tubing on the brass brine port on the control valve and thread the GFN compression nut onto the brine port (clockwise). Securely tightly. Excessive forced is not required and should not be used.

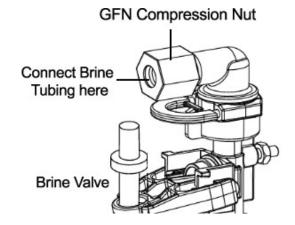


Remove the lid off the top of the brine tank.

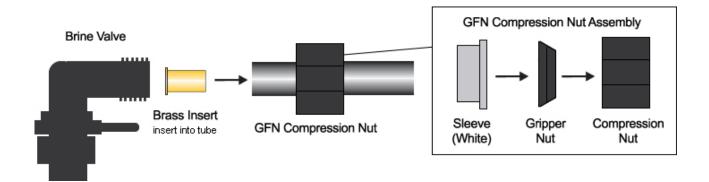
Look inside your brine tank and you will see
a vertical white tube called the brine well.

Remove the cap from the top of the brine well.

Inside the brine well, you will find the brine valve with air check and safety float. The other end of the brine tubing connects to the top of the brine valve in the same manner as the connection to the brine port on the control valve except there is no filter screen. There is a small hole drilled in the brine tank and brine well that you insert the brine



tube through to connect it to the brine valve. Feed a small length of brine line through this hole and connect it to the brine valve assembly using a brass insert and the existing plastic GFN compression nut that is attached to the brine valve.



If you have an excessive length of brine line, you should trim it to a more appropriate length first. The brine tubing should be as short and straight as possible. Make sure that the end of the brine tubing is cut square and that the tubing coating is smooth, unmarred, and undamaged. Tighten the black compression nut finger tight, then confirm that there are no kinks or crimps in the brine line.

## Step 8 - Connect the Brine Tank Overflow to Drain

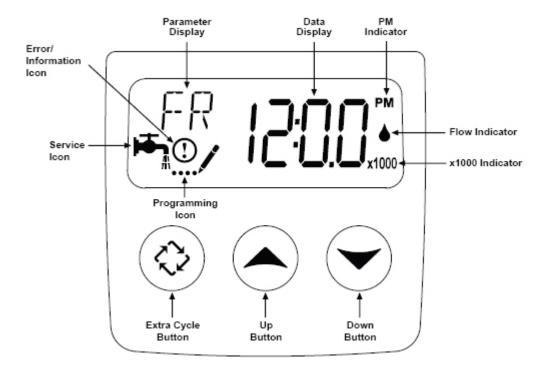
Locate the plastic overflow elbow on the side of your brine tank. This is a safety overflow that will allow water to be safely carried to a drain in the event that the system attempts to overfill the brine tank AND the brine tank safety float fails. It should be connected to a suitable drain if an overflow would not immediately and safely run down a floor drain on its own.

You may use the same material as was used to plumb your drain line connection from the control valve or other suitable material. 1/2 inch I.D. vinyl tubing is a popular option, but you need to ensure that this material cannot become kinked or crimped.

This drain line will not be under pressure, so it must be directed to a drain that is physically lower than it is. DO NOT connect this drain line into the pressurized drain line coming from the control valve. It must be run separately to the drain. Be sure to leave a 1" air gap at the drain to prevent back-siphon. This is only a safety overflow drain and will not be in use under normal operation. Depending on your installation, running the drain tubing to an open basement floor drain is often possible. Secure the drain tubing to the elbow with a suitable fitting or hose clamp.

## Step 9 - Control Valve Set-up

During cold weather, the control valve should be warmed to room temperature before operating. Note: All electrical connections must be done according to local codes.

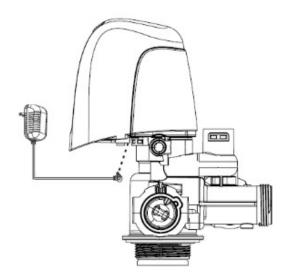


Plug the control valve into a standard, grounded 120 volt (60 Hz) electrical outlet. Be certain that the outlet is uninterrupted and not controlled by a switch. An extension cord may be used to reach a suitable electrical outlet. Ensure that the extension cord is UL/CSA certified and of an appropriate wire gauge for the application. Plug the other end of the power cord into the electrical port on the control valve.

Note: The electrical port on the control valve is located on the right side of the valve (when you are facing the control panel), just behind the tab used to remove the valve cover. It is a bit tricky to find.

Once plugged in, the digital display on the control valve will illuminate. The control valve may need to reset to the home position when it is powered up.

If it does, the motor will run for a few seconds.



The digital display should be alternating between the current time setting (which is probably incorrect), and the number of gallons remaining until the next regeneration cycle. You will also see the "service" icon which appears as a small faucet in the bottom left corner of the display window.

We will first set the time of day to the correct time. Press either the UP or DOWN button and hold for a few seconds. The parameter display will read "TD" (Time of Day) and the "programming" mode icon will appear (4 dots and a pencil). Use the UP and/or DOWN buttons to change the time displayed to the correct time of day. Once the display shows the correct time, press the EXTRA CYCLE button to save your changes.



Your system has been pre-programmed to regenerate based on its capacity and your water conditions, and to perform this process at 2:00am in the morning when it is unlikely that water will be required in the building. In most cases, this will occur every 14-21 days, but this will vary depending on your water conditions and water demand. If water is required during the regeneration process, untreated water will be permitted to flow to meet your service needs. You can alter the time of day that the regeneration process occurs if 12:30am is not ideal for you. If you have another automatic backwashing/regenerating water treatment system, make sure that they are not set to regenerate at the same time. We recommend that they backwash/regenerate at least 2 hours apart. Follow the instructions under "User Programming Mode" to change the regeneration time if desired. If you want to change the duration of the regeneration cycles, these settings must be edited in the "Master Programming Mode" – see below for details.

