

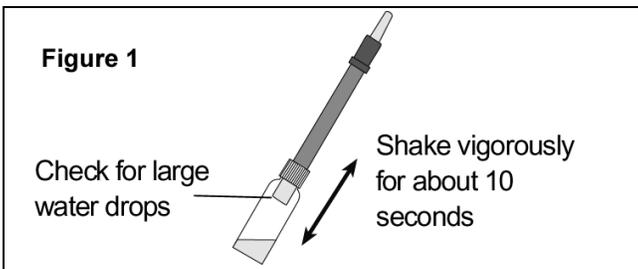
Setup and Calibration

Calibration Procedure: PS-2108 Dissolved Oxygen Sensor

- Equipment required:**
- Soaker bottle (included with sensor)
 - Calibration Table (on reverse side)
 - Barometric pressure reading for your location
 - DataStudio software, version 1.5.3, or a PASPORT datalogger

Equilibrate the Probe in 100% Humidified Air

1. Before performing any calibration, place 5 mL of deionized water into a clean soaker bottle.
2. Insert the probe into the soaker bottle and screw on the lid. Place the end of the probe about 2 cm above the water (see Figure 1).
3. Shake the soaker bottle vigorously for a few seconds. Shake off any large water drops from the membrane.



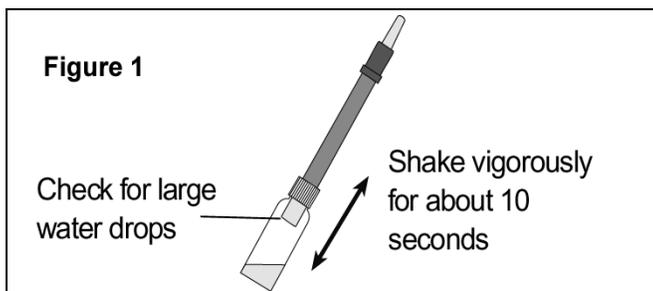
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3. Shake the soaker bottle vigorously for a few seconds. Shake off any large water drops from the membrane.



DataStudio Calibration

If using a computer, perform a single-point calibration using the DataStudio software. Select a measurement unit, either mg/L or Percent (%) Saturation, before performing the calibration:

Perform a mg/L calibration:

1. Make sure the mg/L checkbox is checked in the PASPORT setup window.
2. Click the **Calibrate** button next to **mg/L**.
3. Refer to the calibration table (on the reverse side of this card) and enter the appropriate dissolved oxygen value for the temperature and barometric pressure at your location. You can use a PASPORT Temperature and Barometer to take the necessary measurements. NOTE: If you call the weather service, the barometric pressure they provide must be altitude adjusted!
4. Click the **Set** button.

PASPORT Datalogger Calibration

If using a PASPORT datalogger, then:

1. Turn on the datalogger.
2. Plug the sensor into the datalogger.
3. Press the **Display** button until 'Calibrate' appears on the screen.
4. Press the + button to select either mg/L or % as the measurement unit.
5. Press the **Check** button.

For a mg/L calibration:

- Refer to the calibration table, enter the appropriate dissolved oxygen value for the temperature and barometric pressure at your location (see above for detail). Note, you must have this value to proceed.
- Press the **Tab** button to move through the digits.
- Use the - and + buttons to set the desired value for each digit.
- Press the **Check** button.
- Press the **Display** button.

For a % saturation calibration:

- Wait for the reading to stabilize. Click the **Check** button for 100% saturation.

012-07688B

DataStudio Calibration

If using a computer, perform a single-point calibration using the DataStudio software. Select a measurement unit, either mg/L or Percent (%) Saturation, before performing the calibration:

Perform a mg/L calibration:

1. Make sure the mg/L checkbox is checked in the PASPORT setup window.
2. Click the **Calibrate** button next to **mg/L**.
3. Refer to the calibration table (on the reverse side of this card) and enter the appropriate dissolved oxygen value for the temperature and barometric pressure at your location. You can use a PASPORT Temperature and Barometer to take the necessary measurements. NOTE: If you call the weather service, the barometric pressure they provide must be altitude adjusted!
4. Click the **Set** button.

PASPORT Datalogger Calibration

If using a PASPORT datalogger, then:

1. Turn on the datalogger.
2. Plug the sensor into the datalogger.
3. Press the **Display** button until 'Calibrate' appears on the screen.
4. Press the + button to select either mg/L or % as the measurement unit.
5. Press the **Check** button.

