waterleak systems™

# Water Leak Detection & Monitoring


# User Guide

**Congratulations!** You have just purchased the finest water detection and reporting device ever manufactured. waterleakXsystems is your first line of defense against potential catastrophic and disastrous water leaks at your home or commercial property.

Visit www.waterleakXsystems.com to watch videos and learn more.

*waterleakXsystems, full system with both Basic and Optional Components shown.*

**DISCLAIMER**

WATERLEAKXSYSTEMS, LLC (WLXS) offers a limited warranty not including labor. WLXS and its insurance carrier are not liable for installer workmanship, product failure, maintenance, replacements or repairs beyond the scope and expiration date of the manufacturer's product warranty. WLXS does not guarantee that water damage will not occur. Our system is intended to significantly reduce the risk and severity of water damage. Proper use and maintenance are the sole responsibility of the end users and/or property owners.

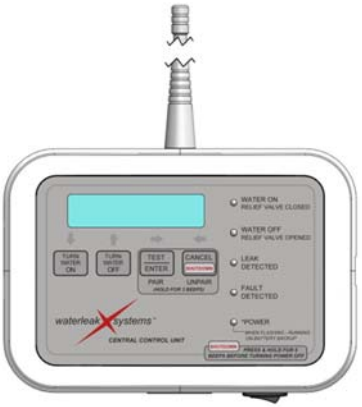
# Table of Contents

# Step 1: Check the Contents of the Basic System WLXS-007 Package

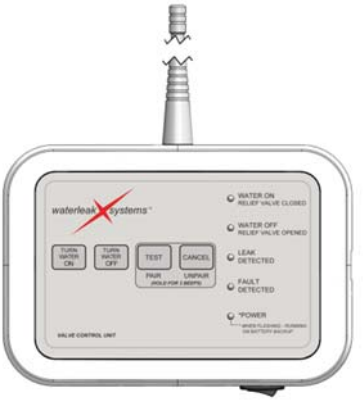
### Basic System Components

Check to make sure you have the items listed below.

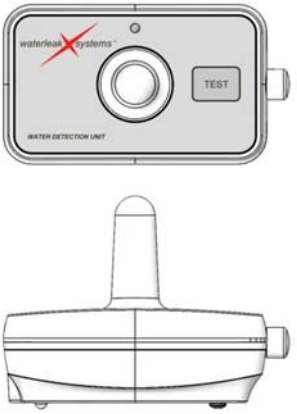
- 1 Central Control Unit (CCU)
- 1 Valve Control Unit (VCU)
- 2 Water Detection Units (WDU)
- 1 Water Detection Unit Skinny Sensor (WDUSS)
- 1 Electric Water Shutoff Valve for 1-inch pipe (WSV-1)
- 1 User Guide
- 4 Quick Start Guides
- 1 Wall Mount Template
- 4 mounting screws and anchors
- 1 Cat5e Ethernet network cable, 6’
- 1 security cable, 6’




Central Control Unit (CCU)
CCU-001




Valve Control Unit (VCU)
VCU-002




Water Detection Unit (WDU)
WDU-003

Water Detection Unit Skinny Sensor (WDUSS)
WDUSS-004

Electric Water Shutoff Valve for 1-inch pipe (WSV-1)
WSV-1"

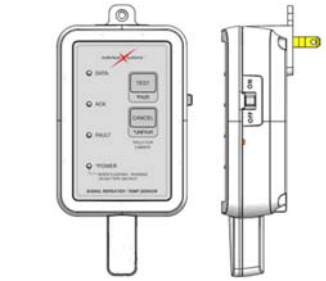
**Optional Components**

If you have ordered online and purchased optional components to enhance the functionality of the Basic System, one or more of the units pictured here may have been shipped to you as well. Check to make sure you have the additional components you may have ordered.

- Electric Water Shutoff Valve for 1-inch pipe (WSV-1)
- Electric Water Shutoff Valve for 1 ½-inch pipe (WSV-1-½)
- Signal Repeater/Temperature Sensor (SRTS, repeater)
- Solid State Well Relay (WR)
- Water Detection Unit (WDU)
- Water Detection Unit Extension Probe (WDUXP)
- Water Detection Unit Skinny Sensor (WDUSS)

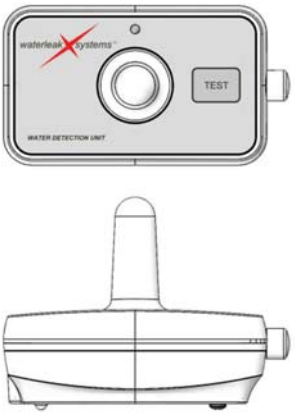
Electric Water Shutoff Valve for 1-inch pipe (WSV-1)
WSV-1"

Electric Water Shutoff Valve for 1-½-inch pipe (WSV-1-1/2)
WSV-1-1/2"



Signal Repeater/Temperature Sensor (SRTS)
SRTS-005

Solid State Well Relay (WR)
WR-006




Water Detection Unit (WDU)
WDU-003


Water Detection Unit Skinny Sensor (WDUSS)
WDUSS-004

Water Detection Unit Extension Probe (WDUXP)
WDUXP-303

## Step 2: Install the Batteries

Install new, non-rechargeable lithium batteries in all applicable components; see the table below for the size required for each unit. WARNING: Refer to page 15 for detailed battery safety information.

**For the Central Control Unit, Valve Control Unit, and Signal Repeater/Temperature Sensor, set the battery tracker:**

- After installing the batteries, press and hold the TEST button and the CANCEL button at the same time, and turn on unit using the switch on its side. You will hear two beeps to indicate that the unit is powering on; after a few seconds you will hear 8 beeps to indicate that the battery tracker is set.

**Do this procedure every time you install new batteries.**

We recommend replacing the batteries every 5 years, or once there is a low battery notification, whichever is sooner. *Batteries are not included with the system.*

**Use of batteries other than lithium batteries will void the warranty.**

| | **Required lithium battery** |
|---|---|
| ***Basic System Components*** | |
| Central Control Unit | One 9V |
| Valve Control Unit | Eight AA |
| Water Detection Unit | Two AA |
| ***Optional Component*** | |
| Signal Repeater/Temperature Sensor | One 9V |
| Water Detection Unit | Two AA |

## Step 3: Decide Where to Install the System

Consider the following factors when choosing where to install your system:

- Where is your internet router? You will need to connect the CCU to your network using the included Cat5e Ethernet network cable. Choose a location as close to the center of your home or facility to ensure the other components are able to communicate with the CCU, minimizing the need for Signal Repeater/Temperature Sensors.
- Where is the water supply in your home or facility? You will need to place the VCU nearby and have the WSV installed here.
- Where are other potential leak points in your home or facility? You will need to list them on the Water Detection Unit Location Log on page 25 and place the WDUs and WDUSSs in these areas.
- Where might there be signal interference between the CCU and any WDU? You may need to order a Signal Repeater/Temperature Sensor (SRTS) to ensure WDUs are communicating with the CCU. If planning to use multiple SRTS units, decide where you will want to monitor the room temperature and place your primary SRTS component here.

Know when to call the professionals:

- Have a licensed plumber install the Electric Water Shutoff or Relief Valves (1” or 1-½”).
- Have a licensed electrician install the Solid State Well Relay.

## Overview

The entire system is interlinked by radio signals and is designed to detect water leakage as early as possible and intervene to prevent further water damage. The system uses the facility's internet access to send text or email notifications to the system owner when a leak is detected or when the system's components require attention.

When the Water Detection Unit (WDU) detects a water leak, the WDU sends this information to the Central Control Unit (CCU). The CCU sounds an alarm, sends a text or email notification to the system owner, and sends a command to the Valve Control Unit (VCU) to turn off the water. The VCU signals the Electric Water Shutoff Valve (WSV) to close, cutting off the water supply until the leak can be repaired. The LCD screen on the CCU will display the location of the leak.

The alarm can be silenced by pressing the CANCEL button on the CCU or VCU. Once the leak is repaired and the WDU sensors are dried, the water flow should be restored by pressing the TURN WATER ON button on the CCU or VCU.

Each Water Detection Unit (WDU) has a unique serial number that is transmitted to the CCU with each radio data packet. This is used to identify which WDU is detecting a leak, and also to keep from causing or receiving interference from other nearby radio systems. Each WDU checks in with the CCU approximately every 24 hours to report its status. The timing of this check-in event varies by design by a few hours to minimize the chance of two or more units trying to check in with the CCU at the same time. If any WDU fails to transmit its status within its time cycle, the CCU sends an email notification to the system owner with that WDU's location, and will suggest checking its battery.

The entire system uses battery backup in case of power failure. When running on battery power, the system continues to monitor for leaks and shuts off the water if a leak is detected. The system will not send out email notifications while running in backup mode. When power is restored, the CCU sends a notification to report the times of the power outage and restoration.

