



CLASSIC

## Owner's Manual and Installation Guide



The proven leader in household leak protection: **WaterCop® is there when you're not.**

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## System Description

The WaterCop® Classic System is designed to detect leaks in your plumbing system at predetermined locations, and automatically shut off the water supply

to help effectively reduce the chance of major water damage associated with a leak.

## System Components

The WaterCop® Classic Indoor System is composed of two basic parts:

- A motorized ball valve that houses a wireless radio receiver which automatically turns off your water supply when any leak sensor detects water.
- Leak sensors, which detect water from a leak or overflow, house a wireless radio transmitter that sends a signal to the WaterCop® to turn off your water supply.

**Note:** Outdoor systems also include an Indoor Control Unit



**CAUTION!**

**It is strongly recommended that eye protection be worn while servicing the system. Failure to do so could result in personal injury.**

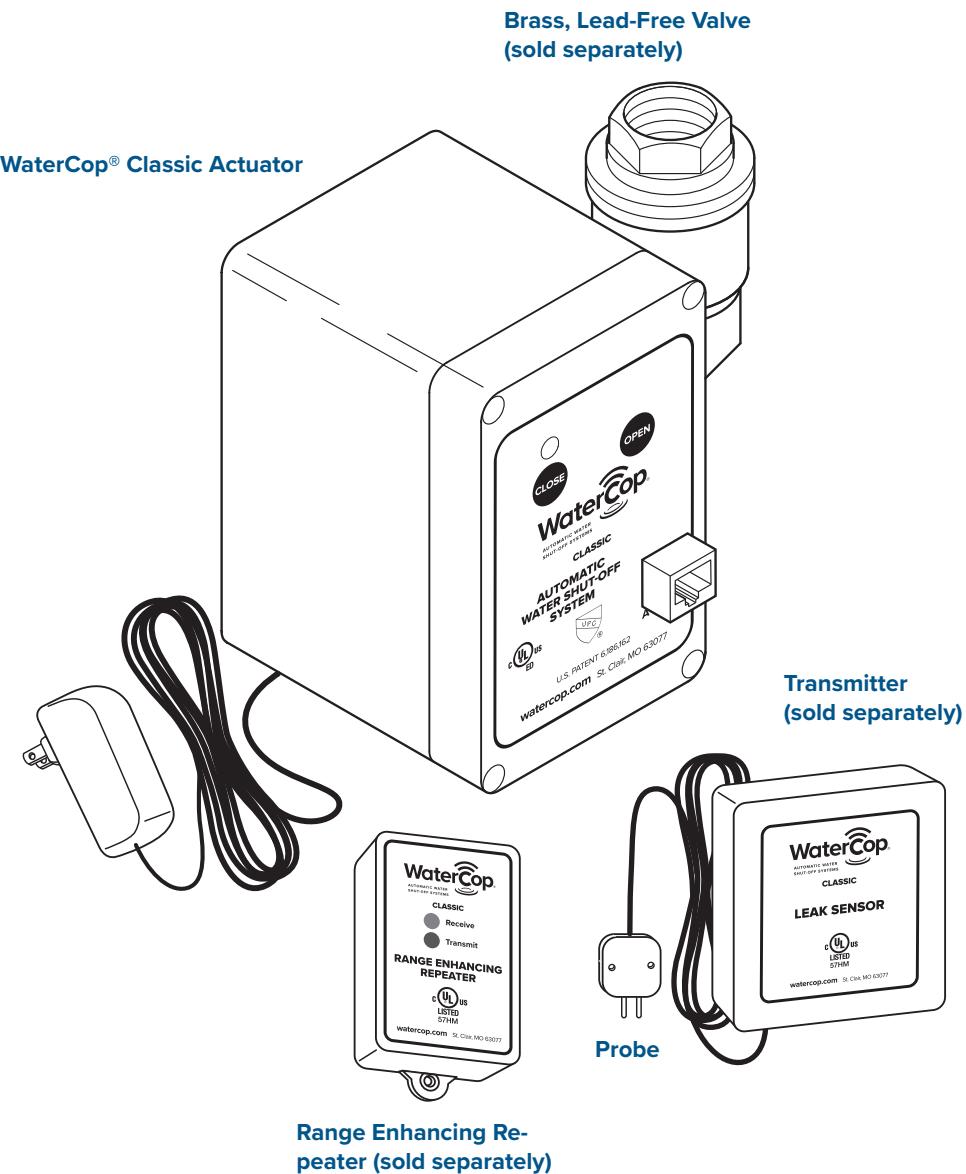


## GENERAL SAFETY INFORMATION

It is strongly recommended that eye protection be worn while servicing the system. Failure to do so could result in personal injury.

Do not apply electrical power to the unit unless the unit is fully assembled. Failure to do so could result in personal injury and/or damage to the unit. Disconnect power source before working on or servicing the unit. Failure to do so could result in personal injury.

