

WeatherTRAK[®]

OptiFlow[™] XR 2-Wire Controller

GETTING STARTED GUIDE

Activate your OptiFlow XR 2-wire Controller:
at www.weathertrak.com/activate
or call (800) 362-8774

H₂O
EQUIPPED



Our Promise to You

WeatherTRAK Product Series Warranty

HydroPoint Data Systems Inc. warrants to the purchaser of its WeatherTRAK products, when shipped in its original carton that they will be free from defects in materials and workmanship for the time period set forth below. During the warranty period, HydroPoint Data Systems, Inc. will, at its option, either repair the defect or replace the defective product or part thereof at no charge to the purchaser for parts during the warranty period.

The WeatherTRAK OptiFlow XR 2-wire controller has a **Ten(10) year warranty from date of purchase.**

This warranty does not apply to any product which has been damaged, defaced, subjected to misuse, abnormal service or handling (including shipping damage), or which has been altered in design or construction.

This warranty does not cover surface discoloration on stainless steel enclosures. Surface discoloration can occur from a variety of environmental conditions outside of HydroPoint's control such as wind-blown soils, water quality, and contaminants.

The warranty described above is in addition to whatever implied warranty may be granted to purchaser by law. (All implied warranties, including the warranty of merchantability and fit for use, are limited to the period(s) from date of purchase set forth above).

Neither sales personnel of the seller nor any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties beyond the time period described herein.

The warranty described above shall be the sole and exclusive warranty granted by HydroPoint Data Systems, Inc. and shall be the sole and exclusive remedy available to the purchaser.

Correction of defects, in the manner and period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of HydroPoint Data Systems, Inc. to the purchaser with respect to the product, and shall constitute full satisfaction of all claims, whether based on contract, negligence, strictly liability or otherwise.

In no event shall HydroPoint Data Systems, Inc., be liable or in any way responsible, for any damages or defects in the product which were caused by repairs or attempted repairs performed by anyone other than HydroPoint Data Systems, Inc.

Nor shall HydroPoint Data Systems, Inc., be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty does not apply to improper installation or grounding, acts of God, such as lightning strikes and/or electrical line power surges, floods, earthquakes, hurricanes, tornados, vandalism, or improper electrical connections.

Warranty Service Procedures

In order to enforce the rights under this limited warranty, the purchaser must notify HydroPoint Data Systems, Inc., of a warranty claim by contacting (800) 362-8774. At that time, the purchaser will be asked to provide dated proof of original purchase. Acceptable forms of this shall be a photo copy or scanned image of the dated original invoice faxed or emailed to HydroPoint Data Systems, Inc. The purchaser will also need to provide a full description of the type of problem occurring, a contact name, address and telephone number and/or email. If requested, purchaser must return the defective product at their own expense.

HydroPoint Data Systems, Inc.

1720 Corporate Circle	Tel (800) 362-8774
Petaluma, CA 94954	Fax (707) 769-9695
support@hydropoint.com	hydropoint.com

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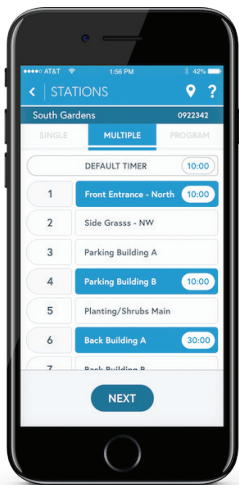
BEFORE YOU PROGRAM

Programming the OptiFlow XR 2-wire from the front panel is only possible in Setup Mode. Once the controller has been updated to OptiFlow, the ability to program from the front panel will be disabled. All future programming can only be performed via WeatherTRAK Central. Please, verify with the owner or maintainer of this controller before performing the OptiFlow updating process.

WeatherTRAK Mobile

WeatherTRAK Mobile can be used to:

- Run manual irrigation
- Change % adjust
- Change controller mode: on/off/shutdown/winterize
- Pause controller
- See active alerts
- Unlock controller



Getting to Know the WeatherTRAK OptiFlow XR 2-Wire Controller

In this section, controller navigation and new hardware features are identified.

Controller Hardware

The WeatherTRAK OptiFlow XR 2-wire controller delivers unique hardware features to simplify installation, field diagnostics and troubleshooting:

- Easily removable command module.
- Interchangeable transformer and ground lug location
- Modular station hardware keys to increase or decrease station count.

