



PUB. 114
LIST OF LIGHTS

RADIO AIDS AND FOG SIGNALS

2023

BRITISH ISLES, ENGLISH CHANNEL AND
NORTH SEA

IMPORTANT

**MARINERS SHOULD REFER TO NGA'S MARITIME SAFETY
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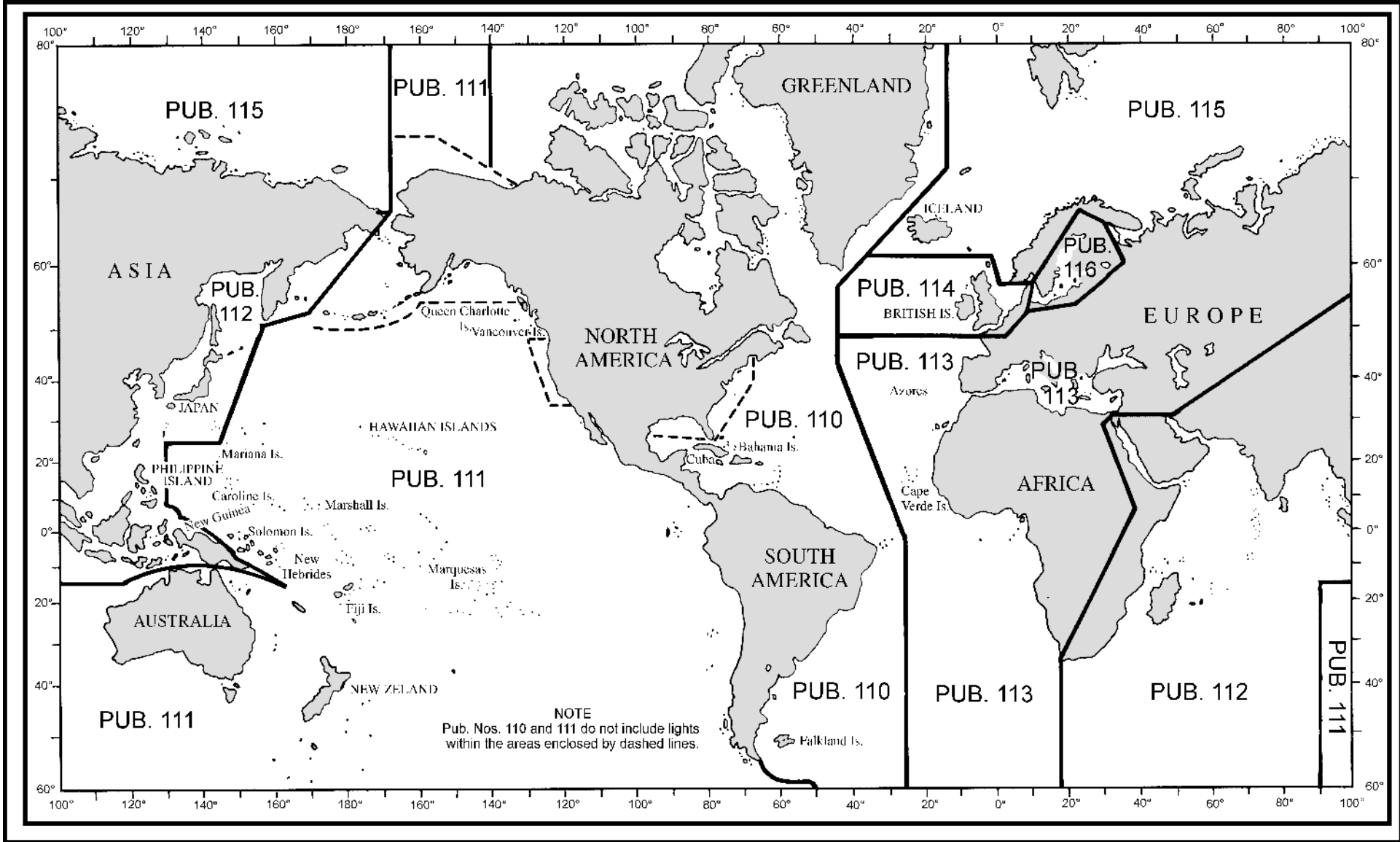


Prepared and published by the
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Springfield, VA

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LIST OF LIGHTS LIMITS

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY



WARNING ON USE OF FLOATING AIDS TO NAVIGATION TO FIX A NAVIGATIONAL POSITION

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 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 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 or 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.

PREFACE

The 2023 edition of Pub. 114, List of Lights, Radio Aids and Fog Signals for the British Isles, English Channel and North Sea, cancels the previous edition of Pub. 114.

This edition contains information available to the National Geospatial-Intelligence Agency (NGA) up to 03 June 2023, including Notice to Mariners No. 22 of 2023.

EXPLANATORY REMARKS

The National Geospatial-Intelligence Agency publishes a List of Lights, Radio Aids and Fog Signals in seven volumes divided geographically as shown on the index chartlet on the inside front cover of this book. Major fixed and outermost floating aids to navigation, such as sea buoys, safety fairway buoys, traffic separation buoys, etc., are listed. Other floating aids are not generally listed. Storm signals, signal stations, radio direction finders, radiobeacons, RACONs and RAMARKs located at or near lights are found in this List. Individual Radiobeacons and DGPS Stations are listed in a separate section in the back of this publication.

Nothing in the manner of presentation of information in this publication or in the arrangement of material implies endorsement or acceptance by NGA in matters affecting the status and boundaries of States and Territories.

CORRECTIVE INFORMATION

Updates to the List of Lights are no longer published in NGA's weekly Notice to Mariners. The List of Lights publications are updated monthly and made available as downloadable PDFs on the NGA's Maritime Safety Information (MSI) website at <https://msi.nga.mil>. Mariners should refer to the MSI website to obtain the latest List of Lights information.

Users should refer corrections, additions, and comments to NGA's Maritime Operations Desk, as follows:

1. Maritime Quality Feedback System: <https://marhelp.nga.mil/>
2. Toll free: 1-800-362-6289
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DESCRIPTION

(Lights, Buoys, RACONs, RAMARKs)

Information is tabulated in eight columns as follows:

Column 1: The number assigned to each light, RACON or RAMARK by this Agency. International numbers are listed below this number in italic type and in a cross reference in the back of the book. RACONs and RAMARKs located at a light are listed with the light. Those not located at a light are assigned separate numbers.

Column 2: Name and descriptive location of the light or buoy, RACON or RAMARK. A dash (-) or dashes (--) in this column is used to reduce repetition of principal geographic names. This column is intended to describe the location of the navigational aid and to distinguish it from others in proximity. Differences in type indicate the following:

Bold-faced: Lights intended for landfall or having a visibility (range) of 15 miles or more.

Italics: Floating aids.

ITALICS CAPITALS: Lightships and LANBYs.

Roman: All other lights not mentioned above.

Column 3: Approximate latitude and longitude of a navigational aid to the nearest tenth of a minute, intended to facilitate chart orientation (use column 2 and the appropriate chart for precise positioning).

Column 4: Light, buoy, RACON or RAMARK characteristic (see Characteristics of Lights chart for explanation of lights).

Column 5: Height of light in feet measured from the focal plane of the fixed light to charted height datum. Equivalent measurement given in meters listed below in bold-faced type.

Column 6: Range. The distance, expressed in nautical miles, that a light can be seen in clear weather or that a RACON or RAMARK can be received.

Column 7: Description of the structure and its height in feet measured from the top of the structure to the ground.

Note—Stripes are vertical. Bands are horizontal. The use of the term “diagonal stripes” is the exception.

Column 8: Remarks—sectors, fog signals, radar reflectors, minor lights close by, radiobeacons, storm signals, signal stations, radio direction finders, and other pertinent information.

Geographic names or their spellings do not necessarily

reflect recognition of the political status of an area by the United States Government.

The names of lights may differ from geographic names on charts.

ABBREVIATIONS














Where the lights of different countries intermingle in the list they are distinguished by the following letters:











(Bm.)	Belgium
(F.)	Norway
(G.)	Germany
(N.)	Netherlands
(U.K.)	United Kingdom

Other abbreviations:

Al.—alternating	It.—lit
bl.—blast	Mo.—Morse code
Bu.—blue	min.—minute
Dir.—directional	obsc.—obscured
ec.—eclipsed	Oc.—occulting
ev.—every	Or.—orange
F.—fixed	Q.—quick flashing
Fl.—flashing	R.—red
fl.—flash	s.—seconds
G.—green	si.—silent
horiz.—horizontal	U.Q.—ultra quick flashing
intens.—intensified	unintens.—unintensified
I.Q.—interrupted quick flashing	vert.—vertical
Iso.—isophase	Vi.—violet
I.V.Q.—interrupted very quick flashing	vis.—visible
Km.—kilometer (0.62137 mile)	V.Q.—very quick flashing
L.Fl.—long flashing	W.—white
	Y.—yellow

CHARACTERISTICS OF LIGHTS

TYPE	ABBR.	GENERAL DESCRIPTION	ILLUSTRATION
Fixed	F.	A continuous and steady light.	
Occulting	Oc.	The total duration of light in a period is longer than the total duration of darkness and the intervals of darkness (eclipses) are usually of equal duration. Eclipse regularly repeated.	 : Period 12s :
Group occulting	Oc.(2)	An occulting light for which a group of eclipses, specified in number, is regularly repeated.	 : Period 14s :
Composite group occulting	Oc.(2+1)	A light similar to a group occulting light except that successive groups in a period have different numbers of eclipses.	 : Period 9s :
Isophase	Iso.	A light for which all durations of light and darkness are clearly equal.	 : 5s 5s :
Flashing	Fl.	A light for which the total duration of light in a period is shorter than the total duration of darkness and the appearances of light (flashes) are usually of equal duration (at a rate of less than 50 flashes per minute).	 : 10s :
Long flashing	L.Fl.	A single flashing light for which an appearance of light of not less than 2 sec. duration (long flash) is regularly repeated.	 : Period 8s :
Group flashing	Fl.(3)	A flashing light for which a group of flashes, specified in number, is regularly repeated.	 : Period 12s :
Composite group flashing	Fl.(2+1)	A light similar to a group flashing light except that successive groups in a period have different numbers of flashes.	 : Period 15s :
Quick flashing	Q.	A light for which a flash is regularly repeated at a rate of not less than 50 flashes per minute but less than 80 flashes per minute.	
Group quick flashing	Q.(3)	A light for which a specified group of flashes is regularly repeated; flashes are repeated at a rate of not less than 50 flashes per minute but less than 80 flashes per minute.	 : Period 10s :
	Q.(9)		 : Period 12s :
	Q.(6)+L.Fl.		 : Period 15s :

