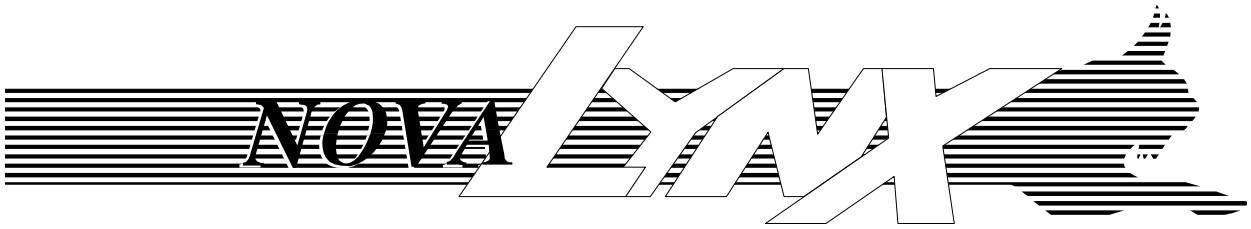
NOVALYNX CORPORATION

ELEVATION CORRECTION TABLES
FOR
BAROMETRIC PRESSURE SENSORS



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INTRODUCTION

Weather stations located at elevations above sea level often need adjustment to the barometer so that sea level pressure is the indicated value. Sometimes the information necessary making for the adjustment is unavailable or is difficult to obtain. This document provides tables that give the barometer corrections for various elevations. A brief discussion of the concept of pressure variations with elevation is also included.

USING THE TABLES

Barometer corrections to sea level pressure are most often associated with airports, television reports, or National Weather Service offices. These organizations give sea level reduced pressure readings. Some large organizations may have networks of weather stations spread over a large region to measure lateral variations in pressure such as those produced by weather fronts. It is not necessary for a barometer to be corrected to sea level in order for it to operate. The correction adjustment is simply a preference for the way that pressure is reported.

Barometric pressure corrections can be obtained by contacting a local airport or National Weather Service weather station operator and requesting the current local reading. The barometer in question is then adjusted so that its reading matches that obtained from the airport or NWS. Some error will be introduced using this method of adjustment, increasing with distance since lateral pressure variations may increase with the horizontal distance from the reporting weather station.

The tables provided with this document are based upon the United States Standard Atmosphere and can be used in situations where no reporting stations exist within the immediate area. The tables give the correction factor that is added to the barometric pressure reading for a given station elevation. The correction is given both in inches of mercury (inHg) and in millibars (mb). Values are indicated for elevations expressed in feet above sea level.

For any station elevation, add the "**deviation from zero**" figure to the barometer's current barometric pressure reading.

As an example, consider a barometer located at an elevation of 4550 feet with a current reading of 25.07 inHg. Using the tables, a value of 4.60 inHg should be added to the reading. The barometer should be adjusted until it produces a reading of 29.67 inHg to report the equivalent sea level pressure.

The "**standard pressure**" figures indicate the calculated barometric pressure at each elevation based upon the United States Standard Atmosphere. Actual pressures typically vary by up to 1 inHg (34 mb), depending upon weather conditions, time of year, and time of day. The variation is seldom more than 2 inHg (68 mb) from the values given, even in a severe storm. These figures provide a method for checking a barometer's operation. A barometer that is located at an elevation of 1950 feet and is reporting a pressure of 860 mb has a calibration problem or is sitting in the eye of a super hurricane!