## WaterCop® Classic Indoor System

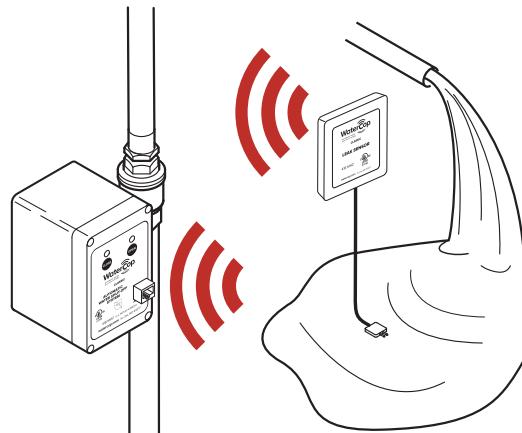


## How the System Works

Leak sensors constantly monitor their selected areas for accumulating moisture. When a leak is detected, a sensor will send a radio frequency signal to the WaterCop® unit instructing it to shut off the water supply to the home. The WaterCop® valve will remain closed until it is manually reset.

The leak sensors are battery powered devices enabling them to be located anywhere a leak is likely to occur, or where water might cause damage.

The WaterCop® requires household electrical power (120 VAC outlet) and will not operate during a power outage unless receiving auxiliary power from a backup device such as an uninterruptible power supply unit (UPS). Additionally, the use of a certified surge protection device is highly recommended.



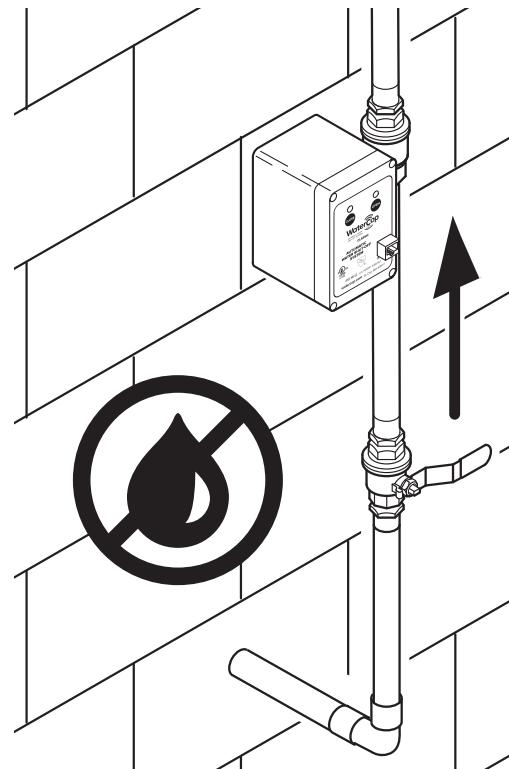
## Selection of Indoor WaterCop® Installation Sites

The WaterCop® valve should be installed in the main water line just downstream from the main shut-off valve in your home. The **front control panel** of the WaterCop® should be easily visible in order to see what position the valve is in (open/closed). It should also be easily accessible for resetting after a leak has been detected and the water supply has been shut off. While the WaterCop® is completely supported by the piping in your plumbing system when it is installed, placement of the valve should ensure that the housing is protected from use as a step or from other excessive loads.

The WaterCop® requires household electrical power, and the provided power adapter must be plugged into a 120 VAC power source. Do not use an extension cord. As with all sensitive electric equipment, the use of surge protection is highly recommended.

The shut-off valve must be installed indoors:

- in the main water line;
- in place of or just downstream from the main water shut-off valve;
- in a dry location;
- where it is accessible for checking and resetting the valve and for resetting the radio receiver code, if necessary; and
- where the case is protected from use as a step or from other excessive loads.



**Local electrical and plumbing codes should be consulted to ensure that the installation is in complete compliance. (See Installation section for details.)**

**Notice:** WaterCop® should be installed downstream of existing shut-off valves and pressure reducers. Install 18" downstream from existing indoor water meters to allow for future meter maintenance.

## FOR OUTDOOR VALVE INSTALLS REFERENCE THE OUTDOOR SUPPLEMENTARY INSTRUCTIONS

## Placement of Wireless Sensors

Each WaterCop® Classic System can support an unlimited number of wireless leak sensors. Additional sensors may be added at any time. A sensor consists of a transmitter (a rectangular box) and a sensor probe (a small disc at the end of the wire, with two short gold prongs protruding from one side). Leak sensors should be placed in locations where leaks are most likely to occur.

### Suggested Locations

- Washing Machines
- Toilets
- Ice Makers/Refrigerators
- Dishwashers
- Automatic Humidifiers
- Kitchen Sinks
- Bathroom Sinks
- Water Heaters