TYPE	ABBR.	GENERAL DESCRIPTION	ILLUSTRATION
Interrupted quick flashing	I.Q.	A light for which the sequence of quick flashes is interrupted by regularly repeated eclipses of constant and long duration.	
Very quick flashing	V.Q.	A light for which a flash is regularly repeated at a rate of not less than 80 flashes per minute but less than 160 flashes per minute.	
Group very quick flashing	V.Q.(3)	A light for which a specified group of very quick flashes is regularly repeated.	
	V.Q.(9)		
	V.Q.(6)+L.Fl.		
Interrupted very quick flashing	I.V.Q.	A light for which the sequence of very quick flashes is interrupted by regularly repeated eclipses of constant and long duration.	
Ultra quick flashing	U.Q.	A light for which a flash is regularly repeated at a rate of not less than 160 flashes per minute.	
Interrupted ultra quick flashing	I.U.Q.	A light for which the sequence of ultra quick flashes is interrupted by regularly repeated eclipses of constant and long duration.	
Morse code	Mo.(U)	A light for which appearances of light of two clearly different durations are grouped to represent a character or characters in Morse Code.	
Fixed and flashing	F.Fl.	A light for which a fixed light is combined with a flashing light of greater luminous intensity.	
Alternating light	Al.	A light showing different colors alternately.	

NOTE - Alternating lights may be used in combined form with most of the previous types of lights.

NOMENCLATURE OF LIGHTS

Lights exhibit a distinctive appearance by which they are recognized, e.g. Fixed, Flashing, Group Flashing, etc. The properties of their appearance, by which they are distinguished, are referred to as the *characteristics* of the light. The principal characteristics are generally the sequence of intervals of light and darkness, and, in some cases, the sequence of colors of light exhibited.

Fixed lights—those which exhibit a continuous steady light.

Rhythmic lights—those which exhibit a sequence of intervals of light and eclipse (repeated at regular intervals) in a manner described in Chart No. 1 and this volume.

Alternating lights—rhythmic lights which exhibit different colors during each sequence.

Period of a light—the time occupied by an entire cycle of intervals of light(s) and eclipse(s).

Range: Meteorological visibility—the greatest distance at which a black object of suitable dimensions can be seen and recognized against the horizon sky or, in the case of night observations, could be seen and recognized if the general illumination were raised to the normal daylight level.

Luminous range of a light—the greatest distance at which a light can be seen merely as a function of its luminous intensity, the meteorological visibility, and the sensitivity of the observer's eyes.

Nominal range of the light—the luminous range of a light in a homogeneous atmosphere in which the meteorological visibility is 10 nautical miles.

Geographical range of a light—the greatest distance at which a light can be seen as a function of the curvature of the earth, the height of the light source and the height of the observer.

The visibility of a light is usually the distance that it can be seen in clear weather and is expressed in nautical miles. Visibilities listed are values received from foreign sources.

Range lights—two or more lights at different elevations, so situated to form a range (leading line) when brought into transit. The light nearest the observer is the *front light* and the one farthest from the observer is the *rear light*. The front light is normally at a lower elevation than the rear light.

Directional lights—lights illuminating a sector of very narrow angle and intended to mark a direction to be followed.

Vertical lights—Two or more lights disposed vertically or geometrically to form a triangle, square, or other figure. If the individual lights serve different purposes, those of lesser importance are called *Auxiliary lights*.

Occasional lights—lights exhibited only when specially needed:

(a) *Tidal light*—shown at the entrance of a harbor, to indicate tide and tidal current conditions within the harbor.

(b) *Fishing light*—for the use of fishermen and shown when required.

(c) *Private light*—maintained by a private authority for its own purposes. The mariner should exercise special caution when using a private light for general navigation.

Seasonal lights—usually shown only during the navigation season or for a lesser time period within that season.

Articulated lights—offshore aids to navigation consisting of a length of pipe attached directly to a sinker by means of a pivot or such other device employing the principle of the universal joint. The positional integrity is intermediary between that of a buoy and a fixed aid.

Aeronautical lights—lights of high intensity which may be the first lights observed at night from vessels approaching the coast. Those lights situated near the coast are listed in the List of Lights in order that the navigator may be able to obtain more information concerning their description.

These lights are not designed or maintained for marine navigation and they are subject to change without prompt notification.

These lights are indicated in this List by the designation AVIATION LIGHT and are placed in geographical sequence in the body of the text along with lights for surface navigation.

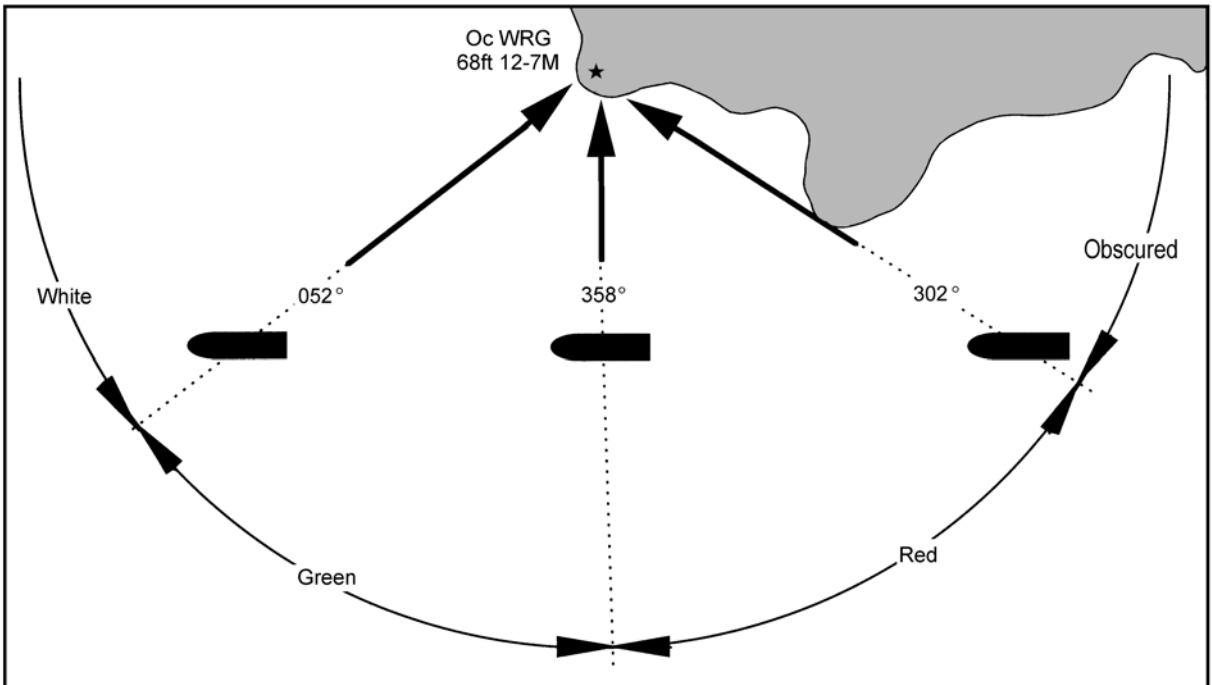
Aeromarine lights—marine-type lights for which part of the beam is deflected to an angle of 10 to 15 degrees above the horizon to facilitate use by aircraft.

Sector limits and arcs of visibility—these are arranged clockwise and are given from seaward toward the light. Thus, in the diagram, the sectors of the light are defined as: obscured from shore to 302°, red to 358°, green to 052°, white to shore. These are bearings of the light as seen from a vessel crossing the sector lines.

Under some conditions of the atmosphere, white lights may have a reddish hue. The mariner should not judge solely by color where there are sectors but should verify this position by taking a bearing of the light. On either side of the line of demarcation between white and red there is always a small sector of uncertain color, as the edges of a sector of visibility cannot be clearly defined.

When a light is obscured by adjoining land and the arc of visibility is given, the bearing on which the light disappears may vary with the distance from which it is observed. When the light is cut off by a sloping point of land or hill, the light may be seen over a wider arc by a ship farther off than by one closer.

Bearings—all bearings are true, measured clockwise from 000°, and given in degrees or degrees and minutes.



LIGHTSHIPS, SUPERBUOYS, AND OFFSHORE LIGHT STATIONS

Courses should be set to pass all floating aids to navigation with sufficient clearance to avoid the possibility of collision from any cause. Experience shows that floating aids to navigation cannot be safely used as leading marks to be passed close aboard, but should always be left broad off the course, whenever searoom permits.

When approaching a lightship, superbuoy, or a station on a submarine site on radio bearings, the risk of collision will be avoided by insuring that the radio bearing does not remain constant.

Most lightships and large buoys are anchored with a very long scope of chain and, as a result, the radius of their swinging circle is considerable. The charted position is the location of the anchor. Furthermore, under certain conditions of wind and current, they are subject to sudden and unexpected sheers which are certain to hazard a vessel attempting to pass close aboard.

During extremely heavy weather and due to their exposed locations, lightships may be carried off station. The mariner should, therefore, not implicitly rely on a lightship maintaining its precisely charted position during and immediately following severe storms. A lightship known to be off station will secure her light, fog signal, and radiobeacon and fly the International Code signal "LO" signifying "I am not in my correct position."

