

Department	HydroLogic		Doc #	SOP – Series 150-3 Setpoints	
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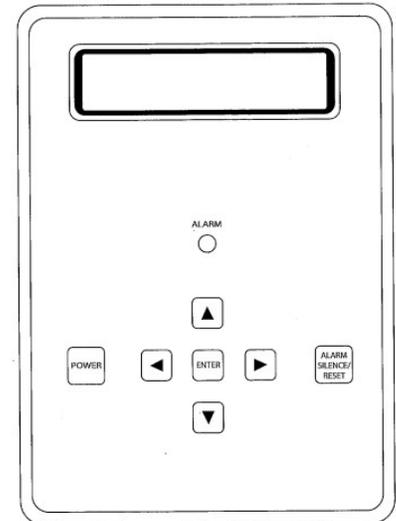
## Standard Operating Procedure (SOP); Series 150-3 Controller Setpoints

### 1. Purpose

The purpose of this SOP is to aid users in understanding, and logging, the assorted Advantage Series 150-3 RO controller Standard Setpoints.

“The Advantage Controls S150-3 controller is a state-of-the-art control system for commercial and industrial reverse osmosis systems. The S150-3 is a microprocessor-controlled system that can monitor pressure and level switches. A TDS/Conductivity monitor/controller with programmable Setpoints is an integral part of the S150-3. The S150-3 displays system status and sensor and switch input status on an easy-to-read backlit display. User programmable Setpoints are provided that allow fast and easy adjustment of system parameters.” \*\*

\*\* Excerpt from the Advantage Controls Series 150-3 Controller Installation, Maintenance, Repair Manual 11/2021



### 2. Applicable To

This SOP is applicable to all HyperLogic Commercial Series RO systems [2-12 Membranes] utilizing the Advantage Series 150-3 Microprocessor Control Board.

### 3. Prerequisites

Ensure you follow all state & federal guidelines for personal workplace safety prior to disassembly and/or maintenance of your HyperLogic equipment and related consumables.

To make Setpoint changes, the Write Protect must be **OFF**. Refer to Images on Page 4 for additional ‘Write Protect’ details.

Verify and Log YOUR UNITS Setpoints before making any changes. Reverting to original ‘Factory’ setpoints may be required. Refer to the ‘Setpoint Log’ on Page 5

*Note: If specific Setpoint(s) are changed, the unit must be recalibrated, and range components may need to be changed.*

### 4. Materials/Reference

Suggested tools/materials required for this operation include, but may not be limited to, the following:

- Ref. HyperLogic ‘Owner’s Manual’
- Advantage Controls ‘Owner’s Manual’

## 5. Procedure

*Preference: Please refer to the HyperLogic RO 'Owner's Manual' and the Advantage Controls Series 150-3 Controller Installation, Maintenance, Repair Manual for governing details on controller programming and operation. Additional details on each setting will be outlined in those manuals.*

The microprocessor controller has numerous setting options. These options have been pre-set during RO manufacturing. Some settings may be tailored to a specific installation or operation method. It is strongly suggested that you record the 'Factory' settings during the initial commissioning of the RO in the event you need to restore these settings. Please log **YOUR SYSTEMS** settings on page 5 of this SOP document.

The 'Write Protect' jumper must be **OFF** for these steps to be saved.

### a. Write Protect

- i. To allow changes to be made to the microprocessor controller, move the 'Write Protect' jumper to the two pins towards the OFF position.
- ii. To prevent changes from being made to the microprocessor controller, move the 'Write Protect' jumper to the two pins towards the ON position.
- iii. Refer to images on Page 4 of this SOP document.

### b. Display Setpoints

- i. Use the Left or Right arrow keys to scroll through each Setpoint name and its current Setpoint value.