Before proceeding, you will need to confirm or set your feed water hardness level setting and your day override setting. In most cases, these settings will have been pre-programmed for you at the factory if we were given information about your water source and quality at your time of purchase. See "User Programming Mode" below for instructions on how to do this.

## Step 10 - Initial Start-up and Leak Testing

Make sure the white salt grid is correctly positioned at the bottom of the brine tank.

Once you add salt, the brine tank will be difficult to move, so it is important that it be located in the desired location now. Do <u>not</u> add salt yet! Position the brine tank in its permanent location and add water to it until the water level is roughly 4 inches above the top of the salt grid. This will not be the permanent water level in your brine tank. The control valve will determine the proper amount of water to put into the brine tank. We are adding water to the tank at this time for initial testing purposes only.

Add 3 tablespoons of standard 5.25% unscented household bleach (sodium hypochlorite) to the water in the brine tank. This will be used to disinfect your system as part of the start-up process.

Ensure that the bypass is in the bypass position. Open a nearby cold water faucet. A faucet without an aerator screen is best. Slowly turn on the main water supply valve to your home and allow the water to run for a few minutes or until the system is free of foreign material and air that may have resulted from the installation. Once the water is running clear and free of air, slowly open the bypass valve on the back of your control valve to let water run through the treatment tank. Run the water for several minutes until all air is purged from the system and then close the water faucet.



# CAREFULLY INSPECT YOUR PLUMBING CONNECTIONS AND CONTROL VALVE FOR LEAKS AND REPAIR ANY LEAKS FOUND BEFORE PROCEEDING.

Press the EXTRA CYCLE button and hold it down for about 5 seconds to engage a full regeneration cycle. "BW" will appear on the parameter display and they system will start the BACKWASH cycle. Allow the backwash to complete its whole cycle.

The valve piston will then re-position and the valve will begin the BRINE DRAW/SLOW RINSE cycle indicated by the parameter "BD" on the LCD display. Check the brine tubing connections at the control valve and brine valve for leaks. Tighten fittings if necessary. Inspect the water level in the brine tank and observe whether the water level is declining, indicating that the control valve is drawing brine as it should. If the system is not drawing water from the brine tank, check all connections for air leaks and check the brine tubing for kinks that may be blocking brine flow. If this does not resolve the problem, call your dealer for support. Allow the BRINE DRAW/SLOW RINSE cycle to run for at least 30 minutes (or not more than 15 minutes remaining).

Once you have confirmed that you have a proper brine draw and you have waited at least 30 minutes, press the EXTRA CYCLE button to advance to the RAPID RINSE ("RR") cycle. Allow this cycle to run for its full duration.

When the RAPID RINSE ("RR") cycle is complete, the control valve will enter the BRINE FILL ("BF") cycle. During this cycle, the control valve sends a very specific amount of water to the brine tank to make brine solution for the next regeneration. This volume of water plays a very important role in the salt efficiency of your system. Check to make sure that the water level in your brine tank is now slowly rising. If not, contact your dealer for assistance. When this cycle is complete, your control valve will return to normal service mode.



INSPECT ALL OF YOUR PLUMBING CONNECTIONS AND REPAIR ANY LEAKS
IMMEDIATELY BEFORE PROCEEDING. IF THE DRAIN PIPE RATTLED OR VIBRATED
DURING THE REGENERATION PROCESS CAUSING EXCESSIVE NOISE, USE ADDITIONAL
FASTENERS TO BETTER SECURE THE DRAIN LINE.

You can now add salt to your brine tank. The salt is not included with your softener but can be purchased from most major department stores, grocery stores, home stores, and hardware stores as needed. See "Salt" below.

Open a nearby cold water tap (after the Aqua-Tech system) and let the water run for 5 to 10 minutes until the water is running clear. Repeat for other faucets in the building starting at the highest elevation and working down to the lowest point until all air is purged. The initial flow of water may be slightly discolored. This is normal and will go away quickly.

It is now safe to turn the electricity back on to your water heater.

#### Congratulations!

Your system is now ready to provide treated water to your home!

Keep in mind that your hot water heater may be full of untreated water so it may take a couple of days before all water used in your home is treated.

## **REGENERATION**

Water softeners remove the minerals responsible for hard water through a process called **ion exchange**. Water softener resin attracts positively charged hard water mineral ions. These contaminants cling to the resin and are removed from the water stream. As the resin becomes saturated with contaminants over time, the water softener is designed to perform an automatic a self-cleaning process called regeneration on a periodic basis. The softener uses sodium ions from common salt to eject contaminants off of the resin - the sodium ions are "exchanged" for the contaminants and the sodium ions cling to the media instead. The contaminants and excess salt brine are backwashed / rinsed down the drain.

The salt used to regenerate the media is stored in a brine tank which sits beside the system. All you have to do is add salt to the brine tank periodically (only once or twice per month for most systems).

The regeneration process is automatically engaged and controlled by your high flow digital valve based on your water demand. Your system was pre-programmed at the factory. In most cases, your system will be programmed to regenerate every 5 to 7 days at 12:30am, but this will vary depending on your water demand and water source.

There are 4 steps to the regeneration process:

Step 1: Backwash: factory pre-set for 10 minutes (parameter display code BW)

Step 2: Brine Draw /Slow Rinse: factory pre-set for 60 minutes (parameter display code BD) Step

3: Rapid Rinse: factory pre-set for 6 minutes (parameter display code RR)

Step 4: Brine Fill: factory pre-set for 14 to 23 minutes depending on the size of your system and salt efficiency setting (parameter display code BF)

Each time the softener regenerates, salt water (brine) is needed to recondition the resin in the water tank. The brine is pulled from the brine tank at a controlled amount. If the salt tank does not contain enough salt, the brine will be weak and the media will not be fully reconditioned, and untreated water will pass through.

