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London
Board of Trade

STATION INSTRUCTIONS

FOR

METEOROLOGICAL TELEGRAPHY.



LONDON:

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1862.

[11,213.—500.—1/62.]

STATION INSTRUCTIONS

FOR

METEOROLOGICAL TELEGRAPHY.

Meteorological Department,
2, Parliament Street, London, S.W.
SIR,
With the concurrence of your Directors, I send the Meteorological instruments specified — and similarly authorized directions for your use.

Will you have the goodness to read the cautionary instructions about *placing* these instruments very carefully :—before unpacking and suspending them (see Barometer Manual, p. 30.)

The aid of an optician may be serviceable, and will be paid for by this Department, if you require such assistance, in fixing and first reading the barometers: two of which should be suspended near each other, for reference.

A third is intended as a reserve, in case of an accident occurring to one of the others.

The thermometers should be *carefully* withdrawn* from their metal cases, and suspended singly, near each other.

Reductions and corrections are to be made in this office, not at your station.

You will be expected to send the Observations *as read off* without alteration. We have the scale corrections of each instrument, and shall have *your elevation above the sea* after receiving your report by telegraph, in accordance with instructions now transmitted.

I am, faithfully,

The Clerk in Charge,
Telegraph Station,

* To do this easily,—press on the circular guard and strap of metal, while pulling out the scale of the thermometer.

INSTRUCTIONS.

1. Two barometers should be suspended in a room; one being a check on the other.*

2. Two thermometers should be fixed *outside* the house, at the north side, and a third near them, with its bulb wet, or, rather, *moistened* (as explained in the Barometer Manual, p. 45).

3. Once a day, at 8 in the morning (except Sundays), or as soon after as possible, the reading of one barometer (B), and its attached thermometer (A), one exposed thermometer (E), and the moistened thermometer (M); the direction of the wind at that time (D), its estimated strength (F), the character of the weather at that time (I), the state of the sea (S), the *general* character of the weather (D, F, I) since *last* report, and the highest or lowest extreme of the mercury in the barometer (B), and in *exposed* thermometer (E) since last report (as far as may have been noticed or can be ascertained by the reporter); after which, occasionally, the rainfall (W);—should be telegraphed to the Meteorological Office, in accordance with the following explanation.

4. The telegram will consist of six, or seven, groups of figures, each group containing five figures.

5. No corrections or reductions are to be made by the observer, who will transmit them as “read off.”

Barometer (B) omitting points.

6. The first group will be the height of the barometer (B), read to three places of decimals; thus, 29.046.

(A) *Attached Thermometer, that fixed to the Barometer.*

7. In the second group, the first two figures will be the temperature of the attached thermometer (A) to degrees only.

Exposed Thermometer (E).

The three last, the reading of the exposed thermometer (E) to the nearest tenth: thus, supposing $A = 54$ with $E = 51.3$, the telegraphic group will be 54513.

* The distinguishing number of whichever is used, and its estimated vertical height above high water, should be made known (*the first day only*) by telegraph.

8. It will be observed that the thermometer *attached* to the barometer is called (A), and will always precede E in the second word, or group, of five figures.

Moistened Thermometer (M).

9. The first three figures of the third group will show the reading of the moistened thermometer (M) to tenths,

Direction of Wind (D).

and the two last figures the direction of the wind (D) given by the *true* meridian, by the sun or pole star, by a chart, or by the world.

10. The direction of the wind will always be given in figures—1 to 32—North being 32, East 8, South 16, West 24, and so, proportionally, for the intermediate points (a cypher being placed *before* the figure indicating the direction when *less than* 10), (N. by E. to E. by S.) Thus, supposing $M = 50.3$ and $D = 8$, the telegraphic word will be 50308.

Force of Wind (F).

11. In the fourth group, the first two figures will show the estimated force of the wind (F) from 1 to 12, supposing 1 to represent the lightest breeze, and 12 a hurricane (a cypher being placed *before* the figure indicating the force when it is less than 10).

Amount of Cloud (C).

The third figure giving the estimated amount of cloud (C) from 1 to 9.

Character of Weather—Initial (I).

The fourth figure indicating the character of the weather (I), according to the “Beaufort scale,” at page 44 of the accompanying “Barometer Manual.”

Sea Disturbance (S).

And the fifth figure the amount of “sea disturbance” (S), from 1 to 9. Thus, supposing $F = 2$, $C = 3$, $I = 1$, and $S = 4$, the telegraphic word will be 02314.

12. The fifth group should express the *average*, or *general* character of wind and weather (D, F, I) *only*, since the last report, or during the whole time elapsed

since the *last* hour of reporting (as far as may have been noticed or can be ascertained by the reporter).

The first two figures will show average direction of wind (D); the third and fourth figures, force (F); and the last figure, character (I). Thus, supposing D = 10, F = 6, and I = 6 (overcast), the telegraphic group should be 10066.

13. The sixth group will show the highest or lowest extreme (the *most* remarkable) of the mercury in barometer (B), and in *exposed* thermometer (E), since *last* report by telegraph, whether *recent* or otherwise.

B will have the three *first* places for *last* integer and two first decimals; E will have the *two* last figures for degrees (only) of exposed dry thermometer. Thus, supposing B = 30.142 and E = 59, the telegraphic group should be 01459; or if B = 30.147 and E = 59.8, the telegraphic word should be 01560 (7 and also 8 being more than half).

14. With each morning report, when rain enough has fallen to be *measurable*, its duration, in hours, from 1 to 24,* or should be in the two first places of a *seventh* group, or word, of five figures; a cypher being before 1 to 9. Quantity of rain, &c. should be shown by the three last figures of five, in the *seventh* group, as inches and two places of decimals. Thus, if rain had prevailed about eight hours since last report, and an inch and half of water was in the gage, the seventh word would be 08150; if thirteen hours, with two inches and five hundredths, the group should be 13205; if three hours and thirteen hundredths, then 03013.†

15. *No decimal points* should be noted in the telegrams. Using the method just described, they are unnecessary. Each decimal point might be counted as a word or figure, increasing expense.

16. *Five* figures should be placed for *each word invariably*, cyphers being used to keep the figures in their proper relative places; the cypher being very carefully placed, and always *before* the unit, or *other cypher*, to which it refers, when used for this purpose.

17. Special occasional information, when necessary, should be transmitted in the common manner by actual words, in addition to the above described groups; but *abbreviations* should be made, by substituting such

letters for words as are used in the scales to which reference is made in these directions.

18. Although no regular Meteorological Telegram is required to be forwarded on *Sundays* and *close Holydays*, it is very desirable that one reading of our instruments, and a regular notice of the *previous* weather, &c. should be taken on such occasions; and recorded, with other daily ordinary observations, in the "Weekly weather registers," which should be sent by post on each Monday or Tuesday. (Sunday being the *last* day of registry).

19. It will be understood, and *expected*, that telegrams will be *dispatched* from their *starting* points not later (if practicable) than eight o'clock in the morning, or three in the afternoon from *Special* Stations (as selected.) To effect this, the observations should be *made*, and the *summaries* of recent weather well considered, *before* those hours arrive. The usually but *slight* change that *may* occur, in about a quarter of an hour, is of little importance compared with the real advantage to the public of *early* and *sufficiently* precise information.

20. Telegraphists should send *extra* reports, *at times*, on their own responsibility, when the barometer is falling much or rapidly;—say, *having* fallen *nearly* one-tenth of an inch, *hourly*, for more than three hours, since the last weather report was sent to London.

21. All telegrams, from *all* stations, should have *six* or seven groups of figures in the morning; but in the afternoon, only from the *special* stations, should *any* be sent,—*generally*.

22. It should be clearly understood that the fifth and sixth words, or groups of figures, refer to the *whole interval* of time, whether only a *few hours*, or one or two days and nights (as from Saturday to Monday) elapsed since the *last* official telegram, whether a regular or an *extra* report.

23. The reports of weather just recently prevailing, and the extreme ranges (fifth and sixth groups of figures) between the last two *transmitted* records, are becoming very valuable; and it is earnestly hoped that not only individual abilities and judgment will be exercised, but also that conclusions may be drawn from the opinions of others, especially seafaring persons, shepherds, fishermen, gardeners, or agriculturists.

24. *When reports are delayed*, beyond such a time as would enable them to be published in their proper

* Or even to 48, after Sunday or a Holyday.

† See additional explanation, under "Rain and Fog," in page 8.

order, they should be sent by the next post: *not* by telegraph, as in such cases they can be used only for record, and subsequent inter-comparison.

25. Weekly tabular registers are requested (in two parts for each day, having a *summary* of the weather during the time between each *exact* notation), which should be transmitted, *weekly*, from *all* stations, to the Meteorological Department in London. Forms will be supplied regularly.

26. The *number* of the barometer read and recorded ought always to be noted on the weekly register, *under* the letters Bu.

27. No weekly registers should be *sealed*, in any way, but merely folded. Sealing interferes with their being duly filed, as it causes tearing or cutting.