### c. Change Setpoints

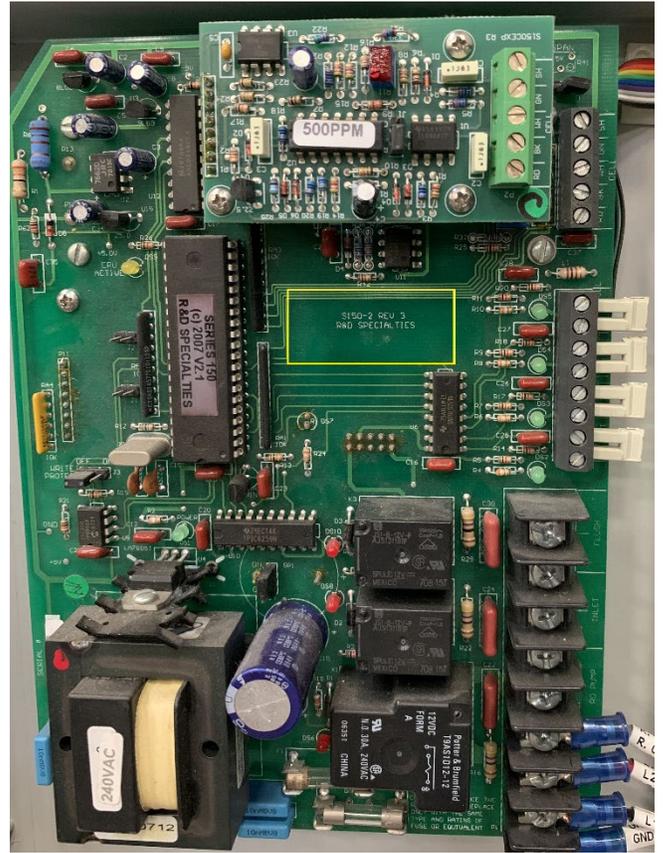
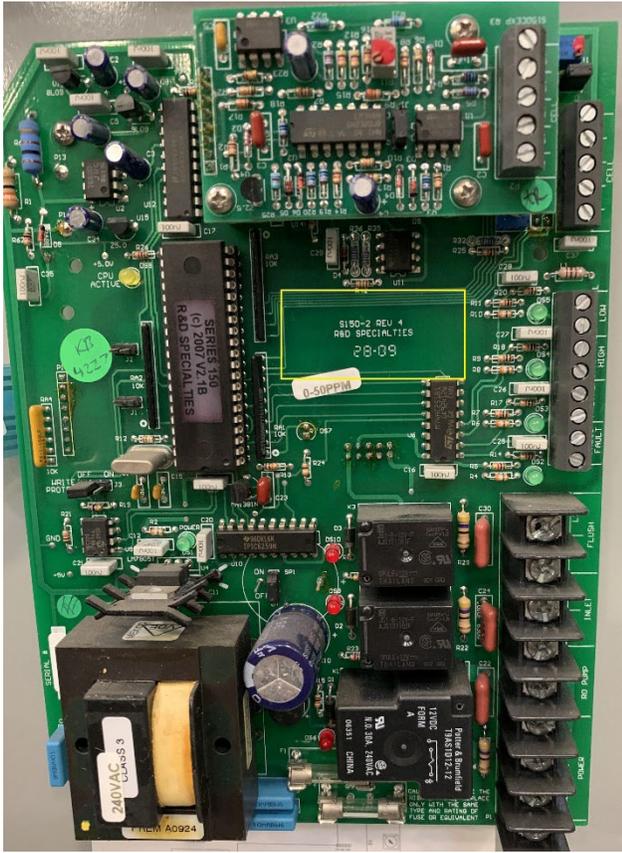
- i. The Up and Down arrow keys will increase or decrease the Setpoint value by an increment of one each time it is pressed. Holding the Up or Down arrow key for ~1 second will change the value at a faster rate.
- ii. When the value has been changed, press the ENTER key to save the value.

### d. Cancel Setpoint Changes

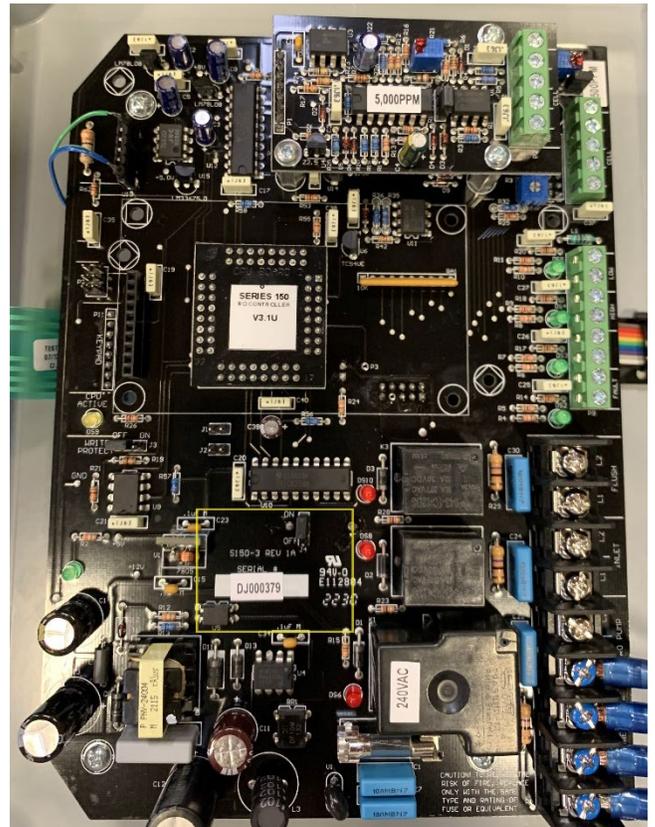
- i. To exit the change menu, either wait a few seconds for it to "time out" or press the Alarm Silence/Reset key to cancel & return to the main screen.