See "Salt" Below.

Note, unless otherwise stated, all of our Aqua-Techwater softeners are factory pre-set to operate at high salt efficiency with capacity and all regeneration settings based on a salt dose of 6.3 lbs per cubic foot of media. Additional capacity can be achieved at higher dose

settings if desired. Please consult your dealer for advice if you would like to re-configure your system at a high capacity and salt dose. Be aware that such changes will result in a less efficient water softener and higher salt consumption.

During each step of regeneration, the digital display on the control valve will indicate the cycle currently underway and the amount of time remaining in that cycle.

Unless directed by a water treatment professional familiar with this system, we do not generally recommend that you alter the duration of any cycles, however, you can adjust the duration of all cycles based on your water conditions through the "Master Programming Mode" (see below).

If your feed water conditions change, you should adjust the hardness level setting. See "User Programming Mode" below.

## Manual regeneration:

If desired, you can choose to initiate a manual regeneration either immediately, or the next time the backwash time of day is reached:

## To initiate a manual regeneration the next time the backwash time of day is reached:

Press the EXTRA CYCLE button once. The "service" icon will begin to flash indicating that a regeneration is scheduled next time the regeneration time of day is reached.

To cancel a queued regeneration, press the EXTRA CYCLE button.

## To initiate an immediate manual regeneration:

Press the EXTRA CYCLE button and hold it down for 5 seconds until the regeneration process begins.

#### Skip through regeneration steps:

There may be times that it may be desirable to skip through regeneration steps without allowing them to fully complete. This would be most typical during servicing. When a cycle engages, always wait until the motor has stopped before skipping to the next cycle. You can hear the valve motor while it is repositioning the valve at the beginning of each cycle.

During the regeneration process, you can advance to the next step by pressing the EXTRA CYCLE button.

The control valve will continue to keep time and the passage of days for a minimum of 48 hours in the event of power failure.

## **SALT**

You must keep salt in the brine tank. If you run out of salt, your system will stop working properly, and permanent media damage could result if left without salt for an extended period of time. Check the salt level every 2-3 weeks.

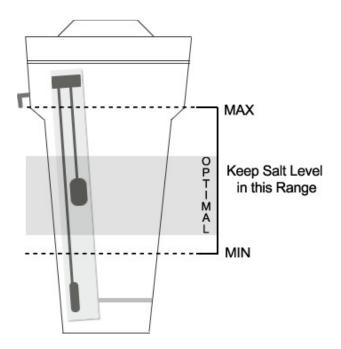


THE BRINE TANK SHOULD BE KEPT TOPPED UP WITH SALT AT ALL TIMES. THE MINIMUM RECOMMENDED SALT LEVEL IS 1/4 AND THE MAXIMUM RECOMMENDED SALT LEVEL IS 1 INCH BELOW THE BRINE OVERFLOW ELBOW.

You should only use sodium chloride or potassium chloride pellet salt specifically designed for use in water softeners. Other types of salt (rock or snow melting salt for instance) will contain dirt and chemicals that will

affect your water softener. If you choose to use potassium chloride salt, consult with your dealer as programming adjustments may be required due to the lower regeneration efficiency of potassium vs. sodium-based salt.

Keep the brine tank covered, and empty and clean the brine tank every three years.



## **Salt Bridging**

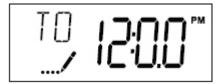
It is sometimes possible for the salt pellets to wedge against each other and fail to fall into the water at the bottom of the brine tank. This is called bridging and it will prevent the formation of an effective brine solution. The softener will try to regenerate but will not properly recondition the resin. A salt bridge can be broken up using a broom handle or similar rod. Carefully pound it into the salt to cause the salt bridge collapse. After loosening the salt pellets, wait 2 hours and then start a manual regeneration. A second regeneration may be needed to fully recondition the media. If bridging happens frequently, reduce the amount of salt that you add to the brine tank when you re-fill it - approximately half full is often best to prevent this problem

#### Sodium

Though our softeners will contain less sodium than a comparable glass of orange juice, All water softeners will add some sodium or potassium (depending on which type of salt is used) to the treated water. We recommend that individuals requiring a low sodium diet for health reasons such as high blood pressure or heart disease install a point-of-use drinking water filter featuring reverse osmosis technology to remove the sodium/potassium from their drinking water. These systems are relatively inexpensive and provide exceptional quality drinking water. More info can be found online here: www.KingWaterFiltration.com

## **CHANGING THE TIME OF DAY**

During regular service mode, the digital display will alternate between the current time of day and the number of gallons remaining until the next regeneration. For proper operation, it is important that the valve display the correct time of day. To change the time of day, press either the UP or DOWN button and hold for a few seconds. The "programming" icon will appear. Use the UP and/or DOWN buttons to change the time displayed to the correct time of day. Once the display shows the correct time, press the EXTRA CYCLE button to save your changes.



## **USER PROGRAMMING MODE**

The User Programming Mode allows you to set the minimum frequency of regeneration, the time of day that regeneration will take place, your hardness level, and your reserve capacity. To enter the User Programming Mode, press the UP and DOWN arrows at the same time and hold for 5 seconds until the "programming" mode icon appears. If the current time display is 12:01PM, you cannot enter the User Programming Mode – simply wait a minute before attempting.