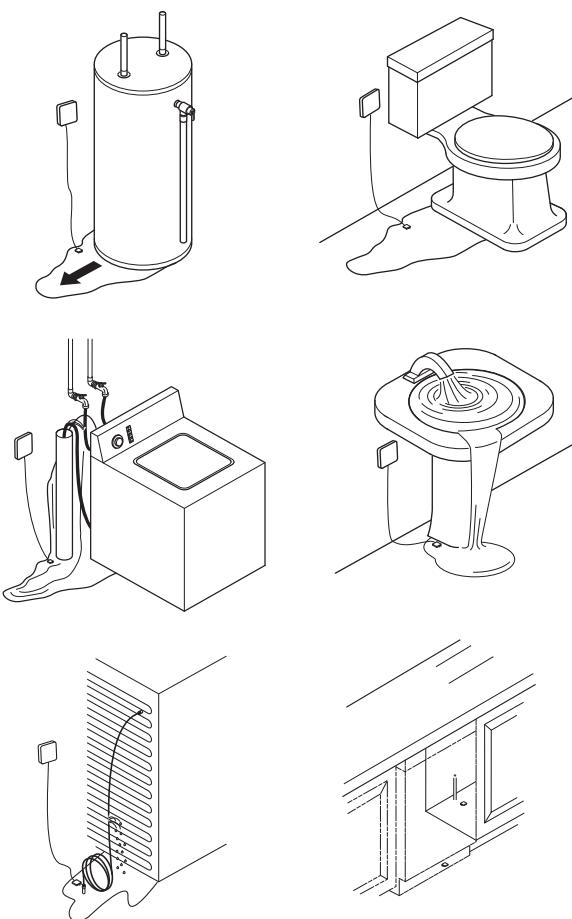


**WARNING: Do not use on fire sprinkler systems.**

The transmitter in the leak sensors and the receiver in the WaterCop® communicate by radio frequency. The smaller the distance between them, the stronger the signal will be. The maximum transmission distance is somewhat dependent upon the building layout and type of construction, but will be in the 150'-200' range. The transmitter (attached to the sensor) must be kept dry. It is NOT splash proof. Sensors should never be placed outdoors. The sensor probe detects the water from a leak and is completely waterproof.

Sensor probes should be placed on the floor or in areas where water would tend to accumulate rapidly in common leak or overflow situations.

**Make sure that any water from a leak will drain toward the sensor probe, not away from it.** Avoid high traffic areas where the cord or sensor could be stepped on or kicked and where children or pets may disturb it.



**The sensor probe should be placed FLAT on the surface so water can be detected as soon as it begins to accumulate.** The sensor probe should be secured to the surface. Do not use hook and loop fasteners to secure sensor probe as this will raise the probe too high above the surface. To avoid damage to transmitters and to provide for the strongest signal possible, the transmitter portion of the leak sensor should be mounted in a convenient location (on the wall, in a cabinet, closet, etc.) two to three feet above the surface. (See Installation section for details on sensor installation.)

# WaterCop Range Enhancing Repeater

## Why a Repeater?

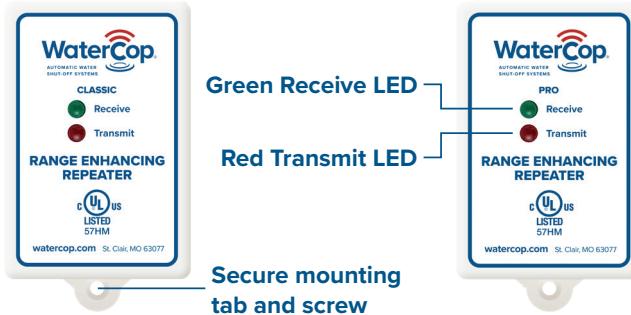
If any of your WaterCop wireless sensors are unable to communicate directly with your WaterCop control panel or shut-off valve during initial set-up and testing, adding a repeater (or more) to your system may be the solution.

## Basic Operation

Upon initial power-up, the red and green LEDs will flash and then go out. The LEDs light up when the device is receiving and transmitting signals from WaterCop wireless sensors.

## Proper Location

Identify an unused 110VAC wall outlet/receptacle roughly midway between the WaterCop Classic actuator and the WaterCop sensor that is farthest away and plug in the



repeater. Test the sensor(s) to ensure they now close the valve from the farthest location. Sometime more than one repeater may be necessary due to great distances, obstructions, or type of construction.

## Leak Sensor Battery Life

High quality AA alkaline batteries from brands like Energizer® and/or Duracell® are recommended for powering your WaterCop Classic sensors. It is recommended that you replace the batteries in your WaterCop sensors at least every 4 years. To ensure optimal performance of your WaterCop system, we recommend an immediate change of the batteries in any sensor that has detected a water leak.

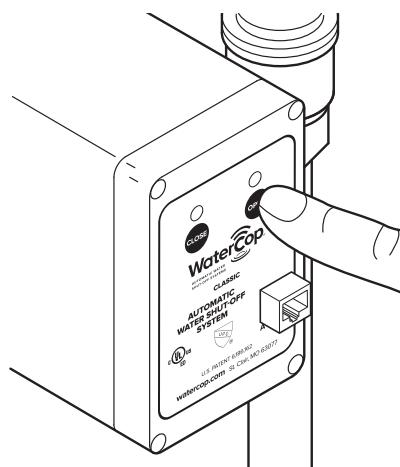
Sensors will sound an audible “chirp” sound when batteries are low. Replace batteries when low or during periodic maintenance to ensure proper power and function. Re-test each unit in its regular location (see Installation Manual).

## Operating the WaterCop® Classic System

The normal position of the valve is open to allow full flow throughout the plumbing system. WaterCop® is a full port ball valve which does not restrict the flow capacity of your plumbing system. The indicator lights on the face of the WaterCop® will show the position of the valve.