Once changes are made and satisfactory to your operation, place the 'Write Protect' jumper in the **ON** position to prevent additional changes.

**Refer to Document Images on Following Pages**



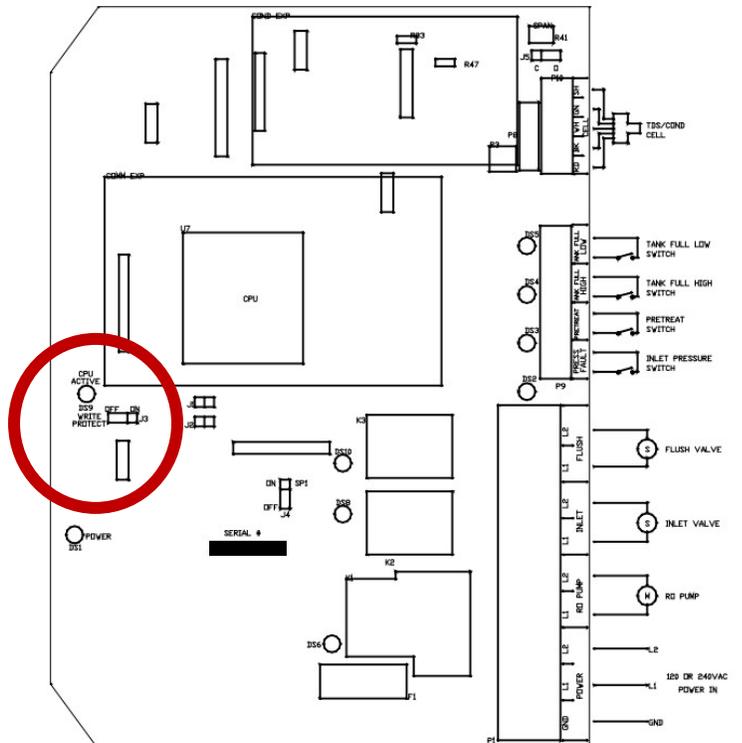
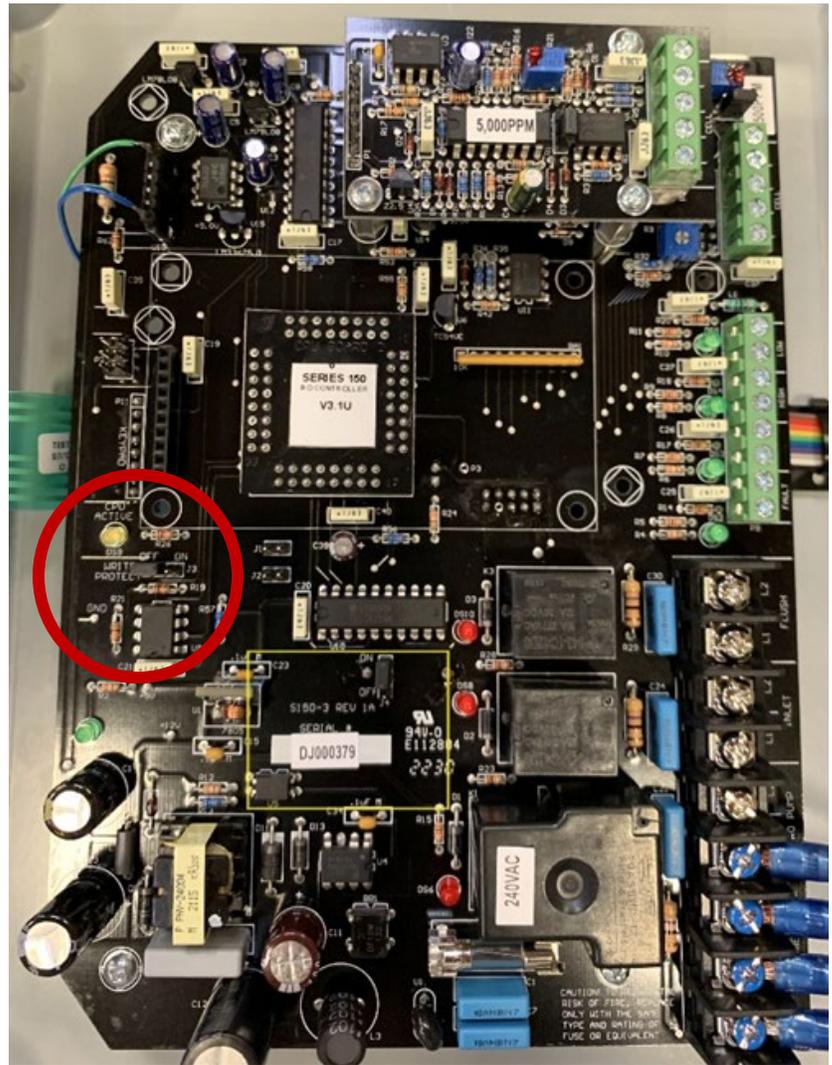
**Assorted variations of the Series 150 Controller**  
 Board Manufacturer, Serial Number and Series Number can be found on the board; refer to the yellow boxes for approximate location of this information



