Taylor BAROMETERS

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LETS TALK ABOUT THE WEATHER

Weather plays a very large part in nearly all of man's endeavors, with the result that weather forecasting receives world wide attention. It is one of man's most successful ventures in international cooperation. Weather forecasts 100% correct are not yet possible, but every discovery and improvement that is made in the science of meteorology is examined by all civilized countries. With international air transportation making such rapid progress the need for complete, accurate forecasting grows ever more pressing.

Many specialized instruments are employed in the science of meteorology but first among them is the Barometer. With the barometer the individual can make predictions for his own locality 12 to 24 hours ahead.

MERCURIAL BAROMETER

The first barometer, invented by the Italian scientist Torricelli in 1643, was a glass tube closed at one end, filled with mercury and inverted into a small open reservoir of mercury. He proved that

Barometers

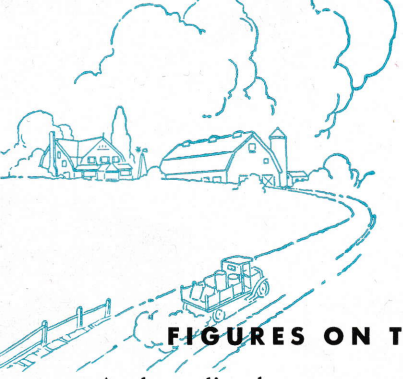
Mercurial Barometer

the weight of the mercury column is balanced by the pressure of the air outside. The mercurial barometer is still the standard for testing and laboratory work.

ANEROID BAROMETER

In 1871 the *aneroid* (without fluid) barometer was invented. Because it used a vacuum chamber instead of mercury it was more compact, hence more useful. (For full description of the aneroid movement see our booklet "Practical Hints for Amateur Weather Forecasters.") Engineers and surveyors put it to use for determining the contours or elevations of the country. Instead of transporting a fragile awkward column of mercury approximately 36″ long they could use an aneroid barometer made in pocket size.

For the home, also, the aneroid is preferable because it is less apt to break or get out of adjustment.



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FIGURES ON THE DIAL

As the earliest barometers were principally mercurial instruments, it was usual to express atmospheric pressure in terms of the length of a column of mercury and this practice continues even though the Weather Bureau has adopted the Millibar Scale (see conversion table, page 17). Most present day barometers, mercurial and aneroid, still use the "inches of mercury," or metric equivalent although instruments showing both inches and millibars are available. Thus a reading of 30.15 inches means that the atmospheric pressure will support a column of mercury 30.15 inches high. Do not confuse this with "pounds per square inch."

WEATHER WORDS

The words "Rain," "Change," and "Fair," on the dials of aneroid barometers are simply relative. It does not follow, for instance, that rain is unlikely unless the barometer has been indicating "Rain." We do know, however, that a reading of 30 inches or more usually signifies dry weather, while a reading of 29 inches or lower means storms. The weather words have been put at average points. Coupled with the position of the indicating hand,

Barometers

one must also know whether the pointer is rising or falling from the point at which the set hand was last placed.

We supply barometers with plain dials for those who prefer them as well as dials with extensive weather words for simplified forecasting (page 12).

TAKING A READING

The indicating hand is the one closest to the dial and responds readily to any change in atmospheric pressure.

The bright outer hand is the "set" hand, which should be moved until it is coincident with the indicating hand after each reading. Barometers should be read and set at least every 12 hours to give continuity to your forecasting.

A few hours after setting, one can note any change in reading, a "rise" indicated by movement of the indicating hand to the right, and a "fall" by movement to the left.

Barometers should be installed indoors. They should never be exposed to the direct rays of the sun nor near any other source of heat; except those marked "compensated" which are not affected by changes of temperature.

In taking a reading do not forget that barometers indicate *coming,* not *present* weather conditions.