#### **DAYS OVERRIDE**

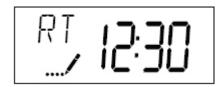
The display will first show the **DAYS OVERRIDE** (parameter display code DO). This is the setting that determines the minimum frequency of backwash (measured in days). For softeners used on city water supplies, this parameter is normally set at 14 days. For softeners operated on a private well or surface water supply, this setting is usually set at 7 days.



To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to skip to the next step.

## **REGENERATION TIME**

The display will now show the **REGENERATION TIME** (parameter display code RT). This is the setting that determines the time of day that the automatic regeneration will start. It is strongly recommended that regeneration be set to occur at night when water will not be in use. If you have other water treatment equipment that regenerates or backwashes (such as an iron filter), make sure that yourAqua-Tech<sup>TM</sup> system is not set to regenerate at the same time.



To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to skip to the next step.

#### **FEED WATER HARDNESS**

The display will now show the **FEED WATER HARDNESS** (parameter display code H). This parameter should be set at the level of your raw (untreated) hardness from your most recent water test, in grains per gallon (GPG). If your hardness level is expressed in ppm or mg/l, first divide by 17.1 to convert to hardness expressed in grains per gallon (GPG).

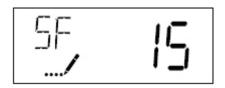


To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to skip to the next step.

## RESERVE CAPACITY (SAFETY FACTOR)

The display will now show the **SAFETY FACTOR** (parameter display code SF). When determining if a regeneration is required each day, the system considers if it has enough capacity to make it through the next day based on your typical daily water demand plus a

"safety factor" expressed as a percentage of your typical daily demand. Reducing the safety factor increases salt efficiency but may leave you without treated water towards the end of the day on days where you use more water than normal. Increasing the safety factor reduces salt efficiency. Our factory default setting is 15% which suits most applications effectively while ensuring high overall salt efficiency.



To change the setting, use the UP and DOWN buttons. Press the EXTRA CYCLE button when done. If you do not want to change the current setting, simply press the EXTRA CYCLE button to return to service mode.

The system should now return to normal service mode. The unit will also return to normal operation after 5 seconds if no buttons are pressed.

## **MASTER PROGRAMMING MODE**



THE MASTER PROGRAMMING MODE IS DESIGNED FOR PROFESSIONAL USE ONLY. UNLESS DIRECTED BY A WATER TREATMENT PROFESSIONAL FAMILIAR WITH THE SYSTEM, IT IS STRONGLY RECOMMENDED THAT YOU DO NOT MODIFY ANY OF THE MASTER PROGRAMMING MODE SETTINGS

To enter the Master Programming Mode, first set the time of day to 12:01PM. With the time display showing 12:01PM, enter the Master Programming Mode, by pressing the UP and DOWN arrows at the same time and holding for 5 seconds until the "programming" mode icon appears.

In this mode, you can adjust a parameter setting by using the UP and DOWN buttons. To save your changes and/or to skip to the next parameter, press the EXTRA CYCLE button. Press the EXTRA CYCLE button at the last parameter to save all settings and return to normal operation. The control will automatically disregard any programming changes and return to normal operation if it is left in Master Programming Mode for 5 minutes without any keypad input.

The following settings are the factory default settings for all 5800SXT/5810SXT Series Aqua-Tech systems:

|                     | Parameter | Default                            | Option                   |  |
|---------------------|-----------|------------------------------------|--------------------------|--|
| Parameter           | Code      | Setting                            | Description              |  |
| Display Format      | DF        | GAL                                | Gallons                  |  |
| Valve Type          | VT        | 5800/5810                          | Fleck 5800/5810          |  |
| Regenerant Flow     | RF        | dF1b                               | Downflow, 1 Backwash     |  |
| Control Type        | CT        | Fd                                 | Flow Meter, Delayed      |  |
| Unit Capacity       | С         | See Chart on Page 5 for your model |                          |  |
| Feed Water Hardness | Н         | See User Programming Mode Above    |                          |  |
| Reserve Selection   | RS        | SF                                 | Percentage Safety Factor |  |
| Safety Factor       | SF        | 15                                 | 15%                      |  |
| Day Override        | DO        | See User P                         | rogramming Mode Above    |  |
| Regeneration Time   | RT        | 12:30                              | 12:30am                  |  |
| Backwash            | BW        | 10                                 | 10 minutes               |  |

| Brine Draw/Slow Rinse | BD | 60**        | 60 Minutes**   |
|-----------------------|----|-------------|----------------|
| Rapid Rinse           | RR | 6 6 minutes |                |
| Brine Fill            | BF |             | See Below*     |
| Flow Meter Type       | FM | t1.2        | 1 1/4" Turbine |
| Relay                 | RE | Off         | Off            |
| Relay                 | VR | Off         | Off            |

<sup>\*</sup> the brine fill cycle time is dependent upon your system size and is based on salt dose of 6 lbs per cubic foot:

<sup>\*\* 60</sup> minutes for KW-AQT-HYB-1054 and 70 minutes for KW-AQT-HYB-1354

| Model            | 9-48 | 10-54 | 12-52 | 13-54 | 14-65 |
|------------------|------|-------|-------|-------|-------|
| Brine Fill Cycle | 17   | 13    | 17    | 21    | 13    |
| Time in minutes: | 17   | 13    | 17    | 21    | 13    |

## **RESETS**



USE OF THE RESET FUNCTIONS IS NOT RECOMMENDED EXCEPT UNDER THE GUIDANCE OF A WATER TREATMENT PROFESSIONAL FAMILIAR WITH THIS EQUIPMENT.

**Soft Reset:** Press and hold the EXTRA CYCLE and DOWN buttons for 25 seconds while in normal Service mode. This resets all parameters to the system default values except days since backwash in the time clock system.