### Write Protect

*Note: The exact location of the Write Protect jumper may vary by boards manufacturer and revision number.*

Please refer to these sample images of the Advantage Controls S150-3 microprocessor control board as outlined in **RED**.



Advantage Controls S150-3 Control System				
SETPOINT	Description	Range	Default	Your System
<b>Expander Setpoints</b>				
C2 Range	Selects range of TDS / Conductivity monitor 0-50, 1-100, 2-250, 3-500, 4-1,000, 5-2,500, 6-5,000, 7-10,000 <b>Note:</b> If this Setpoint is changed, the unit must be recalibrated and range components may need to be changed.	0-7	6	
C2 Limit	When this value is met or exceeded, the alarm lamp will light and High TDS/Cond will show on the display. To disable, set to 0.	0-9999 uS or PPM	0	
% Rej	If the 2nd TDS / Conductivity is used to monitor 0-1 feed water, programming this Setpoint to 1 allows the % rejection to be displayed.	0-1	1	
<b>Standard Setpoints</b>				
TDS/Cond. Limit	When this value is met or exceeded, the alarm lamp will light and high TDS/Cond will show on the display. To disable, set to 0.	0-999 uS or PPM	100	
TDS/Cond. Delay	When the limit Setpoint is exceeded, no alarm will be given until this time has expired.	0-999 seconds	30	
TDS/Cond. Shutdown	Once a TDS/Cond alarm is active, if the time in this exceeded, a TDS/Cond shutdown will occur. To disable, set to 0.	0-99 minutes	0	
RO Start Delay	The amount of time between the inlet valve opening and the RO pump start.	0-99 seconds	5	
Press Fault Delay	The time a pressure fault must be active before a pressure fault shutdown occurs.	0-99 seconds	5	
Auto Reset	When a pressure fault shut down is active, the system will attempt to restart after this delay. If set to 0, system must manually be reset.	0-99 minutes	60	
Alarm Silence	If the audible alarm is silenced, after this delay, the alarm will resound. If set to 0, the alarm will remain silenced.	0-99 minutes	0	
TF Restart Delay	When a tank full condition clears, the system will restart after this delay.	0-99 sec/min	5	
TF Restart	Selects whether the tank full restart delay is in seconds or minutes. 0-seconds, 1-minutes	0-1	0	
TFO Time	The amount of time that a tank full override lasts.	0-9 minutes	5	
Tank Low Restart	When a tank low condition clears, the auxiliary pump will restart after this delay.	0-99 minutes	15	
Flush Type	Selects the type of flush. Set to 0 to disable flush.	0-8	7	
Flush Time	The length of time the off hours flush cycle will last when flush is activated.	0-99 minutes	5	
Flush Interval	The interval between off hour flush cycles. Only valid with op hour, elapsed time or off flush types.	0-99 hours	24	
Flush Mode	Selects if the inlet and RO pump relays operate during a flush.	0-3	1	
Maximum Hours	If the current operating hours exceed this limit, the operating hours warning will occur. To disable, set to 0.	0-65,000 hours	0	
Current Hours	Current number of RO system operating hours.	0-65,000		
Expander Mode	Selects how the relays on the I/O Expander board operate	0-4	4	
Temp Offset	Allows adjustment of the temperature reading by +/-5 degrees	-5 to +5	0	
Temp UOM	Selects display of temperature in °F or °C	0-1	0	
Switch Select	Selects if switch inputs are Normally Open (NO) or Normally Closed (NC)	0-32	0	
TDS/Cond UOM	Selects display of water quality in uS or PPM <b>Note:</b> If this Setpoint is changed, the unit must be recalibrated.	0-1	1	
TDS/Cond Range	Selects range of TDS / Conductivity monitor 0-50, 1-100, 2-250, 3-500, 4-1,000, 5-2,500, 6-5,000, 7-10,000 <b>Note:</b> If this Setpoint is changed, the unit must be recalibrated and range components may need to be changed.	0-6	3	

*Special Note: Not all Set-Point options are available to the user as configurations of this control system may vary.*

**END OF SOP DOCUMENT**

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