The following regulations have been established respecting the several lightships on the coasts of the *British Isles*:

A white riding light is exhibited from the forestay of each lightship, at a height of 6 feet (1.8 meters) above the rail, for the purpose of showing in which direction the vessel is riding when at her station.

If from any cause a lightship is unable to exhibit her usual characteristic lights while on station, the riding light only will be shown.

During fog or low visibility, on the near approach of traffic to a lightship the bell will be rung rapidly during the silent intervals between each sounding of the vessel's prescribed station fog signal until all risk of collision is past.

At lightships where a hand horn is used, the interval will be shortened as vessels approach and, should a vessel come dangerously close, the sound will be continuous until she has passed.

When a lightship is out of position having been driven from her proper station or under tow, and is no use as a guide to shipping, the characteristic light will not be shown and the fog signal will not be sounded.

The following signals will be made:

By day—two large black balls will be shown, one forward and one aft, and the International Code signal "LO" indicating "I am not in my correct position" will be hoisted where it may best be seen.

By night—a fixed red light will be shown at bow and

stern of the vessel and red and white flares will be shown simultaneously every 15 minutes or at more frequent intervals on the near approach of traffic; the flares will be shown from where they can best be seen at a distance of about 10 feet (3 meters) apart in a horizontal line. If the use of flares is impracticable, a red light and a white light will be displayed simultaneously for about a minute.

Lightship under tow by day—the International Code signal "LO" indicating "I am not in my correct position" will be hoisted where it can best be seen. In accordance with Rule 24 of the International Regulations for Preventing Collisions at Sea 1972, a diamond shape will be displayed where it can best be seen.

Lightship under tow at night—sidelights and a sternlight will be exhibited in accordance with Rule 24 of the International Regulations for Preventing Collisions at Sea 1972.

In fog or low visibility, lightships out of position will give the fog signal required for a vessel at anchor.

It should be remembered that lightships, through collisions or other causes, are liable to be withdrawn for repairs without notice, and in some cases may not be replaced by relief vessels.

The name of the station is painted on the sides of the vessel or float, but relief vessels may carry the word "Relief" or "Reserve." A lightship under way shows the same lights and makes the same sound signals as other vessels under way.

Some lightships have been replaced by superbuoys.

Oil and gas permanent platforms and drilling rigs are marked by:

Mo(U) 15s 15M

Horn Mo(U) 30s

Mo(U)R 15s 3M may mark projections.

They may be encountered anywhere in the waters covered by this volume.

Belgian, Dutch, German, and Danish lightships carry a white light on the forestay.

French lightships, when out of position, discontinue their characteristic lights and fog signals and exhibit in their place the following signals:

By day—the International Code signal "LO" and two black balls, one forward and one aft.

By night—two red lights, one forward and one aft. Also two flare-ups, one white and one red, will be burned simultaneously every 15 minutes.

Dutch and Belgian lightships, when out of position, discontinue their characteristic lights and fog signals.

By day—the distinguishing mastheads marks are struck, two black balls are shown, one forward and one aft, and the International Code signal "LO" is hoisted.

By night—two red lights, one forward and one aft, are shown; also one red and one white flare simultaneously or

one red and one white light every 15 minutes.

German lightships, when out of position, by day hoist the International Code signal “LO”, two red flags, one forward and one aft, and the distinguishing masthead mark is lowered; by night two red lights are shown, one forward and one aft; in addition, at intervals of less than 15 minutes, one white and one red light are displayed horizontally 9 feet (3 meters) apart from the deck for a period of one minute. In fog only the bell fog signals prescribed in the navigation regulations are sounded. If a vessel is seen standing in danger a gun will be fired (groups of 2 reports at intervals of 3 minutes), the bell will be rung and signals made accordance with the International Code of Signals. Lightships are liable to be driven from their stations by ice, but are replaced as soon as circumstances allow.

Danish lightships—lights are shown from 15 minutes after sunset to 15 minutes before sunrise. When out of position, they discontinue their characteristic lights and fog signals. If they have drifted out of position, they will exhibit the following signals:

By day—two black balls, one forward and one aft. The International Code Signal “LO” will be hoisted;

By night—two red lights will be shown, one forward and one aft; also, one red and one white light will be shown simultaneously over the gunwale at least every 15 minutes.

A lightship under way shows the same signals as other vessels under way, and if proceeding under its own power, hoists two black balls, one forward and one aft.

It should be remembered that lightships are liable to be withdrawn without notice, and may not be replaced by relief vessels.

Should the mechanical fog signals be disabled, a hand fog horn is used. Should a vessel be seen standing into danger the Morse letter U(••-) will be made by siren or flashing light, and the International Code flag “U” hoisted. When lightships can furnish pilots they display at the masthead a flag, upper half white, lower half red. By night they answer pilot signals by burning a flare.

Many radiobeacons within the European maritime area transmit only a carrier signal keyed to provide a Morse call-sign for identification of the station. The composition of signals is based on a one-minute duration. These radiobeacons operate individually and continuously instead of within a group (sequence) of beacons.

DISTRESS SIGNALS

For lightships and lighthouses on islands or isolated rocks and offshore light structures in the *British Isles*:

(1) Light stations in the above categories are equipped with radiotelephones capable of transmitting messages to summon assistance for themselves or for vessels or aircraft they observe to be in distress, in accordance with recognized procedures. In addition to transmitting such messages, they may make use of one or more of the visual

distress signals indicated in paragraph (2). Light stations which are themselves in need of assistance will in any event make use of one or more of the visual distress signals in addition to the radiotelephone message.

(2) Visual Distress Signals:

(a) a rocket or rockets throwing red stars. Each rocket preceded or accompanied by either a detonating signal or sound rocket—the whole signal repeated at regular intervals;

(b) a signal consisting of a square flag having above or below it a ball;

(c) the International Code Signal of distress (“NC” or “DZ”).

NOTE—a detonating signal has the following characteristics:

By night—on firing, a small yellowish-white flash and a small sharp report; on reaching zenith of trajectory (about 300 feet), a very large yellowish-white flash with a loud cracking report.

By day—as for night, but in addition a small puff of whitish smoke on firing and, on reaching zenith of trajectory, a large compact cloud of whitish smoke.

Reply from shore:

By day—orange smoke signal.

By night—white star rocket.

(3) Certain light stations under the jurisdiction of the Northern Lighthouse Board, which covers *Scotland* and the *Isle of Man*, have, in addition to radiotelephones, white star rockets to acknowledge a ship’s distress signal and to indicate that assistance has been summoned.

DANGER SIGNALS

When from any lightship (and certain lighthouses) a vessel is seen standing into danger, the flag signal “NF” of the International Code, “You are running into danger,” or signal flag “U”, “You are standing into danger,” will be hoisted and kept flying until answered. In addition to the above flag signal, the lightship or lighthouse may fire a rocket sound signal, or a detonating signal, and repeat it at short intervals until observed by the vessel. The letter “U” in Morse flashed by lamp or sounded on a horn may also be used.

In the case of lightships the signal “PS”, “You should not come any closer,” may be used when a vessel is observed to be coming dangerously close.

Call Signals (not Distress)—Lightships and certain lighthouses wishing to attract the attention of a passing vessel will:

By day—hoist the appropriate International Code signal.







By night—make the call sign or letter “K” by signal light.

In the case of a lightship, white flare may also be exhibited. In fog or low visibility, when the signal cannot be used, the letter “K” may be made by hand horn.

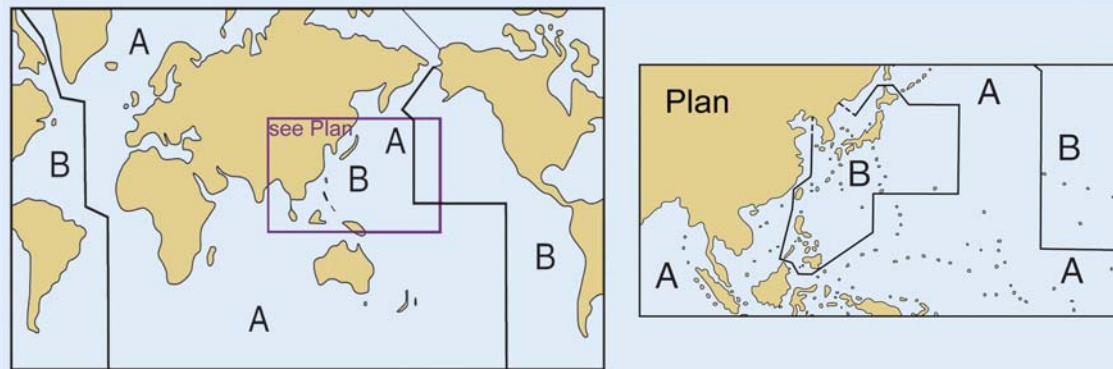
French lights may be shown by day in poor visibility. The heights of structures are measured from the focal plane of the light on the ground.

