



EXPERTS IN
WATER CHEMISTRY
SINCE 1903



9065 Luminescent Dissolved Oxygen Analyzer Calibration Kit
Quick Reference Manual

Step		Description	Key Points
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WALTRON CUSTOMER COMMITMENT

This quick reference manual is a technical guide to aid the customer in the calibration of the Waltron 9065 Dissolved Oxygen Analyzer using the 9065 calibration kit. Waltron provides continuous product improvement and reserves the right to make any modifications to the information contained herein without notice.

<p>To request sales information:</p> <p>Inside Sales Coordinator sales@waltron.net office: (908)534-5100 x115</p>	<p>For technical service:</p> <p>Mike Welenteychik Technical Service & Support mwelenteychik@waltron.net office: (908)534-5100 x106</p>	<p>For engineering and program support:</p> <p>Kenneth Then Director of Documentation/Service kthen@waltron.net office: (908)534-5100 x120</p>
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Waltron’s technical expertise and extensive experience provides personalized solutions to the water quality industry. It is Waltron’s commitment to provide the customer with timely and accurate technical service and support.

Waltron fully expects the customer to be satisfied with the quality, performance, and cost of this product.

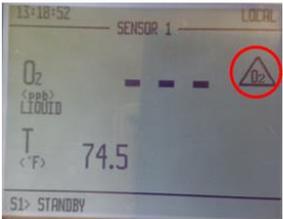
SAFETY

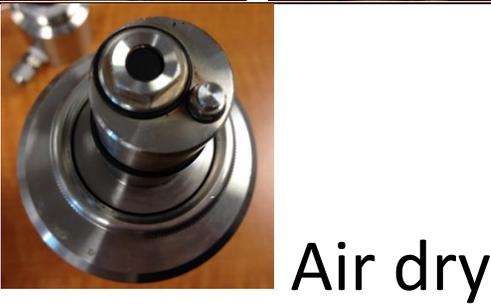
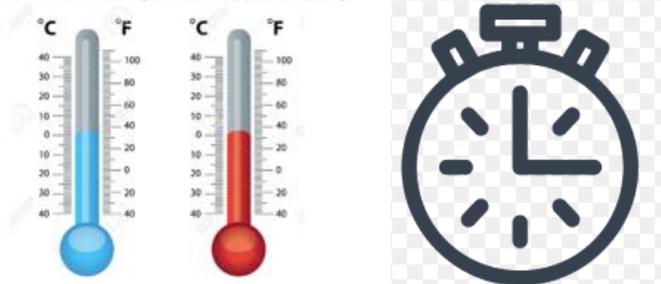
Please observe proper safety and handling precautions when operating this product. The following should be noted and adhered to:

- Read and understand manual before working with the analyzer and calibration kit.
- Safety precautions are highlighted throughout this manual within the Key Points column.

WARRANTY AGREEMENT

Waltron guarantees the equipment to be free of defects. If you believe you have received faulty equipment or an incomplete kit please contact Waltron at the above contact list. Please follow carefully all instructions on the operation the equipment.

Step		Description	Key Points
1 INTRODUCTION AND SETUP			
1.1		<p>Read this manual. Ensure you have an understanding of the key points listed in the right hand column.</p>	
1.2	 <p>Calibration beaker (included with initial analyzer order)</p> <p>Low permeability tubing</p> <p>Fixed flow gas regulator (1000 psig / 0.4 SLPM)</p> <p>Calibration Kit Box</p> <p>99.999% Nitrogen gas cylinder</p> <p>3/16" Barb fitting</p>	<p>Make sure you have all items necessary to complete calibration. Inventory your calibration kit (Calibration Kit p/n K6000-101).</p>	<p>⚠ A calibration beaker is provided with each 9065 analyzer order. Contact Waltron for additional beakers p/n K5000-039.</p>
1.3	<p>Calibration is Due!</p>  <p>Flashing screen and Triangle</p>	<p>Determine if the Dissolved Oxygen Analyzer requires calibration. If the screen is flashing and a triangle appears in the upper right corner, your 9065 sensor needs calibration.</p>	<p>⚠ Each sensor comes with an internal light pulse counter. When the light pulse counter reaches 1 million your analyzer requires calibration.</p>
1.4		<p>Turn off sample flow to the analyzer.</p>	

