

## Adjustment Instructions for the Automatic IRROMETER AVS Switch

### Adjusting the Set Point:

NOTE: The Switch is factory preset at 5 cb/kPa if no setting was specified at time of order.

- Loosen both locking screws to allow rotation of adjustment sleeve.
- Turn the adjustment sleeve counter-clockwise to increase the set point or clockwise to decrease until desired set point is reached. Do not set below the minimum of 5cb/kPa or above the maximum of 85 cb/kPa.
- Each full turn is approximately 20 cb/kPa. (4 turn maximum)
- For increased accuracy of setting, use the Service Unit Pump on the IRROMETER to draw the vacuum up slowly until you reach the tension you want to switch at. Then turn the adjustment sleeve until you see the switch close. With the IRROMETER de-aired and installed in wet soil or in a bucket of water, the applied vacuum should hold long enough to make the necessary adjustments.
- To determine when the switch is activating, you can connect it temporarily to a voltmeter set to detect continuity or wire it to a solenoid and apply 24VAC to the circuit and observe when the solenoid engages (or the valve opens).
- The switch will open back up within 3 cb/kPa below the set point.

**WARRANTY:** The IRROMETER COMPANY warrants its products against defective workmanship or materials under normal use for one year from date of purchase. Defective parts will be replaced at no charge for either labor or parts if returned to the manufacturer during the warranty period. The seller's or manufacturer's only obligation shall be to replace the defective part and neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or inability to use the product. This warranty does not protect against abuse, shipping damage, neglect, tampering or vandalism, freezing or other damage whether intentionally or inadvertently caused by the user.

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**IRROMETER®**

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## INSTALLATION AND OPERATING INSTRUCTIONS

# IRROMETER

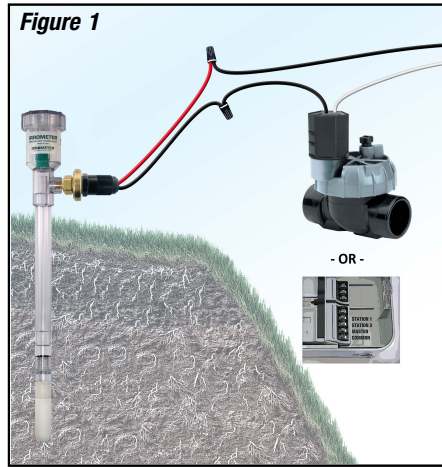
SOIL MOISTURE SENSOR AND SWITCH

**Automation for your Irrigation System  
Controller/Valve to Water ONLY when Necessary**

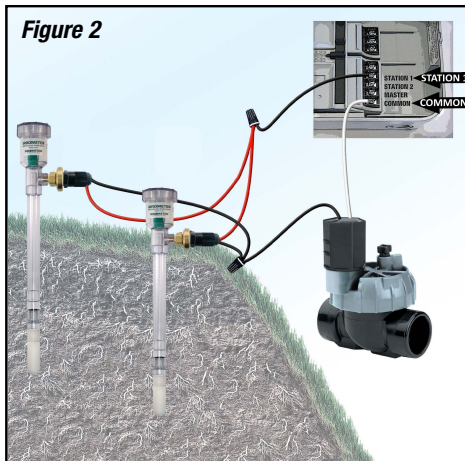


The Adjustable Vacuum Switch is mounted directly on the IRROMETER instrument body. It can be easily field adjusted to the desired soil moisture switching set point. Its function can be compared to that of a thermostat, allowing the controller (or solenoid valve) to operate when irrigation is desirable, or keeping it out of operation when there is no need to irrigate.

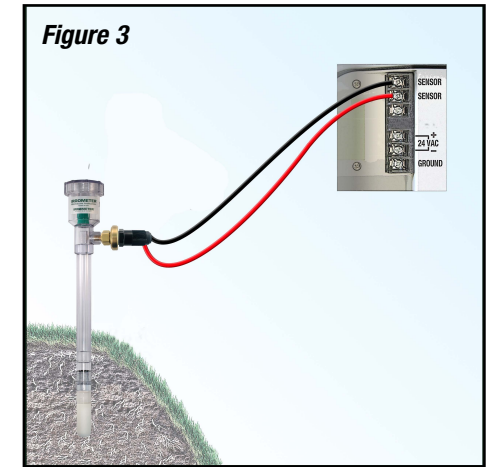
Automatic IRRROMETERS are installed in representative location(s) to control the irrigation for the surrounding area. The site(s) must be carefully chosen so as to be representative of the soil types, topography, and sun exposure of the area being controlled. Where acreage is large, soil variations prevalent and topography is a factor, the use of additional manual IRRROMETERS is advisable to monitor these additional variables and to compare readings to the wired automatic IRRROMETER (Figure 1). When more than one valve is used, it is advised to control each valve separately since each valve irrigates an independent irrigation 'block.'



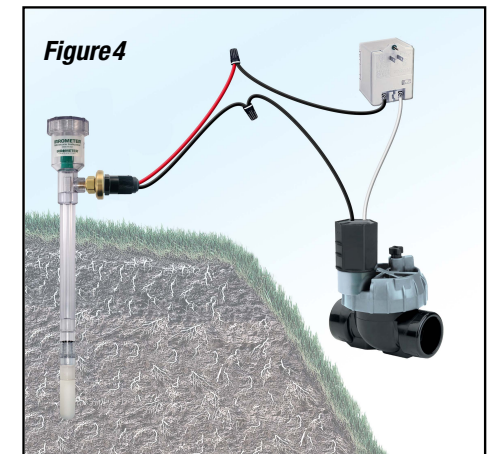
Automatic IRRROMETERS are located in representative sites within each 'block' and instruments are wired (in parallel if more than one is being used) to override the individual valve for that 'block' (Figure 2). Parallel wiring of instruments assures that each depth of instrument can call for water, thus providing water to the exact depth required. Irrigation should be programmed to water daily and as frequently as possible. This allows complete water penetration before the next cycle. Remember, the system will only operate when the automatic IRRROMETER allows it. Any automatic IRRROMETER can activate and allow an irrigation cycle — all automatic IRRROMETERS must be wet for the system to turn off.



When all valves are to be controlled, the automatic IRRROMETER wires connect to the controller's sensor terminals signaling the controller to start and stop irrigation. (Figure 3) The automatic IRRROMETER control station must be installed in the area irrigated by the last valve to run in sequence. You may have to change the sequence of the valves in order to water this area last. All valves must have the opportunity to be irrigated before irrigating the area where the automatic IRRROMETER is located.



When a controller is not being used, the automatic IRRROMETER wires connect to a 24-volt AC power source and solenoid valve (Figure 4). The valve will automatically open and close based on the moisture setting as long as power is applied. This would require a constant water supply source sufficient to supply all valves.



**Note:** The automatic IRRROMETER must be manually overridden to 'irrigate-in' fertilizer, or when other manual operations are desired. The Switch wires must be removed and wired to bypass the switch.

**Note:** The switch 'closes' when the tension reaches the switch set point (becomes dry enough) and remains closed above it. The switch opens when the tension drops below the set point (becomes wet enough).