



## Installation & Start-Up Procedures

For Safety Zone Water®  
Backwashing Whole House Filters,  
Backwashing Acid Neutralizers,  
Backwashing Salt-Free Scale Inhibitors,  
Backwashing CROWN-5™ Systems  
And Backwashing Turbulent-Flow™ Systems.

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## **Watch our videos!**

Just say to your smart phone:

- YOU-TUBE Safety Zone Water® filter **installation** instructions.
- YOU-TUBE Safety Zone Water® filter **start-up** instructions.

# ATTENTION INSTALLERS!

## FOLLOW OUR INSTRUCTIONS CAREFULLY.



### Satisfied Customers!

At the end of the day, our goal is to have satisfied customers. But unfortunately, many after-the-sale call backs are experienced, due to installation oversights. For example the drain was not installed correctly or the valve was not programmed correctly. Take your time. Read our instructions. Watch out videos!

Finally, like your automobile or A/C system, service is required from time to time. And not all service is a warranty issue. So you see, service is required!

# Before You Start

(Identify Components.)

## Components

- Control valve
- By-pass valve
- Pipe fitting kit
- Mineral tank
- Hose bib (optional)
- Shut off valve (optional)



Test Strips  
For Water Testing.  
(Order separately.)



Check For Bacteria  
(Well Water Only)



Pipe Fitting Kit  
(Included.)



Hose Bib To Test  
Water (additional).



Shut Off Valve  
(additional.)



Watch Our Videos.  
[www.safetyzonewater.com](http://www.safetyzonewater.com)



Weather cover for  
outdoor installations.

# Installation

Plug in system before installation to be sure no damage occurred during shipping. **If the display is blank do not proceed with the installation.** Check PC board & transformer. Contact Safety Zone Tech Support: 352-209-6153.

## Next.

### Determine the following:

1. Decide where the system is to be installed. Install system on the main water line before the water heater and after the bladder tank on well water installations.

2. How to construct your drain and determine where the drain water should go. (Drains must not be restricted.) Use  $\frac{3}{4}$ " PVC for best results.



DRAIN



Go ahead and build your drain. Note: **Do not pipe your drain more than 4' above the control valve.**



3. Determine where to get power. (110 volts.)

(Be sure to use a weatherproof electrical outlet on outdoor installations.)

# Additional Installation Procedures.

Now you have constructed your drain and powered up the system, perform the following additional installation procedures:



Test the water for Chlorine, pH and other factors.

## Factory settings

All settings are set at the factory.

## Cycles are:

1. Backwash, 8 minutes.
2. Rinse, 6 minutes
3. Frequency of backwash, 4 days.



To adjust frequency of backwash, press arrow up and next together to “regen days”. Change as desired. To adjust backwash and rinse duration, press arrow down and next to get to “backwash” and “rinse” adjust

**TO SET CLOCK** – Press **SET CLOCK** at any time to set hour and minutes, then press “**NEXT**” to exit. The clock is a 24-hour clock, so AM or PM must be set accordingly. (You may make adjustment only when “hour” or “minutes” blink.)

# Prior to Start-Up

At this point you should have completed the following:

- ✓ Installed the system, making sure you used the correct inlet and outlet. (See arrows on the valve).
- ✓ Installed your drain (must be free flowing). Do not restrict your drain!
- ✓ Made electrical connections (110 / 120 volt).
- ✓ Shielded the electrical connections in outdoor installations. Be sure to use a weather cover!
- ✓ Closed both red knobs on the by-pass valve.
- ✓ Install the by-pass valve and pipe fittings.
- ✓ Provide feed water to the system.



Make sure to install the valve correctly. See “in” and “out” arrows on the control valve.

# Start-Up - Cycle #1



Press and hold the REGEN button until the motor starts.



Slowly open the inlet valve to fill the tank.

## To start - Step #1

With both red knobs closed, **press and hold** the **REGEN** button until the motor starts. This puts you into cycle #1, which is **BACKWASH**.

Next, open the red inlet knob slowly to allow water to fill the mineral tank. Once you see water running to drain, you may open the inlet valve completely.



**Stay in BACKWASH until the drain water runs clear.** This may take several minutes .

**NOTE:** Once you are in a cycle, you may advance to the next cycle by pressing “Regen”. You do not have to wait to complete the entire cycle.

## Cycle #2



**Press and release** the **REGEN** button to advance to cycle #2, **RINSE**. Again, check to see if water is running clear.