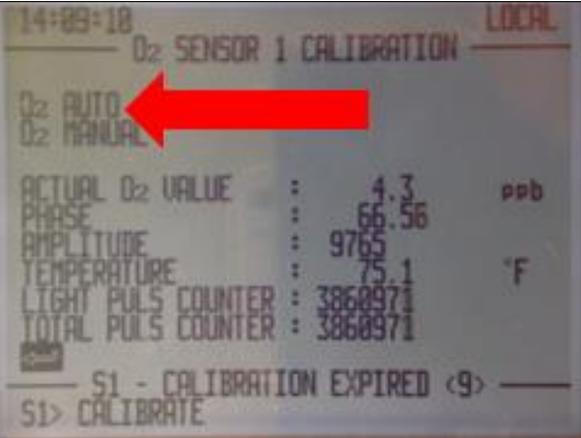
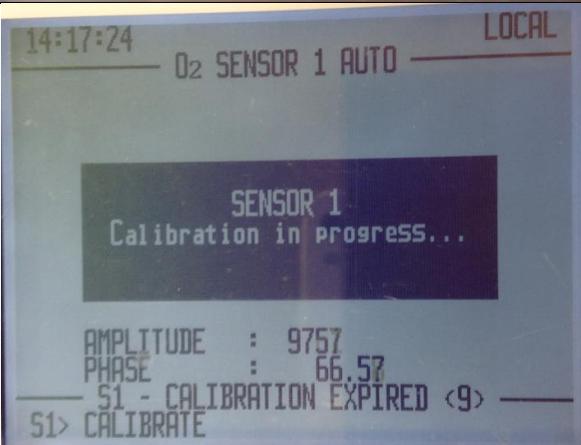
Step		Description	Key Points
1.5		<p>Disconnect the plumbing from the flow cell.</p>	
1.6		<p>Remove the flow cell.</p>	
1.7		<p>Allow the sensor to air dry and to allow the sensor and the calibration kit to equalize to the same temperature. You may flow extra calibration gas or clean dry air over the sensor to expedite drying.</p>	<p>⚠ DO NOT wipe dry the black sensor spot. Touching the sensor may damage the delicate coating.</p> 
1.8	<p>Calibration Kit Temp = Sensor Temp</p> 	<p>Store the calibration kit in the same room as the sensor for at least 4 hours while the sensor is drying to equalize to the same room temperature.</p>	<p>⚠ The calibration process is temperature sensitive. The temperature of the sensor must be roughly equal to the temperature of the calibration gas.</p>

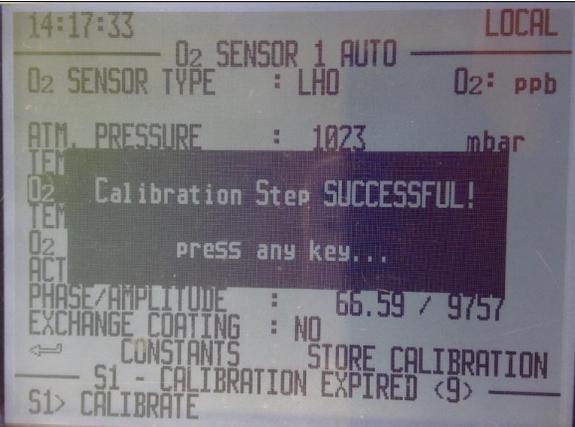
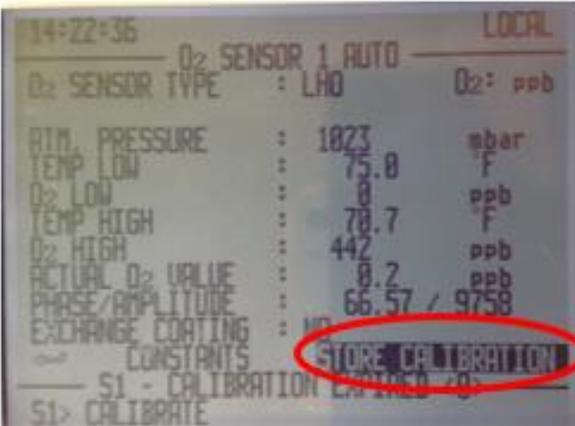
Step			Description	Key Points
2 CONNECT THE NITROGEN CALIBRATION GAS				
2.1			<p>Attach M5 barb fitting (provided) to calibration beaker inlet.</p> <p>The inlet is the side that is closer to the flange than the other fitting.</p> <p>A calibration beaker is included with the initial analyzer order.</p>	<p>⚠️ Ensure the provided O-Ring is installed on the fitting to provide a seal against leaks between the fitting and the beaker.</p>
2.2			<p>Install the calibration beaker by pushing straight upwards over the sensor.</p>	
2.3			<p>Inspect O-Ring on provided gas regulator for any debris or damage.</p>	<p>⚠️ Take care to ensure there are no leaks between the calibration gas tank and the sensor.</p>

Step		Description	Key Points		
2.4				<p>Remove the protective cap from the provided nitrogen tank.</p>	
2.5				<p>Install the gas regulator on nitrogen gas tank.</p>	
2.6				<p>Install one end of the provided tubing on to gas regulator.</p>	

Step		Description	Key Points		
2.7				<p>Install the other end of the provided tubing on to the barb fitting on the calibration beaker.</p>	
2.8				<p>Open the regulator all the way to allow flow of Nitrogen gas.</p>	<p>⚠ The provided fixed flow regulator will supply the correct flow rate.</p>
2.9				<p>Wait approximately 15 minutes.</p> <p>Oxygen readings should drop rapidly and stabilize to close to 0 ppb.</p>	