28. In telegraphing to London, it is now sufficient to note the *place only* whence the telegram is started, and *FitzRoy, London*, as addresses.

29. Although the clerks in charge of such stations are not in attendance beyond a certain time of the day, it is hoped that *general*, and occasionally *special*, information will be obtained by them from other persons, which may much enhance the value of their weekly registers, and will be duly estimated in future arrangements with the telegraph companies, as well as in recommendations to the favourable consideration of their Directors.

RAIN AND FOG.

30. Portable rain gages may be placed on the ground, or any position exposed to a free fall of rain, snow, or hail, where neither buildings, nor walls, nor trees shelter, or cause eddies of wind.

31. Generally, on or near the ground is preferable to an artificial elevation; but, if so elevated, height above ground should be registered and officially reported.

32. From day to day, at a convenient, but uniform time, the quantity of water from rain, snow or hail (melted) should be measured very carefully and recorded.

33. It is not expected that exact *duration* of rain, snow, hail, or fog can be *usually* registered, but very near approximations may be made by collecting the notices of various observers. When fog continues for an hour or more, its duration and character should be

registered and telegraphed with the next usual *morning* report, by words of *letters*; thus, "Five hours of very thick fog* till seven p.m." or, "Three hours of light fog still continuing,"† &c.

34. The measuring glass or tube should be kept apart from the gage, which should not be opened oftener than once a day (except on special occasions of heavy rain, snow, or much hail, in a comparatively short time).

The glass tube (supplied in duplicate) is graduated to inches and decimals. The marks are fixed by actual trial, and comparison with another kind of rain gage duly verified. They are artificial inches. This tube should be placed upright in the gage, with its upper end open; then a thumb or finger *pressed* on the upper aperture, while the tube is lifted gently out, holding in the lower part a small quantity of water, the upper edge of which is at the mark to be read off, and registered; the second decimals or hundredths of an inch (tenths of a tenth) should be estimated by eye. The rain gage should then be carefully and completely emptied.

STORM-WARNING SIGNALS.

35. A staff and two canvas shapes being provided, the following use will be made of them occasionally; perhaps once or twice in a month, on a yearly average. (See Diagram.)

One shape, that of a drum (or cylinder) has the appearance of a black square of (not less than) three feet (seen from any point of view) when suspended.

The other shape, a cone (not less than) three feet high, appears triangular (from any point of view) when suspended.

A cone, with the point upwards, shows that a gale is *probable*; at first from the *northward*. NORTH CONE.

A cone, with the point downwards, shows that a gale is *probable*; at first from the *southward*. SOUTH CONE.

A DRUM, alone, shows that stormy winds may be expected from nearly opposite quarters successively.

A cone and drum give warning of *dangerous* winds, the probable *first* direction being shown by the position of the cone—point up, above the drum, for northerly (or polar) wind; point down, and below the drum, for southerly (or tropical).

* Or, 5 ff till 7 p.m.

† Or, 3 f continuing.

36. A conspicuous place should be selected for signalling; near the telegraph station; whence other places may repeat the signal, or be warned.

If practicable, the signal pole or staff should be in view of seafaring persons, and of the nearest coast-guard.

When both these objects cannot be attained without too great distance from the telegraph station, one only—that of visibility to some of the seafaring community—should be secured; and in this case a message should be sent to the nearest coast-guard, and charged at the authorized tariff.

37. Whenever such a signal is shown (in consequence of a telegram from London) it should be kept up, distinctly, till dusk of *that day only*, unless otherwise specially directed.

38. These cautionary signals advert to winds during some part of the next night and two or three days; therefore due *vigilance* should prevail (until the weather is again settled), without deferring *departures* or any operations *unnecessarily*.

39. Further notice may be given by *local interests* and *authorities*, as London can only warn principal out-ports. The Coast-guard may repeat the warning as far as means allow, and *extension* of such cautionary notices can be effected by *private* assistance along the most *frequented* shores, where alone they are required.

40. When a cautionary telegram is *received* at any place *after* three o'clock p.m., it should be followed by a NIGHT SIGNAL, which should be hoisted at dusk, and kept up till about midnight.

41. It should be remembered that only the greater and more *general* disturbances of the atmosphere can be made known by this method, not merely local or sudden changes which are not felt at a certain distance, and do not therefore affect other localities. Local changes may be indicated to observers at such places, by their own instruments,—by signs of the weather,—and by due consideration of the Weather Reports for a few previous days.

42. Much *inequality* of electricity, atmospheric pressure (*tension*), or temperature; great fall or rise of the barometer; sudden or rapid alternations; great falls of rain or snow, foretell more or less *strong* wind, with its

usual accompaniments, either in some places only, or throughout an extensive area of hundreds, if not thousands, of miles: some tracts, however, remaining unaffected.

43. Speaking *generally*, there is far less occasion to give warning of *southerly* gales, by signals, than of northerly; because those from the southward are preceded by notable signs of the atmosphere, such as a falling barometer, and a temperature higher than usual *at the season*; whereas, on the contrary, dangerous storms from a polar quarter (north-west to north-east) are sometimes sudden, and often are preceded by a *rising* barometer, which may mislead persons, especially if accompanied by a temporary lull of a day or two, with a fallacious appearance of fine weather. (This fallacy is caused by one circuit, or cyclone, following and influencing a preceding similar, though probably inferior movement).

44. It should be kept in mind that these signals are merely *cautionary*, to give notice of much atmospheric disturbance over some considerable part of the British Islands, without being in the least degree *compulsory*, or interfering with individual judgment on any occasion.

NIGHT SIGNALS.

45. Three, or four, signal lanterns, belonging to this Department, are intended to be hoisted, as shown in the following diagram.

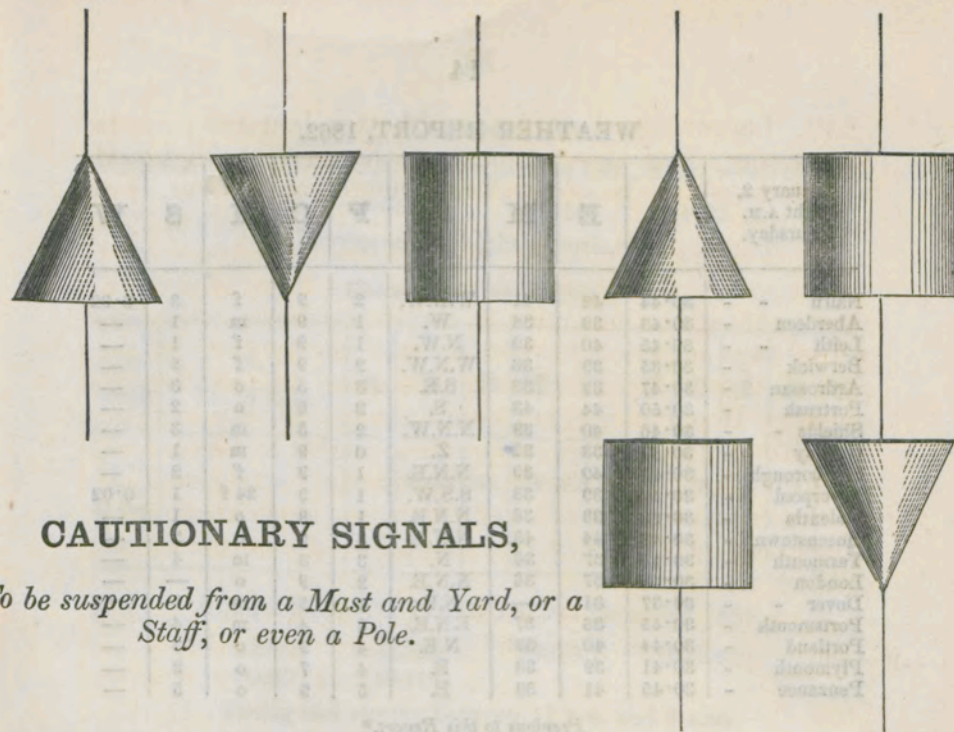
46. They should be kept up from dusk, or the time of receiving a warning telegram, until seven, eight, or nine the same evening; but they *may* be kept up later, if thought advisable on the spot, even till near *midnight*, but not after that time.

47. A person should be employed to clean, trim, hoist, keep alight, take care of, and return these signal lanterns, for which service one shilling for each night of actual use will be paid. This payment is intended to be an *average*, whether three or four lanterns are hoisted, and for whatever time shown lighted. Oil, wick, &c. will be sent to each station with the lanterns, to the care of the Company's clerk in charge.

48. Spreaders, or yards, not less than four or five feet long, should be provided at each station.

49. Larger signal shapes, and better lanterns; masts with yards; and greater distances between the lights of a signal, would be desirable—though, at present, too expensive.

50. Telegrams will not be sent on Sundays, except on *emergencies* (seldom occurring), and then, of course, only to those stations open at the time; but as vigilance will always prevail, by night as well as by day, on the part of those officers who are interested in the Meteorological Department, no great change of weather, or dangerous atmospheric commotion, ought to be unforeseen by them, nor should delay occur in telegraphing to the coasts threatened—at any time—since attempting to prevent unnecessary risk of human life is the object of these measures.