IALA Maritime Buoyage System

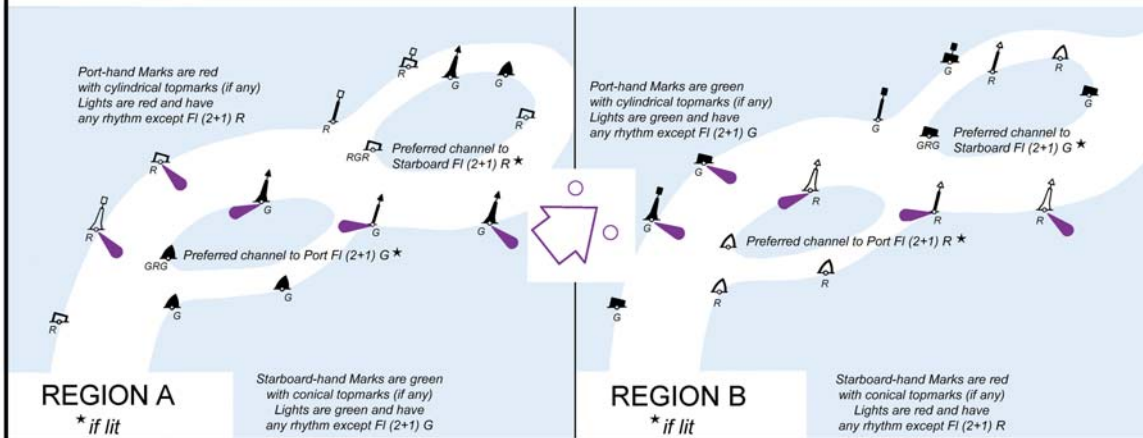
International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA)


Where in force, the IALA System applies to all fixed and floating marks except landfall lights, leading lights and marks, sectored lights and major floating lights. The standard buoy shapes are cylindrical (can) , conical , spherical , pillar , and spar , but variations may occur, for example: minor light floats . In the illustrations below, only the standard buoy shapes are used. In the case of fixed beacons (lit or unlit) only the shape of the topmark is of navigational significance.

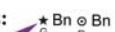

IALA Buoyage Regions A and B



Lateral marks are generally for well-defined channels and are defined by their IALA Buoyage Region. The direction of buoyage is that taken when approaching a harbor from seaward. Along coasts, the direction is determined by buoyage authorities, normally clockwise around land masses.



BEACONS with IALA System topmarks are charted by upright symbols. eg:  or,

on smaller-scale charts:  Beacon towers are charted: 

LIGHTFLOATS: The IALA System is not usually applied to large lightfloats (replacing manned lightships) but may be applied to smaller lightfloats.

Refer to Chart 1 for further detailed information on lights, beacons, and buoys.

FOG SIGNALS

The function of a fog signal in the system of aids to navigation is to warn of danger and to provide the mariner with an audible means of approximating his position relative to the fog signal when the station, or any visual signal which it displays, is obscured from view by atmospheric conditions.

Fog signals depend upon the transmission of sound through air. As aids to navigation, they have certain inherent defects that should be considered. Sound travels through the air in a variable and frequently unpredictable manner.

It has been established that:

fog signals are heard at greatly varying distances and that the distance at which a fog signal can be heard may vary with the bearing of the signal and may be different on different occasions;

under certain conditions of atmosphere, when a fog signal has a combination of high and low tones, it is not unusual for one of the tones to be inaudible. In the case of sirens, which produce a varying tone, portions of the blast may not be heard;

there are occasionally areas close to the signal in which it is wholly inaudible. This is particularly true when the fog signal is screened by intervening land or other obstructions;

fog may exist a short distance from a station and not be observable from it, so that the signal may not be in operation;

even though a fog signal may not be heard from the deck or bridge of a ship when the engines are in motion, it may be heard when the ship is stopped, or from a quiet position. Sometimes it may be heard from aloft though not on deck;

the intensity of the sound emitted by a fog signal may be greater at a distance than in immediate proximity.

All these considerations point to the necessity for the utmost caution when navigating near land in fog. Particular attention should be given to placing lookouts in positions in which the noises in the ship are least likely to interfere with hearing a fog signal. Fog signals are valuable as warnings, but the mariner should not place implicit reliance upon them in navigating his vessel. They should be considered solely as warning devices.

Among the devices in common use as fog signals are:

Radiobeacons which broadcast simple dot-and-dash combinations by means of a transmitter emitting modulated continuous waves;

Diaphones which produce sound by means of a slotted reciprocating piston actuated by compressed air. Blasts

may consist of two tones of different pitch, in which case the first part of the blast is high and the last of a low pitch. These alternate pitch signals are called "two-tone;"

Diaphragm horns which produce sound by means of a diaphragm vibrated by compressed air, steam, or electricity. Duplex or triplex horn units of differing pitch produce a chime signal;

Nautophones, electrically operated instruments, each comprising a vibrating diaphragm, fitted with a horn, which emits a high note similar in power and tone to that of the reed;

Reed horns which produce sound by means of a steel reed vibrator by compressed air;

Sirens which produce sound by means of either a disk or a cup-shaped rotor actuated by compressed air or electricity;

Whistles which produce sound by compressed air emitted through a circumferential slot into a cylindrical bell chamber;

Bells which are sounded by means of a hammer actuated by hand, wave motion, by a descending weight, compressed gas, or electricity;

Guns and explosive signals which are produced by firing of explosive charges, the former being discharged from a gun, and the latter being exploded in midair;

Fog Detector Lights—certain light stations, in addition to the main light, are equipped with fog detector lights for automatic detection of fog. These lights sweep back and forth through an area over which the fog watch is necessary, showing a powerful bluish-white flash of about 1 second in duration. The interval between successive flashes will vary with the position of the vessel within the sector. At the limits of the sector the duration of the flash may be considerably longer than 1 second.

Fog detector lights operate continuously.

Standby fog signals are sounded at some of the light and fog signal stations when the main fog signal is inoperative. Some of these standby fog signals are of a different type and characteristic than the main fog signal.

Radiobeacons, RACONS, RAMARKs, and radio direction-finders are mentioned in the List of Lights, but for detailed information, including the synchronization of radio signals and sound signals for distance finding, the navigator should consult Pub. 117, Radio Navigational Aids.

Note—use Chart No. 1 for the complete list of symbols and abbreviations commonly used in presenting the essential characteristics of lights, fog signals, and radio aids found on charts.

VISIBILITY TABLE

Table of distances at which objects can be seen at sea according to their respective elevations and the elevation of the eye of the observer.

Height in Feet	Distance in geographic or nautical miles	Height in feet	Distance in geographic or nautical miles	Height in feet	Distance in geographic or nautical miles	Height in feet	Distance in geographic or nautical miles	Height in feet	Distance in geographic or nautical miles	Height in feet	Distance in geographic or nautical miles
1	1.2	23	5.6	45	7.8	135	13.6	340	21.6	600	28.7
2	1.7	24	5.7	46	7.9	140	13.8	350	21.9	620	29.1
3	2.0	25	5.9	47	8.0	145	14.1	360	22.2	640	29.5
4	2.3	26	6.0	48	8.1	150	14.3	370	22.5	660	30.1
5	2.6	27	6.1	49	8.2	160	14.8	380	22.8	680	30.5
6	2.9	28	6.2	50	8.3	170	15.3	390	23.1	700	31.0
7	3.1	29	6.3	55	8.7	180	15.7	400	23.4	720	31.4
8	3.3	30	6.4	60	9.1	190	16.1	410	23.7	740	31.8
9	3.5	31	6.5	65	9.4	200	16.5	420	24.0	760	32.3
10	3.7	32	6.6	70	9.8	210	17.0	430	24.3	780	32.7
11	3.9	33	6.7	75	10.1	220	17.4	440	24.5	800	33.1
12	4.1	34	6.8	80	10.5	230	17.7	450	24.8	820	33.5
13	4.2	35	6.9	85	10.8	240	18.1	460	25.1	840	33.9
14	4.4	36	7.0	90	11.1	250	18.5	470	25.4	860	34.3
15	4.5	37	7.1	95	11.4	260	18.9	480	25.6	880	34.7
16	4.7	38	7.2	100	11.7	270	19.2	490	25.9	900	35.1
17	4.8	39	7.3	105	12.0	280	19.6	500	26.2	920	35.5
18	5.0	40	7.4	110	12.3	290	19.9	520	26.7	940	35.9
19	5.1	41	7.5	115	12.5	300	20.3	540	27.2	960	36.3
20	5.2	42	7.6	120	12.8	310	20.6	560	27.7	980	36.6
21	5.4	43	7.7	125	13.1	320	20.9	580	28.2	1000	37.0
22	5.5	44	7.8	130	13.3	330	21.3				

Explanation.—The line of sight connecting the observer and a distant object is at maximum length tangent with the spherical surface of the sea. It is from this point of tangency that the tabular distances are calculated. The table must accordingly be entered twice to obtain the actual geographic visibility of the object—first with the height of the object, and second with the height of the observer’s eye—and the two figures so obtained must be added. Thus, if it is desired to find the maximum distance

at which a powerful light may be seen from the bridge of a vessel where the height of eye of the observer is 55 feet above the sea, from the table:

Nautical Miles	
55 feet height of observer (visible)	8.7
200 feet height of light (visible)	<u>16.5</u>
Distance visible	25.2

CONVERSION TABLE — FEET TO WHOLE METERS

(FOR HEIGHTS OF LIGHTS)

1 foot = 0.3048 meter

Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
		40	12	80	24	120	37	160	49	200	61
1	0	41	12	81	25	121	37	161	49	300	91
2	1	42	13	82	25	122	37	162	49	400	122
3	1	43	13	83	25	123	37	163	50	500	152
4	1	44	13	84	26	124	38	164	50	600	183
5	2	45	14	85	26	125	38	165	50	700	213
6	2	46	14	86	26	126	38	166	51	800	244
7	2	47	14	87	27	127	39	167	51	900	274
8	2	48	15	88	27	128	39	168	51	1000	305
9	3	49	15	89	27	129	39	169	52		
10	3	50	15	90	27	130	40	170	52		
11	3	51	16	91	28	131	40	171	52		
12	4	52	16	92	28	132	40	172	52		
13	4	53	16	93	28	133	41	173	53		
14	4	54	16	94	29	134	41	174	53		
15	5	55	17	95	29	135	41	175	53		
16	5	56	17	96	29	136	41	176	54		
17	5	57	17	97	30	137	42	177	54		
18	5	58	18	98	30	138	42	178	54		
19	6	59	18	99	30	139	42	179	55		
20	6	60	18	100	30	140	43	180	55		
21	6	61	19	101	31	141	43	181	55		
22	7	62	19	102	31	142	43	182	55		
23	7	63	19	103	31	143	44	183	56		
24	7	64	20	104	32	144	44	184	56		
25	8	65	20	105	32	145	44	185	56		
26	8	66	20	106	32	146	45	186	57		
27	8	67	20	107	33	147	45	187	57		
28	9	68	21	108	33	148	45	188	57		
29	9	69	21	109	33	149	45	189	58		
30	9	70	21	110	34	150	46	190	58		
31	9	71	22	111	34	151	46	191	58		
32	10	72	22	112	34	152	46	192	59		
33	10	73	22	113	34	153	47	193	59		
34	10	74	23	114	35	154	47	194	59		
35	11	75	23	115	35	155	47	195	59		
36	11	76	23	116	35	156	48	196	60		
37	11	77	23	117	36	157	48	197	60		
38	12	78	24	118	36	158	48	198	60		
39	12	79	24	119	36	159	48	199	61		

RADIOBEACONS

RADIO DIRECTION-FINDER SETS ON SHIPS

Radio direction-finder sets on board ship enable bearings to be taken of transmissions from other ships, aircraft, shore stations, marine radiobeacons, and the coastal stations of the radio communication network. When located in the pilothouse or on the navigating bridge, the direction-finder enables the navigating officer to obtain bearings himself without reference to others and without delay.