If the valve is in the closed position (the red light will be lit), press **OPEN** and the valve will move to the open position (green indicator will light).

When water comes in direct contact with a leak sensor, an RF (radio frequency) signal is transmitted to the WaterCop® and the valve closes, turning off the water source to protect the building from additional damage.



The red indicator light will signal that the valve is now in the closed position, and that you need to check all areas where you have placed a sensor to determine what plumbing product caused the system to activate.

The valve will remain closed until the unit is manually reset on the WaterCop® panel. After the plumbing problem is fixed, reset the WaterCop® by pressing **OPEN** (green circle) on the face of the WaterCop®. Valve will open and green indicator will be lit. (See illustration.)

**Note:** If major repairs are needed to correct the plumbing system, it is recommended that the manual shut-off valve

upstream of the WaterCop® also be closed during the repairs. Close the main water shut-off valve and unplug the WaterCop® before making repairs on the plumbing system.

**Note:** In case of a power failure, the WaterCop® cannot operate. If the power is out, you will need to use the manual shut-off valve to turn the water off in case of an emergency (see Emergency Procedures on page 14 to turn water on). When power is restored, the WaterCop® will remain in its last known position indicated by the red or green lights on the face of the unit.

## WaterCop® Specifications

### Actuator

Max. working pressure	125 psig
Ambient temperature	35° to 105° F
Enclosure	Polycarbonate
Voltage	12 VDC plus 120 VAC adapter
Current	0.85 Amps (Full Load)

### Accessories

Sensor Signal Repeater	120 VAC 47mA
Sensors	3 VDC (2AA Batteries) 10mA

### Valve

Valve	Full-Port, Lead-Free Brass, NPT
Valve seals	RTFE (Reinforced Teflon®)

### Flow Data

Valve Size Cv = Gpm flow at 1 psi pressure drop

1/2" NPT	19	1" NPT	52
3/4" NPT	34	1 1/4" NPT	77

## FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If

this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient or relocate the receiver;
- increase the separation between the equipment and receiver;
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected; and
- consult the dealer for help.

Operation is subject to the following two conditions:

1. this device may not cause interference;
2. this device must accept any interference, including interference that may cause undesired operation of the device.



**CAUTION:** The user is cautioned that changes and modification made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

# Additional Components Available for Your WaterCop® Classic System

## Single and Dual Probe WaterCop® Leak Sensors

**WCDFS1** (single probe) and **WCDFS2** (dual probe)

- Battery or AC (optional) powered
- Transmits wireless signal to valve when moisture is detected
- Unlimited number can be used, placed anywhere
- 10' sensor cord, white

## Water Control Wall Switch RS100

- Proactively turn water on or off from convenient location
- Lighted display to valve position (on or off)
- Requires category 5E cabling connection to valve (see below)

## AC Power Adapter WPA

- For WCDFS1, WCDFS2, and WCDFT sensors
- Eliminates the need for AA batteries

## WaterCop® / Wall Switch Interconnect Cable

**CBL50 (50')** and **CBL100 (100')**

- Required to connect WaterCop® valve with Water Control Wall Switch

- RJ45 molded connections for easy installation and durability

## SmartConnect – WCSCLV

- This app allows users to enjoy remote mobile access and control with their WaterCop Automatic Water Shut-Off Systems
- Receive mobile alerts from the system via SMS text, email and push notifications of activity and events

## 12 VDC Relay – WPRLY

- Kill power to pumps and other devices

## Range Enhancing Repeater – WCDR

- Enhances the transmission range of the wireless sensors
- Plugs into any standard wall outlet
- Receives and re-transmits sensor signals from outlying sensors to WaterCop® Classic Actuator

## 12 VDC Power Supply – 192168.03

- Energize coil on WPRLY

# Installation Guide

**IMPORTANT!** Adherence to all local and municipal building, plumbing and electrical codes as they pertain to the installation of the WaterCop® Classic System is of utmost importance. Codes in some areas may require that a licensed plumber be employed to do the installation, or that the proper permits be obtained prior to any installation. Even if local codes do not require a licensed plumber to do the installation, it is necessary that the installer has a professional level of competence in both plumbing and electrical skills to perform the installation. These instructions assume this level of knowledge and skill. If in doubt, use a licensed professional.



**CAUTION:** The valve closes with great force. It could cut off a finger. Keep fingers and other items out of the valve when testing.



**WARNING:** The WaterCop® case is NOT EXPLOSION PROOF. The shut-off valve must NOT be installed where it could ignite flammable vapors or explosive mixtures.

**To reduce risk of electrical shock, fire, or damage to property or WaterCop®: Do not use extension cords. Use of extension cords can cause fires or electric shock. Install WaterCop® within 20 feet of an outlet or, install an outlet near the WaterCop®. Comply with all local codes.**

**Before opening case, unplug power cord. When case is open, it is possible to contact electrified components. Always unplug the power cord before opening the unit. Wear eye protection for plumbing and electrical work.**

**NOTICE:** WaterCop® should be installed downstream of existing shut-off valves and pressure reducers. Install 18" downstream from existing indoor water meters to allow for future meter maintenance.

