

# 113 USWB MARINE OBS. FORMS 1201 AND 1210

This reference manual was prepared for use with punched card deck 113, produced from marine observations recorded on transcription slips, source 912.

Observations from the logs of ships at sea were transcribed to uniform slips for punching and hand tabulation. The observations were gathered from ships of many nationalities, although the United States, Great Britain, the Netherlands, France, Germany, and Japan were the major contributors. Data from islands and continents have been eliminated; even the observations from ships in port have been excluded in order that the material, which is confined strictly to ships' reports collected in the Weather Bureau, may be truly representative of conditions over the open sea.

The project began in 1934, under the Civil Works Administration, at which time more than two million marine observations were punched. These cards comprise the complete card deck at the time of writing of this reference manual. In addition to the observations placed on punched cards, an equal or greater number of manuscript observations were brought into organized files. In 1936 and 1937, the Works Progress Administration (successor to CWA), adopted a new project, which added to the previously organized material about 750,000 transcriptions of ocean weather observations for several of the later years. Thus, at present, approximately five and one-half millions of observations, most of which were taken at Greenwich noon, have been collected.

Observations recorded on the transcription slips extend from before 1880 until 1933. However, only observations from 1911 through 1931 have been punched. At present, there is no survey available showing the number of observations on punched cards per ocean square or per year.

### Weather Elements Recorded

The following weather elements when reported were punched: wind direction, wind force, dry bulb temperature, wet bulb temperature, temperature of the sea surface, weather, cloud form, direction of middle clouds, total cloud amount, direction of sea, and state of sea.

### Form of Punched Card Used

Originally, the observations were punched on 45-column cards. These were reproduced by the Air Weather Service in 1947 to the present 80-column card. A reproduction of the card form is shown below.

YEAR	MO.	DAY	LOG TIME (AS)	LOC. (AS)	LAT.	LONG.	WIND DIR.	FORCE	BAR. (H)	DRY TEMP.	W.B.	SEA SURF.	WEA.	CLOUDS	DIR.	TOT. AMT.	DIR.	STATE	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

U.S. MARINE OBSERVATIONS (1911-1931)  
 CONVERTED FROM 45 COLUMN CARDS  
 MARINE CARD - WEATHER BUREAU-STATISTICS DIV.  
 BLUE - HEADQUARTERS ARMY AIR FORCES

