

## USER MODE

The normal state of the valve. The valve is in user mode when it detects that its cover is on, or if it has been in maintenance mode for more than 30 minutes. Auto Activations are only available in user mode.

## ACTIVATION

### **Auto-Activation**

The valve will automatically flush based on IR detection. The IR sensor has 3 LEDs, a red, green, and blue to indicate detection and activation status.

When no object is detected no LED indication will display. After 5-7 seconds of detecting an object, the valve will be considered “locked on” and a green LED will blink in 5-second intervals up to 30 seconds.

When an object exits from lock-on the valve will Auto-Activate.

### **Manual Activation**

There are two manual activation buttons atop the valve. The left button performs a reduced flush, while the right button performs a standard flush.

### **Sentinel Activation**

The valve can automatically activate 24 hours after the last activation, by default Sentinel Activation is off. To toggle Sentinel Activation on and off hold down the Activate button on the control module (not the Manual Activation buttons) for 5 seconds. The green LED will blink 3 times to indicate it has been turned on, or the red LED will blink 3 times to indicate it has been turned off.

### **Activation Refusal**

When an activation is attempted but the valve is unable to activate, a red LED will flash. This can be caused by end-of-life battery, obstructions, being temporarily disabled. Valves are automatically temporarily disabled for 3 seconds after an activation.

## TruFLUSH®

Pro devices use TruFLUSH®, an algorithm based on water pressure to optimize flush volumes.

## DEFAULT SETTINGS

	Urinal	Water Closet
Range	22"	40"
Exit Time	1 second	3 seconds
Water Savings	0%	0%
Base Volume	0.25gpf	1.1gpf
Redetect Time	1 second	15 seconds

### FACTORY RESET

A factory reset is performed by:

1. Power off the interface box.
2. Press and hold the activate button in the interface box.
3. Restore power, while still holding the activate button.
4. Release the activate button after the green LED blinks 4 times. The factory reset is finished.

### MAINTENANCE MODE

If the cover is removed the valve will go into Maintenance Mode which allows additional actions. Auto Activations are unavailable in Maintenance Mode. While in Maintenance Mode a solid green LED indicates that an object is detected. Maintenance Mode times out and returns to User Mode after 30 minutes. Maintenance Mode may be reentered by pushing a tac switch on the control module.

### BUTTONS

There are 4 buttons on the control module. From left to right they are:

1. Auto-Range
2. Profile Selection
3. Activate
4. Activation Count Reset

#### ***Auto-Range***

Activated by holding the Auto-Range button for 3 seconds. When triggered a 5-second countdown will occur with the green LED blinking once each second.

During Auto-Range the green LED will be solid.

After Auto-Range is complete the green LED will blink 3 times.

If during Auto-Range, no object is detected or there is an error with the auto-range process (such as IR sensor malfunctioning) the value will be set to the default range.

#### ***Profile Selection***

Profiles change the water savings value. Pressing the Profile Selection button will display the current profile. Pressing the Profile Selection button again will cycle through the pre-configured profiles. There are 3 profiles.

1. Indicated by blue and red LEDs. 10% water savings.
2. Indicated by blue LEDs. 5% water savings.
3. (Default) Indicated by blue and green LEDs. 0% water savings.

To load a new profile press and hold the Profile Selection button for 3 seconds when the desired profile is indicated. The LEDs will flash to show the profile has changed.

After 5 seconds profile mode will end, and the LEDs will clear.

## **Activate**

The activate button on the control module performs a standard flush indicated by a blue LED blink.

## **Activation Count Reset**

The activation count is reset by holding the Activation Count Reset button for 5 seconds.

The red LEDs on the device will rapidly blink when the reset has occurred.

## **COBALT® PROGRAMMER**

To take full advantage of features available in Maintenance Mode a COBALT® Programmer is required.

The COBALT® Programmer is used to read the current activation count, alerts, and make changes to parameters.

The COBALT® Programmer is sold separately.

When plugged into the valve a round-robin display will begin. If an adjustment is made, the displayed setting and respective LED will blink, and the round-robin will restart.

## **ROUND-ROBIN DISPLAY**

When the Round-Robin Display begins, it will cycle through the alert codes, activation count, and current values of adjustable parameters.

## **ALERT CODES DISPLAY**

Alert codes can be seen on the COBALT® Programmer. Additionally, the valve will flash a red LED every 10 seconds when an alert is present.

Indicated by AL and then the code number in the COBALT® Programmer Round-Robin Display.

### ***Code 1 Device Battery End-of-Life***

The battery voltage has dropped below 5V. Activations will be disabled. The valve will flash the red LED rapidly.

### ***Code 2 Activation Count Threshold Reached***

250,000 activations have been reached since the last reset, indicating that the valve should be rebuilt.

### ***Code 4 Obstruction***

An object has remained locked on for 30 minutes. Auto Activation is disabled. To exit obstruction nothing must be detected for 5 seconds.

### ***Code 6 Disconnected or faulty Pressure/Temperature Sensor***

The Pressure/Temperature sensor must be plugged in or replaced.

### ***Code 7 Low Device Battery***

The battery voltage has dropped below 6V.

## **ACTIVATION COUNT**

The current number of activations since the last activation count reset.

Indicated by AC and then the number of activations scrolling from right to left on the COBALT® Programmer.

The activation count is saved to memory at certain intervals depending on the total number of activations. For the first 100 activations it saves every activation. From 100 to 1000 activations, it saves every 10 activations. For 1000+ activations it saves every 100 activations. For example, if the device is powered off at 215 activations, when powered back on it will report 210 activations.

**ADJUSTABLE PARAMETERS**

**Range**

Adjusts the maximum range used to detect a user. The range can be adjusted from 6-54 inches.

**Exit Time**

Adjusts the amount of time an object must not be detected before the valve considers the user to have exited. The range can be adjusted from 0-15 seconds.

**Water Savings**

Adjusts the water volume savings in percent.

**Base Volume**

Adjusts the base volume.

Adjusted by first pressing the Profile Selection button, and then adjusting using the water savings dial.

Due to display limitations volumes are truncated on the display.

Fixture Type	Selectable Volume	Displayed Value
Urinal	0.125, 0.25, 0.5, 1.0 gallons	0.1, 0.2, 0.5, 1.0
Water Closet	1.1, 1.28, 1.6, 2.4, 3.5 gallons	1.1, 1.2, 1.6, 2.4, 3.5

**Redetect Time**

Adjusts the amount of time a user must be out of range before another user can be detected. The range can be adjusted from 0-60 seconds.