## Basic and Optional Component Abbreviations and Part Numbers

For your reference, here is a table with all the components and their abbreviations. The abbreviations will be used throughout this manual.

| Part Name | Abbreviation | Part Number |
|---|---|---|
| Central Control Unit | CCU | CCU-001 |
| Valve Control Unit | VCU | VCU-002 |
| Water Detection Unit | WDU | WDU-003 |
| Water Detection Unit Skinny Sensor | WDUSS | WDUSS-004 |
| Electric Water Shutoff Valve for 1-inch pipe | WSV-1" | WSV-1 |
| Signal Repeater/Temperature Sensor | SRTS, repeater | SRTS-005 |
| Solid State Well Relay | WR | WR-006 |
| Electric Water Shutoff Valve for 1-½ -inch pipe | WSV-1 ½" | WSV-1-1/2 |
| Water Detection Unit Extension Probe | WDUXP | WDUXP-303 |

## Basic System Components

**All components are intended to be used with the WLXS-007 waterleakXsystems only. Any other use will void its warranty.**

### Central Control Unit

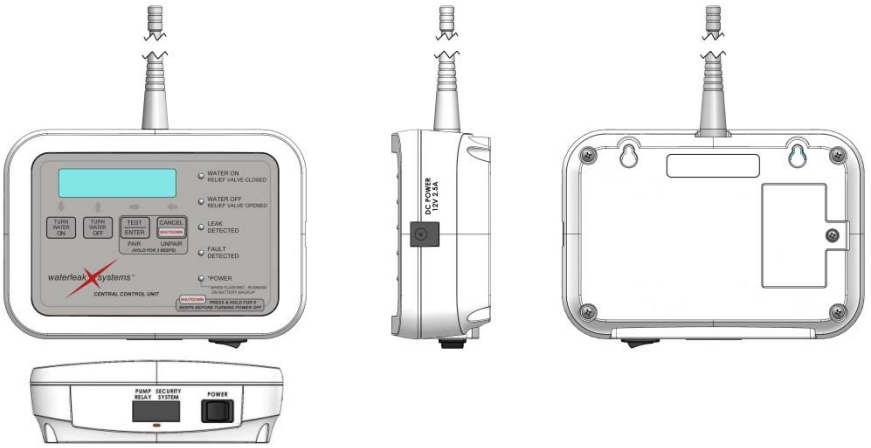
The Central Control Unit (CCU) is the command center of the system. It must be connected to the facility's internet network with the included Cat5e Ethernet network cable and be placed in a central location from where its alarms can be heard. (It may also be connected to an existing security system; this may require the services of a licensed electrician.) This component requires one (1) 9V lithium battery, to be replaced once every 5 years, or once there is a low battery notification, whichever is sooner.

The other system components must be paired with the CCU, similar to how you might pair your cell phone with a wireless headset or car speaker. The CCU stores the unique serial numbers of each component, and receives and processes signals from them. In the event of a water leak, the CCU, via the VCU, commands the Electric Water Shutoff Valve (WSV) to close, shutting off the water supply until the leak can be repaired, sounds an alarm, and sends an email notification to the system owner.

The CCU can send text or email notifications to up to three (3) cell phone numbers or email addresses. Such notifications include:

- Water leaks, reported to the CCU by the Water Detection Unit (WDU). Leak locations will display on the CCU's LCD screen by scrolling the following details:
  - Floor or level
  - Room or space
  - Exact location in the room or space
- Low battery, reported by all components except non-primary SRTSs
- Power outage, once power is restored and network is back online
- Temperature extremes, reported by the Signal Repeater/Temperature Sensor (SRTS)

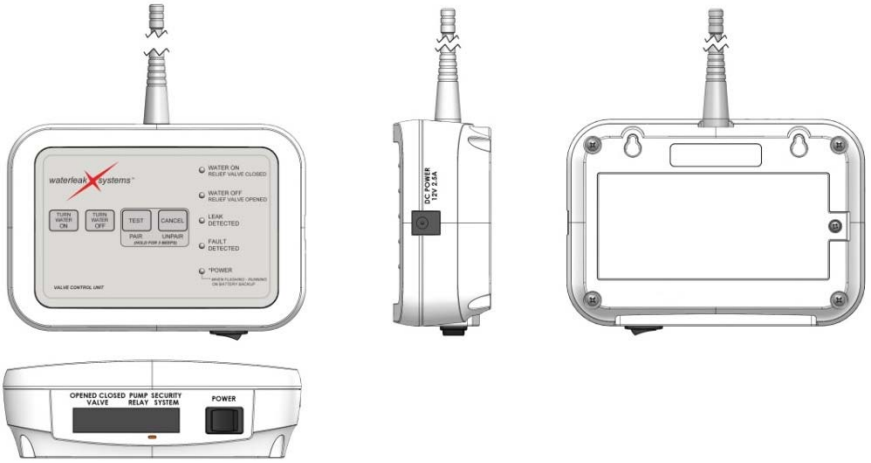
The text/email notification feature only functions when the local area network is operational and connected to the internet. This system is designed to be connected to a network using DHCP protocol for automated IP address assignment.



**Valve Control Unit**

The Valve Control Unit (VCU) processes radio commands sent from the CCU and controls the Electric Water Shutoff Valve (WSV), additional WSV being used as a vent valve (if installed), and Solid State Well Relay (WR) being used as the pump control relay (for well systems). It must be located near the facility's incoming water supply, where the main WSV must be installed. The Valve Control Unit requires eight (8) AA lithium batteries, to be replaced once every 5 years, or once there is a low battery notification, whichever is sooner.

The VCU as well as the CCU sounds an alarm when a leak is detected. The alarm can be silenced by pressing the CANCEL button on either unit. Once the leak is repaired, the system can be returned to a monitoring state by pressing the TURN WATER ON button on either VCU or the CCU.

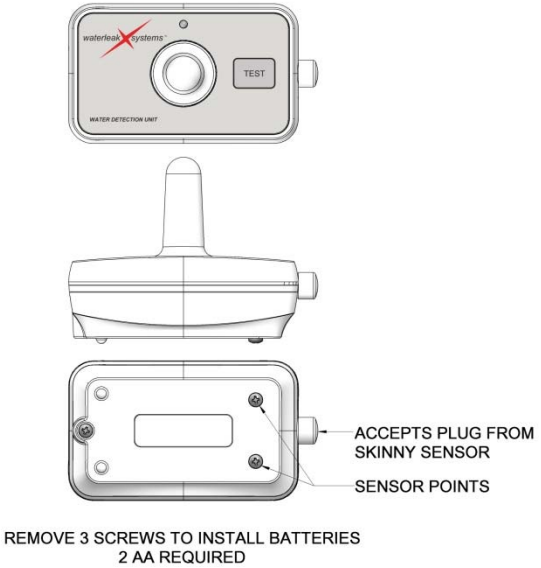


**Water Detection Unit**

The Water Detection Unit (WDU) signals the CCU when it detects a water leak. This component requires two (2) AA lithium batteries, to be replaced once every 5 years, or once there is a low battery notification, whichever is sooner.

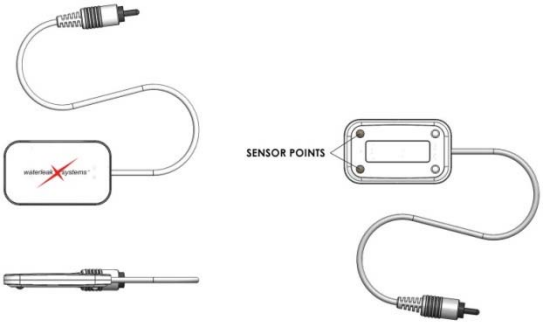
The WDU is programmed with a unique internal serial number. It should be placed where potential water leaks are most likely to occur. The WDU will send radio data packets to the CCU containing its unique serial number, battery status and leak detection status.

Additional WDUs can be installed to expand the coverage of potential leak locations within a facility. A combination of up to 49 WDUs and Signal Repeater/Temperature Sensors (SRTS) can be used in one system.




**Water Detection Unit Skinny Sensor**

The Water Detection Unit Skinny Sensor (WDUSS) plugs into the connector port located on the side of the WDU and is an extension thereof. It is designed to fit under appliances with low clearances. This component requires no batteries.



**Electric Water Shutoff Valve for 1-inch pipe**

The Electric Water Shutoff Valve for 1-inch pipe (WSV-1”) must be installed downstream of the existing facility water shutoff valve. When a leak occurs, the VCU signals the WSV-1” to close and cut off the water supply.

Additional valves can be used as a pressure relief valve in the City Water Setup (see the Pairing and Valve Installation section). It can also be purchased again if the original WSV-1” that came with the Basic System WLXS-007 needs to be replaced.

**We recommend that a licensed plumber install the valve to ensure that the installation complies with local codes and regulations.** Since the valve is low voltage, a licensed electrician is not required to install this unit.