LICENSED FOR USE UNDER PATENT 1,772,482

CARD CONTENT					SOURCE CONTENT	
Col-umns	Item	Code	Code Definition	Remarks	Units or Symbols	Reporting and Coding Practices
1- 2	Year	11-31	1911-1931		1911-1931	
3- 4	Month	01-12	January-December		Jan.-Dec.	
5- 6	Day	01-31	1st-31st day of month		1-31	
7- 8	Local Time A.T.S.	00-11	0000-1159 A.M.		0000-1159 A.M.	Coded to whole hours, minutes disregarded. Not rounded to nearest whole hour.
		12-23	0000-1159 P.M.		0000-1159 P.M.	
		XX	Unknown			
		Blank	Unknown			
9	Quadrant	0	N Lat and W Long			
		1	N Lat and E Long			
		2	S Lat and W Long			
		3	S Lat and E Long			
10-11	Latitude	00-90	00-90° Latitude	00-90° N if "0" or "1" in column 9 00-90° S if "2" or "3" in column 9	0-90° N 0-90° S	Coded to whole degrees, minutes disregarded. Not rounded to nearest whole degree.
12-14	Longitude	000-180	000-180° Longitude	000-180° W if "0" or "2" in column 9 000-180° E if "1" or "3" in column 9	0-180° W 0-180° E	Coded to whole degrees, minutes disregarded. Not rounded to nearest whole degree.
15-16	Wind Direction	00-01	Calm		C	Only even directions punched. Odd directions, such as N by E, SE by S, etc., were coded to the first point named; i.e., N by E was coded 32 for N, SE by S was coded 12 for SE. When direction was given in degrees, it was coded to the nearest point as indicated in the table under "Remarks".
		02	North-Northeast	22 1/2°	NNE	
		04	Northeast	45°	NE	
		06	East-Northeast	67 1/2°	ENE	
		08	East	90°	E	
		10	East-Southeast	112 1/2°	ESE	
		12	Southeast	135°	SE	
		14	South-Southeast	157 1/2°	SSE	
		16	South	180°	S	
		18	South-Southwest	202 1/2°	SSW	
		20	Southwest	225°	SW	
		22	West-Southwest	247 1/2°	WSW	
		24	West	270°	W	
		26	West-Northwest	292 1/2°	WNW	
		28	Northwest	315°	NW	
		30	North-Northwest	337 1/2°	NNW	
		32	North	0° or 360°	N	
99	Unknown					
XX	Variable					
Blank	Unknown					
17-18	Wind Force	00	Less than 1 knot		0	Recorded and punched in Beaufort Scale.
		01	1- 3 knots		1	
		02	4- 6 knots		2	
		03	7-10 knots		3	
		04	11-16 knots		4	
		05	17-21 knots		5	
		06	22-27 knots		6	
		07	28-33 knots		7	
		08	34-40 knots		8	
		09	41-47 knots		9	
		10	48-55 knots		10	
		11	56-65 knots		11	
		12	Above 65 knots		12	
		XX	Unknown		M	
Blank	Unknown					
19-21	Barometric Pressure	Blank		Not punched.		Reported in inches (corrected).
22-23	Air Temperature	00-99	0-99° F.		°F.	All temperatures converted to °F before punching. No information available as to coding procedures when temperature was below 0°F. or above 100°F.
		XX, Blank	Unknown			
24-25	Wet Bulb Temperature	00-99	0-99° F.		°F.	
		XX, Blank	Unknown			

CARD CONTENT					SOURCE CONTENT	
Col- umns	Item	Code	Code Definition	Remarks	Units or Symbols	Reporting and Coding Practices
26-27	Sea Surface Temperature	00-99 XX, Blank	0-99° F. Unknown		°F.	Converted to °F before punching. No differentiation made between bucket readings and engine intake readings.
28-29	Weather	05	Haze		z	Not punched when haze occurred with drizzle, fog, showers, rain, snow, thunder, or lightning.
		08	Mist		m	Not punched when mist occurred with drizzle, fog, showers, rain, snow, thunder, or lightning.
		40	Fog	"0" not punched in column 30.	f, fe	
		40	Dense fog	"0" punched in column 30.	f, fe	Dense fog always coded in columns 28-29 and column 30.
		50	Drizzle		d	Precipitation symbols in order of coding preference are p, rs, r, and d.
		57	Drizzle & fog		df, pdf	Dominant symbols are t, l, and tl, and any combination in which they appeared was coded "90". When, and only when, p occurred with df, rf, or sf, was p disregarded.
		60	Rain, or drizzle & rain		r, dr	
		66	Heavy rain		r	
		67	Rain & fog		rf, prf, pf	
		68	Rain & snow, or sleet		rs	
		70	Snow		s	
		77	Snow & fog		sf, psf	
		80	Showers		p, pr, pd	
		83	Snow flurries		ps	
		85	Showers of rain & snow		prs	
		90	Thunder, lightning, or thunderstorm		t, l, tl	
	XX	No weather punched		b, c, o, h, g, u, e, w	Any combination of the following weather conditions with no others present were coded "XX": blue sky, cloudy, overcast, hail, gloom, threatening sky, wet air, dew.	
	XX, Blank	Unknown				
30	Special Weather Code	0	Dense fog	Columns 28-29 punched "40".	f, fe	These symbols were always coded in column 30, regardless of the other symbols with which they appeared. If q or kq occurred with f, column 30 was coded "0", for f.
		4	Squally		q, kq	
		5	Heavy squalls		q	
		9	Exceptional Visibility		v	
		X	No data			
		X, Blank	Unknown			
31-33	Cloud Forms	0	Stratus	Second in order of preference for low clouds.	St, S, FrSt	As many as three kinds of clouds punched. When more than three types were reported, each level was represented (if possible) by coding the highest preference in that group. If three or fewer cloud forms were recorded, all forms were coded in the order given in the observation. "X" was used to make the field a group of three symbols when less than three types were reported. Cumulonimbus was given first preference in all cloud coding.
		1	Cirrus	First in order of preference for high clouds.	Ci, C	
		2	Cirrostratus	Second in order of preference for high clouds.	CS, St, CS	
		3	Cirrocumulus	Third in order of preference for high clouds.	CK, Ci, CK	
		4	Alto cumulus	First in order of preference for middle clouds.	ACu, AK	
		5	Altostratus	Second in order of preference for middle clouds.	AS, AS	
		6	Stratocumulus		StCu, SK	
		7	Nimbus		Nb, N, FrNb	
		8	Cumulus	Third in order of preference for low clouds.	Cu, K, FrCu	
		9	Cumulonimbus	First in order of preference for low clouds.	CuNb, KN	
	X	No cloud form	Used to fill group.			
34-35	Direction of Middle Clouds	02	North-Northeast		NNE	Punched only for middle cloud types. Calm not coded.
		04	Northeast		NE	
		06	East-Northeast		ENE	
		08	East		E	
		10	East-Southeast		ESE	
		12	Southeast		SE	
		14	South-Southeast		SSE	
		16	South		S	
		18	South-Southwest		SSW	
		20	Southwest		SW	
		22	West-Southwest		WSW	
		24	West		W	
		26	West-Northwest		WNW	
		28	Northwest		NW	
30	North-Northwest		NNW			
	32	North		N		