**Master Reset:** 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.

## **OPERATION DURING A POWER FAILURE**

The 5800SXT/5800SXT valve/controller includes integral power backup. In the event of power failure, the control shifts into a power-saving mode. The display and motor shut down, but it continues to keep track of the time and day for a minimum of 48 hours.

The system configuration settings are stored in a non-volatile memory and are stored indefinitely with or without line power. The Time of Day flashes when there has been a power failure. Press any button to stop the Time of Day from flashing.

If power fails while the unit is in regeneration, the control will save the current valve position before it shuts down. When power is restored, the control will resume the regeneration cycle from the point where power failed. Note that if power fails during a regeneration cycle, the valve will remain in its current position until power is restored.



THE DRAIN LINE PLUMBING CONFIGURATION SHOULD INCLUDE ALL REQUIRED SAFETY COMPONENTS TO PREVENT OVERFLOWS RESULTING FROM A POWER FAILURE DURING REGENERATION.

The control will not start a new regeneration cycle without power. If the valve misses a scheduled regeneration due to a power failure, it will queue a backwash. Once power is restored, the control will initiate a regeneration cycle the next time that the Time of Day equals the programmed regeneration time. Typically, this means that the valve will regenerate one day after it was originally scheduled.

## **DIAGNOSTIC DATA**

The SXT controller records and maintains diagnostic data to assist with servicing and troubleshooting. See page 12 of The Fleck 5800/5810 SXT Downflow/Upflow Service Manual for details.

## **MAINTENANCE & TROUBLESHOOTING**



THE CONTROLLER MUST BE DEPRESSURIZED BEFORE REMOVING ANY QUICK CONNECTION CLIPS OR THE VALVE ITSELF FOR SERVICING. THE CONNECTOR SHOULD BE PUSHED TOWARD THE CONTROL VALVE WHILE REMOVING CLIPS.

#### **Service Recommendations**

It is imperative that the salt level in your brine tank be kept at the correct level. See "Regeneration" and "salt" sections above for details. Every time you add salt, inspect all fittings for signs of leaks, as well as brine tubing for crimps or kinks that may impede brine flow. Empty and clean the brine tank every three years.

Your Fleck 5810 valve is built for long term operation with limited maintenance. The seals and spacers and piston assembly, injector, and injector screen require periodic servicing or replacement, generally every 2 to 5 years. See Service Bulletin #5810-2 for instructions on this procedure.

## **Troubleshooting**

| PROBLEM                          | CAUSE                             | CORRECTION                         |
|----------------------------------|-----------------------------------|------------------------------------|
| 1. Valve fails to backwash       | A. Electrical service to unit has | A. Assure permanent electrical     |
|                                  | been interrupted.                 | service (check fuse, plug, pull    |
|                                  | B. Timer is defective.            | chain or switch).                  |
|                                  |                                   | B. Replace timer.                  |
| 2. Loss of water pressure.       | A. Contaminant build-up in feed   | A. Clean line to water filter.     |
|                                  | line.                             | B. Perform manual backwash.        |
|                                  | B. Contaminant build-up in unit   | Increase frequency of              |
|                                  | C. Inlet of control plugged due   | regeneration and/or backwash       |
|                                  | to foreign material broken loose  | time.                              |
|                                  | from pipe by recent work done     | C. Remove pistons and clean        |
|                                  | on plumbing system.               | control.                           |
| 3. Loss of media through drain   | A. Drain line flow control too    | A. Check to ensure drain line flow |
| line.                            | large.                            | control is sized properly for your |
|                                  |                                   | treatment tank.                    |
| 4. Water running to drain during | A. Internal valve leak.           | A. Replace seals and spacers       |
| service mode.                    | B. Jammed piston.                 | and/or piston.                     |
|                                  |                                   | B. Remove obstruction/debris       |
|                                  |                                   | and inspect seals and spacers      |
|                                  |                                   | and/or piston for damage.          |
| 5. Cloudy water and/or poor      | A. Additional backwash            | A. Perform 1 or more additional    |
| water pressure after initial     | required.                         | manual backwash cycles.            |
| installation.                    |                                   |                                    |
| 6. Continuous hard water at      | A. No salt                        | A. Brine tank is empty or salt is  |
| faucets.                         | B. Bypass                         | "bridged."                         |
|                                  | C. Injector / Screen Plugged      | B. Make sure bypass valve is in    |
|                                  | D. Brine Flow Problem             | service position.                  |
|                                  | E. Internal Leak                  | C. Inspect and clean injector      |