For a mg/L calibration:

- Refer to the calibration table, enter the appropriate dissolved oxygen value for the temperature and barometric pressure at your location (see above for detail). Note, you must have this value to proceed.
- Press the **Tab** button to move through the digits.
- Use the - and + buttons to set the desired value for each digit.
- Press the **Check** button.
- Press the **Display** button.

For a % saturation calibration:

- Wait for the reading to stabilize. Click the **Check** button for 100% saturation.

012-07688B

Concentration (mg/L) of Dissolved O₂ at Saturation
by Temperature and Barometric Pressure¹

Calibration Table

TEMP (c)	29.5	29.7	29.9	30.1	30.3	30.5	30.7	30.9	31.1	31.3
0	14.37	14.47	14.57	14.66	14.76	14.86	14.95	15.05	15.15	15.24
1	13.98	14.08	14.17	14.27	14.36	14.45	14.55	14.64	14.73	14.83
2	13.61	13.70	13.79	13.88	13.97	14.07	14.16	14.25	14.34	14.43
3	13.25	13.34	13.43	13.52	13.61	13.69	13.78	13.87	13.96	14.05
4	12.90	12.99	13.08	13.16	13.25	13.34	13.42	13.51	13.60	13.68
5	12.57	12.66	12.74	12.83	12.91	13.00	13.08	13.16	13.25	13.33
6	12.25	12.34	12.42	12.50	12.58	12.67	12.75	12.83	12.91	13.00
7	11.95	12.03	12.11	12.19	12.27	12.35	12.43	12.51	12.59	12.67
8	11.66	11.74	11.81	11.89	11.97	12.05	12.13	12.21	12.29	12.36
9	11.38	11.45	11.53	11.61	11.68	11.76	11.84	11.91	11.99	12.07
10	11.11	11.18	11.26	11.33	11.41	11.48	11.56	11.63	11.71	11.78
11	10.85	10.92	10.99	11.07	11.14	11.21	11.29	11.36	11.43	11.51
12	10.60	10.67	10.74	10.81	10.89	10.96	11.03	11.10	11.17	11.24
13	10.36	10.43	10.50	10.57	10.64	10.71	10.78	10.85	10.92	10.99
14	10.13	10.20	10.27	10.34	10.41	10.48	10.54	10.61	10.68	10.75
15	9.91	9.98	10.05	10.11	10.18	10.25	10.32	10.38	10.45	10.52
16	9.70	9.77	9.83	9.90	9.96	10.03	10.10	10.16	10.23	10.29
17	9.50	9.56	9.63	9.69	9.76	9.82	9.89	9.95	10.01	10.08
18	9.30	9.37	9.43	9.49	9.56	9.62	9.68	9.75	9.81	9.87
19	9.12	9.18	9.24	9.30	9.36	9.43	9.49	9.55	9.61	9.67
20	8.93	9.00	9.06	9.12	9.18	9.24	9.30	9.36	9.42	9.48
21	8.76	8.82	8.88	8.94	9.00	9.06	9.12	9.18	9.24	9.30
22	8.59	8.65	8.71	8.77	8.83	8.89	8.95	9.01	9.06	9.12
23	8.43	8.49	8.55	8.61	8.66	8.72	8.78	8.84	8.90	8.95
24	8.28	8.33	8.39	8.45	8.50	8.56	8.62	8.67	8.73	8.79
25	8.13	8.18	8.24	8.29	8.35	8.41	8.46	8.52	8.57	8.63
26	7.98	8.04	8.09	8.15	8.20	8.26	8.31	8.37	8.42	8.48
27	7.84	7.89	7.95	8.00	8.06	8.11	8.17	8.22	8.27	8.33
28	7.70	7.76	7.81	7.86	7.92	7.97	8.02	8.08	8.13	8.18
29	7.57	7.63	7.68	7.73	7.78	7.84	7.89	7.94	7.99	8.05
30	7.44	7.50	7.55	7.60	7.65	7.70	7.76	7.81	7.86	7.91
31	7.32	7.37	7.42	7.47	7.52	7.58	7.63	7.68	7.73	7.78
32	7.20	7.25	7.30	7.35	7.40	7.45	7.50	7.55	7.60	7.65
33	7.08	7.13	7.18	7.23	7.28	7.33	7.38	7.43	7.48	7.53
34	6.97	7.02	7.07	7.11	7.16	7.21	7.26	7.31	7.36	7.41
35	6.86	6.90	6.95	7.00	7.05	7.10	7.15	7.19	7.24	7.29
36	6.75	6.79	6.84	6.89	6.94	6.98	7.03	7.08	7.13	7.18
37	6.64	6.69	6.73	6.78	6.83	6.88	6.92	6.97	7.02	7.06
38	6.53	6.58	6.63	6.67	6.72	6.77	6.81	6.86	6.91	6.95
39	6.43	6.48	6.52	6.57	6.62	6.66	6.71	6.75	6.80	6.85
40	6.33	6.38	6.42	6.47	6.51	6.56	6.60	6.65	6.70	6.74
41	6.23	6.28	6.32	6.37	6.41	6.46	6.50	6.55	6.59	6.64
42	6.13	6.18	6.22	6.27	6.31	6.36	6.40	6.45	6.49	6.53
43	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.35	6.39	6.43
44	5.94	5.99	6.03	6.07	6.12	6.16	6.20	6.25	6.29	6.33
45	5.85	5.89	5.94	5.98	6.02	6.06	6.11	6.15	6.19	6.24
46	5.76	5.80	5.84	5.88	5.93	5.97	6.01	6.06	6.10	6.14
47	5.67	5.71	5.75	5.79	5.83	5.88	5.92	5.96	6.00	6.05
48	5.57	5.62	5.66	5.70	5.74	5.78	5.83	5.87	5.91	5.95
49	5.49	5.53	5.57	5.61	5.65	5.69	5.73	5.78	5.82	5.86
50	5.40	5.44	5.48	5.52	5.56	5.60	5.64	5.68	5.72	5.77