Removable Command Module

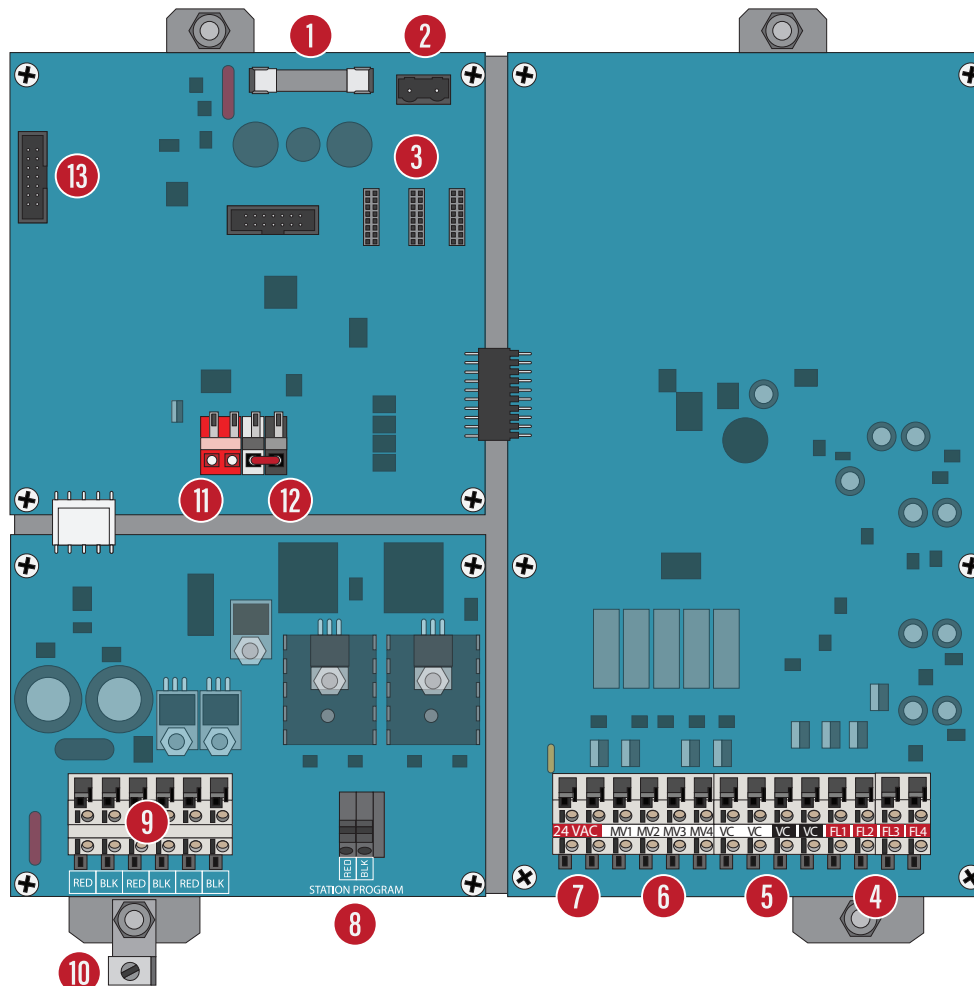
The command module can be easily removed or slid down into a lower position by loosening the captive screws by hand. Removing the command module (shown in Figure 1) provides access to the rain switch input and 24 VAC source. If panel removal is necessary, support it with one hand, then disconnect the cables with the other hand and set it aside carefully.



Figure 1
Removable Command Module

Controller Board Design

- 1 3.0 Amp Slo-Blow Fuse
- 2 24 VAC
- 3 Station Expansion Key Ports
- 4 4 Flow Sensor(s) Spring Clamp Terminal
- 5 4 Common Terminals
- 6 4 Master valve Terminals
- 7 24 VAC Direct Connect Terminals
- 8 Station Program Push Release
- 9 Three 2-Wire Connection Terminals
- 10 Ground Lug
- 11 24 VAC Put for Wireless Rain Sensor (red)
- 12 Rain Switch Input
- 13 Ribbon Cable Connector



Activation

In order to receive daily weather updates, your controller must be activated. To activate, call HydroPoint Customer Service at (800) 362-8774.