# Manually Testing the Valve and Wireless Sensors

## Manually Test the Valve

To test your WaterCop® Classic System, gently pull the safety plugs out from each end of the valve. Check the position of the valve by looking in either threaded end.

In the open position, you will be able to see through the valve; in the closed position only the shiny surface of the ball will be visible. Place the base of the housing on a sturdy surface, as close as feasibly possible to the location where it will be permanently installed. Plug the WaterCop® power cord into a nearby 120 VAC outlet. The valve position indicator lights should now correspond to the actual position you noticed: Green = Open, Red = Closed. Grasp both sides of the housing (not the valve) with the valve pointing away from you for safety. Being very careful not to have your fingers or other objects near the valve openings, press the colored circle just below the unlit indicator light. You will hear the motor change the valve position. Again, look into the threaded end of the valve to verify that the valve has changed position. **If it appears that the valve has not turned from one position to the other, DO NOT try to reposition the valve yourself by inserting any tool or fingers into the valve.** Operate the valve several more times from open to close, checking each time for proper positioning. If you are experiencing trouble getting the valve to open and shut, call 800-545-3636.

## Manually Test the Leak Sensors

Leak sensors require power to operate. Use either fresh AA alkaline batteries (not included) and/or a WaterCop® AC Adapter (sold separately) to power. If both are used, batteries will provide back-up power in the event AC power is lost. Rechargeable batteries are not recommended. To install batteries, remove the battery cover located on the back of the sensor and install batteries in accordance with the (+ and -) placement guide. Reinstall the back plate.

Follow suggestions found in the section titled “Placement of Leak Sensors” for recommendations where sensors should be placed. Locate a wall near the area you choose to monitor.

Avoid high traffic areas where cord or sensor could be stepped on or kicked. Mount transmitter at a convenient location on the wall, two to three feet above the floor. This will help avoid damage to the sensor and provide a strong signal. Use provided mounting hardware.

1. Following all safety precautions, make sure that the WaterCop® is plugged in and the valve is in the open position. Leave the WaterCop® near your main water line, on a sturdy surface. It is important that anyone who will be near the valve is aware of the safety precautions, and does not insert any object into the valve, or handle the valve during the test.
2. Remove the back cover of the sensors to install batteries. Use two AA Alkaline batteries, match polarity.
3. At one of the locations you have chosen to monitor, drop the sensor probe (not the mounted transmitter) into a cup of water. Hold until you hear the sensor transmit a signal to the WaterCop® (about 5 seconds) and beep. This test simulates a leak, and lets you check for interference between the sensor and the WaterCop®.
4. Take the sensor out of the water and carefully dry off the sensor and prongs. It should stop beeping.
5. Go back to your WaterCop® and verify that the valve has closed (the red indicator light will be lit).
6. Keeping all objects away from the valve, reset the WaterCop® by pushing the green circle below the Open text.
7. Repeat steps 2 through 5 until you have tested each sensor directly in the locations you wish to monitor.

## Troubleshooting

- If the wireless sensor does not close the valve, check that the sensor has power and batteries and/or AC adapter is installed correctly. Repeat test.
- If the batteries have power and the wireless sensor still does not make the valve close, physically remove it from its installed location and place it next to the WaterCop® unit. Repeat test. If the sensor operates properly when it is closer to the Water Control Panel, but not when it is installed at its remote location, try moving the sensor to a different position or try a different wireless sensor. Some possible causes of signal reduction are steel construction, foil backed insulation or other large metallic barriers. You may also use a range enhancing repeater (WPR sold separately) to extend the effective range of the wireless signals.

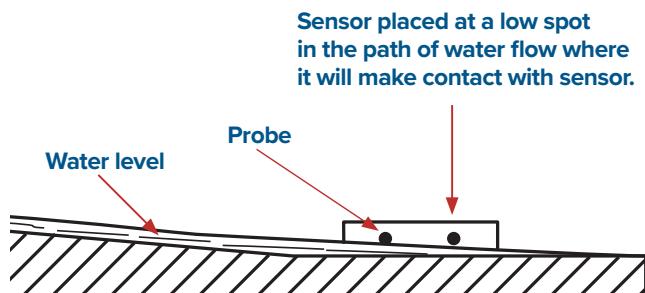
- If the unit still does not function properly, check the digital code settings (see instructions for changing digital codes).
- If the code matches the code on the WaterCop® valve, and it still does not function properly, replace the sensor.

## Installation of Leak Sensor

Once testing is complete, finish installation of the leak sensors by unwinding the cord and placing the sensor probe on the surface at the lowest point (where water would naturally collect) in the area to be monitored. Be sure that the sensor is placed FLAT on the surface so water can be detected as soon as it begins to accumulate. The sensor should be secured to the surface, taking care that the metal probes are not covered. Verify that the transmitter and wire are clear of doors, drawers, sharp edges, or other hazards that may cause damage.

**Unplug the WaterCop® after the testing is complete. The WaterCop® can now be installed.**

Prior to installation, read all warnings and precautions carefully.