Due to the great value of radio bearings, particularly when visibility is poor and when celestial observations cannot be obtained, the radio direction-finder on board ship deserves the same consideration and care as are given to the sextant and compass. It has the following characteristics in common with the two latter navigational instruments: the readings are subject to certain errors; these errors may be reduced by skillful and intelligent operation; the dangers of using erroneous readings may be greatly reduced by the intelligence and good judgment of the mariner. In order to acquire experienced judgment in the operation of the instrument, it is essential that the mariner use it as much as practicable.

Troubles from interference and weak signals are greatly reduced by the use of direction-finders of proper selectivity. The bearings must be corrected for radio deviation as shown by the calibration curve of the set.

Types of Radiobeacons

1. Directional radiobeacons which transmit radio waves in beams along fixed bearings.
2. Rotating radiobeacons by which a beam of radio waves is resolved in azimuth in a manner similar to the beam of light sent out by rotating lights.
3. Circular radiobeacons which send out waves of approximately uniform strength in all directions so that ships may take radio bearings of them by means of the ship's radio direction-finder sets. This is the most common type of radiobeacon.

To extend the usefulness of marine radiobeacons to ships and aircraft employing automatic radio direction finders, U.S. marine radiobeacons on the Atlantic and Pacific Coasts and Great Lakes have been modified to transmit a continuous carrier signal during the entire radiobeacon operating period with keyed modulation providing the characteristic signal. Unless a beat frequency oscillator is installed, the continuous carrier signals are not audible to the operator of an aural null direction finder. A ten second dash has been included in the characteristic of these radiobeacons, to enable the navigator using a conventional aural null direction finder to refine his bearing. Vessels with direction finders will be able to use the

United States radiobeacons located on the Atlantic and Pacific Coasts, and Great Lakes at any time in their assigned sequence.

Aeronautical Radio Aids

Aeronautical radiobeacons and radio ranges are often used by navigators of marine craft in the same manner as marine radiobeacons are used for determining lines of positions. They are particularly useful along coasts where marine broadcast coverage is inadequate. Aeronautical aids situated inland become less trustworthy, so far as ships are concerned, when high land intervenes between them and the coast. They are established to be of primary usefulness to aircraft, and surface craft should use these aids with caution. Only those aeronautical radiobeacons considered to be of use to the mariner have been selected for inclusion in this publication.

AERONAUTICAL RADIOBEACONS. Like marine radiobeacons, these aids broadcast a characteristic signal on a fixed frequency.

NOTE: The assigned frequency of aeronautical radiobeacons is normally from 200 to 415 kHz while the frequency of marine radiobeacons is normally from 285 to 325 kHz. Aeronautical radiobeacons not within the marine radiobeacon band will not normally be listed in this publication.

The range signals are interrupted at intervals to permit broadcast of the identification signal. In aviation publications the range leg bearings are most often given as magnetic bearings toward the station; in this publication they are given as true bearings toward the station. Unless otherwise stated in the station details, aeronautical radio aids mentioned in this publication transmit continuously.

NOTE: Mariners are advised that changes to and deficiencies in aeronautical radio facilities are not always immediately available to maritime interests and the positions are approximate and listed to the nearest minute only.

Obligations of Administrations Operating Radiobeacons

The obligations of nations and other administrations operating radiobeacons are given in Article 43 of the Radio Regulations of the International Telecommunication Union, Geneva.

Accuracy of Bearings Taken Aboard Ship

No exact rules can be given as to the accuracy to be expected in radio bearings taken by a ship as the accuracy depends to a large extent upon the skill of the ship's opera-

tor, the condition of the ship's equipment, and the accuracy of the ship's calibration curve. Mariners are urged to obtain this information by taking frequent radio bearings when their ship's position is accurately known and by recording the results. Normally, United States radiobeacons are operated in a group of six, each station in a group using the same frequency and transmitting for one minute in its proper sequence, and operate during all periods, either sequenced or continuously, regardless of weather conditions.

SKILL OF OPERATOR: Skill in the operation of the radio direction-finder can be obtained only by practice and by observing the technical instructions for the set in question. For these reasons the operator should carefully study the instructions issued with the set and should practice taking bearings frequently.

OPERATOR'S ERROR: As the operator obtains bearings by revolving the direction-finder coil until the signal disappears or becomes a minimum, the operator can tell by the size of the arc of silence or of minimum strength approximately how accurately the bearing has been taken. For instance, if the minimum is broad and the residual signal covers about 10° with equal strength, it is doubtful if the bearing can be accurately estimated. On the other hand, if a sharp minimum can be obtained, the operator can determine the bearing to within a half of a degree.

In this connection it should be noted that a properly operating and correctly adjusted direction-finder should in no case produce other than a point or arc of absolute silence. That is, there should be no "residual" signal at the point or arc of observation. The sharpness and completeness of the arc of silence are the best indications of a properly operating direction-finder, and their absence is the best indication of the presence of "night effect."

SUNRISE, SUNSET, OR NIGHT EFFECT: Bearings obtained from about half an hour before sunset to about half an hour after sunrise may be subject to errors due to night effect. On some nights this effect is more pronounced than on others and effect is usually greatest during the hours of twilight. Night effect may be detected by a broadening of the arc of minimum signals and by a fluctuation in the strength of the signals. It may also be indicated by difficulty in obtaining a minimum or by a rapidly shifting minimum. It is sometimes accompanied by an actual shift in the direction of the bearings. If it is essential to obtain a bearing when the night effect is pronounced, several bearings should be taken over a short period of time and an average taken of them.

RADIO DIRECTION FINDER WITHOUT GYRO REPEATERS: The ship's compass must be read as the bearing is taken or an error may be introduced equal to the amount that the ship has yawed in the interval between taking the bearing and reading the compass. Any error in the ship's compass must be applied to the bearing.

RECIPROCAL BEARINGS: In some direction-finder sets, the operator cannot tell from which side of the ship the signals are coming. With these sets the operator shall correct both bearings for their respective deviations and give both corrected bearings to the person who is plotting the bearings on the chart. If the mariner is in doubt as to the side of the ship from which the bearings are coming, this difficulty can usually be solved by having another bearing taken after the ship has steamed a short distance and noting in which direction the bearing is changing.

CALIBRATION: It is essential that the radio direction-finder be accurately calibrated in order that the bearings may be corrected for deviation. While the bearings are being taken, other radio antennas on board must be in the same condition as they were when the calibration was made; movable parts of the ship's superstructure such as booms, davits, wire rigging, etc., must be secured in the positions which they occupied when the direction-finder was calibrated. Unusual cargoes such as large quantities of metals and extraordinary conditions of loading may cause errors.

The direction-finder should be recalibrated after any changes have been made in the set or its surroundings (this includes alterations to or changes in position of antennas, wire rigging, boat davits, booms, etc.) whenever there is reason to believe that the previous calibration has become inaccurate, and also at periodic intervals.

The calibration must be made on approximately the same frequency or frequencies as will be used to take bearings because the deviation for several frequencies is not likely to be the same. It is believed that one calibration curve is satisfactory for the normal radiobeacon frequency (285 to 325 kHz), but the instructions issued by the manufacturer of the particular direction-finder in question should be studied in this connection.

To facilitate the calibration of ship's direction-finders, special arrangements have been made by some services for operation of their radiobeacons at times other than their published schedules. Information as to the arrangements made by the United States stations in this respect is as follows:

Sequenced radiobeacons cannot broadcast at any time other than on their assigned operating minute for the purpose of enabling vessels to calibrate their radio direction finders without causing interference. Special radio direction finder calibration transmitters of short range are operated at certain localities to provide continuous calibration service.

The position given for the antenna is the point from which the radiobeacon signal is emitted.

If it is not practicable to determine the time of calibration sufficiently in advance to contact the district commander, request may be made directly to the stations by means of telephone, telegraph, or a whistle signal consisting of three long blasts; followed by three short blasts.

This whistle signal is to be repeated until it is acknowledged by the station through the starting of the transmitter. The same group of signals should be sounded at the termination of calibration.

The work of the station personnel is not confined to standing watch and there may be times when the whistle request for calibration is not immediately heard, due to the noise from operating station machinery, etc. Usually, a repeated signal not too far from the station will attract attention.

“COMPENSATED” RADIO DIRECTION-FINDERS: Many radio direction-finders are “compensated” and no calibration chart or curve is used. Attention is invited to the fact that such compensation is just as vulnerable as the calibration data due to changes made in the set or its surroundings.

CHECK THE CALIBRATION: The calibration of compensation should be checked frequently by taking bearings when the ship’s position is accurately known and the results should be recorded for future reference.

CALIBRATION RADIOBEACONS: In the United States and certain other areas special radiobeacons, primarily for calibrating shipboard direction-finders are in operation. These radiobeacons transmit either continuously during scheduled hours or upon request, as indicated in station details.

