INTRODUCTION

General Remarks—This publication (Chart No. 1) contains symbols and abbreviations that have been approved for use on nautical charts published by the United States of America. A Glossary of Terms used on the charts of various nations is also included. The user should refer to DMAHTC Pub. No. 9, **American Practical Navigator** (Bowditch), Volume I, for the use of the chart in the practice of navigation and more detailed information pertaining to the chart sounding datum, tides and currents, visual and audible aids to navigation, etc.

Numbering—Terms, symbols, and abbreviations are numbered in accordance with a standard format approved by a 1982 resolution of the International Hydrographic Organization (IHO). Although the use of IHO-approved symbols and abbreviations is not mandatory, the United States has adopted many IHO-approved symbols for standard use. Style differences of the alphanumeric identifiers in the first column of the following pages show the status of symbols and abbreviations.

VERTICAL FIGURES indicate those terms for which no IHO or abbreviations are in accordance with resolutions of IHO.

SLANTING FIGURES indicate those symbols for which no IHO resolution has been adopted.

SLANTING FIGURES ASTERISKED indicate IHO and U.S. symbols do not agree.

SLANTING LETTERS IN PARENTHESIS indicate that the items are in addition to those appearing in the IHO STANDARD LIST OF SYMBOLS AND ABBREVIATIONS.

Metric Charts and Feet/Fathom Charts—In January 1972 the United States began producing certain new nautical charts in meters. More than many charts have been issued with soundings and contours in meters; however, for some time to come there will still be many charts on issue depicting sounding units in feet or fathoms. Microfilm reproductions of foreign charts are being produced retaining the native sounding unit value. The sounding unit is stated in bold type outside the border of every chart and in the chart title.

Chart Modernization—Chart symbols and labeling are brought into reasonable agreement with uniform international drafting standards and procedures as quickly as opportunity affords. An example of this is the trend toward using nautical type for all soundings and terms referred to the shoreline plane of reference, and slant type for all items referred to the sounding datum. This is not completely reflected in this publication but is reflected in new charts produced by this country in accordance with international practices.

Soundings—The sounding datum reference is stated in the chart title. In all cases the unit of depth used is shown in the chart title and in the border of the chart in bold type.

Drying Heights—On rocks and banks that cover and uncover the elevations are above the sounding datum as stated in the chart title.

Shoreline—Shoreline shown on charts represents the line of contact between the land and a selected water elevation. In areas affected by tidal fluctuation, the line of contact is usually the mean high-water line. In confined coastal waters of diminished tidal influence, a mean water level line may be used. The shoreline of interior waters (rivers, lakes) is usually a line representing a specified elevation above a selected datum. Shoreline is symbolized by a heavy line (A9).

Apparent Shoreline is used on charts to show the outer edge of marine vegetation where that limit would reasonably appear as the shoreline to the mariner or where it prevents the shoreline from being clearly defined. Apparent shoreline is symbolized by a light line (A7, C17).

Landmarks—A conspicuous feature on a building may be shown by a landmark symbol with a descriptive label. (See I 8b, 36, 44, 72.) Prominent buildings that are of assistance to the mariner may be shown by actual shape as viewed from above (See I 3c, 19, 47, 66). Legends associated with landmarks when shown in capital letters, indicate conspicuous or the landmarks may be labeled "CONSPIC" or "CONSPICUOUS."

Buoys—The buoyage systems used by other countries often vary from that used by the United States. U.S. Charts show the colors, lights and other characteristics in use for the area of the individual chart. Certain U.S. distributed modified reproduction charts of foreign waters may show shapes and other distinctive features that vary from those illustrated in this chart.

In the U.S. system, on entering a channel from seaward, buoys on the starboard side are red with even numbers, on the port side, black or green with odd numbers. Lights on buoys are on the starboard side of the channel are red or white, on the port side, white or green. Mid-channel buoys have red and white or black and white vertical stripes and may be passed on either side. Junction or obstruction buoys have red and green or red and black horizontal bands, the top band color indicating the preferred side of passage. This system does not apply to foreign waters.