## Optional Components

**All components are intended to be used with the WLXS-007 waterleakXsystems only. Any other use will void its warranty.**

**Signal Repeater/Temperature Sensor**

The Signal Repeater/Temperature Sensor (SRTS, or repeater) has two functions:

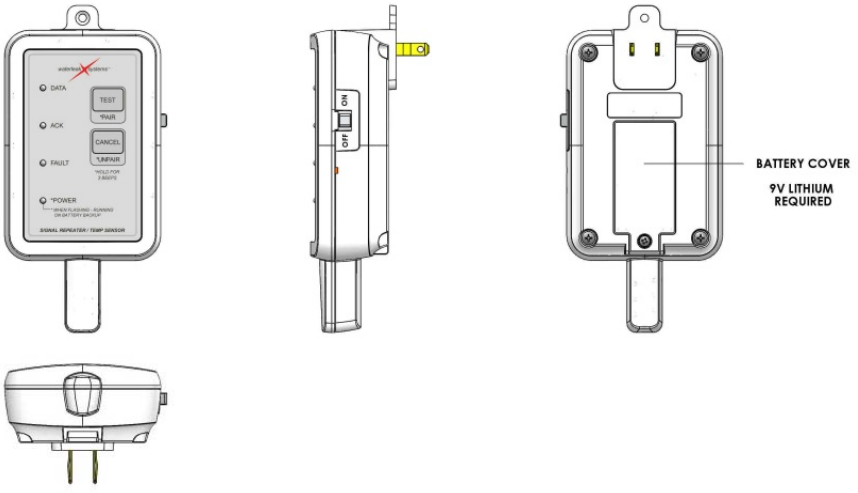
- Extends the effective range of the system by repeating WDU signals to the CCU. This feature is useful in larger homes or facilities that may have areas where radio signal reception is poor due to steel or concrete dividers or other obstruction.
- Reports temperate extremes to the CCU. This feature is designed to alert you and assist in the prevention of frozen pipes or detection of home or commercial HVAC systems failure.

This component must be plugged into a 120V outlet. It requires one (1) 9V lithium battery, to be replaced once every 5 years, or once there is a low battery notification, whichever is sooner.

*Important:*

- The first SRTS you install must be paired with the CCU, the VCU, and any WDU whose signal it is extending. This will be the primary repeater. It must be paired with the CCU as a sender and a receiver, and with the VCU as a receiver only. It will receive signals from its paired WDUs and transmit it to the CCU. Only the primary repeater must be paired with the CCU and VCU. Only the primary SRTS can detect and report the high and low temperature alarm thresholds, which are set using the CCU’s setup menu.

- Multiple WDUs can be paired with a repeater.
- Each WDU should only be paired with one repeater. *Pairing a WDU with more than one repeater will cause simultaneous repeated transmissions and prevent the system from working properly.*
- All WDUs paired with a repeater must be also be paired with the CCU.
- Non-primary repeaters only need to be paired with WDUs that require their signals to be rebroadcast to the CCU; non-primary repeaters should not be paired with the CCU or VCU.




**Solid State Well Relay**

The Solid State Well Relay (WR) can be used with the Basic System WLXS-007 to turn off a well pump in the event of a water leak. This component comes with a white 6' cable with an RJ45 connector on one end and three bare end wires on the other end. It should be wired into the facility's well system circuitry, and the low voltage side should then be plugged into the VCU.

**We recommend that a licensed electrician make the required connections to the facility well control circuitry to ensure that the installation complies with local codes and regulations.**

**Electric Water Shutoff Valve for 1-½-inch pipe**

The Electric Water Shutoff Valve for 1-½-inch pipe (WSV-1-1/2") is intended for use when a larger valve is required in the facility's plumbing. It can be used to replace the WSV-1" valve included with the Basic System WLXS-007. The WSV-1" valve can then be used as a relief valve if desired. The WSV-1-1/2" valve can also be used as a relief valve in the city water set or well setup.

**We recommend that a licensed plumber install the valve to ensure that the installation complies with local codes and regulations.** Since the valve is low voltage, a licensed electrician is not required to install this unit.

**Water Detection Unit Extension Probe**

The Water Detection Unit Extension Probe (WDUXP) extends the sensor surfaces of the WDU. The stainless steel nail-like probe is installed by removing the sensor pads of the WDU with a Phillips head screwdriver and replacing them with the probes, tightening them by hand. Two probes are required for each WDU used on carpet, and are easily pushed through the carpet to reach the subfloor. They are designed to detect a water leak before the water comes up to the surface of the carpet.

## Battery Information

### Installation

WARNING: The system components require the use of 9V and 1.5V AA non-rechargeable lithium batteries. UL 2017 standard requires that lithium batteries used in this system shall be certified to UL 1642. Use of batteries other than non-rechargeable lithium batteries are prohibited and will void the system's warranty. Battery life for lithium batteries cannot be determined by measuring voltage output as with other battery types and must be tracked in minutes used. The battery life tracking function for the Central Control Unit, Valve Control Unit, and Signal Repeater/Temperature Sensor must be set up when you install their batteries. CAUTION: Risk of explosion if battery is replaced by an incorrect type.

**Setting the Battery Tracker**

After installing the batteries, press and hold the TEST button and the CANCEL button at the same time, and turn on unit using the switch on its side. You will hear two beeps to indicate that the unit is powering on; after a few seconds you will hear 8 beeps to indicate that the battery tracker is set.

**Do this procedure every time you install new batteries.**

| | **Required lithium battery** |
|---|---|
| ***Basic System Components*** | |
| Central Control Unit | One 9V |
| Valve Control Unit | Eight AA |
| Water Detection Unit | Two AA |
| ***Optional Component*** | |
| Signal Repeater/Temperature Sensor | One 9V |
| Water Detection Unit | Two AA |

### Replacement

With the exception of the WDUs, the batteries in the system are only used during a power failure, and should last several years if few power outages occur. The CCU tracks the battery life in all components (except for non-primary repeaters). The CCU sends a text or email notification when any component's battery life may not be reliable for use in backup mode. When you receive this notification, replace the lithium battery in the appropriate component.

Since only primary SRTS batteries are tracked, you should replace all non-primary repeater batteries at the same time.

We recommend replacing the batteries every 5 years, or once there is a low battery notification, whichever is sooner.

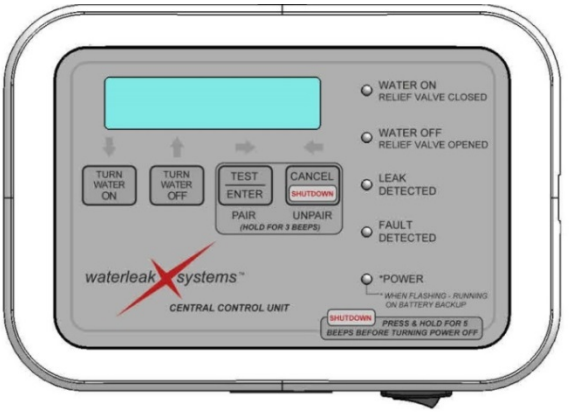
**When replacing the battery in the CCU, you must perform the shutdown procedure before turning it off. To shut down the unit:**

- Press and hold the SHUTOFF button until it beeps 5 times.
- Wait for the LCD screen to display the message OK TO TURN OFF before turning off the unit using the switch on its side.
- With the unit shut down and switched off, remove old batteries and replace with new ones.
- To reset the battery tracker, simultaneously press the TEST and CANCEL buttons, and switch on the unit. You will hear two beeps to indicate that the unit is powering on; after a few seconds you will hear 8 beeps to indicate that the battery tracker is set.

## Using the Multipurpose Keypad Buttons

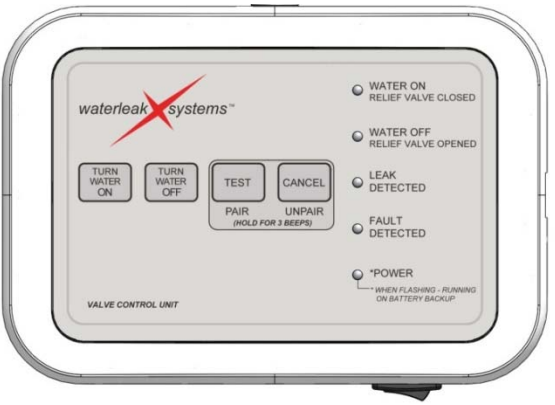
The CCU and the VCU each have four multipurpose buttons on their keypad panels. Their functions are different depending on which setup menu you are in.