CAUTIONARY SIGNALS,

To be suspended from a Mast and Yard, or a Staff, or even a Pole.

Gale
probably
from the
Northward.

Gale
probably
from the
Southward.

Gales
successively.

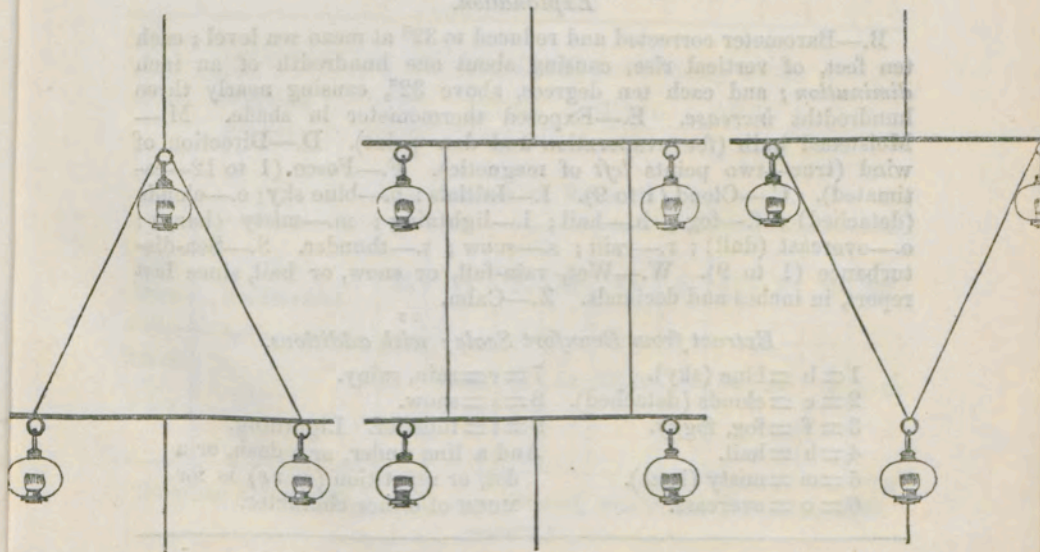
Dangerous
Winds
probably at first
from the
Northward.

Dangerous
Winds
probably at first
from the
Southward.

NIGHT SIGNALS.

(instead of the above)

Lights in triangle, or square.



Four lanterns and two yards, each not less than four feet long, will be sufficient—as only one signal will be used at night.

These signals may be made with any lanterns, shewing either white, or any colour, but *alike*. Red is most eligible. Lamps are preferable to candles. The halyards should be good rope, protected from chafing. The lanterns should hang at least three feet apart.

WEATHER REPORT, 1862.

January 2, Eight A.M. Thursday.	B	E	M	D	F	C	I	S	W
Nairn - -	30·44	42	41	W.N.W.	2	9	f	3	0·02
Aberdeen -	30·43	39	38	W.	1	9	m	1	—
Leith - -	30·45	40	39	N.W.	1	9	f	1	—
Berwick -	30·35	39	38	W.N.W.	2	9	f	2	—
Ardrossan -	30·47	39	38	S.E.	3	5	o	3	—
Portrush -	30·50	44	43	S.	2	6	o	2	—
Shields -	30·46	40	39	N.N.W.	2	5	m	3	—
Galway -	30·57	33	32	Z.	0	9	m	1	—
Scarborough -	30·45	40	39	N.N.E.	1	9	f	2	—
Liverpool -	30·49	39	38	S.S.W.	1	9	24 f	1	0·02
Valentia -	30·52	39	38	N.N.E.	1	9	o	1	—
Queenstown -	30·48	44	43	N.N.E.	3	6	o	2	—
Yarmouth -	30·45	37	36	N.	3	3	m	4	—
London -	30·44	37	36	N.N.E.	2	9	o	—	—
Dover - -	30·37	31	—	N.E.	4	5	m	3	0·04
Portsmouth -	30·45	38	37	E.N.E.	3	4	m	4	—
Portland -	30·44	40	39	N.E.	4	9	o	3	—
Plymouth -	30·41	39	38	E.	4	7	o	2	—
Penzance -	30·45	41	39	E.	5	9	o	5	—

*Previous to this Report.**

N. BRITAIN	- Mixed—Westerly and N.E., moderate, light. Foggy. Some rain.
IRELAND	- N.N.E. to E.—Light to moderate. Fine.
CENTRAL	- Similar—Variable and to S. Foggy. Some rain.
E. COAST	- N.W. to N., and N.E.—Moderate. Some rain in places.
S. ENGLAND	- N. to E.S.E.—Moderate to fresh. Some rain in places.

Probable before Saturday.

N. BRITAIN	- W. to N. and N.E.—In places light, moderate. Some rain.
IRELAND	- N. to E.—Moderate. Cloudy.
CENTRAL	- Variable—Chiefly easterly. Foggy. Rain or sleet in places.
E. COAST	- N.N.W. to N.E. and S.E.—Light to moderate. Misty.
S. ENGLAND	- Similar—N.N.E. to SE.

Explanation.

B.—Barometer corrected and reduced to 32° at mean sea level; each ten feet, of vertical rise, causing about one hundredth of an inch *diminution*; and each ten degrees, above 32°, causing nearly three hundredths *increase*. E.—Exposed thermometer in shade. M.—Moistened bulb (for evaporation and dew point). D.—Direction of wind (true—two points *left* of magnetic). F.—Force (1 to 12—estimated). C.—Cloud (1 to 9). I.—Initials: b.—blue sky; c.—clouds (detached); f.—fog; h.—hail; l.—lightning; m.—misty (hazy); o.—overcast (dull); r.—rain; s.—snow; t.—thunder. S.—Sea-disturbance (1 to 9). W.—Wet, rain-fall, or snow, or hail, since last report, in inches and decimals. Z.—Calm.

Extract from Beaufort Scale; with additions.

1 = b = blue (sky).	7 = r = rain, rainy.
2 = c = clouds (detached).	8 = s = snow.
3 = f = fog, foggy.	9 = t = thunder. Lightning.
4 = h = hail.	And a line under, or a dash, or a
5 = m = misty (haze).	dot, or repetition (as rr) is for
6 = o = overcast.	MUCH of either character.

* Taken from fifth and sixth groups of this morning's telegrams.

EXAMPLES:—

GALWAY TO LONDON, 21st September 1861, 8 AM., received at 10.

29444 56557 54118 04722

Hurricane last night; much rain.

CONVERSION IN REPORT.

1861. Days.	Bu. No. 13 Adie.	A	B	E	M	D	F	C	I	S	W
Satur- day, 21 Sep.			29·42	56	54	S.S.W.	4	7	c	2	—

ABERDEEN TO LONDON, 5th December 1861.

29600 55395 39018 03322

16087 98444

Strong and stormy between 11 P.M. and 3 A.M.

CONVERSION IN REPORT.

1861. Days.	Bu. No. 205 Adie.	A	B	E	M	D	F	C	I	S	W
Thurs- day, 5 Dec.			29·55	40	39	S.S.W.	3	3	c	2	—

LIVERPOOL TO LONDON, 2nd January 1862.

30488 40385 37917 01931 29013

04932 03002 fog 24 hours (or 24 f.)

CONVERSION IN REPORT.

1862. Days.	Bu. No. Standard.	A	B	E	M	D	F	C	I	S	W
Thurs- day, 2 Jan.			30·49	39	38	S.S.W.	1	9	24 f	1	0·02

Weather before this record, as registered, was South-Easterly—light—cloudy.

WEYMOUTH TO LONDON, 4th January 1862.

29974 49435 42528 01751
26012 01141 05003

CONVERSION IN REPORT.

1862. Days.	Bu. No. 235 Adie.	A	B	E	M	D	F	C	I	S	W
Satur- day, 4 Jan.		29.93	43	42	N.W.	1	7	m	1	0.03	

Weather before this record, as registered, was South-East—fresh breeze—very fine—clear.

YARMOUTH TO LONDON, 4th January 1862.

29750 48400 39032 05525 32047
97540 Six hours light fog—or (6 f.) till 4 p.m.

CONVERSION IN REPORT.

1862. Days.	Bu. No. 262 Adie.	A	B	E	M	D	F	C	I	S	W
Satur- day, 4 Jan.		29.73	40	39	N	5	5	c	5	—	

Weather before this record, as registered, was Six hours light fog (or 6 f) till 4 p.m. with North wind—moderate—rainy.

YARMOUTH TO LONDON, 6th January 1862.

30000 47360 35030 04885
02087 00036 05030

CONVERSION IN REPORT.

1862. Days.	Bu. No. 262 Adie.	A	B	E	M	D	F	C	I	S	W
Mon- day, 6 Jan.		29.99	36	35	N.N.W	4	8	s	5	0.30	

EXAMPLE OF THE WEEKLY WEATHER REGISTER.

LONDON, December, 1861, 8 A.M. and 3 P.M.