COASTAL REFRACTION (OR LAND EFFECT): Errors may occur in bearings taken by ships so located that the line of observation to the radiobeacon passes over land or along the shore line. However, many observations seem to indicate that such errors are negligible when the observing vessel is well out from the shore. Bearings secured entirely over water areas are to be preferred since “land effect” is thus eliminated. Bearings taken at sunset and sunrise are likely to be erratic, and observations taken at these hours should therefore be repeated and checked as may be feasible.

PROGRAM BROADCASTING STATIONS: Before taking bearings on a station broadcasting entertainment programs a mariner should consider that frequency may differ widely from the frequency for which the set is calibrated, that the published location of the station may be that of its studio and not that of its transmitting antenna, that if the station is synchronized with other stations it may be impossible to tell on which station the bearing was taken, and that as the majority of these stations are inland, the coastal refraction may be excessive.

Station Details

FREQUENCY: The frequency listed is that used by the station in transmitting its “Characteristic Signal.” Calling frequencies, if any, will be given under “remarks.”

RANGE: In this book the range of radiobeacons is only approximate and is given merely to assist mariners in

planning their voyages and to inform them of several radiobeacons they will probably hear first. Frequently, when conditions for radio reception are good, radiobeacons may be heard at greater distances than indicated. The mariner who is at a greater distance than the range indicated should attempt to obtain bearings when necessary, and not assume that the radiobeacon will be unheard beyond its indicated range.

GROUP SEQUENCE: Selected radiobeacons are grouped together on the same operating frequency and are assigned a specific sequence of transmission within this group. This reduces station interference and unnecessary returning.

ANTENNA LEAD-IN: Included in the details of many radiobeacons located at or near light stations is a statement of the distance and bearing of the radiobeacon transmitting antenna from the light tower. Use should be made of this information when calibrating the ship’s direction-finding equipment by means of simultaneous visual and radio bearings.

Plotting Radio Bearings

The procedure for converting radio (great circle) bearings as received by direction-finder equipment aboard ship is identical with that used in converting radio bearings supplied by direction-finder stations on shore and is described in section 100E “Plotting Radio Bearings” of Pub. 117, Radio Navigational Aids.

Synchronization for Distance Finding

At some radiobeacon stations, sound signals, either submarine or air or both, are synchronized with the radiobeacon signals for distance finding. Ordinarily, the sound signals do not operate during the transmission period of the radio signal in clear weather. The methods in use employ, as a rule, distinctive signals to indicate the point of synchronization, and make use, for determining distance, of the lag of signals traveling through air or water as compared to the practically instantaneous travel of the radio signals.

In the case of some sound signals, a series of short radio dashes is transmitted at intervals following the synchronizing point, so that by counting the number of such short dashes heard after the distinctive radio signal and before hearing the corresponding distinctive sound signal, the observer obtains the distance, in miles equal to the number of dashes counted, from the sound signal apparatus unless stated otherwise.

In the case of other signals, the observer notes the number of seconds intervening between the reception of the distinctive radio signal and the corresponding sound signal and uses a factor to determine distances in miles as follows:

Submarine signals—multiply the observed numbers of seconds by 0.8 or divide by 1.25 distance in nautical miles.

Air signals—multiply the observed number of seconds by 0.18 or divide by 5.5. For more approximate results or for statute miles, multiply the observed number of seconds by 0.2 or divide by 5.

Tables for finding distance

Interval in seconds	Distances in nautical miles from sound signal source	
	Air	Submarine
1	0.18	0.8
2	0.36	1.6
3	0.54	2.4
4	0.72	3.2
5	0.90	4.0
6	1.08	4.8
7	1.26	5.6
8	1.44	6.4
9	1.62	7.2
10	1.80	8.0
20	3.60	16.0
30	5.40	24.0
40	7.20	
50	9.00	
60	10.80	

REMARKS: Average speed of sound travel in water is 1 nautical mile in 11/4 seconds.

The speed of sound travel is influenced by a number of conditions making it impracticable to state a factor that will give exact results under all conditions. The results obtained by the methods described may be accepted as being accurate to within 10 percent of the distance.

Methods of synchronizing the signals vary and are described or illustrated in official announcements regarding them. It is essential to note carefully the point of synchronization used so that no error will be made through taking time on the wrong signal or the wrong part of it.

In observing air signals it is usually sufficient to use a watch with second hand, although a stop watch is helpful. For submarine signals where the interval is shorter and a time error correspondingly more important, it is essential that a stop watch or other timing device be used. Where the radiobeacon and submarine signals are not received at the same point on the vessel, means of instant communication between two observers should be available or synchronized stop watches provided for each.

Ships not equipped with a DF receiver can take advantage of the distance-finding feature of a radiobeacon station, if equipped with a radio receiver capable of receiving

the transmission. In the case of obtaining distance from a radiobeacon station which is synchronized with a submarine sound signal, the ship must also be equipped with a device for picking up submarine sound signals.

Rotating Loop Radiobeacon

MODE OF OPERATION:

(1) The radiobeacon consists of a rotating loop transmitter having directional properties by which an observer in a ship can obtain his bearing from the beacon without the use of a direction-finder. Any ordinary receiving set capable of being tuned to the radiobeacon's frequency may be used. The only other equipment required is a reliable stop watch or chronograph with a sweep second hand. Stop watches and clocks with dials graduated in degrees may be used, from which bearings may be read directly without any mathematical calculation.

(2) During each revolution of the beacon, the signals received by the observer will rise and fall in intensity, passing through a maximum and a minimum twice each minute. The positions of minimum intensity, which occur at intervals of thirty seconds from one another, are very sharp and can be accurately observed. These are, therefore, used for navigation purposes.

The beacon may be regarded as having a line or beam of minimum intensity which rotates at a uniform speed of 360° in 1 minute (i.e. 6° in 1 second) based on the true meridian as starting point. Therefore, if the observer can (a) identify the beacon and (b) measure the number of seconds which this minimum beam takes to reach their position starting from the true meridian, this number multiplied by six will give their true bearing from the beacon or its reciprocal.

The signals which enable the beacon to be identified and the bearing to be calculated are described in the following paragraphs:

Signals transmitted by the beacon: Each transmission from the beacon lasts for 4 minutes; the beacon is then silent for 8 minutes, and automatically starts again at the end of the silent period. Each transmission consists of two parts: (a) the identification signal of the station set at a slow speed for the first minute, commencing when the minimum beam is true east and west and followed by a long dash of about 12 seconds duration; (b) the signal group commencing when the minimum beam is approaching the true meridian, and consisting of (i) the north starting signal, which is the letter V followed by two dots (•• — ••); (ii) a long dash of about 12 seconds duration; (iii) the east starting signal, which is the letter B followed by two dots (— •• ••); and (iv) a long dash for about 42 seconds.

The navigation signals are repeated during the remainder of the transmission and signals cease when the minimum beam is in the east and west position.

INSTRUCTIONS FOR TAKING BEARINGS

- (i) Set stop watch to zero.
- (ii) Listen for identification signal.
- (iii) When the first long dash begins (at A on diagram) get ready for the "north signal."
- (iv) After the "north signal," start stop watch exactly at beginning of long dash (see "00 seconds" on diagram) counting one-two with the two preceding dots, and 3 for the start of the stop watch.
- (v) Listen for minimum and note its exact time by stop watch.

NOTE: If stop watch is graduated in degrees note exact angle, which is the bearing.

- (vi) Multiply number of seconds by 6° for bearing.
- (vii) Determine whether bearing is direct or reciprocal.
- (viii) If the "north signal" is faint, use the "east signal," but add 090° to final bearing.

Particular attention is directed to the following:

(a) The stop watch must be started exactly at the beginning of the long dash for each series of observations.

(b) The time of occurrence of the minimum must be read to the nearest fifth of a second.

(c) The bearing obtained will be either the direct bearing or its reciprocal.

(d) When using the east signal, add 090° to obtain bearings from true north.

(e) The beacon is set up on the true meridian, and no correction is required for magnetic variation.

(f) No quadrantal error arises, and no corrections are necessary except as in (c) and (d) above.

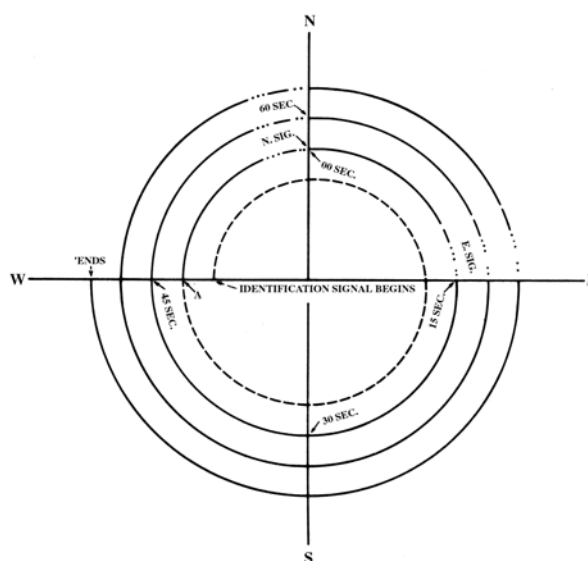
(A correction must, of course, be made for convergency; this should be applied as if the beacon were a shore radio direction-finder station.)

(g) A comparatively large error of bearing may occur due to inaccuracy in the stop watch, and to obviate this,

observers or navigators should check their stop watches on the beacon station before taking bearings. This can easily be done by checking the time by stop watch of the complete revolution of the beacon transmission. Any error found can then be allowed for.

Caution

Due to the many factors which enter into the transmission and reception of radio signals, a mariner cannot practically estimate its distance from a radiobeacon either by the strength of the signals received or by the time at which the signals were first heard. Mariners should give this fact careful consideration in approaching radiobeacons. A diagram showing the signals used is given below.



ROTATING RADIOBEACON
SIGNAL DIAGRAM

DESCRIPTION

(Radiobeacons)

Information is tabulated in eight columns as follows:

Column 1: The number assigned to each radiobeacon by this Agency.