## Installation Procedure

Check the contents of the carton with the products listed on the carton label. The shipping package should contain the following:

- 1 each WaterCop® with power adapter (20' cord)

**Note:** Outdoor systems include an indoor Control Unit and Outdoor Actuator. See Outdoor Supplementary Instructions for details.

Read Operating Instructions before any installation is attempted. All sections of this Owner's Manual/ Installation Guide should be read and completely understood.

### Review Location and Type of Main Supply Line

The main supply line should enter the house in either the basement or a crawl space beneath the first floor. The water main shut-off valve is usually located near where the line comes through the basement wall or just after the water line enters the living area from the crawl space. In apartments, townhouses, and manufactured housing constructions the water main shut-off valve can usually be found in close proximity to the water heater

installation. The WaterCop® valve should be installed in the main water line just downstream from the main shut-off valve in your home. The water supply must be shut off prior to installation of the WaterCop.®

Choose a dry location to install the WaterCop.® The front control panel should be easily visible in order to see what position the valve is in (open/closed) and accessible for resetting after a leak has been detected and corrected, and for checking and resetting the radio receiver code if necessary. Place the valve where the housing is protected from use as a step or other excessive loads. The shut-off valve must be installed:

- in the main water line;
- just downstream from the main water shut-off valve;
- in a dry location (indoors only – for outdoor installation refer to the Outdoor Supplementary Instructions);
- where it is accessible for checking and resetting the valve and for resetting the radio receiver code, if necessary; and
- where the case is protected from use as a step or other excessive loads.



**CAUTION:** Never use the housing for leverage when mounting this unit or tightening fittings. Use a wrench on the valve flats that are provided.



**CAUTION:** High heat from soldering or brazing can damage valve seats or motor

housing. Proper precautions should be taken to prevent damage from heat when installing the unit. Remove plastic housing before soldering valve in place.



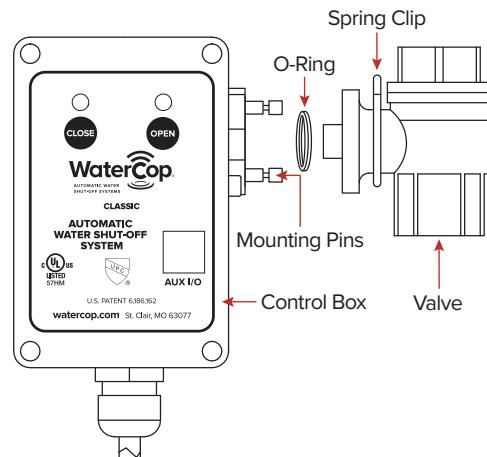
**WARNING:** Do not use on fire sprinkler systems.

## Mounting Indoor Actuator to Valve

1. Make sure the valve and motor box are both in the **OPEN** position.
  - a. The slot in the valve stem should be in line with the valve body, end to end.
  - b. Apply power to the control box. The green light should be **ON**. If not press the green button and the unit will cycle to the **OPEN** position. Disconnect power.
2. Place the spring clip around neck of the valve as shown.
3. Place O-ring into valve mounting recess.
4. Slide the valve on to the mounting pins in the position shown.

**IMPORTANT:** The control box must be aligned with the valve as shown.

5. Secure by compressing the spring clip and sliding it to the inside of the mounting pins.



6. Release clip. Make sure the clip is inserted into the groove in all four mounting pins.

**Note:** For outdoor systems, mount Indoor Control Box where the buttons are accessible. See Outdoor Supplementary Instructions for further outdoor details.

## Additional Part Requirements

Installation of the WaterCop® will require additional parts. When the main supply line is cut to accommodate the WaterCop®, new fittings will be needed to connect the ends of the piping to the WaterCop® valve.

The type of connecting fittings to use will be determined by the type of existing piping, local plumbing codes, and “industry standard practices.”

The most common material for water supply lines is copper. If the WaterCop® is to be installed in a copper line, you still have a choice of fittings and methods of installation.

## Compression Fittings

The unit can be installed with compression fittings using common household tools and basic mechanical ability. You will need:

- two fittings (male pipe thread x compression) available at most local hardware or plumbing supply stores
- pencil or marker
- Teflon® tape or thread sealant
- tubing cutter
- ruler
- two large adjustable wrenches

Measure the outside diameter of the copper tube and note the valve size to be sure you purchase the proper size fittings for the job.

1. Remove nuts and sleeves from compression fittings and install the fittings into each end of the valve using Teflon® tape or other thread sealant to ensure a watertight seal. Hold one wrench on flats of valve body and use the other to tighten fittings.
2. Measure the distance from end to end of valve assembly. For 1/2" tube (5/8" outside diameter) subtract 1/2", for 3/4" tube (7/8" outside diameter) subtract 3/4" from your measurement. This is the length of the section of tubing to be cut out of the existing line. The piece of existing tubing to be cut out is shorter than the measured length so that tube ends extend into the compression fittings.
3. Select the location for the WaterCop®. Be sure to consider that you will need access to the front panel of the control unit. After cutting the section of tube out of the line, you will need to shift the tube ends to be able to fit the unit into place. Make sure you will have access and room to adjust before you cut the tube.
4. Mark the tube in the location you have selected. Double check the length and location you marked.
5. Turn water off and drain the system.
6. Use tube cutter to cut copper tube at the locations you marked. Be careful, there will probably still be some water in the line.