Days.	Bu. No. 877.	A	B	E	M	D	F	C	I	S	W
26	30.257	37	30.268	35	34	E.	2	9	m	—	—
	.298	39	.304	41	39	E.	2	9	m	—	0.02
27	.565	36*	.578	34	31	E.	1	9	f	—	—
	.570	37	.581	39	37	E.	2	9	o	—	—
28	.545	39	.550	39	37	E.	4	9	o	—	—
	.544	40	.547	40.5	38	E.N.E.	3	9	mo	—	—
29	Sunday		.492	31	30	N.N.E.	1	9	mo	—	—
			.451	34.5	33	E.	2	9	o	—	—
30	30.429	33.5	.450	29	27	E.	1	9	m	—	—
	.441	34	.460	36	34	E.	2	9	m	—	—
31	.452	38	.460	35	33	N.N.E.	3	9	om	—	0.04
	.417	39	.422	40	38	N.E.	2	9	om	—	—

1st January 1862, commenced on a fresh sheet.

WEATHER BEFORE RECORD ON THE

Days.

- 26 East—light. Clear. In morning hazy. Frost.
East—light. Hazy. Showers.
- 27 East—light. Mist to fog. Frosty.
East—light. Fog to haze. Overcast.
- 28 East—fresh. Misty. Overcast.
E. to E.N.E.—moderate. Overcast. Gloomy.
- 29 E.N.E. to N.N.E.—light. Hazy or slight fog.
N.N.E. to E.—light. Overcast.
- 30 Easterly*—variable. Light and calm. Foggy.
East—light. Misty or hazy. Overcast.
- 31 E. to N.N.E.—moderate. Misty. Rain in night.
N.N.E. and N.E.—light. Misty. Overcast.

WEATHER REGISTER.

LIVERPOOL, December and January, 1861-62, 9 A.M. and 3 P.M.

Days.	Rain.	A	B	E	M	D	F	C	I	S
30	0.00	39.1	30.501	30.5	30.4	S.S.E.	1	9	f	2
	0.00	38.0	30.506	34.3	33.0	S.S.E.	1	9	f	3
31	0.00	41.0	30.509	36.3	35.5	S.E.	1	9	f	2
	0.00	39.1	30.470	37.3	35.6	S.S.E.	1	9	f	2
1	0.00	39.3	30.462	30.9	30.8	S.S.E.	1	9	f	1
	0.00	38.2	30.468	36.2	35.3	S.W.	1	3	f	1
2	0.02	39.8	30.501	39.0	38.5	S.S.E.	1	9	f	1
	0.00	40.3	30.434	40.7	40.2	S.S.E.	1	9	f	1
3	0.13	42.0	30.171	41.2	40.6	N.W.	1	8	b-c	1
	0.00	44.4	30.093	44.8	44.0	W.N.W.	2	7	b-c	2
4	0.00	43.0	29.973	38.8	37.8	N.W.	1	2	b-c	2
	0.00	47.0	29.907	42.0	40.2	N.W.	2	3	b-c	2
5	0.00	45.7	29.808	45.2	43.9	W.N.W.	4	9	o	2
	0.00	45.7	29.894	46.0	43.6	N.	1	9	o	3

WEATHER BEFORE RECORD ON THE

Days.	
30	Northerly and South-easterly—light. Overcast. Fog. South-easterly—light. Overcast. Fog.
31	South-easterly—very light. Overcast. Fog. Easterly—very light. Overcast. Fog.
1	Variable—very light. Fog. Southerly—very light. Fog.
2	North-westerly—very light. Fog. Rain, 3 hours. S.S.E.—very light. Fog. Overcast.
3	S.S.E. and N.W.—light. Cloudy. Rain, 4 hours. North-westerly—light. Fine, clouds, detached.
4	North-westerly—fresh—squally. Clouds, detached. North-westerly—light. Fine; few clouds.
5	W.N.W.—moderate. Cloudy. Northerly—moderate. Cloudy.

WEATHER REGISTER.

WEYMOUTH, December and January, 1861-62, 8 A.M. and 3 P.M.

Days.	Bu. No. 235.	A	B	E	M	D	F	C	I	S
30	30.43	44	—	27	27	N.N.E.	3	0	f	2
	30.45	44	—	29	28	N.N.E.	2	0	f	2
31	30.44	45	—	36	35	E.N.E.	5	4	mc	3
	30.41	50	—	40	38	E.	6	5	mc	4
1	30.43	46	—	36	34	N.E.	4	9	om	3
	30.45	47	—	35	33	N.E.	4	9	om	2
2	30.48	48	—	40	39	N.E.	4	9	o	3
	30.45	48	—	41	39	N.E.	5	6	c	3
3	30.25	48	—	37	36	W.N.W.	1	8	o	3
	30.11	49	—	42	41	W.N.W.	1	7	mo	1
4	29.97	49	0.03	44	43	N.W.	1	7	m	1
	30.01	51	—	48	46	N.W.	2	4	mc	1
5	29.91	49	—	44	42	N.W.	3	2	be	2
	29.93	51	—	47	44	N.W.	5	5	c	3

WEATHER BEFORE RECORD ON THE

Days.	
30	North-easterly—light. Hard frost. Fog, getting thicker since 11 A.M. yesterday. N.N.E.—light. Dense fog. Still freezing. Thermometer rising.
31	North-easterly—moderate to fresh. Foggy. Frosty. Easterly—fresh. Very misty.
1	North-easterly—fresh. Overcast. Gloomy. North-east—moderate. Overcast. Gloomy. Hazy.
2	Ditto Ditto Ditto. Ditto Ditto Ditto.
3	Ditto Cloudy. Fine. W.N.W.—light. Showery. Misty. Fine. Rainy.
4	Ditto Ditto Ditto. North-easterly—variable, light. Fine. Misty. Mild.
5	North-west—variable, light. Fine. Misty. Mild. North-west—moderate to fresh. Fine. Misty. Cloudy.

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Newport * †	2	E.T.		3	84	
Peterstone -	4					
Cardiff * † (Glamorgan) -	1	E.T.		17	76	
Penarth -	3	G.				
Sully -	3					
Porthkerry -	3					
West Aberthaw -	3					
Porth Cawl *	3	G.				
Port Talbot *	3	E.T.				
Briton Ferry -	3	E.T.				
Neath *	3	E.T.				
Swansea * †	1	E.T. G.		18	139	120
Oystermouth -	4					
Mumbles -	3	E.T. G.				
Oxwich -	4					
Penard -	3					
Port Eynon -	3					
Roshilly -	4					
Bury Port -	4	G.				
Llanelly * † (Caermarthen)	1	E.T.		3	79	
Pembrey *	3					
Penclawdd *	3					
Kidwelly -	3					
Caermarthen *	2	E.T.				
Laugharne -	4					
Sandersfoot -	4					
Tenby -	3	G.				
Manorbeer -	4					
Bosheston -	4					
Angle -	4					
Pembroke * (Pembroke) -	2	G.				
Milford * †	1	E.T. G.		1	151	
St. Ishmael's -	4					
Dale -	3					
St. Bride's -	4					
Littlehaven -	4					
Nolton -	4					
Solva -	3					
Trevine -	4					
Abercastle -	3					
Goodick -	3	G.				
Fishguard -	3					
Dinas -	3					
Newport *	2					
St. Dogmels -	3	G.				
Cardigan * † (Cardigan) -	2				196	
Aberport -	3					
Penbryn -	3					
Llangranog -	4					
Newquay -	3	G.				
Aberaeron *	3					
Aberarth -	3					

LONDON :

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 For Her Majesty's Stationery Office.

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Llansantffraid	-	3				
Aberystwith * †	-	2		1	365	
Borth	-	4				
Aberdovey *	-	3				
Towyn (Merioneth)	-	4				
Llangelynin	-	4				
Barmouth *	-	3				
Llanaber	-	3				
Harlech	-	3				
Portmadoc *	-	3				
Criccieth (Caernarvon)	-	3				
Pwllheli *	-	3				
Llanbedrog	-	4				
Abersoch	-	4				
Aberdaron	-	4				
Nevin	-	4				
Clynog-fawr	-	4				
Caernarvon * †	-	2	E.T.	2	500	
Portenleen *	-	3				
Port Dinorwic *	-	3				
Bangor	-	2	E.T. G.			
Llandwyn	-	4	G.			
Aberffraw (Isle of Anglesea)	-	3		500		
Rhoscolyn	-	4		200	1	10
Holyhead *	-	2	E.T. G.	4,000	20	20
Penrhos	-	4			50	
Cemmaes	-	4				
Amlwch *	-	3	G.			
Llaneilian	-	4				
Dulas	-	4				
Llanddona	-	4				
Llanfaes	-	4				
Beaumaris * †	-	1	G.		287	
Llanfair-fechan (Caernarvon).	-	4				
Conway	-	2	E.T. G.			
Llandudno (Denbigh)	-	4				
Abergeley	-	4	E.T.			
Rhyl * (Flint)	-	3	E.T. G.			
Prestatyn	-	4				
Greenfield	-	4				
Moyston *	-	3	E.T.			
Flint * and Baggit	-	3	E.T. G.			
Chester † (Chester)	-	2	E.T. G.	13	112	
Neston	-	4				
West Kirby	-	4				
Hoyle	-	4	G.			
Hoose	-	3				
New Brighton	-	3				
Birkenhead	-	2	E.T.			
Eastham	-	4	G.			
Runcorn	-	2	M.T.			