Step		Description	Key Points
3 CALIBRATION			
3.1	<p>Press and hold the ENTER button to get to the MAIN MENU.</p> <p>Using the arrow buttons select USER. Press ENTER button.</p> <p>Using the arrow buttons enter the Password 6848. The analyzer will show "Password Accepted!"</p> <p>Go back one level by using the arrow keys to select the . Press ENTER button</p>	Switch to SUPERVISOR Mode.	
3.2	<p>Using the arrow buttons select CALIBRATION. Press ENTER button.</p> <p>Select SENSOR 1 (Or Sensor 2 for calibrating your second sensor in a dual stream analyzer). Press ENTER button.</p>	Go to O2 SENSOR 1 (or 2) CALIBRATION Menu.	If you have a dual stream analyzer you may select Sensor 1 or Sensor 2.
3.3		<p>For oxygen free calibration gas values for PHASE and AMPLITUDE should be:</p> <p>PHASE: 65-68 AMPLITUDE > 5000-6000</p> <p>If either PHASE or AMPLITUDE do not fall within these ranges then the sensor spot needs replacement.</p>	<p> Watch rate of degradation of AMPLITUDE. A brand new sensor spot will have amplitude = 20000. Typical degradation rate is approximately 5000 per year, but will degrade faster or slower depending on the makeup of the sample water</p> <p> Contact Waltron for a replacement sensor spot p/n K5000-010. Refer to 9065 User manual for installation.</p>

Step		Description	Key Points
3.4	 <p>The screenshot shows the 'O2 SENSOR 1 CALIBRATION' menu. At the top, it displays '14:09:18' and 'LOCAL'. The menu options are 'O2 AUTO' and 'O2 MANUAL', with a red arrow pointing to 'O2 AUTO'. Below the options, the following data is shown: 'ACTUAL O2 VALUE : 4.3 ppb', 'PHASE : 66.56', 'AMPLITUDE : 9765', 'TEMPERATURE : 75.1 °F', 'LIGHT PULS COUNTER : 3868971', and 'TOTAL PULS COUNTER : 3868971'. At the bottom, it says 'S1 - CALIBRATION EXPIRED <9>' and 'S1> CALIBRATE'.</p>	<p>Using the Arrow buttons select O2 AUTO. Press ENTER button.</p> <p>In the next screen select O2 LOW. Press ENTER button.</p> <p>Select 000000 ppb. Press ENTER button.</p>	
3.5	 <p>The screenshot shows the 'O2 SENSOR 1 AUTO' screen. At the top, it displays '14:17:24' and 'LOCAL'. A dark box in the center contains the text 'SENSOR 1 Calibration in progress...'. Below this, the following data is shown: 'AMPLITUDE : 9757', 'PHASE : 66.57', 'S1 - CALIBRATION EXPIRED <9>', and 'S1> CALIBRATE'.</p>	<p>Calibration will begin. Wait approximately 2 minutes. Do not disturb the analyzer or the calibration equipment.</p>	

Step		Description	Key Points
3.6		<p>After approximately 2 minutes the analyzer will show an alert for successful calibration.</p> <p>Press any button to clear this alert.</p>	<p>⚠️ If calibration is not successful, make sure the sensor spot is completely dry and try again. Contact Waltron technical support if you are still unsuccessful.</p>
3.7		<p>Close the valve on the gas regulator to preserve your calibration gas.</p>	
3.7		<p>Use the arrow buttons to select STORE CALIBRATION. Press ENTER button.</p> <p>Wait for approximately 2 minutes the analyzer will show an alert for successful storage of calibration.</p>	<p>⚠️ Perform this step to store the calibration results. Otherwise the analyzer will revert back to the last calibration results and the calibration process must be repeated.</p>

Step		Description	Key Points
3.8		<p>After calibration is successfully stored, cycle the power to reboot the analyzer by disconnecting and then reconnecting the power cord (connector at the bottom of the transmitter which is furthest to the left).</p>	
3.9	<p>Make sure the valve on the gas regulator is closed. Remove the gas regulator from the gas cylinder. Replace plastic cap and store in a clean safe location in the provided kit box.</p> <p>Remove the calibration beaker and store in a clean safe location for the next calibration.</p> <p>Reinstall the flow cell and the inlet and outlet connections. Restore the sample flow to the analyzer.</p>	<p>Disconnect and store the calibration kit for the next usage.</p> <p>Reconnect the analyzer flow cell and restore sample flow.</p>	<p>⚠ The nitrogen gas cylinder can last up to 5-7 calibrations or until the expiration date printed on the cylinder, whichever is sooner.</p>
3.10		<p>Press START button to put the analyzer back online.</p>	