*Central Control Unit*




| TURN WATER ON | TURN WATER OFF | TEST | CANCEL |
|---|---|---|---|
| ⇩ (down arrow) | ⇧ (up arrow) | ENTER | SHUTDOWN |
| | | PAIR | UNPAIR |
| | | ⇨ (right arrow) | ⇦ (left arrow) |

*Valve Control Unit*




| TURN WATER ON | TURN WATER OFF | TEST | CANCEL |
|---|---|---|---|
| | | PAIR | UNPAIR |

**Navigation**

- To enter pairing mode, press and hold the PAIR button until it beeps 3 times.
- To enter the system setup menu on the CCU, press and hold the ENTER button until it beeps 4 times.
  - This menu is where you enter the cell phone numbers and/or email addresses where you want to receive system notifications.
  - Use the arrow keys to navigate the menu and scroll through the letters, numbers, punctuation, and special characters.
  - If you are entering an email address and you need to get to the @ symbol, press and hold the ⇧ (up arrow) or ⇩ (down arrow) button until you hear a beep. The display selection will skip to the next category of characters. *Most other special characters will not be needed unless you are an advanced user and will be reconfiguring the system to use your own email server (not recommended).*
  - Press the ENTER button to accept a character and move the cursor to the right.
  - Press the CANCEL button to move the cursor back to the left if you need to change a selected character.
  - Press and hold ENTER to accept the entered characters and return to the previous menu.
  - To exit the texting setup menu at any time, press and hold CANCEL to return to normal operation.
- To shut down the unit,
  - Press and hold the SHUTOFF button until it beeps 5 times.
  - Wait for the LCD screen to display the message OK TO TURN OFF before turning off the unit using the switch on its side. **Never switch the CCU off without shutting down first.**

## Pairing and Valve Installation

**Pairing and Unpairing System Units**

Pairing is the process of setting up two devices to recognize radio signals from one another. It is essentially introducing system units to each other and storing their unique serial numbers in each other's non-volatile memory, which is maintained when units are powered down. In order for one unit to receive and process another unit's radio packet (signal), it must first recognize that unit's serial number in the incoming data. Pairing units allows them to recognize each other's signal while ignoring others, such as a neighbor's system, or a separate system in a different building on the same property.

| *Component* | *Stores serial numbers for* |
|---|---|
| CCU | VCU, WDUs, primary SRTS |
| VCU | CCU |
| SRTS | WDUs |

| *Component* | *Receives signals from* | *Sends signals to* |
|---|---|---|
| CCU | VCU, WDU, WDU via SRTS, primary SRTS | VCU |
| VCU | CCU | CCU, WSVs |
| WDU | n/a | CCU, CCU via SRTS |
| Primary SRTS | CCU, VCU, WDUs | CCU, CCU as WDUs, VCU |
| Non-primary SRTS | WDUs | CCU as WDUs |

**General Pairing Procedure**

- On the receiving unit, press and hold the PAIR button until you hear 3 beeps. Release the PAIR button. LED lights will blink in scanning pattern.
- On the sending unit, press and release the PAIR button. The receiving unit will beep 5 times and the LEDs will stop blinking. The receiving unit has now stored the serial number of the sending unit.

**Unpairing**

- On the original receiving unit, press and hold the UNPAIR button until you hear 3 beeps. Release the UNPAIR button. LED lights will blink in scanning pattern.
- On the original sending unit, press and release the TEST/PAIR button. The receiving unit will beep 5 times and the LEDs will stop blinking. The receiving unit has now removed the serial number of the sending unit.

**Reset All Pairings**

On the CCU, press and hold the CANCEL button until you hear 10 beeps. All serial numbers will be deleted; this will be confirmed by 7 short beeps. Repeat this procedure on the VCU.

**Using this procedure will remove all WDU location data as well as primary SRTS data from the CCU. You will then need to re-pair the VCU, all WDUs, re-enter the WDU location information in the CCU, and re-pair the primary SRTS.**

Detailed pairing procedures are in the following sections.

**City Water Setup**

**Install the Central Control Unit (CCU)**

- Install one 9V lithium battery in the CCU. Do not turn on the unit.
- Identify where to install it. The CCU must be
  - In a central location from which the alarm can be heard;
  - Close enough to a connected internet router to connect to it with the included Cat5e cable;
  - Near a standard AC outlet;
  - Near a wall where it can be mounted.
- Mount using the Wall Mount Template, mounting screws and anchors. Make sure it is in a position that allows the antenna to be vertical.
- Plug the 12VDC adapter into a standard outlet.
- Connect the power adapter to the CCU.
- Connect the CCU to the router with the Cat5e network cable.

**Install the Valve Control Unit (VCU) and the Electric Water Shutoff Valve (WSV)**

The VCU and WSV must be installed in the utility area of the home or facility. The WSV comes with a 5-foot cord that plugs into the VCU. The VCU must be mounted on a wall that easily allows the cord to connect the two components. The WSV must be installed in the incoming main water supply line, downstream of the existing water shutoff valve. **We recommend the WSV be installed by a licensed plumber to ensure that the installation complies with local codes and regulations.**

- Install eight (8) AA lithium batteries in the VCU. Do not turn on the unit.
- Mount the VCU. Make sure it is in a position that allows the antenna to be vertical, and is as far away as practical from other metal objects such as air ducts, gas and water pipes, etc.
- Once the plumber has installed the WSV, connect the WSV cord to the VCU port labeled SHUTOFF.
- Plug in the VCU power adapter and connect it to the VCU.

**Set the Battery Tracker**

- On the CCU, press and hold the TEST button and the CANCEL button at the same time, and turn on unit using the switch on its side. You will hear two beeps to indicate that the unit is powering on; after a few seconds you will hear 8 beeps to indicate that the battery tracker is set.
- Repeat the previous step on the VCU.

**Pair the CCU and the VCU**

- On the CCU, press and hold the PAIR button until you hear 3 beeps, and release it. The LED lights will blink in scanning pattern. *If you accidentally press too long and the SETUP menu comes up, press CANCEL. Try again to enter pairing mode.*
- On the VCU, press and release the PAIR button. Both units should emit 5 beeps and the CCU's LED lights will stop blinking. Pairing is complete.

**City Water with Relief Valve Setup**

*Using Optional Electric Water Shutoff Valve for 1-inch pipe (WSV-1")*

Installing a second valve in a T can be advantageous to vent off the pressure from the facility plumbing once the shutoff valve has closed, causing less water to exit at the leak point. The relief valve cord plugs into the VCU port labeled VALVE RELIEF. The outlet from the valve should be plumbed to or directed to a nearby drain or utility sink. Upon detecting a water leak, once the main WSV closes, the relief valve will open immediately after to relieve the facility's pressure to a drain. Test to ensure the drain can handle the flow.

**Well Pump and Pressure Relief Valve Setup**

*Using Optional Solid State Well Relay (WR-006)*

A Solid State Well Relay (WR) can be used in the facility's pump power circuit to allow the WLXS system to interrupt the power to the pump and shut the water flow off. When using the system in a well configuration, the valve supplied with the Basic System serves as the pressure relief valve to minimize the amount of water spilling from the leak location. The valve needs to be installed in a T downstream of the well pressure tank and plugged into the port on the VCU labeled VALVE RELIEF. (See System and Plumbing Diagrams). The outlet from the valve should be routed to a nearby drain or utility sink. Test to ensure the drain can handle the flow.

We recommend the Solid State Well Relay (WR) be installed in a 4" galvanized steel square box, which should be connected to the existing well control panel. The cable that is supplied with the relay plugs into the port on the VCU labeled PUMP RELAY. The other end of that cable should be connected to the low voltage side of the relay. One of the wires in the low voltage cable from the VCU is a ground braid/shield used for a safety ground. This wire must be attached to a grounding screw in the metal box containing the relay. Should it be necessary to add relays for a more involved boiler system needing gas shutdown etc., the low voltage signal for the relay is strong enough to drive additional solid state relays with the low voltage side wired in parallel (all relay drive positives connected together and all negatives connected together).

**We recommend that a qualified licensed electrician perform this portion of the installation to ensure that the installation complies with local codes and regulations.**

**Using Signal Repeater/Temperature Sensors**

In larger facilities or homes that may have areas of poor radio reception due to steel or concrete divides or other obstruction, one or more Signal Repeater/Temperature Sensors (SRTS) may be installed to

extend the reception range of the WLXS system. Adding at least one SRTS has the advantage of being able to detect temperature extremes and report this to the Central Control Unit (CCU). This feature is designed to alert you and assist in the prevention of frozen pipes or detection of home or commercial HVAC systems failure. Temperature information is sent via radio signal to the CCU, and that information would then be compared with the high and low temperature thresholds you have entered. If the temperature exceeds the high or low setting, the CCU notifies you via text or email.

Only the first (primary) SRTS unit set up in the system will be used for temperature monitoring. The temperature information from any additional SRTS units installed will be ignored. Proper placement of the primary SRTS is important to obtain the proper temperature reading of the home or facility being monitored.

You may need more than one SRTS to cover a large home or facility. Pairing the primary SRTS will be slightly different from pairing the non-primary repeaters.

The primary SRTS must be paired with the CCU in both sending and receiving directions, and with the VCU only in the receiving direction. This will allow the repeater to send temperature information to the CCU, have its radio signal recognized, and also extend the reception range between the CCU and VCU. Non-primary SRTS units will only need to be paired with WDU sensor units and not the CCU or VCU.