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Garston	-	3	M.T.			
Liverpool * † (Lancaster)	-	1	M.T. G.	223	2,228	160
Bootle	-	3				
Waterloo	-	3	G.			
Seaforth	-	3				
Crosby	-	3				
Formby	-	3				
Southport	-	2	M.T. G.			
Hesketh Bank	-	3				
Preston * †	-	2	E.M.T.	3	108	
Freckleton	-	3				
Lytham *	-	3	M.T. G.			
Blackpool	-	3	M.T.			
Fleetwood * †	-	2	M.T. G.	4	84	
Glasson Dock	-	3	M.T.			
Lancaster * †	-	2	E.M.T.	9	133	
Morecambe	-	3	G.			300
Poulton	-	3	M.T.			
Arnside	-	3				
Aldingham	-	3				
Ulverstone	-	3	E.T.			
Piel	-	3	G.			
Barrow	-	3	E.T.			
Ireleth	-	3				
Angerton	-	3				
Haverigg	-	3	G.			
Ravenglass (Cumberland)	-	3	E.T. G.			
Nethertown	-	3				
St. Bees	-	3	E.T.			
Whitehaven * †	-	1	E.T. G.	12,000	2	187
Parton	-	3				
Harrington	-	3				
Workington * †	-	2	E.T.		1	92
Flimby	-	3				
Maryport * †	-	1	E.T. G.		4	114
Allonby	-	3				
Leys	-	3				
Port Silloth	-	3	M.T. G.			
Skinburness *	-	2				
Carlisle †	-	2			4	24
Kirkbride	-	3				
Port Carlisle	-	2	M.T. G.			
Bowness	-	3	M.T. G.			
Ramsay * † (Isle of Man †)	-	3				
Douglas * †	-	2	M.T. G.			
Darbyhaven *	-	3				
Castleton †	-	2				
Port Mary	-	3				
Peel * †	-	3	G.			

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
SCOTLAND.						
Port Annan * (Dumfries)	2	M.T.				
Foot - - -	3	G.				
Barnes - - -	3					
Dumfries * † - -	2	M.T.			125	
Castle Douglas - -	3	M.T.				
Kirkconnel (Kirkcudbright)	3					
Corbely - - -	3					
Arbigland - - -	3					
Southernness - -	3	G.				
Preston Cross - -	3					
Sandyhills - - -	3					
Palnachie - - -	3	G.				
Auchercain - - -	3					
Barlochan* - - -	3					
Port Mary - - -	3					
Glencaple * - - -	3	G.				
Kirkcudbright* - -	2	M.T.				
Bridgehouse - - -	3					
Kirkandrew - - -	3					
Gatehouse * - - -	2	M.T.				
Creetown - - -	3					
Wigtown * † (Wigtown)	2	M.T.		1	50	
Garlieston - - -	3					
Port Yarrock - - -	3					
Whithorn * - - -	2					
Milltown - - -	3					
Port William - - -	3					
Achenmalg - - -	3					
Glenluce - - -	3					
Drumore * † - - -	3	G.				
Portencorkie - - -	3					
Portnessock - - -	3					
Spittal - - -	3					
Port Patrick † - -	2	M.T.			5	20
Kirkcolm - - -	3					
Stranraer * † - -	2	M.T. G.			34	
Cairn Ryan - - -	3	G.				
Ballantrae † (Ayr)	3					31
Dunure - - -	3					30
Ardwell - - -	3					
Girvan * † - - -	2	M.T.				18
Ayr * † † - - -	2	M.T.	7	2	42	26
Troon * - - -	2	M.T.				
Irvine * † - - -	2	M.T.		3	118	30
Saltcoats - - -	2		5,000			20
Ardrossan * - - -	2	M.T. G.	3,000	2	80	4

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
IRELAND.						
Ballyhillin (Donegal)	-	4				
Sandyport	-	4				
Glengad Head	-	4	G.			
Ballymenagh	-	4				
Culdaff	-	3				
Port Redford	-	4	G.			
Ballymagarah	-	4				
Ballybane*	-	3				
Ballyboes	-	4				
Greencastle	-	4	G.			
Rathlin Island	-	4		120		16
Moville	-	3	G.			
Carrokwheel	-	3				
Culmore	-	4	G.			
Londonderry * † (Derry)	-	1	M.T.		6	33
Coleraine * †	-	2	M.T.	8,000		7
Port Stewart (Antrim)	-	3		280		9
Port Rush	-	3	M.T. G.	320		2
Port Ballintrae	-	3	G.	110		10
Ballintoy	-	3	G.	300		26
Ballycastle	-	2	G.	310		2
Murlough Bay	-	4	G.	30		4
Torr Head	-	3	G.	85		12
Cushendun	-	4	G.	80		6
Cushendall	-	3	G.	400		6
Carnlough	-	3	G.	300		4
Glenarm	-	3	G.	500		6
Ballygally	-	4	G.	30		
Larne	-	2	G.	1,500		40
Port Muck	-	4	G.	80		2
Black Head	-	4	G.	40		2
Kilroot	-	4	G.	60		
Carrickfergus	-	2	M.T. G.	2,000		20
Whitehouse	-	3	G.	200		4
Belfast * †	-	1	M.T. G.	65,000	13	492
Hollywood (Down)	-	3	M.T. G.	1,500		6
Crawfordsburn	-	3	G.	100		
Bangor	-	3	G.	1,600		10
Groomsport	-	4	G.	150		
Orlock Hill	-	4	G.	40		
Donaghadee	-	2	G.	1,500		8
Millisle	-	4	G.	100		
Roddens	-	4	G.	50		
Cloghy	-	3	G.			
Tara	-	3	G.			
Portaferry	-	3	G.			
Quoile*	-	2				
Strangford †	-	2	G.			60
Killard	-	4	G.			
Gun's Island	-	4	G.			
Ardglass	-	2	G.			

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Killough - - -	2	G.				
Dundrum - - -	3					
Newcastle - - -	3	G.				
Annalong - - -	3	G.				
Kilkeel - - -	3	G.				
Crandfield - - -	4	G.				
Killowen - - -	4	G.				
Rostrevor - - -	2	M.T. G.				
Warrenspoint - - -	2	G.				
Newry * † - - -	2			5	115	
Carlingford - - -	2	G.				
Whitestown (Louth) - - -	4	G.				
Riverstown - - -	4					
Templetown - - -	4					
Dundalk * † - - -	2	M.T.		5	27	
Soldier's Point - - -	4	G.				
Haggardstown - - -	4					
Lurgangreen - - -	4					
Annagassan - - -	4					
Roadstown - - -	4	G.				
Clogher - - -	3	G.				
Baltray - - -	3	G.				
Drogheda * † - - -	2	M.T.		5	44	
Nanny Water - - -	3	G.				
Gormanstown - - -	3					
Balbriggan (Dublin) - - -	2	M.T. G.	2,310			
Skerries - - -	4	G.	2,330			
Loughshiney - - -	4					
Rush - - -	3	G.	1,500			
Portrane - - -	4	G.				
Lambay I. - - -	4	G.				
Malahide - - -	2	M.T. G.	1,340			
Baldoyle - - -	3	G.	1,130			
Howth - - -	3	G.	1,720			
Clontarf - - -	3	G.	2,680			
Ringsend - - -	3	G.	2,060			5
Dublin * † - - -	1	M.T.	258,300	53	483	
Kingstown - - -	2	M.T. G.	10,450			15
Dalkey - - -	3	G.	2,230			
Killiney - - -	3					
Bray (Wicklow) - - -	3	M.T. G.	4,500			
Greystones - - -	3	G.				
Five Mile Point - - -		G.				
Wicklow - - -	2	M.T. G.	3,140			14
Innishboheen - - -	4					
Maghremore - - -	3	G.				
Arklow - - -	2	G.	3,300			90
Kilmichael - - -	4	G.				
Ballymoney - - -	4	G.				
Courtown (Wexford) - - -	3	G.	800			30
Cahore - - -	4	G.	250			10
Morris Castle - - -	4	G.	100			6