Concentration (mg/L) of Dissolved O₂ at Saturation
by Temperature and Barometric Pressure¹

Calibration Table

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1	13.98	14.08	14.17	14.27	14.36	14.45	14.55	14.64	14.73	14.83
2	13.61	13.70	13.79	13.88	13.97	14.07	14.16	14.25	14.34	14.43
3	13.25	13.34	13.43	13.52	13.61	13.69	13.78	13.87	13.96	14.05
4	12.90	12.99	13.08	13.16	13.25	13.34	13.42	13.51	13.60	13.68
5	12.57	12.66	12.74	12.83	12.91	13.00	13.08	13.16	13.25	13.33
6	12.25	12.34	12.42	12.50	12.58	12.67	12.75	12.83	12.91	13.00
7	11.95	12.03	12.11	12.19	12.27	12.35	12.43	12.51	12.59	12.67
8	11.66	11.74	11.81	11.89	11.97	12.05	12.13	12.21	12.29	12.36
9	11.38	11.45	11.53	11.61	11.68	11.76	11.84	11.91	11.99	12.07
10	11.11	11.18	11.26	11.33	11.41	11.48	11.56	11.63	11.71	11.78
11	10.85	10.92	10.99	11.07	11.14	11.21	11.29	11.36	11.43	11.51
12	10.60	10.67	10.74	10.81	10.89	10.96	11.03	11.10	11.17	11.24
13	10.36	10.43	10.50	10.57	10.64	10.71	10.78	10.85	10.92	10.99
14	10.13	10.20	10.27	10.34	10.41	10.48	10.54	10.61	10.68	10.75
15	9.91	9.98	10.05	10.11	10.18	10.25	10.32	10.38	10.45	10.52
16	9.70	9.77	9.83	9.90	9.96	10.03	10.10	10.16	10.23	10.29
17	9.50	9.56	9.63	9.69	9.76	9.82	9.89	9.95	10.01	10.08
18	9.30	9.37	9.43	9.49	9.56	9.62	9.68	9.75	9.81	9.87
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31	7.32	7.37	7.42	7.47	7.52	7.58	7.63	7.68	7.73	7.78
32	7.20	7.25	7.30	7.35	7.40	7.45	7.50	7.55	7.60	7.65
33	7.08	7.13	7.18	7.23	7.28	7.33	7.38	7.43	7.48	7.53
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44	5.94	5.99	6.03	6.07	6.12	6.16	6.20	6.25	6.29	6.33
45	5.85	5.89	5.94	5.98	6.02	6.06	6.11	6.15	6.19	6.24
46	5.76	5.80	5.84	5.88	5.93	5.97	6.01	6.06	6.10	6.14
47	5.67	5.71	5.75	5.79	5.83	5.88	5.92	5.96	6.00	6.05
48	5.57	5.62	5.66	5.70	5.74	5.78	5.83	5.87	5.91	5.95
49	5.49	5.53	5.57	5.61	5.65	5.69	5.73	5.78	5.82	5.86
50	5.40	5.44	5.48	5.52	5.56	5.60	5.64	5.68	5.72	5.77

¹To convert pressure (inches of Hg) to pressure (mm of Hg (torr)), multiply by 25.4.

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