

ET2000 (500 SERIES) IRRIGATION CONTROLLER



TROUBLESHOOTING



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 **ET2000 (500 SERIES) IRRIGATION CONTROLLER TROUBLESHOOTING**

CONTROLLER TROUBLESHOOTING			
PROBLEM	DESCRIPTION	CAUSES	SOLUTION
<p>OUTPUT SHORT Short detected on station</p>	<p>When the controller activates a valve it measures the current flow to the valve. When the current flow in the field common exceeds 1.5 amps the controller turns off all outputs and generates an OUTPUT SHORT alert. For all types of irrigation the valve presently on is assumed to be the cause. It is turned off and irrigation continues with the next valve (if there is one).</p>	<p>Bad solenoids, improper wiring, nicked wires, and even wrong solenoids.</p>	<p>Check solenoid, test appropriate wiring.</p>
<p>OUTPUT SHORT Station Unknown</p>	<p>This implies excessive current (more than 1.5 amps) was detected in the field common when the controller believed no stations were on. Irrigation can be interrupted due to this event.</p>	<p>Bad solenoids, improper wiring, nicked wires, bad connections and even wrong solenoid</p>	<p>Check solenoids, test appropriate wiring and connections.</p>
<p>NO CURRENT Open circuit on station</p>	<p>If the controller tries to activate a valve, and there is no current flow, a NO CURRENT alert is generated.</p>	<p>Broken wire, burnt out solenoid, or disconnected wires at the valve or controller. On the TP-1 board the transorbs could be blown. (They should read OL when measured in Ohms. (See note 1).</p>	<p>Test appropriate wiring, Check solenoids, Test transorbs on TP-1 board.</p>
<p>NO CURRENT Multiple stations</p>	<p>When going through the stations you may find that only groups of eight have the NO CURRENT alert. The harnesses in the back run in pairs of eight. The red harness has stations 1-8, blue 9-16, yellow, 17-24, green 25-32, and the white 33-40.</p>	<p>A station harness could be unplugged, or defective.</p>	<p>Check all wiring harnesses for security, Replace defective wiring harness.</p>

CONTROLLER TROUBLESHOOTING CONTINUED			
PROBLEM	DESCRIPTION	CAUSES	SOLUTION
NO CURRENT All stations	When going through the stations you find the NO CURRENT alert on every single station.	The 4 amp fuse could be blown. (If the fuse is blown, there will be no beep with the push of a key). The Black wiring harness could be loose or disconnected. Resistor (R201) could be blown. If it is discolored or brown at all, it is blown. The field common could also be disconnected or cut out in the field.	Check the 4 amp fuse and replace if necessary. Check the black wiring harness for security. Test the (R210) resistor for integrity. Check field common wires for disconnection, or damage.
LOW FLOW	During normal scheduled irrigation or during scheduled manual hold-over, flow was tested and this valve failed the LOW FLOW test. The action taken is controlled by the Alert Actions settings implemented by the user.	<ul style="list-style-type: none"> • Clogged valves or heads • Pressure decreased at back flow • Too many valves on-at-a-time • Flow control turned down manually • Incorrect expected flow rate 	<ul style="list-style-type: none"> • Clear clogged valves or heads • Correct flow at back flow • Adjust valves-on-at-a-time • Check Flow control • Adjust expected flow rate
HIGH FLOW	During normally scheduled irrigation or during scheduled manual hold-over, flow was tested and this valve failed the HIGH FLOW test. The action taken is controlled by the Alert Actions settings implemented by the user.	<ul style="list-style-type: none"> • Broken head or lateral line • Nozzles have been changed • Heads have been added • A stuck valve • Incorrect expected flow rate 	<ul style="list-style-type: none"> • Replace broken heads or lateral lines • Recalibrate controller for new heads • Replace stuck valve • Recalibrate expected flow rates
NO DISPLAY Faint or unreadable	The display screen is to bright, or to dim.	Brightness out of adjustment	Press the Main Menu Key, then use the PLUS or MINUS keys to adjust.
24 VOLTS CONSTANT All stations	Stations receiving 24 volts DC even when not scheduled to come on.	Field common wire connected to 24 VDC power output on TP-1 Board.	Connect field common to one of the filed common posts on the TP-1 Board.



CONTROLLER TROUBLESHOOTING CONTINUED			
PROBLEM	DESCRIPTION	CAUSES	SOLUTION
MASTER VALVE Not activating	Stations turned on with no water to any station even though station valves are open.	Master Valve set up as a NORMALLY OPEN master Valve in the controller when it is actually a NORMALLY CLOSED.	Select the correct Master Valve setting in the controller FLOW section.
DELAY TIME TO LONG FOR STATION	The screen will display "Delay time to long for station # "	The particular station identified has a run time that is shorter than the station valve delay time.	Increase the station run time to more than the delay time. Or decrease the station delay time to less than the station run time.
ZERO PULSES FROM ET GAGE	Getting no pulses (0 pulses) from an ET Gage over a 24 hour period is a very rare event-yet possible. The contribution to irrigation for this period will be nil. As weather conditions can cause this event, the controller will tolerate it one day. If this occurs a second day (in a row) the controller will assume the ET gage is not functioning and irrigate according to historical numbers.	More likely than weather, the ET gage is out of water, or not functioning properly.	Check water level in the ET Gage, troubleshoot and service as needed.



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