**Pairing the Primary Signal Repeater/Temperature Sensor**

Before pairing the primary SRTS, ensure that:

- You have set up the Basic System. *See pages 18 – 19.*
- You have installed a 9V lithium battery in the primary SRTS and have set the battery tracker.
- You have removed the center cover plate screw from the facility's existing electrical outlet and plugged the SRTS into the outlet.
- You have replaced the screw through the tab on the SRTS to secure it to the wall outlet.
- Mount the SRTS in a vertical position; this is best for sending and receiving signals.

<u>Pair the SRTS with the CCU</u>

- On the CCU, press and hold the PAIR button until it beeps three times, then release it. The LED lights will blink in scanning pattern.
- On the SRTS, press and release the PAIR button. The CCU will beep 5 times and the LEDs will stop blinking. The CCU has now stored the serial number of the primary SRTS and will recognize any signal coming from it.

<u>Pair the CCU with the SRTS</u>

- On the primary repeater, press and hold the PAIR button until it beeps three times, then release it. The LED lights will blink in scanning pattern.
- On the CCU, press and release the PAIR button. The SRTS will beep 5 times and the LEDs will stop blinking.

<u>Pair the VCU with the SRTS</u>

- On the primary SRTS, press and hold the PAIR button until it beeps three times, then release it. The LED lights will blink in scanning pattern.
- On the VCU, press and release the PAIR button. The primary SRTS will beep 5 times and the LEDs will stop blinking. The primary SRTS will now recognize and repeat any radio packets received from the VCU.

<u>Testing the Primary SRTS Temperature Reporting</u>

To test the SRTS temperature monitoring, press and hold the TEST button on the primary SRTS until it beeps two times. After a few seconds, observe the CCU display for the current room temperature. Set

up temperature monitoring on the CCU. (See how to enter and navigate the CCU Setup Menu and set temperature thresholds on pages 22-23 in the Central Control Unit Setup Menu Navigation section.)

**Pairing the Non-Primary Signal Repeater/Temperature Sensor**
A non-primary repeater (SRTS) should only have WDUs paired with it, and it should not be paired with the CCU or VCU. Non-primary repeaters only listen for signals from WDUs they are paired with and rebroadcast those signals.

For example, an SRTS repeater could be located in the lower level but within range of the CCU located on the main floor. All WDUs located in the lower level could be paired with that one repeater to get assistance getting their signals to reach the CCU. An additional repeater and WDUs paired with it could be located in an upper level. All of those WDUs would still need to be paired with the CCU so that their location assignment could be entered into the system and the CCU can recognize their signal. Before randomly installing additional repeaters, you should make sure that you really need them. The basic system can cover a fairly significant area. However, if necessary to cover large areas or areas with obstructions, more than one SRTS can be used. All repeaters need to be within range of the CCU.

A WDU should only be paired with one SRTS. The system software will not prevent you from pairing it with more repeaters; it may still function, but will likely operate with a decreased effective range. Pairing a WDU with more than one repeater will cause the system to send simultaneous conflicting signals and be ineffective.

Pair WDUs with a non-primary SRTS
Before pairing any WDUs to a non-primary SRTS, ensure that the WDUs have already been paired with the CCU. Plug the SRTS into an outlet that allows the antenna extension to be vertically oriented.

- On the non-primary SRTS, press and hold the PAIR button until it beeps three times, then release it. The LED lights will blink in scanning pattern.
- On the WDU, press and release the PAIR button. The SRTS will beep 5 times and the LEDs will stop blinking. The SRTS will now recognize and repeat any radio packets received from the WDU.

## Central Control Unit Setup Menu Navigation

The setup menu for the Central Control Unit (CCU) is where you will complete setup tasks including entering your cell phone number to receive text notifications, set the time zone, enter high and low temperature thresholds, and more. Access the menu by holding down the ENTER button until you hear 4 beeps; release the ENTER button. The top line on the display will show SETUP OPTIONS; the second line will show TEXTING SETUP as the first menu item. Use the ⇧ (up arrow) or ⇩ (down arrow) button to scroll to the menu item you want. When the desired option is displayed, pressing ENTER will activate that sub-menu, or execute the listed function (e.g. SHOW SW VERSION). The menu options are listed below.

**Texting Setup**

You can enter up to three (3) cell phone numbers and/or email addresses where you want to receive system notifications. You will be prompted to pick the cell phone service carrier from a list, and then prompted for the phone number. Once that information is entered, you will be prompted for the number of desired message recipients and an available selection of 0 through 3. This value should be set to 1 if only one cell phone or email address is to be notified of any alarms.

In the CCU, both cell phone numbers and email addresses will be handled in an email address format. Once you select your carrier and enter your phone number, the domain names corresponding to the

carrier will be automatically populated. If your cell phone carrier is not listed, call your carrier to get the email address for your phone number. You can then enter this into the CCU as you would an email address. For information purposes, below is a table showing the current cell phone carrier domain names as of the time of this printing.

To enter an email address instead of a cell phone number, select CUSTOM as your carrier and enter the entire email address using the same key scrolling method. In this text entry mode, the ENTER button accepts the current character and advances the cursor. When your entry is complete, press and hold the ENTER button until you get a second beep.

| | |
|---|---|
| ATT | cellnumber@txt.att.net |
| Verizon | cellnumber@vtext.com |
| T-Mobile | cellnumber@tmomail.net |
| Sprint PCS | cellnumber@messaging.sprintpcs.com |
| Virgin Mobile | cellnumber@vmobl.com |
| US Cellular | cellnumber@email.uscc.net |
| Boost Mobile | cellnumber@myboostmobile.com |

**Network On/Off**

This is where you enable the network connection for the CCU. It can take a couple minutes for the CCU to establish a network connection, so this feature defaults to 'disabled' on a new system. Once the system is connected to a router or other local area network, and the texting parameters have been entered, use this option to enable the network.

**Set Time Zone**

This is where you select the time zone for the location of the CCU.

| | | | |
|---|---|---|---|
| *AT* | Atlantic Time | *HT* | Hawaii Time |
| *CT* | Central Time | *MT* | Mountain Time |
| *ET* | Eastern Time | *PT* | Pacific Time |

This information is used to ensure that notifications have an accurate time stamp.

**Temperature Set**

Use this option to set high and low temperature alarm thresholds (*e.g. 90°F high, 45°F low*) when an SRTS is used in the system. When prompted for the temperature settings, use the ⇧ (up arrow) and ⇩ (down arrow) buttons to increase or decrease the value shown and ENTER to save the setting.

**Test Message**

Test the text message function to make sure you have entered a valid cell phone or email address. In order to use this feature, the network has to be enabled, the CCU must be connected to a working network connection, and valid entries must be entered into the TEXTING SETUP menu.

**Show Software Version**

Displays the CCU serial number and the version of software (firmware) in the unit. The firmware field cannot be changed.

#### Show Battery Level

Displays the remaining percentage of useful battery life in the CCU and VCU.

#### Change Server

Provides a way for advanced users to set up their own email server connection instead of the one provided for the system. Using this menu is not recommended, as incorrect or invalid settings can render the notification function of the system useless.

## Water Detection Unit Setup

#### Completing the Water Detection Unit Location Log

- On the numbered Water Detection Unit Location Log on page 25, list up to 49 areas in your home or facility where you will be placing WDUs to monitor for leaks.
- Write the corresponding number from the Water Detection Unit Location Log on the back of each WDU.

#### Pairing with the Central Control Unit

- With the CCU and the WDU you have marked as #1 on your log at hand, press and hold the PAIR button on the CCU until it beeps 3 times. The LED lights will blink in scanning pattern.
- Press and release the TEST button on the WDU to complete the pairing.
- On the CCU, use the ⇧ (up arrow) and ⇩(down arrow) buttons to select the location descriptions from the menu, beginning with the state in which the system is located. Select the state, then press the ENTER button to accept the entry. The CCU will prompt you to select an entry for each of five categories to describe the intended location for the WDU being paired. Complete the entry WDU #1 for:
  - State
  - General location *(e.g., 123 Acorn Street, Tampa)*
  - Floor or level *(e.g., main floor)*
  - Room or space *(e.g., kitchen)*
  - Exact location *(e.g., under sink)*

Press CANCEL at any time to abort the pairing process.

You will only need to enter the state and general location on the first WDU paired with the CCU. Since that information is redundant to all the other WDUs, you will not be required to enter this for remaining units.

- Once all information has been entered, the CCU will beep 5 times to confirm that pairing is complete.
- Repeat this process for every WDU you will be adding to the system in the order listed on the Water Detection Unit Location Log.

If pairing doesn't occur, (i.e. the LEDs keep scanning), then either the WDU has already been paired, the limit of paired devices has been reached (49), or there is a problem with the WDU or its battery.

To test to ensure that a WDU is paired with the CCU, first make sure that the CCU is **not** in pairing mode. Press the TEST button on the WDU and it will cause the CCU to beep and the POWER LED to blink off momentarily.