STANDARD PRESSURE VS. ELEVATION

Feet and mb

Station Elevation (feet)	Standard Pressure (mb)	Deviation from zero (mb)	Station Elevation (feet)	Standard Pressure (mb)	Deviation from zero (mb)
0	1013.2	0.0	1950	943.8	69.4
50	1011.4	1.8	2000	942.1	71.1
100	1009.6	3.7	2050	940.4	72.9
150	1007.8	5.5	2100	938.6	74.6
200	1005.9	7.3	2150	936.9	76.3
250	1004.1	9.1	2200	935.2	78.0
300	1002.3	10.9	2250	933.5	79.8
350	1000.5	12.8	2300	931.8	81.5
400	998.7	14.6	2350	930.1	83.2
450	996.9	16.4	2400	928.4	84.9
500	995.1	18.2	2450	926.7	86.6
550	993.3	20.0	2500	925.0	88.3
600	991.5	21.8	2550	923.3	90.0
650	989.7	23.6	2600	921.6	91.7
700	987.9	25.4	2650	919.9	93.4
750	986.1	27.2	2700	918.2	95.1
800	984.3	29.0	2750	916.5	96.8
850	982.5	30.8	2800	914.8	98.4
900	980.7	32.5	2850	913.1	100.1
950	978.9	34.3	2900	911.4	101.8
1000	977.1	36.1	2950	909.7	103.5
1050	975.4	37.9	3000	908.1	105.2
1100	973.6	39.7	3050	906.4	106.8
1150	971.8	41.4	3100	904.7	108.5
1200	970.0	43.2	3150	903.1	110.2
1250	968.3	45.0	3200	901.4	111.9
1300	966.5	46.7	3250	899.7	113.5
1350	964.8	48.5	3300	898.1	115.2
1400	963.0	50.2	3350	896.4	116.8
1450	961.2	52.0	3400	894.7	118.5
1500	959.5	53.8	3450	893.1	120.2
1550	957.7	55.5	3500	891.4	121.8
1600	956.0	57.3	3550	889.8	123.5
1650	954.2	59.0	3600	888.1	125.1
1700	952.5	60.7	3650	886.5	126.8
1750	950.8	62.5	3700	884.8	128.4
1800	949.0	64.2	3750	883.2	130.0
1850	947.3	66.0	3800	881.6	131.7
1900	945.6	67.7	3850	879.9	133.3

STANDARD PRESSURE VS. ELEVATION

Feet and mb

Station Elevation (feet)	Standard Pressure (mb)	Deviation from zero (mb)
3900	878.3	134.9
3950	876.7	136.6
4000	875.0	138.2
4050	873.4	139.8
4100	871.8	141.4
4150	870.2	143.1
4200	868.6	144.7
4250	866.9	146.3
4300	865.3	147.9
4350	863.7	149.5
4400	862.1	151.1
4450	860.5	152.7
4500	858.9	154.3
4550	857.3	155.9
4600	855.7	157.5
4650	854.1	159.1
4700	852.5	160.7
4750	850.9	162.3
4800	849.3	163.9
4850	847.7	165.5
4900	846.2	167.1
4950	844.6	168.7
5000	843.0	170.2
5050	841.4	171.8
5100	839.8	173.4
5150	838.3	175.0
5200	836.7	176.5
5250	835.1	178.1
5300	833.6	179.7
5350	832.0	181.2
5400	830.5	182.8
5450	828.9	184.3
5500	827.3	185.9
5550	825.8	187.5
5600	824.2	189.0
5650	822.7	190.6
5700	821.1	192.1
5750	819.6	193.6
5800	818.1	195.2
5850	816.5	196.7
5900	815.0	198.3
5950	813.4	199.8
6000	811.9	201.3
6050	810.4	202.9
6100	808.9	204.4
6150	807.3	205.9
6200	805.8	207.4
6250	804.3	209.0
6300	802.8	210.5
6350	801.3	212.0
6400	799.7	213.5
6450	798.2	215.0
6500	796.7	216.5
6550	795.2	218.0
6600	793.7	219.5
6650	792.2	221.0
6700	790.7	222.5
6750	789.2	224.0
6800	787.7	225.5
6850	786.2	227.0
6900	784.7	228.5
6950	783.2	230.0
7000	781.8	231.5
7050	780.3	233.0
7100	778.8	234.4
7150	777.3	235.9
7200	775.8	237.4
7250	774.4	238.9