For a faster call, complete the blue activation card inside the controller before calling HydroPoint Customer Service.

Controllers can also be activated on our website at hydropoint.com.

Navigation

The user interface incorporates five main functions:

1. The display
2. The menu buttons
3. The left ← and right → arrow buttons
4. The plus + and minus - buttons
5. The * button

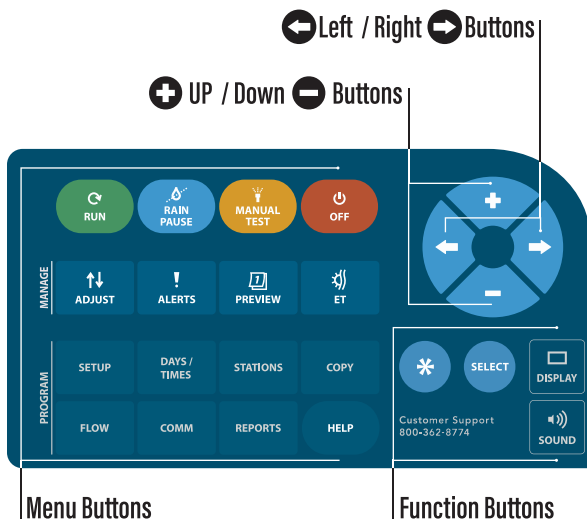


Figure 13
Controller Front Panel

Pushing the ← or → arrow buttons allows you to scroll through all of the sub-functions within a menu.

Pushing the + or - buttons allows you to select choices for each sub-function.

Pressing and holding the * button in some limited sub-menus within the SETUP, STATIONS, FLOW and MANUAL menus will display additional information.

In the COPY menu the * button executes the "copy" function.

Help?

Call Customer Service
1-800-362-8774

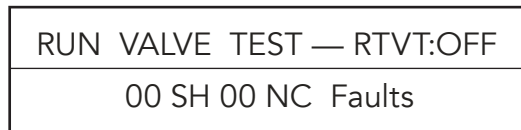
Valve Test

To ensure all field wiring is properly connected and all stations are operating properly conduct a field wire integrity test.

Step 1. Press the MANUAL TEST button.

Step 2. Press the minus - button until the Valve Test screen displays.

Step 3. Press the right arrow → button until the following screen displays:



Step 4. Press the SELECT button, then press the * button to start the test. It will take about 15 seconds to verify continuity to all stations and the master valve.

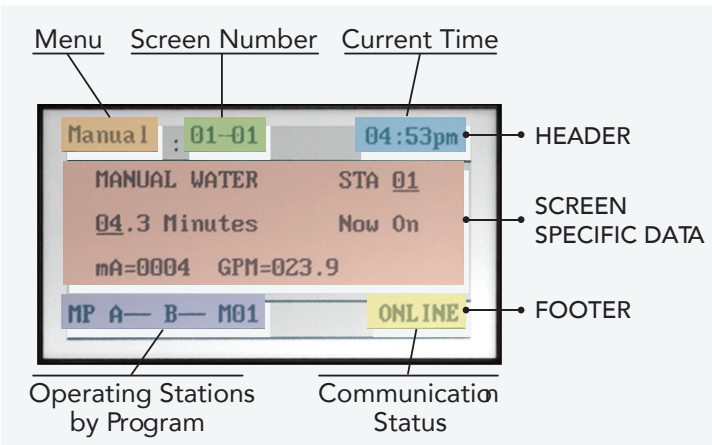
Step 5. If any field wiring issues exist, they will be identified as a "Fault". A valve fault could be "SH" (valve short) from a failing solenoid OC (over current) from valves drawing more than 1000 mA or an "NC" (valve no-connect or open) reflecting a broken wire or wire that is not making good contact in the corresponding station terminal.

Free online training is available at:

hydropoint.com/training-support

Visit hydropoint.com or support@hydropoint.com to access and print additional copies of this Installation Guide.

Programming-Before you Program: Programming the OptiFlow XR 2-wire from the front panel is ONLY possible in Setup Mode. After the Controller has been updated to OptiFlow, the ability to program from the front panel will be disabled. All future programming can only be performed via WeatherTRAK Central. Please verify with the owner or maintainer of this controller before performing the OptiFlow updating process.