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Blackwater - - -	4		400			20
Curraclloe - - -	4	G.	400			20
Wexford * † - - -	2	G.	9,000	3	100	50
Ballygeary - - -	4	G.	300			15
Carnsore - - -	4	G.	300			6
Kilmore - - -	3	G.	1,000			40
Ballyhealy - - -	4		80			6
Bar of Lough - - -	3	G.	200		1	6
Bannow - - -	3		200		3	5
Fethard - - -	3	G.				
Ross † - - -	3				16	
Arthurstown - - -	3	G.				
Ballyhack - - -	3					
Waterford * † (Waterford) - - -	1	M.T.		35	150	
Dunmore - - -	3	G.				
Ballymacaw - - -	4	G.				
Tramore - - -	3	G.				
Islands of Kane - - -	4	G.				
Bunmahon - - -	2	G.				
Ballinacourty - - -	4	G.				
Dungarvan - - -	2					
Ardmore - - -	3	G.	450			20
Youghal * (Cork) - - -	2	G.	4,000		50	30
Knockadoon - - -	4	G.	800			20
Ballycotton - - -	3	G.	360		5	70
Ballycroneen - - -	4	G.	100			9
Poorhead - - -	4	G.	550			30
Whitegate - - -	3	G.	1,000		9	27
East Ferry - - -	4	G.	60			
Queenstown - - -	2	M.T. G.	2,880			29
Cork * † - - -	1	M.T.	78,900	33	377	
Blackrock - - -	3	G.	700			9
Crosshaven - - -	3	G.	300	1		17
Ringabella - - -	3	G.	50			6
Oysterhaven - - -	3	G.	90		4	6
Kinsale * - - -	2	G.	520		20	63
Ballymakeen - - -	4	G.				
Howstrand - - -	4	G.	120			21
Courtmacsherry - - -	3	G.	200		4	30
Dunworly - - -	4	G.	20			3
Clonakilty - - -	3				5	10
Dunny Cove - - -	4	G.	60			13
Dirk Cove - - -	4	G.	40			13
Rosscarberry - - -	3					
Milk Cove - - -	4	G.				
Glandore - - -	3	G.				
Castletownsend - - -	3	G.				
Barlogue - - -	3	G.				
Baltimore - - -	3	G.				
Roaring Water - - -	3					
Skibbereen * † - - -	3					
Ballydahob - - -	3					

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Skull	3	G.				
Crookhaven	3	G.				
Dunmanus	4	G.				
Aghakisty	4					
Blue Hill	4	G.				
Bantry	2					
Ballylickey	4					
Glengariff	2					
Ardrigole	3					
Castletown	3	G.				
Cahirmore	4	G.				
Longslane	4					
Ardgroom	3					
Kilmichalog (Kerry)	3	G.				
Kenmare	2					
West Cove	4	G.				
Waterville	4					
Ballinskilligs	3	G.				
Eeny Bridge	3					
Port Magee	3					
Valentia	2	M.T. G.				
Cahirciveen	3	G.				
Ballycarberry	4					
Kells	4	G.				
Cromane Pt.	4	G.				
Minnard	4	G.				
Dingle*	3	G.				
Ventry	3	G.				
Ferriters Cove	3	G.				
Ballydavid	4	G.				
Brandon	4	G.				
Castle Gregory	3	G.				
Blennerville	4					
Tralee* †	2	M.T.	300			
Barrow	3	G.	8,000	16	12	
Ballyheighe	4	G.				
Cashen	3	G.				
Ballylongford	3					
Tarbert	2	G.				
Glin (Limerick)	3					
Loughil	3					
Foynes*	3					
Askeaton*	3					
Limerick* †	2	M.T.		5	48	
Cappa (Clare)	4	G.				
Kilrush*	2	G.				
Clare*	3					
Carrickaholt	3	G.				
Kilkee	4	G.				
Dunbeg	4					
Seafeld	4	G.				
Freagh Point	4	G.				

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Liscanor	3					
Doolin	4					
Ballyvaughan	4	G.				
Kinvarra (Galway)	3					
Ardfry	3	G.				
Galway* †	2	M.T. G.		1	19	
Freeport	3	G.				
Spiddal	3	G.				
Costello	3	G.				
North Arran, I.	4	G.				
Lettermore	4	G.				
Roundstone	4	G.				
Bayleek	4	G.				
Clifden	3	G.				
Claggan	3	G.				
Killeries	3	G.				
Falduff (Mayo)	3	G.				
Westport* †	3	G.				4
Newport	4	G.				
Innislyre	4	G.				
Achil Beg	4	G.				
Keel	4	G.				
Ballsmouth	4	G.				
Tulloughan	4	G.				
Bellmullet	3	G.				
Ely Bay	4	G.				
Blacksod Quay	4	G.				
Portnafrank	4	G.				
Ballyglass	4	G.	250			6
Dunkeehan	4	G.	300			25
Porturlin	4	G.	450			33
Belderig	4	G.	400			
Doonfeeny	4	G.	400			7
Ballycastle	3	G.	50			5
Kilcummin	4	G.				5
Ross	3		900			8
Killala	3					
Ballysakeery	4					
Ballina* †	2		5,450	1	5	10
Inniscrone	4	G.	250			36
Pullacheeny (Sligo)	4	G.	250			5
Easky	4					
Pullandiva	4	G.				
Portavad	4	G.				
Ballysadare	3					
Sligo* †	2	G.		3	34	
Ross Point	4	G.				
Rackley	4	G.				
Drumcliff	3					
Mullaghmore	3	G.				
Ballyshannon (Donegal)	2					
Rossnowlagh	4					

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Donegal*	-	2	900		1	15
Dooran -	-	3	740			62
Inver	-	4	560			94
Dunkineely	-	4				
Tribane	-	4	920		2	97
Killybegs	-	3				
Kilcar	-	4	380		7	56
Teelin	-	4				
Malin More	-	4	80			6
Loughrus	-	3	1,850			94
Ardara	-	3				
Portnoo	-	4	360			25
Dungloe or Croie	-	3	1,630			12
Aran Island	-	4	760			50
Gweedore or Bunbeg	-	3	1,120			10
Rutland	-	3	1,210			50
Ballyness	-	3	300			50
Dunfanaghy *	-	3	300			50
Doagh	-	4	100			20
Mulroy	-	3	400			200
Knockhallow	-	4				
Rathmullen	-	3				
Rathmelton	-	3				
Cunningham	-	4				
Buncrana	-	3				
Portbane	-	3				
Cardonagh	-	4				
Malin Head	-	4				
SCOTLAND.						
Fairlie (Ayr)	-	3	200			20
Largs	-	3	500			80
Inverkip (Greenock)	-	3	200			30
Gourock	-	3				
Bowling Bay *	-					
Renfrew *	-	2				
Greenock *†	-	1	E.M.T. G.	15,000	30	387 600
Glasgow†	-	1	E.M.T.		166	497
Port Glasgow *†	-	2	E.M.T.		9	40
Dumbarton (Dumbarton)	-	2				
Helensburgh	-	2	E.M.T.			
Roseneath	-	3				
Arrochar	-	3				31
Kilmun (Argyle)	-	3	100			20
Dunoon†	-	3	300			40
Rothsay† (Bute)	-	2	3,000		27	200
Port Bannatyne	-	4	80			10
Port Wemyss	-	4				
Inverary (Argyle)	-	2				45
Ardishaig *†	-	2	630			200
East Tarbert	-	3	800			150

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Campbeltown *††	-	2			2	43 68
Lamlash (Arran)	-	2	1,400		2	19 191
Loch Ransa†	-	3				3
Machrianish	-	3				10
Killeen	-	3	40		2	32
Gigha†	-	3	25			6
Kilberry	-	4	12			
Portaskaig† (Islay*)	-	4	400			160
Portellen	-	3	200			
Portnahaven	-	3	450			10
Bowmore	-	3	300			
Jura	-	3	120			18
Colonsay†	-	3	110			
Oronsay†	-	3				12
Loch Crinan	-	3				15
Oban* (Argyle)	-	2	500			
Tobermory* (Mull)	-	3	500		5	15
Achnacraig and district	-	3			9	180
Fort William *	-	3				
Ardnamurcham (Inverness)	-	3				
Arasaig	-	4				
Glenelg	-	4				
Lochalsh	-	4				
Lochcarron	-	4				
Dunan† (Skye)	-	3			60	160
Portree†	-	3			90	180
Uig	-	4				
Snizort	-	4				
Kilmur	-	4				
Braccadale	-	4				
Ardavaser†	-	4			3	25
Broadford†	-	3			20	40
Kyleakin *†	-	3				
Loch Alsh	-	4				
Scalpa Rasay	-	4				
Loch Carron† (Ross)	-	4				
Cronlin†	-	4			2	7
Kishorn†	-	3			2	20
Applecross†	-	3			6	36
Lonebane†	-	3			4	19
Kenmore†	-	3			4	5
Shieldag†	-	3			7	25
Ardmore†	-	3				20
Torridon†	-	3				39
Diebeg†	-	4				
Gairloch†	-	3			8	63
Longa†	-	4				
Aldgrishag†	-	3				
Poolew† (Loch Ewe)	-	3				18
Fisherfield†	-	3				16
Griernard†	-	3				18
Loch Broom†	-	3				

Place.	Class.	Station.	Remarks.			
			a.	b.	c.	d.
Ullapool † (Cromarty)	- 3					47
Isle Martin †	- 3					7
Ackeldabig †	- 3					19
Tannera †	- 3					14
Aultandie †	- 3					12
Lochinver † (Sutherland)	3					12
Clacktoll †	- 4					30
Glendue †	- 3					8
Scourie †	- 4					18
Bradcall †	- 4					
Achragraskill	- 4					
Scoraig †	- 3					7
Sandwick	- 4					
HEBRIDES.						
Stornoway * † †	- 2					290
Babyle †	- 3					37
Port-na-Guron †	- 3					40
Callicot †	- 3					25
Berneray * †	- 3					12
Carloway †	- 3					16
Scalpa †	- 3					14
Lochshell †	- 3					15
Cromore †	- 3					59
North Uist *	- 3					
Harris * †	- 3					
South Uist *	- 3					
Barra †	- 4					
Benbecula †	- 4					
Eriskay †	- 4					

Additional information will be collected, and given in another edition.