Column 2: Name and/or descriptive location of the radiobeacon.

Column 3: Approximate latitude and longitude of the radiobeacon to the nearest tenth of a minute.

Column 4: Radiobeacon characteristics. Included in this column are the Morse code, period in seconds, length of transmission and silence time.

Column 5: Range (approximate) in nautical miles.

Column 6: Group sequence. Selected radiobeacons are grouped together on the same operating frequency and are assigned a specific sequence of transmission within this group. This reduces station interference and unnecessary return.

Column 7: Frequency (given in kilohertz) and amplitude modulation (see Table Symbols).

Column 8: Remarks. Transmission synchronization, type of radiobeacon (marine, aero, etc.), calibration, antenna lead-in, calling frequencies, distance-finding information, service charges, hours of transmission, directional signals and other pertinent information.

ABBREVIATIONS

aero aeronautical
tr transmission
si silence
s seconds
(4) 4 times
Transmission is continuous unless otherwise stated.

TABLE OF SYMBOLS

LEGEND

- (1) Type of modulation of the main carrier.
- (2) Nature of signal(s) modulating the main carrier.
- (3) Type of “information” to be transmitted. “Information” does not include information of a constant, unvarying nature such as provided by standard frequency emissions, continuous wave and pulse radars, etc.

AMPLITUDE MODULATION:

N0N

- (1) Emission of an unmodulated carrier.
- (2) No modulating signal.
- (3) No information transmitted.

A1A

- (1) Double-sideband.
- (2) Single channel containing quantized or digital information without the use of a modulating subcarrier.
- (3) Telegraphy (for aural reception).

A2A

- (1) Double-sideband.
- (2) Single channel containing quantized or digital information with the use of a modulating subcarrier.
- (3) Telegraphy (for aural reception).

A3E

- (1) Double-sideband.
- (2) Single channel containing analog information.
- (3) Telephony (including sound broadcasting).

R3E

- (1) Single-sideband (reduced or variable level carrier).
- (2) Single channel containing analog information.
- (3) Telephony (including sound broadcasting).

B8E

- (1) Independent sidebands.
- (2) Two or more channels containing analog information.
- (3) Telephony (including sound broadcasting).

H2A

- (1) Single-sideband (full carrier).
- (2) Single channel containing quantized or digital information with the use of a modulating subcarrier.
- (3) Telegraphy (for aural reception).

H3E

- (1) Single-sideband (full carrier).
- (2) Single channel containing analog information.
- (3) Telephony (including sound broadcasting).

J3E

- (1) Single-sideband (suppressed carrier).
- (2) Single channel containing analog information.
- (3) Telephony (including sound broadcasting).

A3C

- (1) Double-sideband.
- (2) Single channel containing analog information.
- (3) Facsimile.

A3F

- (1) Double-sideband.
- (2) Single channel containing analog information.
- (3) Television (video).

B7D

- (1) Independent sidebands.
- (2) Two or more channels containing quantized or digital information.
- (3) Data transmissions, telemetry, telecommand.

Note: With 6 kHz. EDW operation in the bands below 30 MHz allocated exclusively for Maritime Mobile Service (FC, MO).

FREQUENCY (OR PHASE) MODULATION:**F1B**

- (1) Frequency modulation.
- (2) Single channel containing quantized or digital information without the use of a modulating subcarrier.
- (3) Telegraphy (for automatic reception).

F2A

- (1) Frequency modulation.
- (2) Single channel containing quantized or digital information with the use of a modulating subcarrier.
- (3) Telegraphy (for aural reception).

F3E

- (1) Frequency modulation.
- (2) Single channel containing analog information.
- (3) Telephony (including sound broadcasting).

F3C

- (1) Frequency modulation.
- (2) Single channel containing analog information.
- (3) Facsimile.

F3F

- (1) Frequency modulation.
- (2) Single channel containing analog information.
- (3) Television (video).

P1B

- (1) Sequence of unmodulated pulses.
- (2) Single channel containing quantized or digital information without the use of a modulating subcarrier.
- (3) Telegraphy (for automatic reception).

Pulse Modulation:

GHz = gigahertz

kHz = kilohertz

MHz = megahertz

DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS)

Differential Global Positioning System (DGPS) is a radio-based navigation system that eliminates errors in a GPS receiver that will allow the accuracy level to be significantly enhanced. DGPS accuracy can be 10 meters or better, compared with 100 meters or better with GPS. This is possible by placing a high-performance GPS receiver (reference station) at a known location. Because the receiver knows its exact location, it can determine the errors in the satellite signals. The satellite measures the ranges to each satellite using the signals received and comparing these measured ranges to the actual ranges calculated from its known position. The total error is the difference between the measured and calculated range. The error data for each tracked satellite is formatted into a correction message and transmitted to GPS users. The correction message format follows the standard established by the Radio Technical Commission for Maritime Services, Special Committee 104 (RTCM-SC104). These differential corrections are then applied to the GPS calculations, thus removing most of the satellite signal error and improving accuracy.

Terms for understanding DGPS:

DGPS Correction Receiver

A DGPS correction receiver decodes the signals received from a reference site. Data is formatted into a serial RTCM SC104 data stream and provided to the remote GPS receiver. There are many types of DGPS correction receivers.

GPS Receivers

The GPS receiver measures ranges to each satellite, but

before the measurements are used to calculate position, corrections received from the DGPS receiver are applied to the measurements. The position is then calculated using the corrected range measurements providing vastly increased accuracy.

Modulator

Depending on the transmission format, the modulator encodes the data as necessary for transmission.

Reference Station

The reference station GPS receiver knows exactly the position of its antenna, therefore it knows what each satellite range measurement should be. It measures the ranges to each satellite using the received signals just as if it was going to calculate position. The measured ranges are subtracted from the known ranges and the result is range error. The range error values for each satellite are formatted into messages in the RTCM SC104 format and transmitted continuously.

Transmitter

The transmitter is basically a power amplifier which is connected to an antenna system. The modulated carrier is amplified and driven to the antenna. In the United States Coast Guard system, the transmitter is 250-1000 Watts and operates in the 300Khz frequency range. The amplified signal is radiated via the antenna to remote DGPS receivers for real-time position correction.

DESCRIPTION

(Differential GPS Stations)

Information is tabulated in eight columns as follows:

Column 1: The number assigned to each DGPS Station by this Agency.

Column 2: Name of the DGPS Station.

Column 3: Approximate latitude and longitude of the DGPS Transmitting Station to the nearest tenth of a minute.

Column 4: Station ID which can be found in the IALA Master list. No two stations have the same ID. **T** denotes the Transmitting Station, **R** denotes the Reference Station.

Column 5: Range (approximate) in nautical miles.

Column 6: Frequency in kHz.

Column 7: Transfer Rate which equates to the baud rate and will be published as a whole number without any additional abbreviations such as “bps” (bits per second).

Column 8: Remarks. This column contains information about the reference stations and messages types transmitted. GPS Message Type Numbers are 1, 3, 4, 5, 6, 7, 9, 15 and 16. (*Refer to message type descriptions below*)

GPS MESSAGE TYPE NUMBER INDICATORS

1	Differential GNSS corrections (full set of satellites)
3	Reference stations parameters
4	Datum used
5	Constellation health
6	Null frame (no information)
7	Radiobeacons Almanacs
9	Sub-set differential GNSS corrections
15	Ionospheric corrections
16	Special messages