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SETTING BAROMETERS

For every 900 feet above sea level, a barometer will show a difference of approximately one inch in pressure from readings taken at sea level. The air is like a body of water, the nearer the bottom the greater the weight of the mass above. This is a very important fact to remember in connection with your barometer, because it will have to be adjusted to the altitude at which it is used before it will give correct sea level readings.

On most weather barometers the indicating hand has to be set forward (clock wise) by hand,

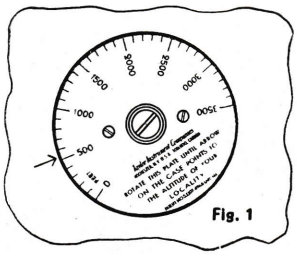


Fig. 1

Barometers

one tenth of one inch for every 90 ft. above sea level.

The ideal barometer is one that can be easily adjusted to compensate for altitude change without the need of moving the delicate hand. Such adjustment is an exclusive feature on most Taylor barometers, baroguides, and stormoguides. A revolving plate on the back of the instrument is graduated into 0-3500 ft. or 3500-7000, depending on where you live. If you live at 500 ft. above sea level turn the dial until that height is opposite an arrow engraved on the case and the barometer then will be adjusted for altitude (Fig. 1).

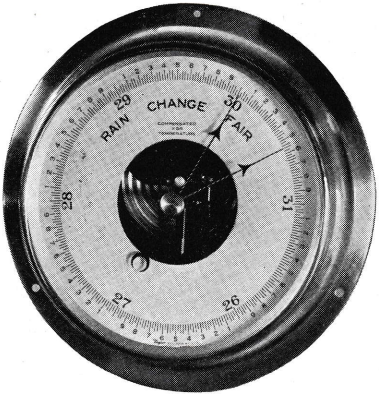
Occasionally it is desirable to check an aneroid barometer. Get the *Actual Pressure Reading Uncorrected for Altitude* from your local weather bureau. Then set the "0" on the back plate to the arrow on the case. For errors up to .20″ make the correction by turning the left hand screw (seen through the hole in the back of the case). If the barometer reads more than .20″ from the standard reading it should be put into competent hands for adjustment.

No. 2202

Taylor Brass-Case Barometer

This is a widely used weather barometer. It is of convenient size, mounted in lacquered brass case. The enameled dial is five inches in diameter. This instrument is also available with dial giving both inch and metric measurements.

No. 2200 I *and* Mb. *Similar instrument, with closed dial graduated in both inches and millibars.*



No. 2230-A

Taylor Brass-Case Barometer

This barometer has a heavy spun brass case with a mounting flange for wall installation. Dial is silvered metal 5″ in diameter. Movement is our best grade. Compensated for temperature changes. Open center silvered dial.

Similar instrument can be supplied with inches and millimeters or inches and millibars.

No. 2250

Taylor Brass-Case Barometer

The barometer above is the type supplied to the U. S. Weather Bureau. It is our best quality weather barometer in this style. The 5″ dial is silvered metal, finely divided, reading to 0.02 of an inch. The movement is of highest quality, compensated for temperature.

Similar instrument can be supplied with inches and millimeters or inches and millibars.

APPROXIMATE BAROMETER READINGS

Barometer Rising

29.0 to 29.3 inches...Clearing, with high winds and cool wave.

29.3 to 29.6 inches...High winds, with cool wave, preceded by squalls.

29.6 to 29.9 inches...Fair weather, with fresh winds tonight and tomorrow.

29.9 to 30.2 inches...Fair, with brisk winds, which will diminish.

30.2 to 30.5 inches...Generally fair weather, probably cool today, with variable winds.

30.5 to 30.8 inches...Clear weather tonight and continued cool, with moderate winds.

30.8 to 31.0 inches...Southeast rains with high winds.

Barometer Falling

30.7 to 30.5 inches...Fair and warmer, followed by wind and rain.

30.5 to 30.2 inches...Storm brewing in the direction of the wind.