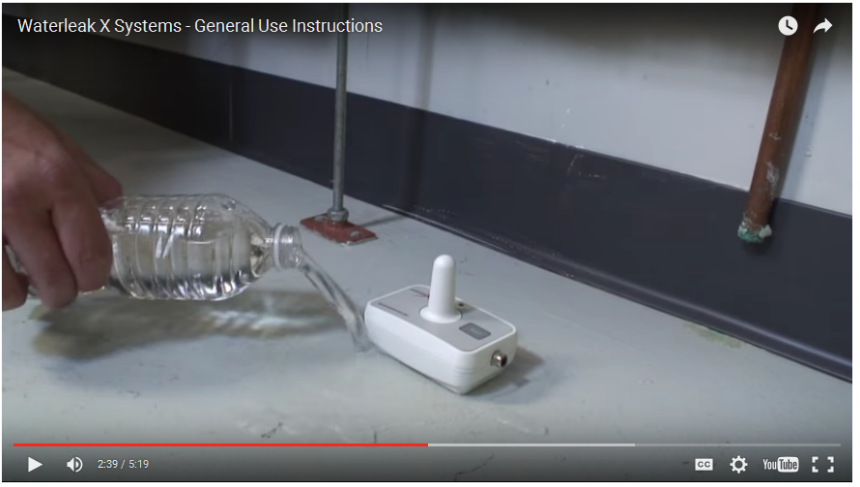
If the WDU is already paired, but you want to change its location description, you must first unpair it:

- On the CCU, press and hold the UNPAIR button until you hear 3 beeps.
- On the WDU, press and release the TEST button. The CCU will beep 5 times and its LCD will display the WDU's serial number with a message indicating that it has been removed. The unpairing is complete.

To re-pair the WDU, ensure that its number and location description correspond with the WDU number entry on the Water Detection Unit Log. Re-pair the WDU with the CCU using the procedure described at the beginning of this section.

**Placement and Testing**

- Once the WDUs have all been paired with the CCU, place the WDUs in the locations you designated on the Water Detection Unit Location Log.
- Test each WDU and WDUSS with water or a wet napkin to trigger each sensor in their designated location.
- When you hear the alarm, the valve closes, and you receive notification messages via text or email, the test is complete.
- Dry the test area and the WDUs.
- Press the CANCEL button on the CCU or VCU to silence the alarm, then press the TURN WATER ON button to reset.
- Repeat this process for each WDU to ensure proper pairing with the CCU.




If a connection between the CCU and WDU cannot be made in a location, a Signal Repeater/ Temperature Sensor (SRTS) may be needed to extend the coverage area and ensure the WDU signal reaches the CCU.

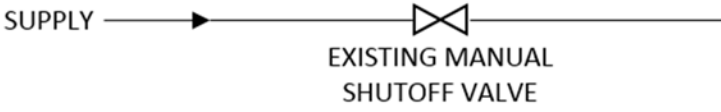
## Water Detection Unit Location Log

Write the location number on the back of the WDU and list the location on the reference sheet below.
*Example: WDU#8, basement, laundry room, washing machine*

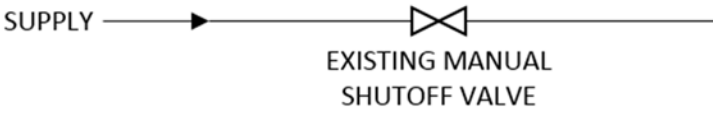
| WDU# | Location | WDU# | Location |
|---|---|---|---|
| #1 | | #26 | |
| #2 | | #27 | |
| #3 | | #28 | |
| #4 | | #29 | |
| #5 | | #30 | |
| #6 | | #31 | |
| #7 | | #32 | |
| #8 | | #33 | |
| #9 | | #34 | |
| #10 | | #35 | |
| #11 | | #36 | |
| #12 | | #37 | |
| #13 | | #38 | |
| #14 | | #39 | |
| #15 | | #40 | |
| #16 | | #41 | |
| #17 | | #42 | |
| #18 | | #43 | |
| #19 | | #44 | |
| #20 | | #45 | |
| #21 | | #46 | |
| #22 | | #47 | |
| #23 | | #48 | |
| #24 | | #49 | |
| #25 | | | |