## Cycle #3



**Press and release** the **REGEN** button to advance to service.

Go inside the house (or to a laundry sink) and open a faucet to be sure water is running clear. You may also test the water for Chlorine to show your customer the water is filtered (once the filtered water gets to the faucet used for the demonstration).

**Finally . . .**

Open up the outlet to supply water to the house.

# Customer Orientation Important!

It is now time to give your customer an “orientation” to explain how the system works and provide additional information to prevent call-backs.

## **Components**

Explain Safety Zone Water filters include the following components:

- Automatic control valve
- By-pass valve so the unit may be isolated if necessary
- Pressure tank with filter media.

## **By-pass valve**

Should it be necessary to by-pass your water filter, turn the red knobs on the by-pass valve at right angles to the direction of the flow.

# Diagnostics

To determine how frequently the backwash process has occurred and observe other operational factors follow the following directions:

Press ▲ and ▼ simultaneously for 5 seconds and release. Observe the following data, pressing NEXT to advance through the data:

1. Software version
2. Volume of water used since start-up
3. Total days since start-up
4. Total regenerations since start-up
5. Error log
6. Days since last regeneration
7. Volume of water since last regeneration
8. Press next to get back to the clock to exit

Analysis:

Is the volume of water excessive? (Is the customer using filtered water to fill a pool?)

Is the system going through the backwash process?

How many “regen days” on average?

Error messages?

# TROUBLE SHOOTING

## **Service**

When you first arrive to service a water filter, complete a water analysis to determine the Chlorine level if you are dealing with a filter or backwashing salt-free system.

## **Next, check the basics:**

Are the inlet and outlet valves open?

1. Is the valve installed correctly? (Direction of flow – see arrows on valve).
2. Does the system have power, or is the display blank?
3. Go into diagnostics (see above) to determine when the last regeneration occurred and other factors.
4. Check the valve settings.
5. Go through a regeneration and advance through the cycles to determine if each cycle is operating properly.
6. Is the backwash water flowing properly? (5 GPM is typical for residential filters).
7. Is water continuously running to drain?
8. Call 352-209-6153 if you need technical assistance.

# Troubleshooting, continued

“My display is blank”.

Typically, this is in outdoor installations, where a weather cover is not used and when an electrical outlet is not waterproof. (Not a warranty issue.)



Try to re-boot the system at the PC board. Remove the second terminal from the right for fifteen seconds and re-power. If the motor starts, the problem is most likely corrected. Otherwise, see below. May need a new transformer and or PC board.

## Problems & Error Messages (Overview)

Problem	Most common correction
Water continuously runs to drain.	Reboot if you had a power outage. Replace seal stack assembly & piston.
Error 1, 101, 1001	Check PC board, motor, drive cap assembly. Board must “snap” in. Clean optical eye. Re-boot..
Error 2, 102, 1002	Unexpected stall. Binding, interfering with piston. Clean piston. May need to replace piston and spacer assembly.
Blank display..	Loss of power. Water damage. Replace transformer and/or PC board.

Re-boot after service.

## Troubleshooting, continued

Cloudy water, foul odors.



**Check your drain!**

(Frequency of your backwash and duration.)

Usually, odors are due to improper backwashing because the drain is obstructed, or the system is not going into backwash frequently enough.

Put the system into “regen” and observe the backwash water. (Press and hold the “REGEN” button to go into backwash.)

The flow rate should be 4-6 GPM with a whole house carbon filter. Next, check the frequency of regenerations, since this problem is a factor with low water usage.

Finally, check Chlorine levels prior to the unit, since the incoming water may contain bacteria, which is a source of “rotten egg” odors.

If water sits in water pipes (particularly with low water usage), bacteria may produce “rotten egg” odors since the water is not sterile. Test to determine if Chlorine is in your city water, then adjust your by-pass to allow chlorinated water to flow through your pipes for one to two days to provide disinfection and oxidation to kill the bacteria and eliminate the resulting odors.

# LIMITED WARRANTY

## **SAFETY ZONE WATER™ SYSTEMS (Manufacturer)**

Safety Zone Water Systems are warranted to be free of defects in material and workmanship to the ORIGINAL purchaser. All aspects of this warranty are subject to the limitations, terms and conditions described below:

### **Duration**

Water conditioner and filter components, including valves, tanks and non-wear parts are covered under this warranty. Should failure occur due to defects in materials and workmanship, Manufacturer, at its sole discretion, will repair or replace the defective part or component for the duration of five years for valves; ten years on tanks; and five years on electrical components, with limits described below. Labor for parts replacement, service, shipping and handling charges are not included, and they are the customer's responsibility.