The numbers in columns of Remarks *a*, *b*, *c*, and *d*, are *approximate* only, at present.

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Staxigo and Elzie	- 4	Tribane	- 26	Wilkhaven	- 5
Stennis	- 3	Trimingham	- 10	Wilthorpe	- 9
Stirling	- 7	Troon	- 20	Winchelsea	- 12
Stockton on Tees	- 8	Truro	- 15	Winterton	- 10
Stonehaven	- 6	Trusthorpe	- 9	Winthorpe	- 9
Stonhouse	- 15	Tulloughan	- 25	Wisbeach	- 9
Stokes Bay	- 13	Tunstall	- 9	Withernsea	- 9
Stornoway	- 28	Tweedmouth	- 7	Woodbridge Haven	- 10
Strathferry	- 4	Tynemouth	- 8	Woolston	- 13
Strathy	- 4			Workington	- 19
Strangford	- 21			Worthing	- 13
Stranraer	- 20	Uig	- 27	Wrangle	- 9
Stroma	- 4	Ullapool	- 28	Wyke Regis	- 14
Stromness	- 3	Ulverstone	- 19		
Stronsay	- 3	Uphill	- 16	Yantlet Creek	- 11
Studland Bay	- 14	Uya Sound	- 3	Yarmouth	- 13
Sully	- 17	Uzon	- 6	Yealm	- 15
Sunderland	- 8			Youghal	- 23
Sutton Bridge	- 9				
Sutton	- 9				
Swale Cliff	- 11				

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For Her Majesty's Stationery Office.

BOARD OF TRADE.

CONVERSION TABLES

OF

EQUIVALENT WORDS, LETTERS, AND FIGURES,

ARRANGED FOR TELEGRAPHING, FOR REDUCTION, AND FOR COMPARISONS,

AND FOR REPORTING

METEOROLOGICAL OBSERVATIONS.



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FOR HER MAJESTY'S STATIONERY OFFICE.

AND

SOLD BY J. D. POTTER, 31, POULTRY, AND 11, KING STREET, TOWER HILL.

1861.

EQUIVALENTS FOR FRENCH WORDS DESCRIPTIVE OF WEATHER.

Beau	-	-	-	Fine	-	-	b*	1†
Belle	-	-	-	Smooth, still	-	-	f	3
Brouillard	-	-	-	Fog	-	-	g	—
Brumeux-se	-	-	-	Foggy	-	-	b	1
Ciel	-	-	-	Sky	-	-	o	6
Clair-e	-	-	-	Clear	-	-	q q or q	—
Couvert-e	-	-	-	Overcast	-	-	l	4
Coup (de vent)	-	-	-	Heavy squall	-	-	ll or l	—
Eclair	-	-	-	Lightning	-	-	—	—
Eclaireux-se	-	-	-	Lightning around	-	-	(— or • or)	—
Faible	-	-	-	Light, slight	-	-	q or q	—
Fort-e	-	-	-	Much, strong	-	-	(— or • or)	—
Grains	-	-	-	Squally	-	-	(repeated letter)	—
Grand-e	-	-	-	Great, much	-	-	(— or • or)	—
Humide-ité	-	-	-	Damp, humidity	-	-	(repeated letter)	—
Intense-ité	-	-	-	Intense-ity	-	-	(— or • or a)	—
Legèr-e-ment	-	-	-	Light-ly	-	-	(repetition)	—
Mauvais-e	-	-	-	Bad, threatening	-	-	u	—
Nebeux-se	-	-	-	Misty, hazy, obscure	-	-	m	5
Neige-ant	-	-	-	Snow-ing	-	-	s	8
Nuage-s-eux-se	-	-	-	Cloud-s-y	-	-	c	2
Orage-ux	-	-	-	Storm-y	-	-	qww	—
Pluie-s	-	-	-	Rain-s	-	-	rr	7
Pluvieux-se	-	-	-	Rainy	-	-	r	—
Presque	-	-	-	Almost, slight	-	-	—	—
Rafales	-	-	-	Sudden squalls	-	-	q	—
Serein-e	-	-	-	Serene, settled	-	-	b c	1
Sombre	-	-	-	Gloomy, dark	-	-	g or g g	6
Tempête	-	-	-	Tempest	-	-	w w q q	—
Tempestueux-se	-	-	-	Tempestuous	-	-	—	—
Tonnerre	-	-	-	Thunder	-	-	t	9
Tonnant-e	-	-	-	Thundery	-	-	tt	—
Très	-	-	-	Very, excessively	-	-	(— or • or a)	—
							(repetition)	—

* Beaufort Letters, with additions.

† Telegraphing Numbers 1 to 9.

WIND SCALES.

SEA SCALE.		WIND.		LAND SCALE.
0 to 3	=	Light	=	0 to 1
3 " 5	=	Moderate	=	1 " 2
5 " 7	=	Fresh	=	2 " 3
7 " 8	=	Strong	=	3 " 4
8 " 10	=	Heavy	=	4 " 5
10 " 12	=	Violent	=	5 " 6
Pressure in Pounds (Avoirdupois.)		(Land Scale.)		Velocity in Miles (Hourly.)
1 1/2	=	1	=	10
5	=	2	=	32
10	=	3	=	45
21	=	4	=	65
26	=	5	=	72
32	=	6	=	80

FAHRENHEIT.

Fahren-heit.	Centi-grade.	Reau-mur.	Fahren-heit.	Centi-grade.	Reau-mur.	Cen-tigrade.	Fah-renheit.	Reau-mur.	Cen-tigrade.	Fah-renheit.	Reau-mur.
1°	-17°2	-13°8	51°	10°6	8°4	-17°	1°4	-13°6	11°	51°8	8°8
2	16°7	13°3	52	11°1	8°9	16	3°2	12°8	12	53°6	9°6
3	16°1	12°9	53	11°7	9°3	15	5°0	12°0	13	55°4	10°4
4	15°6	12°4	54	12°2	9°8	14	6°8	11°2	14	57°2	11°2
5	15°0	12°0	55	12°8	10°2	13	8°6	10°4	15	59°0	12°0
6	14°4	11°6	56	13°3	10°7	12	10°4	9°6	16	60°8	12°8
7	13°9	11°1	57	13°9	11°1	11	12°2	8°8	17	62°6	13°6
8	13°3	10°7	58	14°4	11°6	-10	14°0	-8°0	18	64°4	14°4
9	12°8	10°2	59	15°0	12°0	9	15°8	7°2	19	66°2	15°2
10	12°2	9°8	60	15°6	12°4	8	17°6	6°4	20	68°0	16°0
11	-11°7	-9°3	61	16°1	12°9	7	19°4	5°6	21	69°8	16°8
12	11°1	8°9	62	16°7	13°3	6	21°2	4°8	22	71°6	17°6
13	10°6	8°4	63	17°2	13°8	5	23°0	4°0	23	73°4	18°4
14	10°0	8°0	64	17°8	14°2	4	24°8	3°2	24	75°2	19°2
15	9°4	7°6	65	18°3	14°7	3	26°6	2°4	25	77°0	20°0
16	8°9	7°1	66	18°9	15°1	2	28°4	1°6	26	78°8	20°8
17	8°3	6°7	67	19°4	15°6	-1	30°2	-0°8	27	80°6	21°6
18	7°8	6°2	68	20°0	16°0	0	32°0	0°0	28	82°4	22°4
19	7°2	5°8	69	20°6	16°4	+1	33°8	+0°8	29	84°2	23°2
20	6°7	5°3	70	21°1	16°9	2	35°6	1°6	30	86°0	24°0
21	-6°1	-4°9	71	21°7	17°3	3	37°4	2°4	31	87°8	24°8
22	5°6	4°4	72	22°2	17°8	4	39°2	3°2	32	89°6	25°6
23	5°0	4°0	73	22°8	18°2	5	41°0	4°0	33	91°4	26°4
24	4°4	3°6	74	23°3	18°7	6	42°8	4°8	34	93°2	27°2
25	3°9	3°1	75	23°9	19°1	7	44°6	5°6	35	95°0	28°0
26	3°3	2°7	76	24°4	19°6	8	46°4	6°4	36	96°8	28°8
27	2°8	2°2	77	25°0	20°0	9	48°2	7°2	37	98°6	29°6
28	2°2	1°8	78	25°6	20°4	+10	50°0	+8°0	38	100°4	30°4
29	1°7	1°3	79	26°1	20°9						
30	1°1	0°9	80	26°7	21°3						
31	-0°6	-0°4	81	27°2	21°8						
32	0°0	0°0	82	27°8	22°2						
33	+0°6	+0°4	83	28°3	22°7						
34	1°1	0°9	84	28°9	23°1						
35	1°7	1°3	85	29°4	23°6						
36	2°2	1°8	86	30°0	24°0						
37	2°8	2°2	87	30°6	24°4						
38	3°3	2°7	88	31°1	24°9						
39	3°9	3°1	89	31°7	25°3						
40	4°4	3°6	90	32°2	25°8						
41	+5°0	+4°0	91	32°8	26°2						
42	5°6	4°4	92	33°3	26°7						
43	6°1	4°9	93	33°9	27°1						
44	6°7	5°3	94	34°4	27°6						
45	7°2	5°8	95	35°0	28°0						
46	7°8	6°2	96	35°6	28°4						
47	8°3	6°7	97	36°1	28°9						
48	8°9	7°1	98	36°7	29°3						
49	9°4	7°6	99	37°2	29°8						
50	+10°0	+8°0	100	37°8	30°2						