The following **SETUP** functions must be performed for the controller to operate properly. Press the **SETUP** Menu button. Press the left or right arrow buttons to move to each function. Press the plus or minus buttons to change the underlined value.

Date: Year, Month, Day

Time: Hour (confirm am or pm), minutes

Time Zone: Select your local time zone

Auto Daylight Savings: Automatically updates controller twice a year, unless you press the button to "No."

Maximum Active Stations: Number of stations physically wired into the controller.

Stack or Overlap: When Stack is selected, all programs operate one after another. The start time and water window for all programs is assigned to Program A. When Overlap is selected, each program can have its own start time and water window. See the Owners Manual for more detail.

The following **SETUP** functions are optional:

Master Valve: Select the type of Master Valve if used.

Assign Pump Start Output: Any station output may be selected. If a pump start is not required, leave this setting as Not Assigned.

Runtime Valve Test: Default setting is "Yes". See the Owner's Manual for more details.

Max Backup ET: Represents the worst-case weekly ET for your area for the month of July. If you are not sure what this number should be, call our Customer Service 800 number for help.

Note: It is important to select None if a master valve does not exist. Selecting Normally Open or Normally Closed when you do not have a master valve may cause a Valve alert that can prevent irrigation.

Days / Times

In this menu a start time, water window and a water day mode can be assigned to one of eight available programs A – H. If a pump start has been assigned as a station output, any one of three programs can be excluded from a pump start.

Note: Check for STACK or OVERLAP (See SETUP for Stack or Overlap.): If Stack is set, subsequent programs will have the same start time as Program A. Programs will run sequentially starting with program A. If Overlap is set, different start times may be set for each program.

Exclude a Program from a Pump Start (only when assigned)

Any program can be excluded from a pump start when a station output has been assigned as a pump start. The factory default is all programs are assigned to a pump start unless otherwise selected. This feature might be used when drip emitters and rotor use the same mainline but only one sprinkler type needs the added delivery pressure.

Programming instructions are also available through our website at www.hydropoint.com

Set Start Times and Water Windows

Press the DAYS/TIMES Menu button. Press the plus or minus button to select the desired program. Press the right or left arrow button to SET STARTS/WINDOWS. Press the SELECT button to edit 1st START/WINDOW. Press the arrow and plus or minus button in sequence to set the start time and the water window. If a 2nd start time is needed press the right or left arrow button to 2nd START TYPE. Press the plus or minus button to set either High ET or Off. Repeat this procedure for each program used. 1st and 2nd start times cannot overlap and the maximum water window is 24 hrs.

Selecting Water Day Mode

Press the DAYS/TIMES Menu button. Press the right or left arrow button to WATER DAY MODE (for Program A-H). Press the plus or minus button to select one of the following seven water day modes:

Optimized by WeatherTRAK: ET and individual station settings determine watering days automatically. Press the plus or minus button to exclude a day if needed.

Odd/Even: Waters based on Odd or Even calendar days. Press the plus or minus button to select Odd or Even days.

Interval: When Interval is selected, press the right or left arrow to WATER DAY INTERVAL. Press the plus or minus button to set the day interval. Day intervals can be set from 1 to 30 days.

Days of Week: Uses a 7-day calendar Sunday through Saturday. Press the right arrow to move through each day of the week. Press the plus or minus button to turn days off or on. (Off days shown as a dash “—”).

Days of Week by Month: Uses a 7-day calendar Sunday through Saturday for each month of the year. Press the right arrow button to Jan OK TO WATER ON. Press the right arrow button to move through each day of the week. Press the plus or minus button to turn days off or on. Press the right arrow button to move to the next month. Follow the above procedure for each month of the year.

Off: When Off is selected, the controller will ignore programmed starts for the selected program until a different water-day mode is selected.

Stations

Individual stations are assigned to a program (start time(s), water window and water day mode), and station mode. There are four station modes to select from: Automated by WeatherTRAK, User w/ ET, User No ET and Off. Select the station mode based on the type of landscape to be irrigated.

Note: The same station cannot be assigned to different programs.

Programming for Existing Landscapes

Automated by WeatherTRAK

Automatically calculates run times, cycle and soaks for each zone based on zone-specific attributes. Daily ET updates then adjust the calculated run times to reflect current weather conditions. Run times will vary as weather changes.