IALA Buoyage System—The International Association of Lighthouse Authorities (IALA) Maritime Buoyage System (combined Cardinal-Lateral System) is being implemented by nearly every maritime buoyage jurisdiction worldwide as either REGION A (red to port) or REGION B buoyage (red to starboard). The terms "REGION A" and "REGION B" will be used to determine which type of buoyage is in effect or undergoing conversion in a particular area. The major difference in the two buoyage regions will be in the lateral marks. In REGION A they will be red to port; in REGION B they will be red to starboard. Shapes of lateral marks will be the same in both REGIONS, can to port; cone (nun) to starboard. Cardinal and other marks will continue to follow current guidelines and may be found in both REGIONS. A modified lateral mark, indicating preferred channel where a channel divides, will be introduced for use in both REGIONS. Section L and the color plates at the back of this publication illustrate the IALA buoyage system for both REGIONS A and B.

Aids to Navigation Positioning—The aids to navigation depicted on charts comprise a system consisting of fixed and floating aids with varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly on a floating aid.

The buoy symbol is used to indicate the approximate position of the buoy body and the sinker which secures the buoy to the seabed. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecisions in position fixing methods, prevailing atmospheric and sea conditions, the slope of and the material making up the seabed, the fact that buoys are moored to sinkers by varying lengths of chain, and the fact that buoy body and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits which often occur more than a year apart. The position of the buoy body can be expected to shift inside and outside the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of ice, running ice, other natural causes, collisions, or other accidents.

For the foregoing reasons a prudent mariner must not rely completely upon the position or operation of floating aids to navigation, but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

Colors—Colors are optional for characterizing various features and areas on the charts. For instance the land tint in this publication is gold as used on charts of the National Ocean Service; however, charts of the DMA show land tint as gray.

Heights—Heights of lights, landmarks, structures, etc. are referred to the shoreline plane of reference. Heights of small islets or offshore rocks, which due to space limitations must be placed in the water area, are bracketed. The unit of height used is shown in the chart title.

Conversion Scales—Depth conversion scales are provided on all charts to enable the user to work in meters, fathoms, or feet.

Improved Channels—Improved channels are shown by dashed limit lines with the depth and date of the latest examination placed adjacent to the channel or in a channel tabulation.

Longitudes—Longitudes are referred to the meridian of Greenwich.

Traffic Separation Schemes—Traffic separation schemes show established routes to increase safety of navigation, particularly in areas of high density shipping. These schemes were established by the International Maritime Organization (IMO) and are described in the IMO publication "Ships Routing".

Traffic separation schemes are generally shown on nautical charts at scales of 1:600,000, and larger. When possible, traffic separation schemes are plotted to scale and shown as depicted in Section F.

Names—Names on nautical charts compiled and published by the United States of America are in accordance with the principles of the Board of Geographic Names.

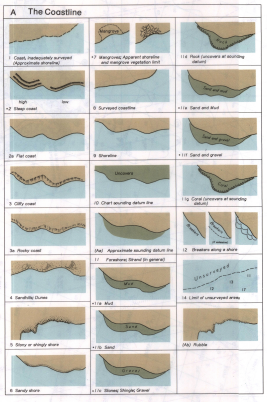
Correction Dates—The dates of New Editions are shown below the lower left border of the chart. These include the date of the latest Notice to Mariners applied to the charts.

U.S. Coast Pilots, Sailing Directions, Light Lists, Lists of Lights—These related publications furnish information required by the navigator that cannot be shown conveniently on the nautical charts.

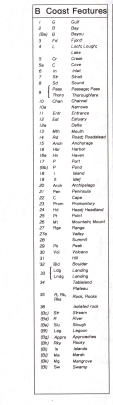
U.S. Nautical Chart Catalogs and Indexes—These list nautical charts, auxiliary maps, and related publications and include general information relative to the use and ordering of charts.

Special and Foreign Symbols—Some differences may be observed between the symbols shown in Chart No. 1 and symbols shown on certain special charts and reproductions of foreign charts. A glossary of foreign terms and abbreviations is generally shown on charts on which they are used, as well as in the Sailing Directions.