|                                |                               | and injector screen.               |
|--------------------------------|-------------------------------|------------------------------------|
|                                |                               | D. Inspect brine tubbing for kinks |
|                                |                               | or blockages, check brine tube     |
|                                |                               | connections for air leak, & check  |
|                                |                               | brine line flow control for        |
|                                |                               | blockage.                          |
|                                |                               | E. Check riser tube for crack,     |
|                                |                               | check riser tube o-ring seal on    |
|                                |                               | control valve, & inspect valve     |
|                                |                               | seals for wear.                    |
| 7. Intermittent hard water at  | A. No salt                    | A. Brine tank is empty or salt is  |
| faucets.                       | B. Using hot water during     | "bridged."                         |
|                                | regeneration                  | B. Adjust regeneration time so     |
|                                | C. Change in feed water       | that hot water use does not        |
|                                | hardness                      | coincide with regeneration.        |
|                                | D. Capacity settings          | C. Check feed water hardness       |
|                                | E. Fouling                    | level and adjust setting if        |
|                                |                               | necessary.                         |
|                                |                               | D. Capacity or safety factor       |
|                                |                               | settings should be reviewed with   |
|                                |                               | your dealer                        |
|                                |                               | E. Resin fouling may be reducing   |
|                                |                               | capacity of your resin. Discuss    |
|                                |                               | with your dealer.                  |
| 8. Excessive salt consumption. | A. Incorrect setting.         | A. Confirm settings with your      |
|                                | B. Excess water in brine tank | dealer.                            |
|                                |                               | B. See below.                      |
| 9. Excess water in brine tank. | A. Drain line flow control    | A. Inspect and clean the DLFC,     |
|                                | plugged                       | and ensure no blockages in drain   |
|                                | B. Plugged injector           | piping.                            |
|                                | C. Incorrect setting          | B. Inspect and clean injector and  |
|                                | D. Brine flow problem         | injector screen                    |
|                                |                               | C. Confirm settings with your      |
|                                |                               | dealer.                            |
|                                |                               | D. Inspect brine tubbing for kinks |
|                                |                               | or blockages, check brine tube     |
|                                |                               | connections for air leak, & check  |
|                                |                               | brine line flow control for        |
|                                |                               | blockage.                          |
| 9. Softener regenerated at     | A. Power failure              | A. Reprogram correct time into     |
| unexpected time of day.        |                               | controller.                        |

## **ERROR CODES**

| Code | Error         | Cause                    | Reset & recovery                                    |
|------|---------------|--------------------------|---|
| 0    | Cam Sense     | The valve drive took     | Unplug the unit and examine the control valve.      |
|      | Error         | longer than 6 minutes to | Verify that all cam switches are connected to the   |
|      |               | advance to the next      | circuit board and functioning properly. Verify that |
|      |               | regeneration position.   | the motor and drive train components are in good    |
|      |               |                          | condition and assembled properly. Check the         |
|      |               |                          | valve and verify that the piston travels freely.    |
|      |               |                          | Replace / reassemble the various components as      |
|      |               |                          | necessary. Plug the unit back in and observe its    |
|      |               |                          | behavior. The unit should cycle to the next valve   |
|      |               |                          | position and stop. If the error re-occurs, unplug   |
|      |               |                          | the unit and contact technical support.             |
|      |               |                          |   |
| 1    | Cycle Step    | The control experienced  | Unplug the unit and examine the control valve.      |
|      | Error         | an unexpected cycle      | Verify that all cam switches are connected to the   |
|      |               | input.                   | circuit board and functioning properly. Enter       |
|      |               |                          | Master Programming mode and verify that the         |
|      |               |                          | valve type and system type are set correctly with   |
|      |               |                          | regard to the unit itself. Step the unit through a  |
|      |               |                          | manual regeneration and verify that it functions    |
|      |               |                          | correctly. If the error re-occurs unplug the unit   |
|      |               |                          | and contact technical support.                      |
| 2    | Regen Failure | The system has not       | Perform a Manual Regeneration to reset the          |
|      |               | regenerated for more     | error code. Enter Master Programming mode           |
|      |               | than 99 days.            | and verify that the unit is configured properly. As |
|      |               |                          | appropriate for the valve configuration, check      |
|      |               |                          | that the correct system capacity has been           |
|      |               |                          | selected, and that the day override is set          |
|      |               |                          | properly. Correct the settings as necessary.        |
| 3    | Memory Error  | Control board memory     | Perform a Master Reset and reconfigure the          |
|      |               | failure.                 | system via Master Programming mode. After           |
|      |               |                          | reconfiguring the system, set the valve through a   |
|      |               |                          | manual regeneration. If the error re-occurs,        |
|      |               |                          | unplug the unit and contact technical support.      |

# **SHIPPING POLICY**

## **Billing Information**

Your credit card will be billed as "Freedom Water Systems".

## **Undeliverable Packages**

Occasionally packages are returned to us as undeliverable. When the carrier returns an undeliverable package to us, we will issue a refund minus shipping costs if the carrier is unable to deliver the package due to an address error that is not through any fault of Freedom Water Systems. We are unable to re-ship orders that are returned to us as undeliverable. If you would still like to purchase items that were undeliverable, you are welcome to place a new order on our website. Please contact us if you suspect your order cannot be delivered as addressed and you have not received confirmation of its return or refund after 4 weeks from the estimated delivery date.

## Refused Shipments

If an item is refused upon delivery at no fault of Freedom Water Systems LLC dba Freedom Water Systems<sup>™</sup>, we may at our own discretion, charge the customer return shipping fees. Freedom Water Systems cannot be liable for the shipping charges if the item is refused before delivery. Freight packages that are refused will be charged a 25% restock in addition to freight charges.

## **Tracking Shipments**

Upon your order shipping, a tracking number will be emailed to the email address you provided on your order. Sometimes tracking information won't be immediately available. This may be due to the timing of tracking-database updates by the carrier, or extenuating delays relating to your shipment. If you don't see any tracking data for your shipment, please allow up to 48 hours for our system to update and then contact customer service for additional information.

## Damage/Lost Package Claims

All damage or lost package/item claims on deliveries must be made within 5 days of arrival to customers home for (Small Package) shipments. Freight shipments should be inspected for damage upon arrival and reported to the freight driver immediately. If damage is not noted on the delivery receipt prior to acceptance, Freedom Water System scan assume no liability for damages, however, will give its best effort to process claim with the shipping carrier. Freedom Water Systems may request photos of the damage to give to the designated freight company for inspection of the damage and to file a claim. Should any item arrive damaged, or any item be missing from your shipment, please contact customer service at 855-957-2166. Please note that lost package investigations can take up to 30 business days to process, damage claims can take up to 90 business days to process.