Note: To navigate through the next several screens, press the right arrow button to move to each underlined heading and press the plus or minus button to select a choice within each function. To preview abbreviate Auto mode station settings for this specific station, press and hold the * button.

Select Station: Locate the station to be programmed.

Select Station Mode: Select Automated by WeatherTRAK

Select a Program: Assign the station to a program that has a start time and water day mode.

Use Water Window: If this station can irrigate outside of the water window, select “No”.

Usable Rainfall: If a station is under a roof, heavy tree canopy or semi-porous roof, select either “None” or a percent of rainfall that is actually used. When “None” is selected, the specific station will water during Rain Pause.

Sprinkler Type: Select 1 of 13 industry-recognized sprinkler types. When a sprinkler type is selected, a default precipitation rate and sprinkler efficiency value is automatically assigned. Both values can be changed in the next two screens if different than the displayed default rates.

Precipitation Rate: Is how much water is applied in Inches per Hour. Changing the precip rate will change run times. Lower Precip rates = higher run times, Higher Precip rates = lower run times.

Sprinkler Efficiency: Every sprinkler applies water with a specific efficiency based on its design and performance and spacing. If head or row spacing is stretched, efficiency is less. (Higher = less water; Lower = more water).

Soil Type: Select 1 of 5 soil types determined by the USDA.

Plant Type: Select 1 of 17 plant types that best represents the valve zone being irrigated.

Root Depth: Press the plus or minus button to select root depth. (Shallow roots = more frequent watering; deep roots = less frequent watering.)

Microclimate: Select 1 of 4 levels of sun exposure of the valve zone being irrigated.

Slope: Select 1 of 5 slope gradients. The steeper the slope the higher number of cycles will be applied.

Sprinkler Location on Slope: Select 1 of 5 choices identifying sprinkler locations on a slope.

Next Station: Press the right arrow button to go to the next station or use COPY to duplicate settings to like stations.

Programming for New Landscapes

User With ET

Set run times, number of cycles and the soaks between cycles. It then automatically increases or decreases runtime based on the daily weather information defined as ET.

Select Station: Locate the station to be programmed.

Select Station Mode: Select User w/ ET

Select a Program: Assign station to a program (with a start time, water window and water day mode).

Use Water Window: If this station can irrigate outside of the water window, select "No".

Usable Rainfall: If a station is under a roof, heavy tree canopy or semi-porous roof, select either "None" or a percent of rainfall that is actually used. When "None" is selected, the specific station will water during Rain Pause.

Set Runtime: Set a desired cycle run time.

Set Number of Cycles and the Soak Time: Select from 1-20 cycles and Soak times from 0 to 480 minutes in 10 minute increments.

Reference ET: Set a reference ET that is appropriate for the schedule just set. The number you see in parenthesis is ET for the past week and is the value to enter as Part 1 and 2. Alternately, you can set the program you would run in July and use a weekly reference ET that is normal for your area in July.

Other Stations: Repeat these steps for other stations assigned to this station mode.

Programming for New Landscapes

User No ET

Commonly used for plant establishment periods when overwatering is required to establish new roots. Run times, cycle and soak periods are all user defined in this station mode. User No ET sets up the same as User With ET except there is no reference ET. Activation is not required for User No ET.

Copy

This function lets you quickly copy all station settings from any particular station to any other station or to all stations. Press the COPY Menu button. Press the right or left arrow button to select the station to copy from. Press the plus or minus button to select the station to copy to. ("All Stations" is one of the choices.) Push the * button until COPYING is displayed. Repeat the process for each station to be copied.

Maintenance Tips

Manual Watering

Stations can be operated individually with specific run times or all stations with one run time. Press the MANUAL Menu button. Select "Specific Stations" or "All Stations" by pressing the plus or minus button.

Manual Water Specific Stations: Press the right or left arrow button to the first station you want to water. Press the plus or minus button to the minutes desired. The selected station will start immediately. To add more stations, press the right or left arrow button to the next station desired.

Manual Water All Stations: Press the plus or minus button to the desired run time. Station 1 will start immediately, and all other active stations will follow sequentially for the same run time.

Note: To stop a station that is operating manually press the OFF Menu button for 5 seconds then back to RUN.

% Adjust - More or Less Water

Adjusts individual stations for more or less water. A 0% setting means there is no adjustment for that particular station.