STANDARD PRESSURE VS. ELEVATION

Feet and inHg

Station Elevation (feet)	Standard Pressure (inHg)	Deviation from zero (inHg)	Station Elevation (feet)	Standard Pressure (inHg)	Deviation from zero (inHg)
0	29.92	0.00	1950	27.87	2.05
50	29.87	0.05	2000	27.82	2.10
100	29.81	0.11	2050	27.77	2.15
150	29.76	0.16	2100	27.72	2.20
200	29.71	0.22	2150	27.67	2.25
250	29.65	0.27	2200	27.62	2.30
300	29.60	0.32	2250	27.57	2.36
350	29.54	0.38	2300	27.52	2.41
400	29.49	0.43	2350	27.46	2.46
450	29.44	0.48	2400	27.41	2.51
500	29.38	0.54	2450	27.36	2.56
550	29.33	0.59	2500	27.31	2.61
600	29.28	0.64	2550	27.26	2.66
650	29.22	0.70	2600	27.21	2.71
700	29.17	0.75	2650	27.16	2.76
750	29.12	0.80	2700	27.11	2.81
800	29.07	0.86	2750	27.06	2.86
850	29.01	0.91	2800	27.01	2.91
900	28.96	0.96	2850	26.96	2.96
950	28.91	1.01	2900	26.91	3.01
1000	28.86	1.07	2950	26.86	3.06
1050	28.80	1.12	3000	26.82	3.11
1100	28.75	1.17	3050	26.77	3.16
1150	28.70	1.22	3100	26.72	3.20
1200	28.65	1.28	3150	26.67	3.25
1250	28.59	1.33	3200	26.62	3.30
1300	28.54	1.38	3250	26.57	3.35
1350	28.49	1.43	3300	26.52	3.40
1400	28.44	1.48	3350	26.47	3.45
1450	28.39	1.54	3400	26.42	3.50
1500	28.33	1.59	3450	26.37	3.55
1550	28.28	1.64	3500	26.32	3.60
1600	28.23	1.69	3550	26.68	3.65
1650	28.18	1.74	3600	26.23	3.69
1700	28.13	1.79	3650	26.18	3.74
1750	28.08	1.85	3700	26.13	3.79
1800	28.02	1.90	3750	26.08	3.84
1850	27.97	1.95	3800	26.03	3.89
1900	27.92	2.00	3850	25.98	3.94

STANDARD PRESSURE VS. ELEVATION

Feet and inHg

Station Elevation (feet)	Standard Pressure (inHg)	Deviation from zero (inHg)
3900	25.94	3.98
3950	25.89	4.03
4000	25.84	4.08
4050	25.79	4.13
4100	25.74	4.18
4150	25.70	4.22
4200	25.65	4.27
4250	25.60	4.32
4300	25.55	4.37
4350	25.51	4.42
4400	25.46	4.46
4450	25.41	4.51
4500	25.36	4.56
4550	25.32	4.60
4600	25.27	4.65
4650	25.22	4.70
4700	25.17	4.75
4750	25.13	4.79
4800	25.08	4.84
4850	25.03	4.89
4900	24.99	4.93
4950	24.94	4.98
5000	24.89	5.03
5050	24.85	5.07
5100	24.80	5.12
5150	24.75	5.17
5200	24.71	5.21
5250	24.66	5.26
5300	24.62	5.31
5350	24.57	5.35
5400	24.52	5.40
5450	24.48	5.44
5500	24.43	5.49
5550	24.39	5.54
5600	24.34	5.58
5650	24.29	5.63
5700	24.25	5.67
5750	24.20	5.72
5800	24.16	5.76
5850	24.11	5.81
5900	24.07	5.85
5950	24.02	5.90
6000	23.98	5.95
6050	23.93	5.99
6100	23.89	6.04
6150	23.84	6.08
6200	23.80	6.13
6250	23.75	6.17
6300	23.71	6.22
6350	23.66	6.26
6400	23.62	6.30
6450	23.57	6.35
6500	23.53	6.39
6550	23.48	6.44
6600	23.44	6.48
6650	23.39	6.53
6700	23.35	6.57
6750	23.31	6.62
6800	23.26	6.66
6850	23.22	6.70
6900	23.17	6.75
6950	23.13	6.79
7000	23.09	6.84
7050	23.04	6.88
7100	23.00	6.92
7150	22.95	6.97
7200	22.91	7.01
7250	22.87	7.05