## Electrical Connections

The WaterCop® is supplied with a power adapter (20' cord) to be plugged into a 120 VAC power source. It is recommended that the WaterCop® not be plugged into an extension cord.

7. Remove any burrs from the tube ends and clean ends.
8. Install compression nuts and sleeves to each tube end.
9. Shift tube ends to install WaterCop® valve in line.
10. Position the unit and tighten compression nuts. Hold the fitting with one wrench while tightening the nut with the other. Tighten both nuts.
11. Plug unit into a proper power source and turn valve to open position (OPEN button/green light).
12. Unplug unit, turn water back on and carefully check for leaks.
13. Tighten fittings if needed to stop any leaks.
14. Plug unit back into power source. Installation is complete.

## Solder Fittings

An alternative method is to solder the unit into the water line. This method requires a considerably higher skill level to accomplish the installation properly and safely. If you are not skilled in this area, it is strongly recommended that you contact a professional plumber to do this type of installation.

## Warnings and Precautions



**WARNING:** WaterCop hardware is not capable of supporting any loads. Do not attempt to use the unit as a step. This will cause damage to the unit

Review "Specification" current and power requirements as not to overload the circuit supplying power.

**As with all valuable electronic items; we recommend plugging the WaterCop® Actuator into a surge protector.**

and could cause personal injury. Do not store highly flammable items such as oily rags or other combustibles near your WaterCop®.



**CAUTION!** It is recommended that eye protection be worn while installing or servicing the system. Failure to do so could result in personal injury.



**CAUTION!** Do not use the case as leverage when mounting this unit or tightening fittings. Apply wrench to flats on the valve body to tighten fittings.

## Procedure After a Leak

Get the Sensor Location Log with sensor locations recorded and locate the beeping or wet sensor. If the beeping sensor is touching metal, correct it and then you can press the OPEN button to turn the water back on. If

the sensor probe is wet, dry the probe and prevent any more leaking. If probe was moved or disturbed put it back in the optimal position. Press the OPEN button to turn the water back on.

## Changing Digital Codes

Codes on all control units and transmitters are set at the factory and should not require alteration. If you use other wireless products in your home (garage door openers, etc.), there is a slight chance of interference with the signal. The following instructions will aid in resetting the code.

**Important: All transmitters and the control unit must have the same code setting!**

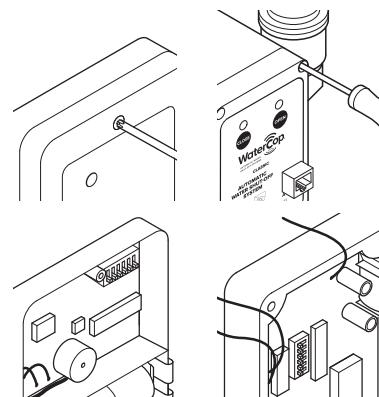
### Changing the Actuator Code

Disconnect power to receiver unit by unplugging power cord.

1. Remove cover using the 4 screws located in the corners of the cover.
2. Locate code switch block (see illustration below). Switches are numbered 1 through 8.
3. Arrange the switches in any combination (on or off position). Write down the code combination you selected. Example: 1-on, 2-off, 3-off, 4-on, 5-off, 6-on, 7-off, and 8-off.
4. Some WaterCop® receivers may have 6 dip switches. To match codes between 6 and 8 dip switch units, set switches 1–6 exactly the same on both units. Switches 7 and 8 must remain in the “on” or “up” position.
5. Carefully tuck wires completely into case and reinstall cover.
6. Reconnect power by plugging the power cord into power receptacle.

### Changing the Transmitter Code

1. Remove transmitter cover.
2. Locate code switch block. Switches are numbered 1 through 8.
3. Arrange the switches in the exact combination as the code that you set in the receiver. It is important that the same exact code be set in the receiver and all transmitters. If the codes differ, the unit will not function properly.
4. Some WaterCop® transmitters may have 6 dip switches. To match codes between 6 and 8 dip switch units, set switches 1–6 exactly the same on both units. Switches 7 and 8 must remain in the “on” or “up” position.
5. Test each transmitter to ensure that the unit is functioning properly.
6. If not, verify that all codes are set the same. When all transmitters are functioning properly, your WaterCop® Classic System is on duty to help protect your home from damage due to plumbing leaks.



# WaterCop® Interface Connections

Contacts 5, 6 and 7 are used to control the valve position from a remote location. The most common is your home security system control panel.

This is done by wiring these contacts to a control switch on the panel. The diagram below shows typical installation options. This control can be a relay, push buttons or toggle type switch. This control needs to be a momentary switch, which means that the control switch stays made or “on” for a short period of time (1 to 3 seconds) and then returns to a neutral position.

Switching contact 7 (brown/white wire) to contact 5 (blue/white wire) will cause the valve to close.