### **Limitations of Coverage**

This warranty extends only to the CONSUMER for damage resulting from defects in materials and workmanship, and does not include wear related damage, renewable or consumable components, such as seals, spacers, ultraviolet lamps, filter cartridges, resin, neutralizing media, iron media, sediment media and granular activated carbon. Damage caused by the CONSUMER'S neglect or abuse, accident, rain, wind, heat, cold, ultraviolet light exposure, damage caused by acts of God, civil insurrection and extraordinary circumstances beyond the Manufacturer's control are not covered. Manufacturer shall not be liable for any direct or indirect damage resulting from the use of the Equipment, and this Warranty coverage shall not exceed the purchase price of the Equipment. This Limited Warranty excludes: 1. Any equipment not manufactured by the Manufacturer. 2. Equipment which has been altered by the CONSUMER or non-authorized service personnel. 3. Systems where date codes and serial numbers have been removed. Should pressure tanks fail under this warranty, replacement cost shall be PRO-RATED, based on the current list prices for re-bedded pressure tanks in effect when the defect was reported. (Formula: List price for your re-bedded tank (\$1,200 (for example) used 3 years (for example). This represents:  $\$1,200 \times 3/10$ . Or  $\$1200 \times 30\% = \$360$  (for example) for re-bedded tank excluding freight and labor.

This limited warranty may NOT be transferred from the original owner to another individual.

### **Water quality**

Manufacturer cannot know the characteristics of the customer's water quality. Furthermore, water characteristics may vary, over time. For these reasons, Manufacturer assumes no liability for product selection.

### **Claims**

All claims for Warranty coverage must be accompanied by a copy of the purchase invoice, showing date of the original installation. If this is not available, a warranty card must be on file. Manufacturer reserves the right to inspect the equipment, prior to honoring any warranty claim. This Warranty gives CONSUMERS specific rights, and these rights may vary from state to state.

### **Service**

Service and labor are not included in this limited warranty. Service is available. Please contact us via our website. Service call fees: \$149 (up to 50 miles); \$199 (51-100 miles); \$249 101-200; \$295 (201-300 miles). Over 300 miles, we will quote upon request.

### **Contact information**

Any and all claims should be directed to the Plumber who installed your system. If this information is not available, consumers may contact us at [www.safetyzonewater.com](http://www.safetyzonewater.com).

# SPARE PARTS

Part Number	Description
WC-SS-W	Weather cover for control valve; white
V3186-06	Transformer & power cord
V-FILTER-EE-BOARD	PC board for "EE" backwashing filter
V3007-01	Pipe fitting kit; ¾" & 1"; slip
V3005-02	Seals & spacers stack assembly
V3006	By-pass valve
V3004	Drive cap assembly
V3193-02	Spanner wrench
V3162-027	Drain line flow control button; 2.7 GPM
V3162-053	Drain line flow control button; 5.3 GPM
V3162-075	Drain line flow control button; 7.5 GPM
V3011	Piston for control valve.
V3107-01	Motor
V3004	Drive cap assembly
H4615	Red locking clip for by-pass valve
MT-9X48-WHF-RB	Mineral tank; 9x48; black
MT-9X48-WHF-RB-J	Mineral tank; 9x48; with jacket; re-bed with carbon
MT-10x54-WHF-RB	Mineral tank; 10x54; black; re-bed with carbon
MT-10x54-WHF-RB-J	Mineral tank; 10x54; with jacket; re-bed with carbon
MT-12X52-WHF-RB	Mineral tank; 12x52; re-bed with carbon
MT-13X54-WHF-RB	Mineral tank; 13x54; re-bed with carbon
MT-13X54-WHF-RB	Mineral tank; 13x54; re-bed with carbon
MT-14X65-WHF-RB	Mineral tank; 14x65; re-bed with carbon
MT-10X54-AN-RB	Mineral tank; 10x54; re-bed with neutralizing media
MT-9X48-SFWC-J	Mineral tank; 9x48; re-bed with Polyphosphate; jacket
MT-10X54-SFWC-J	Mineral tank; 10x54; re-bed with Polyphosphate; jacket
MT-10X54-SFWCF-J	Mineral tank; 10x54; re-bed with Polyphosphate & carbon; jacket