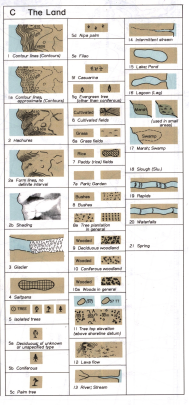
A The Coastline



B Coast Features



C The Land



D Control Points

1		Triangulation point (station)	4	Obs Spot	Observation spot
1#		Astronomic station	5	▼ VB	Bench mark
2		Fixed point (landmark, position accurate)	6	Shea B	New point
			7		Datum point for grid of a plan
(De)		Fixed point landmark, position approximate	8		Graphical triangulation point
3	298	Peak, height (Peak) (when not a landmark)	9	Astro	Astronomical
			10	Tri	Triangulation
(Sh)	298	Peak, accentuated by contours	10a	C d E	Corps of Engineers
(Sh)	298	Peak, accentuated by hachures	12		Great trigonometrical survey station
(De)		Peak, elevation not determined	13		Traverse station
(De)		Peak, when a landmark	14	Bdy Mon	Boundary monument
			(De)		International boundary monument

E Units

1	hr, h	Hour	11	M, NM	Nautical mile(s)
2	m, min	Minute (of time)	12	kn	Knot(s)
3	sec, s	Second (of time)	12a	°	Terms (metric for equate 0.0044 (ka)
4	m	Meter			
4a	dm	Decimeter	(Ca)	cd	Candela (new candle)
4b	cm	Centimeter	(Ca)	cd	Candela (new candle)
4c	mm	Millimeter	(Ha)	Hz	Hertz (cps)
4d	mm²	Square meter	14	long	Longitude
4e	m³	Cubic meter	14a		Greenwich
5	km	Kilometer(s)	15	pub	Publication
6	in, ins	Inch(es)	15	Ed	Edition
7	ft	Foot, feet	17	corr	Correction
8	yds, yds	Yard(s)	18	alt	Altitude
9	fm, fms	Fathom(s)	19	ht, elev	Height, Elevation
10	cwt	Cable length	20		Degree

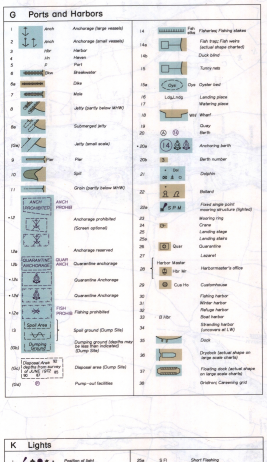
21	'	Minute (of arc)	(Ma)		Megahertz (MHz)
22	"	Second (of arc)	(Ma)		Megawatts (MW)
23	No	Number	(C)	T	Ton (U.S. short ton equate 2,000 lbs)
(Ea)	St Mi, statute mi				
(Ca)	cd	Candela			
(Ca)	cd	Candela (new candle)			
(Ha)	Hz	Hertz (cps)			
(Ge)	kHz	Kilohertz (Hz)			
(Ge)	MHz	Megahertz (Hz)			
(Ki)	cps, c/s	Cycles/second (Hz)			
(Ki)	kc	Kilocycles/second (Hz)			
(Ma)	Mc	Megacycle (MHz)			
(C)	T	Ton (U.S. short ton equate 2,000 lbs)			

F Adjectives, Adverbs, Nouns, and Other Words

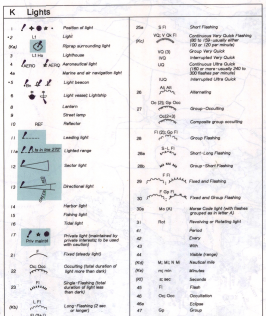
1	all	Short	28	abscond	Obstruction
2	lit	Little	29	prohib	Prohibited
3	Lrg	Large	30	explos	Explosive
4	smt	Small	31	estab	Established
5		Outer	32	elec	Electric
6		Inner	33	prin	Principal
7	mid	Middle	34	Prom	Promontory
8		Old	35	std	Standard
9	anc	Ancient	36	subm	Submerged
10		New	37	approx	Approximate
11	fill	Sand	38	shallo	Shallow
12	COMPASS	Compass rose	39	manifd	Manifested
13		Remarkable	40	aband	Abandoned
14		Projecting	41	Aband	Abandoned
15		Projected	42	occas	Occasional
16	dist	Distant	43	extr	Extreme
17	abd	Abaut	44		Aid to Mariners
18		See chart	45	N tk	Notice to Mariners
19		See plan	46	L N tk	Local Notice to Mariners
20		Lighted/Luminous	47		Magnetic Directions
20	sub	Submarine	48		Chart Cards
21		Eventual	49		Unverified
22	ADRO	Aeronautical	(Fa)		Authorized
23a		Highest	(Fa)		Authorized
23b		Lower	(Fa)	CL	Clearance
24	exper	Experimental			