Switching contact 7 (brown/white wire) to contact 6 (green wire) will cause the valve to open.

Contacts 2, 3 and 4 are used to signal a remote device as to the position of the valve. This is done by connecting a low voltage circuit with indicator lights to these contacts. The diagram shows a typical installation.

When the valve is in the open position, contacts 3 (green/white wire) and 4 (blue wire) will be made, completing the circuit and lighting the indicator light, showing that the valve is in the open position.

When the valve is in the closed position, contacts 2 (orange wire) and 3 (green/white wire) will be made, completing the circuit and lighting the indicator light, showing that the valve is closed.

## WaterCop Interface to Security Panels

### Input Signals from Security Panel to Change Valve Position

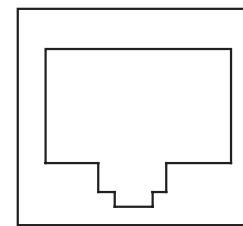
- Apply momentary dry contact closure between lines 5 and 7 to close the ball valve.
- Apply momentary dry contact closure between lines 6 and 7 to open ball valve.

### Output Signals to Security Panel for Valve Position

- Dry contact closure between lines 3 and 4 indicates valve open.
- Dry contact closure between lines 2 and 3 indicates valve closed.

## Classic Interface Contacts

1-----8



- 7 Brown/White (5VDC)
- 5 Blue/White (to close)
- 6 Green (to open)

### CAT5-E

- 3 Green/White
- 4 Blue
- 2 Orange

## RJ45 Socket

**Note:** When using the WCSC2 SmartConnect with a splitter, the RJ45 valve position signals change from Dry Contact to 5 VDC output signals as follows:

- When the valve is OPEN, you will have a 5 VDC signal between line 4 (Blue lead) and line 8 (Brown lead GND).
- When the valve is CLOSED, you will have a 5 VDC signal between line 2 (Orange lead) and line 8 (Brown lead GND).

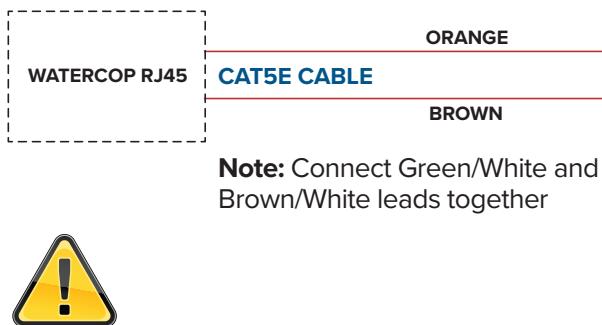
## Emergency Procedures

In the unlikely event that the WaterCop® Classic System should shut off the main water supply and then become inoperable due to a power outage or damage, it is possible to manually operate the WaterCop® to return water service. Unplug the WaterCop® from its power source. The valve may be manually opened by removing the clip holding the housing to the valve, sliding the

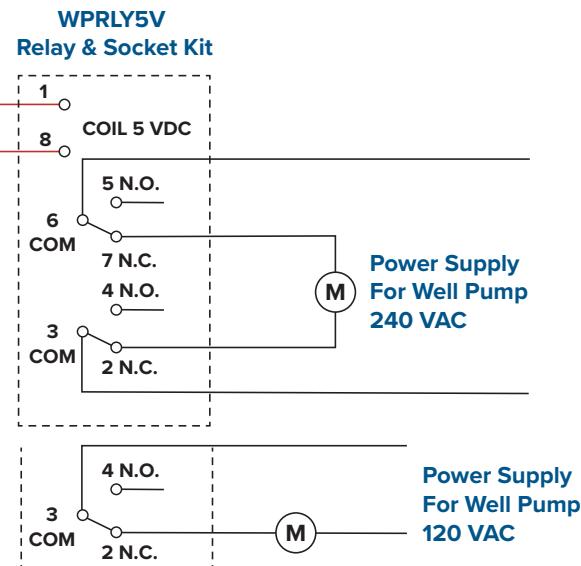
housing off the valve shaft, and turning the valve stem a quarter turn with a screwdriver. This procedure should only be necessary in emergencies.

**Note:** To manually operate an outdoor valve, remove the 4 hex bolts holding the outdoor actuator on and turn the valve stem a quarter turn with a screwdriver.

## Relay Wiring Diagram WaterCop® Classic to Control Well Pump



**WARNING!** The relay coil will be energized when the valve is closed. Make connections to the relay coil before energizing the actuator.



## Periodic System Maintenance & Testing

Quarterly testing and maintenance are recommended.

1. Ensure that the sensor probes/pins are clean and free of dust/dirt.
2. Wet sensor pins to activate valve closure/s.
3. Verify valve closure/s.
4. Repeat steps with the rest of the sensors.

5. Replace sensor/s to optimal location for leak detection if disturbed.
6. Use green button to re-open the valve each time.

If you have a WaterCop SmartConnect test quarterly, or annually minimum, by closing and opening the valve using the in app controls from your smartphone or tablet. Use the Maintenance Log on the next page to record maintenance dates.

# Maintenance Log

Visit [WaterCop.com](http://WaterCop.com) for your warranty information.