**Plumbing Diagram**

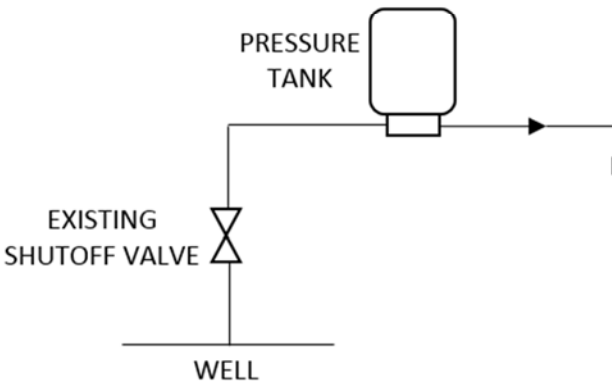
1. CITY WATER SETUP



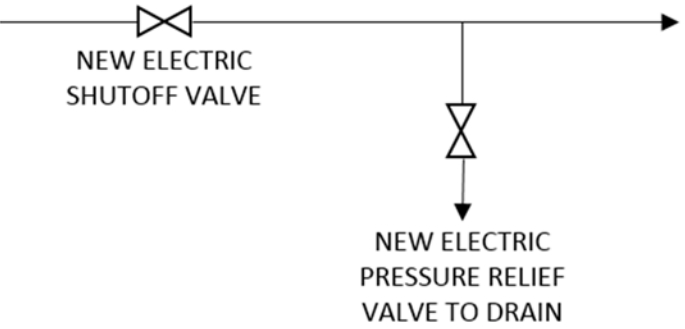

2. CITY WATER SETUP WITH RELIEF VALVE

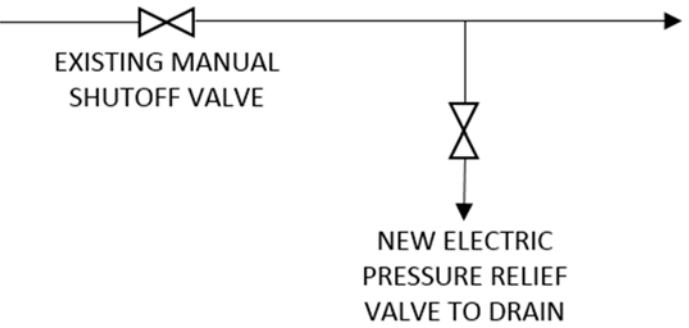



3. WELL SETUP WITH RELIEF VALVE

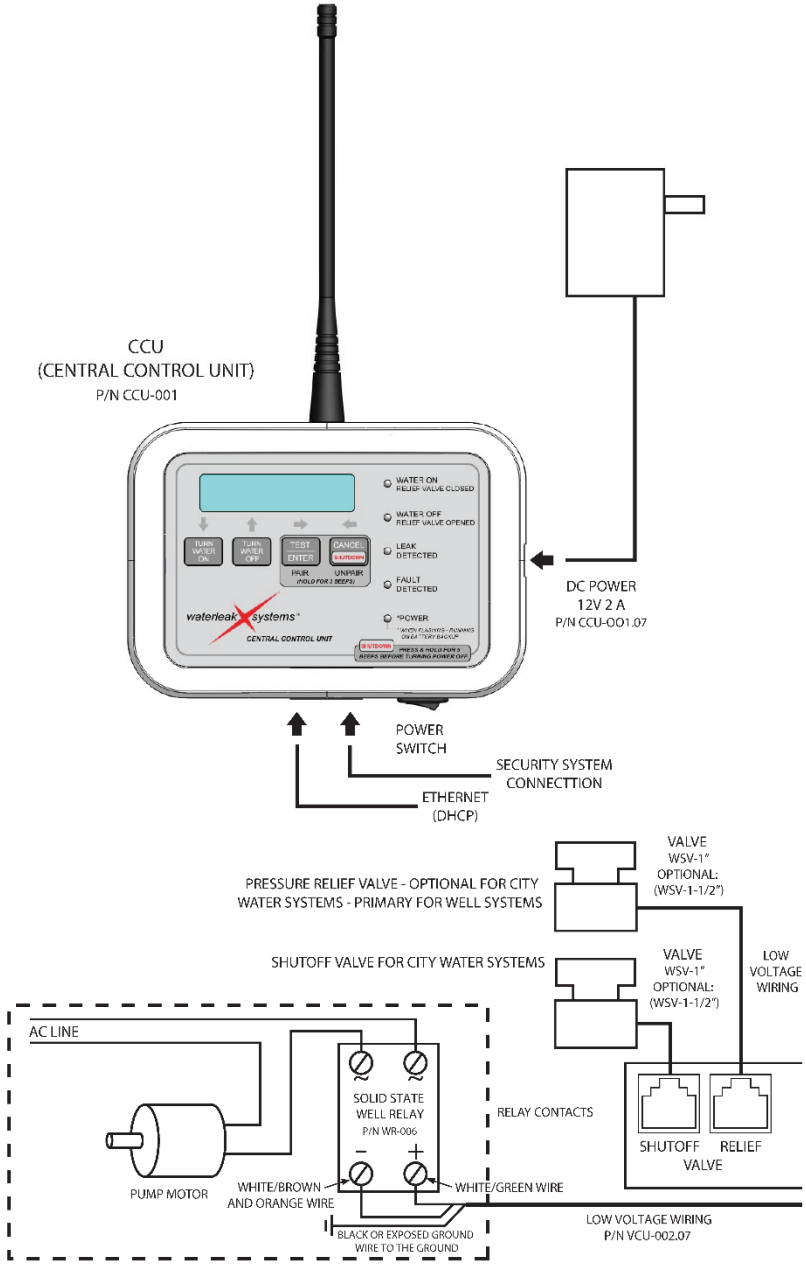


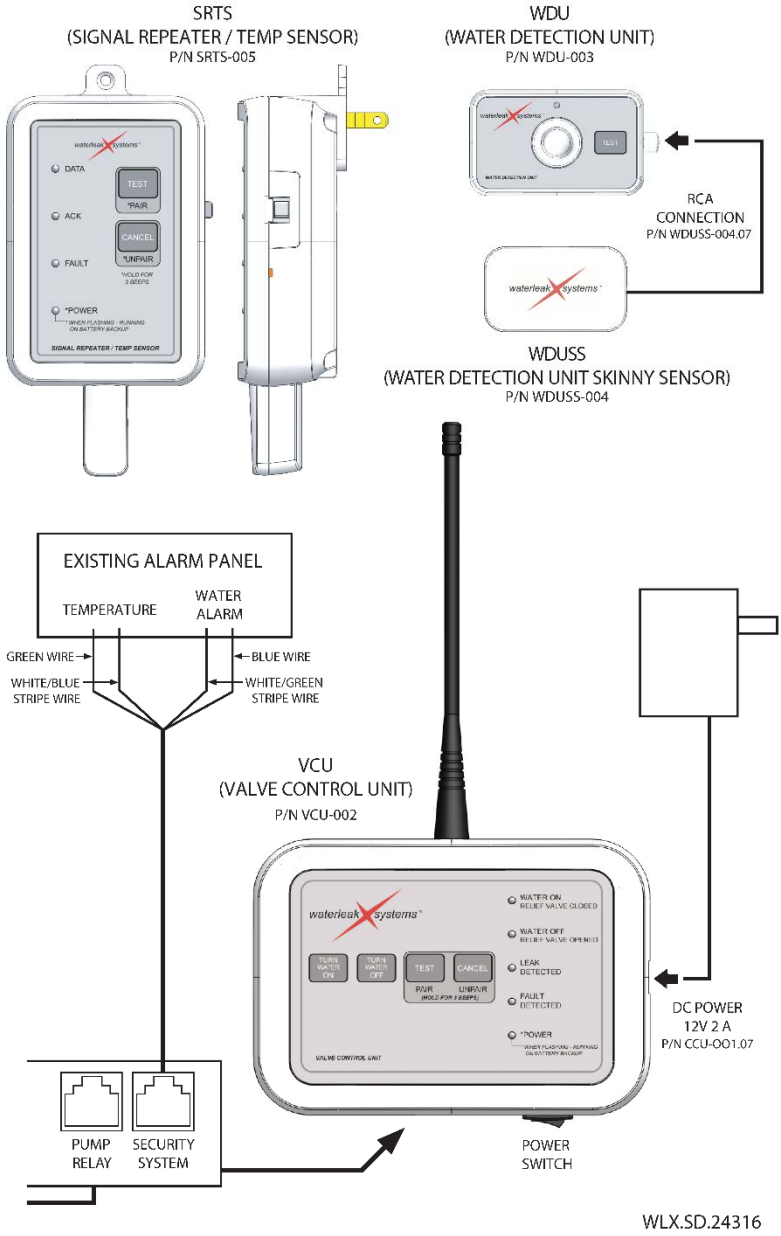

NEW ELECTRIC
SHUTOFF VALVE


NEW ELECTRIC
SHUTOFF VALVE
NEW ELECTRIC
PRESSURE RELIEF
VALVE TO DRAIN


EXISTING MANUAL
SHUTOFF VALVE
NEW ELECTRIC
PRESSURE RELIEF
VALVE TO DRAIN

## System Diagram




SRTS
(SIGNAL REPEATER / TEMP SENSOR)
P/N SRTS-005
WDU
(WATER DETECTION UNIT)
P/N WDU-003
RCA
CONNECTION
P/N WDUSS-004.07
WDUSS
(WATER DETECTION UNIT SKINNY SENSOR)
P/N WDUSS-004
EXISTING ALARM PANEL
TEMPERATURE
WATER
ALARM
GREEN WIRE
BLUE WIRE
WHITE/BLUE
STRIPE WIRE
WHITE/GREEN
STRIPE WIRE
VCU
(VALVE CONTROL UNIT)
P/N VCU-002
DC POWER
12V 2 A
P/N CCU-OO1.07
PUMP
RELAY
SECURITY
SYSTEM
POWER
SWITCH
WLX.SD.24316

## Warranty

We believe the waterleakXsystems is a superior product. Although we take pride in producing and testing a product that will function properly, we cannot guarantee that there will never be a defective unit or that a unit will be compatible with the many types of communication equipment in use now or in the future. The warrantors do not insure your premises or guarantee that there will not be damage to your person or property if you use this product. If you are not comfortable with our Limited Warranty, or completely satisfied with the product, we encourage you to return the unused product for a full refund within 30 days of purchase.

**Causes for Termination of this Warranty**

This warranty shall terminate and be of no further effect at the time the product is

- Damaged by extraneous causes, such as fire, water, power surge or spike, lightning, etc., or not maintained as reasonable and necessary
- Modified
- Improperly installed
- Repaired by someone other than the warrantor
- Used in a manner or purpose for which the product was not intended

WARRANTORS' OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT ONLY. THIS WARRANTY DOES NOT COVER PAYMENT OR PROVIDE FOR THE REIMBURSEMENT OF PAYMENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

**Warrantors' Liability**

waterleakXsystems, LLC is not insuring your premises or guaranteeing that there will not be damage to your person or property if you use this product. waterleakXsystems, LLC shall not be liable under any circumstances for damage to your person or property or some other person or that person's property by reason of the sale or use of this product, or its failure to operate in the manner in which it is designed. The warrantors' liability, if any, shall be limited to the original cost of the product only.

**One-Year Limited Warranty**

This product is warranted by waterleakXsystems, LLC, against manufacturing defects in materials and workmanship under normal use for one (1) year from the date of purchase. EXCEPT AS PROVIDED HEREIN, waterleakXsystems, LLC, MAKES NO EXPRESS WARRANTIES, AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, waterleakXsystems, LLC, SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGE RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF waterleakXsystems, LLC, HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions *may* not apply to you. In the event of a product defect during the warranty period, take the product and your sales receipt as proof of purchase date to the place of purchase. waterleakXsystems, LLC, will, at its option, unless otherwise provided by law, (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design. All the parts and products become the property of waterleakXsystems, LLC. New or reconditioned parts and products *may* be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the

remainder of the original warranty period. You may be charged for the repair or replacement of the product made after the expiration of the warranty period. This warranty does not cover (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by waterleakXsystems, LLC, consumables such as fuses or batteries; (c) cosmetic damage; (d) transportation, shipping or insurance costs; or (e) cost of product removal, installation, set-up service adjustment or reinstallation. This warranty gives you specific legal rights, and you may also have other rights.

**Additional Information**

## Frequently Asked Questions

**Is the system easy to install?**
Yes. Plug the Cat5e Ethernet network cable included with the Basic System from your connected internet router into the port labeled LAN on the Central Control Unit (CCU). Have the Electric Water Shutoff Valve (WSV) installed in the incoming water line. Connect the cable from the valve into the Valve Control Unit (VCU). The Water Detection Units connect wirelessly to the CCU via pairing, similar to pairing a wireless headset with a smartphone. More details are included in the general instruction video on our website, waterleakXsystems.com.

**Can I install the system myself?**
Yes. Step-by-step instructions are included with the Basic System and there is a general instruction video on our website, waterleakXsystems.com. The system for the most part is low voltage “plug and play.” However, we recommend that the Electric Water Shutoff Valve (WSV) be installed by a licensed plumber. Also, when used with a well pump setup, the Solid State Well Relay (WR) should be installed by a licensed electrician.

**Can the system be used with both city water and well water setups?**
Yes, the Basic System can be used for both. A Solid State Well Relay (WR) is required for the well setup. The Electric Water Shutoff Valve (WSV) included in the Basic System is multipurpose. It can be installed in a T configuration and used as a relief valve when used with the well setup.