## **Order Cancellation Policy**

You can cancel your order for any item provided that the order has not yet entered the shipping process. If the item you want to cancel has already entered the shipping process, it cannot be canceled by you or by our customer service department. However, you can return the item for a refund, minus any and all shipping costs. To request cancellation of your order please call Customer Service at 702-750-9800. Cancellation requests are not accepted by email.

# **RETURN POLICY**

## **General Return Policy**

We will accept returns of Freedom Water Systems brand items if unused and in their original condition within 30 days of delivery for a full refund of your purchase price. Shipping and Brokerage charges are not refundable. Customers are responsible for both delivery and return shipping/freight costs. All returns will be inspected for completeness and damage. Some products have return restrictions. Please review the list below to determine if special return policies apply to your products. Systems altered or changed from their original manufacturer build and specs are not returnable. Taxes, brokerage, shipping, customs and border crossing fees on shipments are not refundable.

## 30 Day Satisfaction Guarantee

Freedom Water Systems™ Whole Home Water Treatment Systems offer a 30-day satisfaction guarantee. Try these products for 30 days and if you are not 100% satisfied, return the item to us for a 100% parts refund. All shipping charges are the customers' responsibility; Taxes, brokerage, customs and border crossing fees on international shipments are not refundable; water must be within manufacturer specifications.

#### Custom/High Flow/Special Order Products

All custom, high flow, estate or special order products are built to order and cannot be returned once ordered. Manufacturer warranties still apply to all custom systems.

#### **Product Exchange**

If you received a faulty item and need to exchange it for the same item, contact customer service to setup an exchange as you will need to obtain an RMA number prior to return or exchange. Customer service will send you a prepaid return label to have the faulty item returned or may set up a pick-up. Once customer service has confirmed the carrier has picked up the faulty package or that it has been dropped off to the carrier, a new shipment will be sent. If you would like to exchange an item for a different one, please return the original following our return policy and place another order for the item you wish to purchase. You do not have to wait for us to receive the original item before placing the new order.

#### Responsibilities and Limitations

Freedom Water Systems™ representatives will recommend an overall water filtration, treatment, and/or conditioning system solution based upon all the information we receive by the customer. We cannot be responsible for a recommended solution that falls short resulting from lack of information about any other extenuating conditions that exist in the water that are not disclosed. Purchasers are advised that water quality conditions vary by area. Product performance, pH levels and alkalinity may be affected by these variables, and for optimum performance purchasers should verify prior to ordering that their local water quality falls within Freedom Water Systems recommended specifications. Our representatives base all product recommendations on information provided by the customers if extenuating conditions (i.e. water, installation space, power, water pressure, etc.) exist which were not disclosed, then additional and/or other products, services or equipment may be required. We are, however, committed to working with our customers to help remedy any problems by providing them with the most effective and affordable solutions available.

Freedom Water Systems is not financially responsible for any service, guarantees or warranties that has resulted from improper installation, application, poor handling, neglect, set-up, start-up procedure and/or lack of thorough follow-through procedures found on or with the unit and in any readily available sources such as service guides, product manuals and/or related website pages

# **RETURNS PROCEDURE**

All returned products will be thoroughly inspected to determine the overall condition of the item being returned and if it complies with our policies and procedures. Please verify the product you are returning meets the guidelines herein and qualifies for return to avoid any delays, or denial of, processing your return. If a nonconforming product is accepted for return Freedom Water Systems reserves the right to charge a restocking fee up to 25% at our sole discretion. Return processing may take up to 10 business days from the time your product is received.

## Return Merchandise Authorization Code

Returns will not be accepted without a valid Return Merchandise Authorization number (RMA). Unless otherwise specified on our website or in our Return policy, you may request a Return Merchandise Authorization number (RMA) within 30 days of the original purchase date. RMA numbers expire after 30 days, however we encourage you to return the product as soon possible. Any return we receive without a valid RMA number will be documented and rejected or subject to a restocking charge at our sole discretion. Customers should call 855-957-2166 and speak with customer service to get the RMA number. All returns must also contain all parts that were sent, along with all original packaging. ALL Returns must have an authorized RMA before being returned or the return shipment may be refused by Freedom Water Systems.

## Return Shipping

Freedom Water Systems may, at our discretion, send you a pre-paid return label for you to return your product. If you use this mailing label and the return is a result of our error (you received an incorrect or defective item, etc.), we'll pay the return shipping costs. If you use this mailing label and your return is not the result of our error, the shipping cost of that returned item will be deducted from your refund. The amount deducted will be equivalent to our standard shipping cost for that item. For your protection, we recommend that you insure your return and obtain tracking information from the shipping carrier that can provide you with delivery confirmation. Freedom Water Systems shall not be responsible for any returned items that are lost or damaged in transit. Postage and handling charges, both to and from our warehouse will be paid for by the customer and are nonrefundable. At our discretion, we may reimburse shipping charges related to the return of defective products inside the U.S. only.

Note: Any return that is not the result of our error will be subject to a restocking fee, which will be deducted from the refund.

## IMPORTANT RETURN NOTICE

If the product you are returning does NOT meet the requirements described in this document, we will photograph the merchandise and packaging and prepare a detailed summary of our determination as to why the return was denied, the product(s) will be deemed not eligible for return and will be returned to you. If Freedom Water Systems, at our sole discretion, decides to accept a non-qualified item for return, a restocking fee will be assessed of 20%.

## WARRANTY

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#### 10 Year Full Warranty

Freedom Water Systems warrants to the end user customer") that its tanks between (9"- 13" diameter), valves, bypass's, fittings, housings and all filtration media covered Items") will be free from defects in material and workmanship under normal use and service for a period of 15 years when used in accordance with our recommendations. This warranty applies only to Signature Series Whole Home System models KW-AQT-HYB-1054 and KW-AQT-HYB-1354.