11 = .2
 .2 = .4
 .4 = .5
 .5 = .7
 .7 = .8
 .8 = 1.1
 1.1 = 1.3
 1.3 = 1.4
 1.4 = 1.6

BAROMETER.

MILLIMETRES AND ENGLISH INCHES.

Mill.	Inches.	Mill.	Inches.	Mill.	Inches.	Mill.	Inches.
712	28.032	731	28.780	750	29.528	769	30.276
3	.071	2	.819	1	.568	770	.316
4	.111	3	.859	2	.607	1	.355
5	.150	4	.898	3	.646	2	.394
6	.190	5	.938	4	.686	3	.434
7	.229	6	.977	5	.725	4	.473
8	.268	7	.916	6	.764	5	.512
9	.308	8	.956	7	.804	6	.552
720	28.347	9	.995	8	.843	7	.591
1	.386	740	29.134	9	.882	8	.631
2	.426	1	.174	760	.922	9	.670
3	.465	2	.213	1	29.961	780	30.709
4	.505	3	.253	2	30.001	1	.749
5	.544	4	.292	3	.049	2	.788
6	.583	5	.331	4	.079	3	.827
7	.623	6	.371	5	.119	4	.867
8	.662	7	.410	6	.158	5	.906
9	.701	8	.449	7	.197	6	.945
730	28.741	749	29.489	768	30.237	787	30.985

Proportional Parts.

Mill.	Inch.
0.1	0.004
0.2	.008
0.3	.012
0.4	.016
0.5	.020
0.6	.024
0.7	.028
0.8	.032
0.9	.035

English Inches—and Millimetres.

Inches	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	Inches
28.0	mm. 711.2	mm. 711.4	mm. 711.7	mm. 712.0	mm. 712.2	mm. 712.5	mm. 712.7	mm. 713.0	mm. 713.2	mm. 713.5	28.0
.1	13.7	14.0	14.2	14.5	14.7	15.0	15.3	15.5	15.8	16.0	.1
.2	16.3	16.5	16.8	17.0	17.3	17.5	17.8	18.0	18.3	18.6	.2
.3	18.8	19.1	19.3	19.6	19.8	20.1	20.3	20.6	20.8	21.1	.3
.4	21.3	21.6	21.9	22.1	22.4	22.6	22.9	23.1	23.4	23.6	.4
.5	23.9	24.1	24.4	24.7	24.9	25.2	25.4	25.7	25.9	26.2	.5
.6	26.4	26.7	26.9	27.2	27.4	27.7	28.0	28.2	28.5	28.7	.6
.7	29.0	29.2	29.5	29.7	30.0	30.2	30.5	30.7	31.0	31.3	.7
.8	31.5	31.8	32.0	32.3	32.5	32.8	33.0	33.3	33.5	33.8	.8
.9	34.0	34.3	34.6	34.8	35.1	35.3	35.6	35.8	36.1	36.3	.9
29.0	736.6	736.8	737.1	737.4	737.6	737.9	738.1	738.4	738.6	738.9	29.0
.1	39.1	39.4	39.6	39.9	40.1	40.4	40.7	40.9	41.2	41.4	.1
.2	41.7	41.9	42.2	42.4	42.7	42.9	43.2	43.4	43.7	44.0	.2
.3	44.2	44.5	44.7	45.0	45.2	45.5	45.7	46.0	46.2	46.5	.3
.4	46.7	47.0	47.3	47.5	47.8	48.0	48.3	48.5	48.8	49.0	.4
.5	49.3	49.5	49.8	50.1	50.3	50.6	50.8	51.1	51.3	51.6	.5
.6	51.8	52.1	52.3	52.6	52.8	53.1	53.4	53.6	53.9	54.1	.6
.7	54.4	54.6	54.9	55.1	55.4	55.6	55.9	56.1	56.4	56.7	.7
.8	56.9	57.2	57.4	57.7	57.9	58.2	58.4	58.7	58.9	59.2	.8
.9	59.4	59.7	60.0	60.2	60.5	60.7	61.0	61.2	61.5	61.7	.9
30.0	762.0	762.2	762.5	762.8	763.0	763.3	763.5	763.8	764.0	764.3	30.0
.1	64.5	64.8	65.0	65.3	65.5	65.8	66.1	66.3	66.6	66.8	.1
.2	67.1	67.3	67.6	67.8	68.1	68.3	68.6	68.8	69.1	69.4	.2
.3	69.6	69.9	70.1	70.4	70.6	70.9	71.1	71.4	71.6	71.9	.3
.4	72.1	72.4	72.7	72.9	73.2	73.4	73.7	73.9	74.2	74.4	.4
.5	74.7	74.9	75.2	75.5	75.7	76.0	76.2	76.5	76.7	77.0	.5
.6	77.2	77.5	77.7	78.0	78.2	78.5	78.8	79.0	79.3	79.5	.6
.7	79.8	80.0	80.3	80.5	80.8	81.0	81.3	81.5	81.8	82.1	.7
.8	82.3	82.6	82.8	83.1	83.3	83.6	83.8	84.1	84.3	84.6	.8
30.9	784.8	785.1	785.4	785.6	785.9	786.1	786.4	786.6	786.9	787.1	.9
	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	

Proportional Parts.

Inch.	Mill.
0.001	0.03
.002	.05
.003	.08
.004	.10
.005	.13
.006	.15
.007	.18
.008	.20
0.009	0.23

ARRANGEMENT of the DAILY WEATHER REPORT. 1861.

Eight A.M.

day	B.	E.	M.	D.	F.	C.	I.	S.
Nairn.....
Aberdeen.....
&c.

EXPLANATION.

B.—Barometer corrected and reduced to 32° at mean sea level: each ten feet, of vertical rise, causing about one hundredth of an inch *diminution*; and each ten degrees, above 32°, causing nearly three hundredths *increase*. E.—Exposed thermometer in shade. M.—Moistened bulb (for evaporation and dew point). D.—Direction of wind (true—two points *left* of magnetic). F.—Force (1 to 12—estimated). C.—Cloud (1 to 9). I.—Initials: b.—blue sky; c.—clouds (detached); f.—fog; h.—hail; l.—lightning; m.—misty (hazy); o.—overcast (dull); r.—rain; s.—snow; t.—thunder. S.—Sea-disturbance (1 to 9). Z.—Calm.

Beaufort Scale.

1 = b = blue (sky). 7 = r = rain, rainy.
 2 = c = clouds (detached). 8 = s = snow (\pm hail).
 3 = f = fog, foggy. 9 = t = thunder.
 4 = l = lightning. And a line under, or a dash, or
 5 = m = misty (haze). a dot, is for MUCH of either
 6 = o = overcast. character.

TABLE of French and English words, for the state of the Sea, or "Sea-disturbance"; corresponding with their equivalent numbers, for telegraphing by groups of figures, instead of words.

État de la Mer.	State of Sea, or Sea disturbance.	Equivalents.
Calme - - -	Dead calm - - -	0
Assez calme - - -	Calm - - -	1
Très belle - - -	Very smooth - - -	1
Belle - - -	Smooth - - -	2
Tranquille - - -	Still - - -	2
Faible houle - - -	Slight swell - - -	3
Petite houle - - -	Do. - - -	3
Un peu houleuse - - -	Some swell - - -	3
Un peu de mer - - -	Rather rough - - -	4
Risée - - -	Squally - - -	4
Agitée - - -	Disturbed irregularly - - -	4
Houleuse - - -	Considerable swell - - -	5
Très houleuse - - -	Much swell - - -	6
Moutonneuse - - -	Crested waves - - -	7
Creusée - - -	Cross sea - - -	7
Grosse houle - - -	Great swell - - -	8
Haute mer - - -	High sea - - -	8
Très-grosse mer - - -	Very large and high sea - - -	9