Adjust Water Amount: Press the % ADJUST Menu button if a station is too wet or too dry. Press the plus or minus button to select the station to adjust in 5% increments from -50% to +25%.

Adjust Day Frequency: Increases or decreases the number of days of the week per station when water is applied and does not increase the amount being applied unless ET increases. A 0% setting means there is no adjustment for that particular station.

Press the plus or minus button to Day Frequency/Depletion. Press the right or left arrow button to ADJ DAYS (MAD). Press the right or left button to select the station to adjust.

Note: Using either Adjust function adjusts ET or MAD which will adjust runtimes or frequency of irrigation.

Rain Pause - Suspend Irrigation

If the controller is not connected to a rain switch, the rain pause feature can be used to stop irrigation in the event of rain. Irrigation stops immediately, and resumes or counts down a day at the Program A start time. For longer pauses select more days.

During a rain pause, all irrigation start times will be suspended unless the Usable Rainfall station setting is set to None. While paused, station depletions are held constant.

Caution: The rain pause feature is intended to be used ONLY during rain events. To stop irrigation during specific events, please go to www.weathertrak.net to pause the controller via the Event Pause feature. Event pause will pause all stations regardless of the Usable Rainfall setting.

Note: For firmware version before 7.2, when a rain pause day is selected, the controller pauses irrigation immediately and resumes or counts down a day at midnight. Make sure to select more days accordingly.

To pause irrigation for rain:

- Step 1. Press the RAIN PAUSE button.
- Step 2. Press the + or – button to set the number of days you would like to pause irrigation for.
- Step 3. Press the RUN button to finish.

Preview

This menu previews programming changes of individual station data or flow parameters (if a flow sensor is used and setup).

Station Data: Press the right or left arrow button to view station data. Press the right or left arrow button to change the station number and the plus or minus button to view projected water days (based on current ET) in one week increments from 1-8 weeks. Displayed station data includes run time, cycle and soak periods, station mode, % adjustments, projected water days on a weekly basis.

Flow Data: Press the plus or minus button to view flow data. Press the right or left arrow button to view previously setup flow parameters. (If a flow sensor is set-up and used).

Manual Valve Test

Manual Valve Test Function: This feature confirms wire integrity between the controller and valves in the field. This test can quickly identify, on a station basis, where an electrical fault exists.

Run Manual Valve Test: Press the MANUAL Menu button. Press the right or left arrow button to RUN VALVE TEST. Press the plus or minus button to change from Skip to View. Press the * button to run the Manual Valve Test. You will hear the controller briefly send a signal to every station including the master valve. Press the right or left arrow button to view the first eight valves. Press the right or left arrow button to view additional stations in groups of eight. "?" means the test has not been operated and "--" means the station does not have an electrical fault. This test cannot be run if any valve is operating. The controller will identify a (SH) "Short" (current draw exceeding 1000 mA) or (NC) "No Connect" reflecting a broken wire.

Caution: Valve alerts must be cleared in the ALERT menu to ensure stations will operate. Failure to clear an alert could suspend watering. If a relay is present, the controller will display an "SH" because the relay cannot open and close fast enough for the duration of this test.

Viewing Solenoid Current Draw

The controller will display the milliamp draw of any station solenoid in this test.

- Step 1. Press the main menu button to SETUP.
- Step 2. Press the right arrow button until the following screen appears:

RUN VALVE TEST — RTVT:OFF
Skip 00 SH 00 NC Faults

- Step 3. Press the minus button to change the word "Skip" to "View", then press the * button to start the test. It will take about 15 seconds to verify continuity to all stations and the master valve.
- Step 4. If any field wiring issues exist, they will be identified as a "Fault". A valve fault could be "SH" (Valve Short) from a failing solenoid or an "NC" (Valve No-Connect or open) reflecting a broken wire or wire that is not making good contact in the corresponding station terminal.

System Shutdown

This feature can be found in the OFF menu when a catastrophic event occurs. This feature is not intended for winterization but will stop scheduled irrigation until emergency repairs can be made. Press the OFF Menu button. Press the plus or minus button to locate "System Shutdown". The controller will immediately stop all scheduled irrigation and close a normally open master valve until reset by pressing the * button in this submenu.

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www.hydropoint.com

1 (800) 362-8774 support@hydropoint.com



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