30.2 to 29.9 inches...Cloudy and warmer, followed by unsettled weather.

29.9 to 29.6 inches...Unsettled weather, increasing winds and warmer.

29.6 to 29.3 inches...Clearing, slight squalls, fair and cooler tomorrow.

29.3 to 29.0 inches...Clearing weather, with high winds, accompanied by squalls and cooler.

29.0 to 28.7 inches...Stormy.

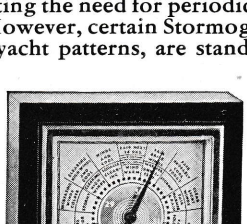
Above barometer readings are corrected to a sea-level reading.

TAYLOR STORMOGUIDES

Over and above the Taylor standard of "Accuracy First" the Taylor "Stormoguide" has two outstanding features—the complete weather forecasting dial and the Automatic Signal Device (automatic rise-and-fall index).

For every movement of the indicating hand the dial shows the appropriate weather prediction for the next 12 to 24 hours. Many people prefer this dial to the standard one which carries only the words "Rain," "Change," and "Fair."

The automatic rise and fall index shows at all times whether the air pressure is rising or falling, thus eliminating the need for periodic reading and a set hand. However, certain Stormoguide models, such as the yacht patterns, are standard with the set hand.



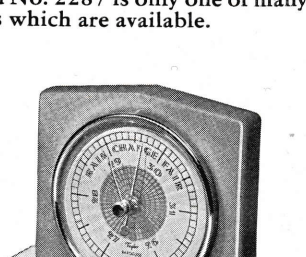
Taylor Fairfax Stormoguide No. 2257

This model of the Stormoguide is one of the most popular. It is mounted in a satin-finish, black case, 5 inches square with chromium trim. Price includes the automatic altitude adjustment to 3500 feet, the complete weather forecasting dial and the Automatic Signal Device.

No. 2257-HA—*Same as No.* 2257 *but for use in altitudes* 3500-7000 *feet.*

TAYLOR BAROGUIDES

Taylor Baroguides are a popularly priced line of Taylor barometers attractively cased for use in the home. All of them carry the hallmark of "Taylor" a name synonymous with "Accuracy." Baroguides are all equipped with unbreakable crystals, set hands to show whether air pressure is rising or falling, and the exclusive altitude adjustment so that they can be set quickly and easily to give correct readings for any altitude up to 3500 feet. The Fleetwood No. 2287 is only one of many attractive case styles which are available.



Taylor Fleetwood Baroguide No. 2287

The plastic case with contrasting base measures 5″ x 4″ x 1″. Fitted with 2¾″ diameter, two-toned dial with simplified readings. Chrome bezel. Each in an attractive box. Altitude adjustment to 3500 feet.

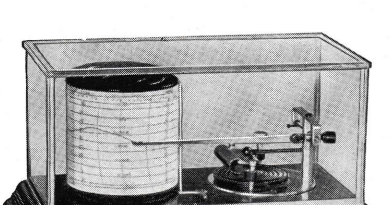
No. 2287-HA—*Same as No.* 2287 *but for use in altitudes* 3500 *to* 7000 *feet.*

RECORDING BAROMETERS

The ideal instrument for weather forecasting is the Taylor recording barometer or "Cyclo-Stormograph." It automatically writes on a chart a continuous record of changes in the pressure of the air and notes them correctly, both as to day and hour. By its use one can, at a glance, easily ascertain the condition of the air as regards its pressure trend, see if the change taking place is a rapid or slow one, or if it is in equilibrium. Plans which depend largely upon the condition of the weather for their success—can be made 12 to 24 hours in advance on the basis of the "Cyclo-Stormographs" continuous weather record.

Changes in air pressure may take place during the night when they would never be seen on a strictly indicating barometer. But the Cyclo-Stormograph records them all with indelible ink on a revolving paper chart.