CARD CONTENT					SOURCE CONTENT	
Col-umns	Item	Code	Code Definition	Remarks	Units or Symbols	Reporting and Coding Practices
34-35	Dir Mid Clds	XX	Direction not given			
36	Total Cloud Amount	0	Zero		None, 0	If fractional amounts were given for several kinds of clouds, all amounts were added, and total punched.
		2	1 tenth		1	
		3	2 or 3 tenths		2, 3	
		4	4, 5, or 6 tenths		4, 5, 6	
		5	7 or 8 tenths		7, 8	
		6	9 tenths		9	
		8	10 tenths		10	
		X, Blank	Unknown			
37-38	Direction of Sea	00-01	Calm		C	Only even directions punched. Odd directions, such as N by E, SE by S, etc., were coded to the first point named; i.e., N by E was coded 32 for N, SE by S was coded 12 for SE. When direction was given in degrees, it was coded to the nearest point as indicated in the table under "Remarks".
		02	North-Northeast	22 1/2°	NNE	
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		06	East-Northeast	67 1/2°	ENE	
		08	East	90°	E	
		10	East-Southeast	112 1/2°	ESE	
		12	Southeast	135°	SE	
		14	South-Southeast	157 1/2°	SSE	
		16	South	180°	S	
		18	South-Southwest	202 1/2°	SSW	
		20	Southwest	225°	SW	
		22	West-Southwest	247 1/2°	WSW	
		24	West	270°	W	
		26	West-Northwest	292 1/2°	WNW	
		28	Northwest	315°	NW	
		30	North-Northwest	337 1/2°	NNW	
		32	North	0° or 360°	N	
		99	Unknown			
XX	Variable					
Blank	Unknown					
39	State of Sea	0	Calm		0, Calm, plain, rippled	Sometimes reported in International Code, sometimes in word description. All references to swell were disregarded.
		1	Smooth		1, smooth, S, Sm	
		2	Slight		2, slight, Sl, l	
		3	Moderate		3, moderate, M, mod, medium, med	
		4	Rough		4, rough, R, RR	
		5	Very rough		5, very rough, VR	
		6	High		6, high, h, rough-high	
		7	Very high		7, very high, VH	
		8	Precipitous		8, precipitous, P, mountainous	
		9	Confused		9, confused, con, choppy, lumpy, agitated	
X	No data, or indefinite description		C, long, rushing, waving, mod calm etc.			
40-80	Blank					