#### **Limitations and Responsibilities**

Freedom Water Systems' obligation to the customer under these warranties shall be limited, at its option, to replacement or repair of Covered Items by these warranties, labor is not covered. Prior to return or repair of Covered Items, the customer must obtain an RMA (Return Merchandise Authorization) number from the company and at our sole option, return the Covered Items freight prepaid. Any Covered Item repaired or replaced under these warranties will be returned prepaid standard freight to the original point of shipment. Expedited freight options are available at customer expense.

No warranty is made with respect to defects or damaged due to neglect, misuse, alterations, accident, misapplication, physical damage, or damaged caused by fire, acts of God, or freezing. These warranties apply only to the original purchaser so long as the purchaser owns/lives in the home in which the unit was originally installed. Customer must register their system with Freedom Water Systems, within 30 days of purchase\* to obtain a warranty. The warranty will be discontinued after the unit is removed from the location where it was originally installed. The warranty begins on the date of delivery of the product to the customer. Installation of any system on water conditions outside of or beyond the recommended specs of any system voids any warranty. All warranties are non-transferable.

Freedom Water Systems™ gives this warranty to the customer in lieu of all other warranties, express or implied, including without limitation any implied warranties of merchantability or fitness for a particular purpose or treatment of certain water and hereby expressly disclaims all other such warranties. Freedom Water Systems' liability hereunder shall not exceed the cost of the product. Under no circumstances will Freedom Water Systems be liable for any incidental or consequential damage or for any other loss, damage or expense of any kind, including loss of use, arising in connection with the installation or use or inability to use the Covered Items or any water treatment system the Covered Items are incorporated into. These warranties are governed by the laws of the state of Nevada and may change at any time without notice.

\*\*\*Failure by California and Quebec residents to complete the product registration form does not forfeit their warranty rights, however it is still highly recommended\*\*\*

Freedom Water Systems' trademarks and exchange dress may not be utilized as a part of association with any item or administration that isn't Freedom Water Systems the property of Freedom Water Systems<sup>™</sup> in any way that is probably going to cause perplexity, or in any way that criticizes or disparages Freedom Water Systems<sup>™</sup>. All trademarks not possessed by Freedom Water Systems that show up are the property of their separate proprietors, who might be partnered with, associated with, or supported by Freedom Water Systems.

#### PERFORMANCE GUARANTEE

Freedom Water Systems guarantees the performance of its products. Our guarantee assures the end user that appropriate levels of contaminant are being removed and there is no leaching of toxins from any system components. This guarantee provides a refund of the purchase price under the following conditions:

- 1. System recommendations will be provided by Freedom Water Systems" based on lab tests or a detailed description of the existing water conditions as provided by the customer.
- 2. Filtration system is installed by a licensed plumber as recommended and is in operation for 30 to 90 days.
- 3. An independent third-party laboratory test report is requested and provided at customer's expense and chosen by Freedom Water Systems $^{\text{\tiny M}}$ .

If results indicate lack of performance, Freedom Water Systems™ will research results of report, installation procedures, and other relative details. Recommendations will be discussed and implemented at customer's expense based on researched cause of results. If subsequent testing shows satisfactory performance, Freedom Water Systems will reimburse the customer with replacement cartridges up to the cost of testing to have these results posted on the Freedom Water Systems™ website. All details on the report except city, state, zip code, and specific system description would be excluded. If Freedom Water Systems™ exhausts all attempts to increase performance within a stated reasonable time period and is unable to correct the issue, Freedom Water Systems™ will offer an RMA for return of merchandise for refund.



# Freedom Water Systems WARRANTY REGISTRATION AND CLAIM INFORMATION

You must submit your claim in writing within the warranty period and within 3 business days period after the defect is discovered. To initiate a claim, you should contact our warranty services department at Freedom Water Systems<sup>™</sup> 5502 S. Fort Apache #100 Las Vegas, NV 89148, Phone No. 855-957-2166 or email us at cs@freedomwatersystems.com.

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| WARRANTY REGISTRATION I |  |
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|                         |  |

Complete this Warranty Registration Form to validate your warranty.

| Visit us at: Freedomwatersystems.com/pages/register-warran | ity |
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|--|-----|

| Date item(s) were purchased:                | []  |
|---|-----|
| Purchase Order No.:                         |     |
| Dealer purchased from:                      |     |
| Model:                                      | П   |
| Model/Serial Number:                        |     |
| Customer Name:                              | _ 0 |
| Street Address:                             |     |
| City, State, Zip Code:                      |     |
| Your phone number:                          |     |
| Plumbing Company that installed the system: |     |
| Date Installed:                             |     |
| Plumber's phone number:                     |     |

| Please record the information below for | your future reference |
|---|-----------------------|
|---|-----------------------|

| PLUMBER'S NAME | PLUMBER'S ADDRESS | PLUMBER'S PHONE |  |  |
|----------------|-------------------|-----------------|--|--|
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| NOTES:         |                   |                 |  |  |
|                |                   |                 |  |  |

#### KEEP THIS MANUAL FOR FUTURE REFERENCE AND UNIT MAINTENANCE

Online Warranty Information: Freedomwatersystems.com/pages/register-warranty

Product design is subject to change without notice.

For further assistance visit us at www.FreedomWaterSystems.com

To view the latest edition of the Whole Home Municipal and Well Water Treatment Systems, visit: FreedomWaterSystems.com

Please note all drawings, pictures, colors and sizes are approximate for illustrative purposes only and may not exactly resemble the end product.