The weather forecast charts which are supplied with every recording instrument to make forecasting easy, are made from averages covering many years. Back of their accuracy are years of observations, and compilation of weather data.



No. 2314

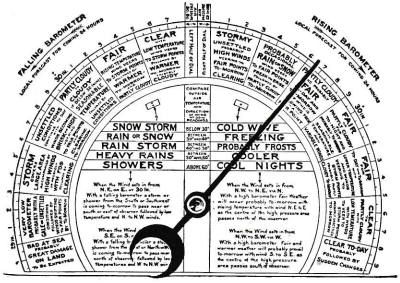
Cyclo-Stormograph

This modern instrument has a high-grade barograph movement with fine, spring-wound clock. The base is mahogany-finished wood. The cover is heavy glass, firmly cemented, and snug fitting to prevent dust entering the case. Furnished with handsome forecast card for displaying weather forecasts, and chart box with compartments for charts and ink bottle. Complete with ink and year's supply of charts.

No. 2314—*For altitudes up to* 3500 *feet*

No. 2314-HA—*For altitudes above* 3500 *feet*

TAYLOR
INSTRUCTIVE CHART



No. 4051

For Aneroid Barometers

We strongly recommend this chart to all users of aneroid barometers. It gives much more information than can possibly be shown on a barometer dial. It will increase your interest in a barometer, as it explains fully the significance of all the instrument's movements.

Price.....75c each

CONVERSION TABLE FOR INCHES AND MILLIBARS

1 inch = 33.86395 millibars

1 millibar = 0.02952993 inch

INCHES	MILLIBARS	INCHES	MILLIBARS
25.00	846.6	28.00	948.2
25.10	850.0	28.10	951.6
25.20	853.4	28.20	955.0
25.30	856.8	28.30	958.3
25.40	860.1	28.40	961.7
25.50	863.5	28.50	965.1
25.60	866.9	28.60	968.5
25.70	870.3	28.70	971.9
25.80	873.7	28.80	975.3
25.90	877.1	28.90	978.7
26.00	880.5	29.00	982.1
26.10	883.8	29.10	985.4
26.20	887.2	29.20	988.8
26.30	890.6	29.30	992.2
26.40	894.0	29.40	995.6
26.50	897.4	29.50	999.0
26.60	900.8	29.60	1002.4
26.70	904.2	29.70	1005.8
26.80	907.6	29.80	1009.1
26.90	910.9	29.90	1012.5
27.00	914.3	30.00	1015.9
27.10	917.7	30.10	1019.3
27.20	921.1	30.20	1022.7
27.30	924.5	30.30	1026.1
27.40	927.9	30.40	1029.5
27.50	931.3	30.50	1032.9
27.60	934.6	30.60	1036.2
27.70	938.0	30.70	1039.6
27.80	941.4	30.80	1043.0
27.90	944.8	30.90	1046.4
		31.00	1049.8