(Fa)	Off	Corner			
(Fa)	corner	Concrete			
(Fa)	F	Flood			
(Fa)	mod	Moderate			
(Fa)	L	Ebb			
(Fa)	tel	Tide			
(Fa)	2nd, 2d	Second			
(Fa)	3rd, 3d	Third			
(Fa)	4th	Fourth			
(Fa)	DW	Deep Water			
(Fa)	min	Minimum			
(Fa)	max	Maximum			
(Fa)	Wy	Highway			
(Fa)	Rwy	Railway			
(Fa)	Twr	Tower			
(Fa)	Cy	Century			
(Fa)	Wy	Westerly			
(Fa)	Str	Straw			
(Fa)	Twsh	Washout			
(Fa)	Pt	Point			
(Fa)	Ch	Church			
(Fa)	Cem	Cemetery			
(Fa)	Chy	Chimney			
(Fa)	Fy	Ferry			
(Fa)	Sch	School			
(Fa)	Obsy	Observatory			
(Fa)	Ldg	Landing			
(Fa)	Ldr	Leader			
(Fa)	Mkr	Marker			
(Fa)	Mg	Mangrove			
(Fa)	Sw	Swamp			

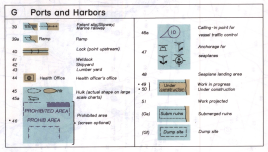
G Ports and Harbors



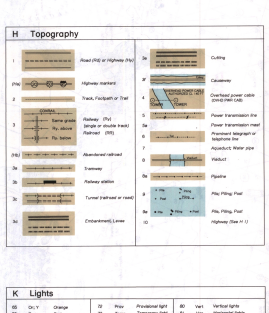
H Topography



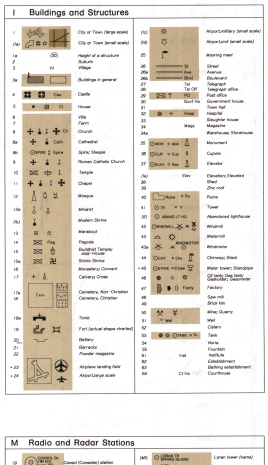
G Ports and Harbors



H Topography



I Buildings and Structures


City or Town (large scale)
City or Town (small scale)
Height of a structure
Buildings in general
Castle
House
Mill
Farm
Church
Cathedral
Spire; Steeple
Roman Catholic Church
Temple
Chapel
Mosque
Tower
Abandoned lighthouse
Minaret
Watermill
Windmill
Chimney; Stack
Water tower; Standpipe
Oil tank; Gas tank; Cistern; Gasometer
Factory
Gas mill
Brick kiln
Mine; Quarry
Well
Cistern
Tank
Kiln
Refinery
Pumping station
Tomb
Fort (actual shape charted)
Battery
Barracks
Powder magazine
Airplane landing field
Airport/large scale
Airport/Military (small scale)
Airport/civil (small scale)
Boundary mast
Signal station, visual
Telegraph office
Telephone office
Customhouse
Government house
Town hall
Hospital
Slaughter house
Prison
Warehouse; Storehouse
Monument
Cupola
Elevator
Elevator; Elevated
Shed
Dog pound
Ruins
Tower
Abandoned lighthouse
Minaret
Watermill
Windmotor
Chimney; Stack
Water tower; Standpipe
Oil tank; Gas tank; Cistern; Gasometer
Factory
Gas mill
Brick kiln
Mine; Quarry
Well
Cistern
Tank
Kiln
Refinery
Pumping station
Tomb
Fort (actual shape charted)
Battery
Barracks
Powder magazine
Airplane landing field
Airport/large scale