**Does the system have temperature reporting capability?**
A Signal Repeater/Temperature Sensor works in conjunction with the system. It not only acts to relay a signal, but can be set to high and low temperature settings of your choice which, upon being reached, will notify you via text or email.

**What information does the system send via text or email?**
When the system detects a leak, the CCU sends a notification to the email or cell phones you entered when setting up the system. The message will include the exact location of the leak including the state, type of property (e.g., home), what level (e.g., basement), which room, (e.g., bathroom), and exact location within the bathroom (e.g., vanity). This information must be set up in the CCU when placing the water detection units (WDUs).

**How long will the backup batteries last?**
waterleakXsystems monitors its battery backup systems and will report a low battery condition. Many lithium batteries are designed to last up to 10 years, but we recommend you replace them at 5-year intervals.

**How does the system notify you of low battery or battery failure?**
Each of the units reports their status and battery level to the Central Control Unit (CCU) at random times each day. Should any unit fail to report within 48 hours, the CCU notifies you that the unit has not reported its battery level. The CCU will send you a notification of any unit with a low battery.

**What happens if the power goes off?**
The system functions in battery backup mode in the event of a power outage. If a leak occurs, the CCU will still send a signal to the VCU to close the WSV. However, text and email notifications cannot be sent in this mode. Once power is restored, the CCU sends the notification.

**In the event of a power failure, how long will the system run on the backup batteries?**
If there is no leak detected during the power outage, the backup battery in the CCU should last about 15 hours. If there is a leak, then some of the circuitry will use more energy, and the estimated life of the battery in the CCU would be approximately 6 hours. Please note that if a leak has occurred before or during a power outage, the system will close the water valve and it will remain closed even if the system battery would drain completely, and even when the power to the facility is restored. Upon a power outage event, the system's battery levels should be checked to ensure proper working status. The SRTS battery is estimated to last approximately 20 hours in the event of an extended power outage. The VCU has an estimated run time of about 70 hours with no active alarm and about 20 hours in an alarm condition.

**I replaced the battery in my VCU after accidentally leaving it unplugged for a couple days, but it is still reporting a low battery. Why?**
The method we use to track remaining battery life keeps track of how many minutes the battery is actually used. This is because with lithium batteries you cannot determine the life remaining by measuring the voltage it puts out like you can with other battery types. Since we keep track of minutes used from the battery, when the battery is replaced with a new one, that tracking record needs to be reset. To reset the battery life tracker when replacing the batteries, with the unit turned off, press and hold both the TEST and CANCEL buttons for about 5 seconds while turning the unit on. You should get a confirmation tone of 8 short beeps when the tracker gets reset. You should then get a 100% remaining life indication from that unit's battery. *Only lithium primary (non-rechargeable) batteries should be installed in all system units*.

**How far can the signals from the water detection units reach?**
We have tested the signal to reach as far as several hundred feet. However, there are several factors that can affect this. Type of construction, walls, thickness of walls, floor levels, electrical, and plumbing can all have an effect on the strength of the signal. It is important to test the effectiveness of the signal from the WDU to the CCU several times before settling on a location. It is a good idea to move the WDU to a location well beyond its designated location and test it there first, then move it to its final designated position and retest.

**How many Water Detection Units can be used with a Signal Repeater Temperature Sensor?**
Up to 20 WDUs can be paired and used with one SRTS. When paired with the SRTS, the WDUs need to also be paired with Central Control Unit as well.

**How many Water Detection Unit Skinny Sensors (WDUSSs) can I use in one system?**
Any combination of up to 49 Water Detection Units or Signal Repeater Temperature Sensors can be used with one system. Because the WDUSS is an extension of the WDU, you can use as many WDUSSs as you can WDUs.

**Can I reset the system without being on site?**
No. The valve will stay closed until the leak is repaired and the TURN WATER ON button is pressed on the CCU or VCU. There is no way you can reset the system remotely.

**Will the Signal Repeater/Temperature Sensor turn off the water upon reaching an extreme temperature?**
Yes. The Electric Water Shutoff Valve (WSV) will be closed and a text message will be sent only upon a ***low*** temperature extreme being reached, e.g., near freezing.

**Will the system report high or low temperatures via an existing home or facility alarm panel?**
Yes, the system will close a set of relay contacts that can be wired into your existing facility alarm panel. Your alarm company can then notify you that a temperature exception has occurred and whether the extreme reached is a high or low temperature. The CCU will send a signal to the Electric Water Shutoff Valve (WSV) to close upon reaching the extreme low temperature you indicated when you set up the system.

**Will the system report a water leak via an existing home or facility alarm panel?**
Yes, the system will report via an existing alarm panel. It will report that there is a leak, but cannot report the exact location of the leak. The CCU will notify you of the exact location of the leak via a text or email.

**What if the system fails to close the valve, causing a major flood in my property?**
The system is designed to prevent and report a devastating water leak event. waterleakXsystems is your first line of defense to assist in and possibly stop an event. We cannot guarantee that you will not experience a water leak which could lead to a catastrophic event. There may be other factors involved that cause the system not to work as intended. We recommend that you periodically test the system by simulating a leak at one of the WDU sensors, making sure the notification is sent out, and the Electric Water Shutoff Valve (WSV) functions properly.

## Troubleshooting

| Problem | Suggestion | Comment |
|---|---|---|
| CCU display reads (NO NETWORK). FAULT LED is blinking. | Check the network cables, routers or connectivity of a different computer on the network. This display message should go away when the network is functional again. | This display message usually means that the local area network is down. The CCU normally pings URLs on the internet to determine if the network is functioning. |
| CCU display reads (NO NETWORK). FAULT LED is blinking and POWER LED is blinking. | Check the power cable and power outlet for power. Functionality should return once power is restored. | This symptom is caused by the CCU losing power and switching to backup battery. Network functions are not available in battery backup mode. |
| CCU displays NO RESPONSE FROM VALVE CONTROL UNIT. | Make sure the VCU is plugged in and turned on. Make sure that the CCU and VCU are in range of each other. Make sure that the CCU and the VCU are properly paired. Try cycling the power on the VCU. See details on pairing. | The CCU sends out a radio request for the VCU to return its status. If the VCU doesn't respond, you will see this message. |

| Problem | Suggestion | Comment |
|---|---|---|
| CCU display momentarily shows ERROR SENDING MESSAGE after a leak is detected or a test message is sent from the setup menu. | Make sure the network cable is connected and that the network is enabled in the CCU Setup Menu. Verify that a valid email address has been entered in at least the ADDRESS #1 slot in the EMAIL SETUP menu. Also make sure that the number of active recipients is set to at least 1. Factory default is 0. | If there is no indication that the network itself is down, then the likely problem is the setup entries in the EMAIL SETUP menu. If you have used lower case characters in the address, make sure that a 'v' has not been switched with a 'u' or vice-versa as they look similar on the LCD display. Note that email messages cannot be sent when the CCU is running on backup battery. |
| A WDU sensor worked at first, but later doesn't always work when tested. | When placing WDUs, testing should be done at the time to verify that they are not positioned at a marginal range for reception by the CCU. Try moving the WDU closer temporarily and re-test. If this changes the symptoms for the better, consider using a repeater (SRTS) unit to extend the range of the system in the area of the problem sensor. | Another option is to use a Skinny Sensor and cable plugged into the WDU at that location, and place the WDU itself a few feet one way or the other for best reception, with the Skinny Sensor put in the place where a leak is most likely to occur. |
| One unit will not pair with another. | Make sure the two units aren't already paired. When paired, pressing the PAIR button on one will cause the other to beep. When pairing is successful, the unit being paired will beep a confirmation sequence of 5 short beeps. If necessary, unpair the two units and re-pair them. See details on pairing and unpairing. If you are still having trouble pairing, as a last resort, you can purge all pairings from a unit by holding down the CANCEL button for a count of 10 beeps. You will hear a confirmation of 7 beeps. | This method of purging should not be necessary. ***If done on the CCU, all location data previously entered for the WDU sensor units will be lost.*** You will need to re-enter any information entered prior to this point. If this purge is performed on the CCU, then it must also be performed on the VCU to completely unpair the two and then they will need to be re-paired. |
| On power up, one of the units emits 5 short beeps every five seconds. | Return unit for service. | This symptom usually means that the unit cannot read its serial number from the internal ID circuit. When working normally, on power up all units should give 2 short beeps. |

## Regulatory Approval

### FCC Part 15.105(b) Warning Statement

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 receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402. Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

### FCC Part 15.19 Warning Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC Part 15.21 Warning Statement

The user manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.


*For technical support or questions:*
Email us at questions@waterleakXsystems.com or visit us online at waterleakXsystems.com.

Model no. WLXS-007
Designed in USA
Manufactured in China
Patent Pending


*La Guía del usuario está disponible en línea en español www.waterleakXsystems.com.*
This User Guide is available in Spanish online at www.waterleakXsystems.com.