LIST OF CITIES WITH OFFICIAL ALTITUDES

STATIONS	Feet Above Sea Level
Abilene, Texas	1718
Albany, N. Y.	18
Astoria, Ore.	18
Atlanta, Ga.	1033
Auburn, N. Y.	677
Augusta, Ga.	100
Baltimore, Md.	98
Bangor, Me.	20
Berkeley, Cal.	320
Binghamton, N. Y.	862
Bismarck, N. D.	1670
Boise, Idaho	2492
Boston, Mass.	5
Brooklyn, N. Y.	107
Buffalo, N. Y.	575
Burlington, Vt.	197
Cairo, Ill.	269
Cape Henry, Va.	7
Cape May, N. J.	6
Cedar Keys, Fla.	6
Charleston, S. C.	9
Charlotte, N. C.	725
Chattanooga, Tenn.	630
Chicago, Ill.	579
Cincinnati, Ohio	628
Cleveland, Ohio	594
Columbia, Mo.	737
Columbus, Ohio	824
Council Bluffs, Ia.	990
Davenport, Ia.	536
Dayton, Ohio	790
Denver, Colo.	5280
Des Moines, Ia.	799
Detroit, Mich.	584
Dubuque, Ia.	643
Duluth, Minn.	601
Elkins, W. Va.	1920
Elmira, N. Y.	863
Erie, Pa.	572
Eureka, Calif.	25
Evansville, Ind.	382
Fort Worth, Texas	600
Fresno, Calif.	290
Galveston, Texas	5
Gloucester, Mass.	52
Grand Haven, Mich.	581
Green Bay, Wis.	587
Harrisburg, Pa.	317
Hartford, Conn.	38
Indianapolis, Ind.	822
Jacksonville, Fla.	7
Kansas City, Mo.	963
Keokuk, Ia.	481
Knoxville, Tenn.	806
La Crosse, Wis.	678
Lansing, Mich.	827
Leavenworth, Kas.	727
Lexington, Ky.	965
Lincoln, Neb.	1147
Little Rock, Ark.	286
Los Angeles, Calif.	338
Louisville, Ky.	456
Lynchburg, Va.	523
Manchester, N. H.	180
Memphis, Tenn.	271
Meridian, Miss.	341
Milwaukee, Wis.	586

Barometers

STATIONS	Feet Above Sea Level
Minneapolis, Minn.	837
Montgomery, Ala.	162
Mt. Tamalpais, Calif.	2353
Nashville, Tenn.	434
New Bedford, Mass.	88
New Haven, Conn.	3
New London, Conn.	23
New Orleans, La.	8
Newport, R. I.	13
New York, N. Y.	35
Oakland, Calif.	36
Oklahoma, Okla.	1195
Olympia, Wash.	17
Omaha, Neb.	1040
Oswego, N. Y.	252
Parkersburg, W. Va.	616
Philadelphia, Pa.	8
Phoenix, Ariz.	1084
Pierre, S. Dak.	1441
Pittsburgh, Pa.	697
Port Angeles, Wash.	11
Port Huron, Mich.	581
Portland, Me.	47
Portland, Ore.	8
Providence, R. I.	74
Red Bluff, Calif.	306
Redlands, Calif.	1335
Richmond, Va.	164
Rochester, N. Y.	509
Sacramento, Calif.	2
St. Louis, Mo.	412
St. Paul, Minn.	693
St. Vincent, Minn.	798
San Antonio, Texas	683
San Diego, Calif.	5
San Jose, Calif.	94
Sandusky, Ohio	572
San Francisco, Cal.	6
Sault Ste. Marie, Mich.	607
Savannah, Ga.	41
Seattle, Wash.	22
Sioux City, Ia.	1107
Southport, N. C.	14
Spokane, Wash.	1910
Springfield, Ill.	600
Springfield, Mass.	70
Springfield, Mo.	1348
Syracuse, N. Y.	398
Tacoma, Wash.	46
Tampa, Fla.	1
Thatchers Island, Mass.	53
Toledo, Ohio	628
Tucson, Ariz.	2389
Utica, N. Y.	407
Vicksburg, Miss.	223
Washington, D. C.	91
Worcester, Mass.	475
Wichita, Kas.	1300
Wilmington, Del.	78
Wilmington, N. C.	31
Youngstown, Ohio	841
Zanesville, Ohio	704

If your town is not on this list, write us for information.

Weather Series for the Amateur

By P. R. JAMESON, F. R. Met. Soc.

"Practical Hints for Amateur Weather Forecasters." 32 pages, illustrated, of information on the care and exposure of barometers.

"Humidity, Its Effect on Our Health and Comfort." 24 pages, illustrated, on matters concerning the necessity of correcting present-day inside moisture conditions, which are dangerous to health and deprive us of ordinary comfort.

"The Mountains of Cloudland and Rainfall." 24 pages, illustrated with different types of clouds and ancient and modern rain gauges.

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