Section 1

South Coast of England Including Scilly Isles

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SCILLY ISLES							
4 A 0002	Bishop Rock.	49°52.4' N 6°26.7' W	Fl.(2)W. period 15s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 12.6s	144 44	20	Gray round granite tower; 161. Helicopter platform.	Visible 233°-236° and 259°- 204°. Partially obscured 204°-211°. AIS (MMSI No 992351137).
	RACON		T(-)		18		Azimuth coverage 254°-215°. (3 & 10cm).
8 A 0006	Peninnis Head.	49°54.3' N 6°18.2' W	Fl.W. period 20s fl. 1s, ec. 19s	118 36	9	White round metal tower, black metal framework tower, black cupola; 46.	Visible 231°-117°, at distances of less than 5M observed in places 048°- 083°.
16 A 0018	Round Island.	49°58.7' N 6°19.4' W	Fl.W. period 10s fl. 0.3s, ec. 9.7s	180 55	18	White round tower; 62.	Visible 021°-288°. Shown by day during reduced visibility. Horn: 4 bl. ev. 60s. (bl. 1s, si. 2s, bl. 1s, si. 2s, bl. 1s, si. 2s, bl. 1s, si. 50s).
20 A 0020	SEVEN STONES LIGHTFLOAT.	50°03.6' N 6°04.3' W	Fl.(3)W. period 30s fl. 0.5s, ec. 4.5s fl. 0.5s, ec. 4.5s fl. 0.5s, ec. 19.5s		15	Red hull, light tower amidships; 39.	Also shown by day when fog signal is operating. AIS (MMSI No 992351023). Horn: 3 bl. ev. 60s (bl. 2s, si. 2s, bl. 2s, si. 2s, bl. 2s, si. 50s).
	RACON		O(- - -)		10		(3 & 10cm).
ENGLAND-SOUTH COAST							
24 A 0028	Longships.	50°04.0' N 5°44.8' W	Fl.(2)W.R. period 10s fl. 1s, ec. 1.5s fl. 1s, ec. 6.5s	115 35	W. 15 R. 11	Gray round granite tower; 115. Helicopter platform.	R. 189°-327°, W.-189°. Also shown in reduced visibility. Horn: 1 bl. ev. 10s (bl. 1s, si. 9s).
28 A 0030	Wolf Rock.	49°56.7' N 5°48.6' W	Fl.W. period 15s fl. 0.2s, ec. 14.8s	112 34	16	Gray round granite tower, black lantern; 135. Helicopter platform.	Also shown in reduced visibility. AIS (MMSI No 992351128). Horn: 1 bl. ev. 30s (bl. 1s, si. 29s).
	RACON		T(-)		10		(3 & 10cm).
32 A 0032	Tater-du.	50°03.1' N 5°34.7' W	Fl.(3)W. period 15s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 9.9s	112 34	20	White round tower; 49.	Visible 241°-072°.
			F.R.	102 31	13		Visible 060°-072°, over Runnel Stone and in places 072°-077° within 4M.
40 A 0038	Newlyn Harbour, S. pier, head.	50°06.2' N 5°32.6' W	Fl.W. period 5s fl. 1s, ec. 4s	34 10	9	White round metal tower, red cupola, base; 33.	Visible 253°-336°.
44 A 0040	-N. pier, head.	50°06.1' N 5°32.6' W	F.W.G.	13 4	2	Green metal post, pedestal.	G. 238°-248°, W. over the harbor. F.R. shown from inner head. F.R. range lights mark fish market.
46 A 0045	The Gear.	50°06.6' N 5°31.6' W	Fl.(2)W. period 10s			ISOLATED DANGER BRB, beacon, topmark.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
PENZANCE:							
48 A 0046	-S. pier, head.	50°07.1' N 5°31.7' W	Fl.W.R. period 5s	37 11	W. 17 R. 12	White round tower, black base; 30.	R. (unintensified) 159°-224°, R.-268°, W.-344°30', R.- shore.
52 A 0048	-Albert pier, head.	50°07.1' N 5°31.8' W	2 F.G. (vert.)	36 11	2	Gray metal column; 20.	2 meters apart.
56 A 0051	-Dock entrance, NW. side.	50°07.0' N 5°31.8' W	2 F.R. (vert.)	20 6	2	Column; 13.	
60 A 0056	Porthleven, on pier, S. side.	50°04.9' N 5°19.1' W	F.G.	33 10	4	Green metal column; 20.	Shown only when inner harbor is open to shipping. F.G. (occasional) shown inside harbor 033°-067° when required for vessels entering.
64 A 0060	Lizard Point.	49°57.6' N 5°12.1' W	Fl.W. period 3s fl. 0.1s, ec. 2.9s	230 70	26	White octagonal tower at E. end of building; 62.	Visible 250°-120°, partially visible 235°-250°. F.W. may also be seen within 12M. Storm signals. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s). DGPS Station.
FALMOUTH:							
68 A 0062	-St. Anthony.	50°08.5' N 5°01.0' W	Iso.W.R. period 15s	72 22	W. 16 R. 14	White octagonal tower; 62.	W. 295°-004°, R.-022° over Manacle rocks, W.-172°. Shown 24 hours. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
70	<i>-Southover Scorpio Lighted Buoy.</i>	50°08.3' N 4°59.8' W	Q.(6)+L.Fl.W. period 15s			S. CARDINAL YB, pillar, topmark.	
	-RACON		D(- • •) period 30s		10		
72 A 0064	-E. breakwater, head.	50°09.4' N 5°03.0' W	2 F.R. (vert.)	6 2		Dolphin. Floodlit.	2 meters apart.
80 A 0065	-W. breakwater, head.	50°09.4' N 5°03.2' W	Q.R.	16 5	3	Red framework tower; 7.	
84 A 0066	-Custom House quay, head.	50°09.2' N 5°03.9' W	2 F.R. (vert.)	16 5		Gray column; 16.	
88 A 0068	-Fish Strand quay.	50°09.3' N 5°04.1' W	2 F.R. (vert.)	16 5		Red column; 13.	
92 A 0069	-Prince of Wales pier, head.	50°09.4' N 5°04.1' W	2 F.R. (vert.)	21 6		White concrete column; 16.	
96 A 0070	-Greenbank quay.	50°09.7' N 5°04.4' W	Fl.R. period 2s	21 6		Gray column; 16.	
100 A 0078	Mevagissey, S. breakwater, head.	50°16.1' N 4°46.9' W	Fl.(2)W. period 10s fl. 1.5s, ec. 2s fl. 1.5s, ec. 5s	30 9	12	White metal tower, black base; 26.	Fishing light. Diaphone: 1 bl. ev. 30s (bl. 2s, si. 28s).
102 A 0080	Charlestown, N. breakwater, head.	50°19.8' N 4°45.3' W	2 F.G. (vert.)	16 5	1		
102.5 A 0080.2	-S. breakwater, head.	50°19.8' N 4°45.3' W	2 F.R. (vert.)	16 5	1		
FOWEY:							
104 A 0082	-Fowey.	50°19.6' N 4°38.8' W	L.Fl.W.R. period 5s fl. 2s, ec. 3s	92 28	W. 11 R. 9	White octagonal tower, red lantern; 20.	R. 284°-295°, W.-028°, R.- 054°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
108 A 0084	-Whitehouse Point.	50°20.0' N 4°38.3' W	Iso.W.R.G. period 3s	36 11	W. 11 R. 8 G. 8	Red metal column; 14.	G. 017°-022°, W.-032°, R.-037°.
112 A 0086	--N. pier, head.	50°20.0' N 4°38.2' W	2 F.R. (vert.)	12 4	8	Red post; 7.	
POLPERRO:							
118 A 0090	-Spy House Point.	50°19.8' N 4°30.7' W	Iso.W.R. period 6s	98 30	7	White concrete pillar; 10.	W. 288°-060°, R.-288°.
120 A 0092	-Tidal basin, W. pier, head.	50°19.8' N 4°30.9' W	F.W.	14 4	4	Post; 10.	Shows F.R. when harbor is closed.
LOOE:							
124 A 0093	-Looe Harbor entrance.	50°20.6' N 4°26.9' W	Q.(3)W. period 10s		2	E. CARDINAL BYB, beacon, topmark.	
128 A 0094	-Looe.	50°21.0' N 4°27.1' W	Oc.W.R. period 3s lt. 2s, ec. 1s	26 8	W. 15 R. 12	Red metal column; 20.	R. 207°-267°, W.-313°, R.-332°. Fishing light.
132 A 0098	Eddystone.	50°10.8' N 4°15.9' W	Fl.(2)W. period 10s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 7.4s	135 41	17	Gray granite tower, red lantern; 161. Helicopter platform.	Reserve light range 10M. AIS (MMSI No 992351125). Horn: 1 bl. ev. 30s (bl. 3s, sl. 27s).
			Iso.R. period 10s	93 28	8		Visible 110°-133° over Hand Deep.
	RACON		T(-)		10		(3 & 10cm).
PLYMOUTH:							
140 A 0111.2	-Whidbey.	50°19.5' N 4°07.3' W	Oc.(2)W.R.G. period 10s lt. 3s, ec. 1s lt. 5s, ec. 1s	95 29	W. 8 R. 6 G. 6	Orange and white metal column.	G. 000°-137°30', W.-139°30', R.-159°. Auxiliary light Q.Y. Shown 24 hours.
144 A 0112	-Maker Point.	50°20.5' N 4°10.9' W	Fl.(2)W.R.G. period 10s fl. 0.5s, ec. 3s fl. 0.5s, ec. 6s	52 16	W. 11 R. 6 G. 6	White concrete tower, red stripe; 15.	G. 270°-330°, W.-004°, R.-050°. Auxiliary light Q.Y.
148 A 0114	-Plymouth, breakwater, W. head.	50°20.1' N 4°09.5' W	Fl.W.R. period 10s fl. 1s, ec. 9s	63 19	W. 12 R. 9	White round granite tower; 75.	W. 262°-208°, R.-262°. F.R. and traffic signals on framework tower on foot 700 meters E. Horn: 1 bl. ev. 15s.
			Iso.W. period 4s	39 12	10		Visible 033°-037°.
150 A 0114.5	--E. head.	50°20.0' N 4°08.2' W	L.Fl.W.R. period 10s fl. 3s, ec. 7s	30 9	W. 8 R. 6	Beacon, black ball topmark.	R. 001°-018°, W.-190°, R.-353°, W.-001°.
153 A 0115.5	-Staddon Point.	50°20.2' N 4°07.5' W	Oc.W.R.G. period 10s	49 15	W. 8 R. 5 G. 5	White concrete structure, red bands; 20.	G. 348°-038°, W.-050°, R.-090°.
160 A 0117	-Withyhedge.	50°20.7' N 4°07.4' W	Dir.W.R.G.	43 13	W. 13 R. 5 G. 5	Column, white triangular daymark point down, orange stripe.	F.G. 060°-065°. Al.W.G.-069° (W. phase increasing with bearing), F.W.-071°, Al.W.R.-075° (R. phase increasing with bearing), F.R.-080°.
			Fl.(2)Bu. period 5s fl. 0.5s, ec. 1s fl. 0.5s, ec. 3s		10		Visible 120°-160°. Auxiliary light Q.Y.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
164 A 0119	-Hoe Range, front.	50°21.6' N 4°08.3' W	Q.W.R.G.	16 5	W. 10 R. 3 G. 3	White column, orange bands, triangular daymark point up.	G. 233°-043°, R.-067°, G.- 087°, W.-099°, leading sector R. 099°-108°. Fl.W. 5s shown in fog, visible 232°-110°. Auxiliary light Q.Y.
168 A 0119.1	--Rear, 396 meters 349° from front.	50°21.8' N 4°08.4' W	Oc.G. period 1.3s lt. 1s, ec. 0.3s	36 11	3	Column, white triangular daymark point down, orange stripe.	Visible 310°-040°. Auxiliary light Q.Y.
172 A 0122	-Royal Western Yacht Club.	50°21.8' N 4°08.8' W	Dir.W.R.G.	29 9	W. 13 R. 5 G. 5	Orange triangular daymark point down.	F.G. 309°-311°, Al.W.G.-314° (W. phase increasing with bearing), F.W.-317°, Al.W.R.-320° (R. phase increasing with bearing), F.R.-329°. F.W. shown in fog, visible 314°-317°. Auxiliary light Q.Y.
176 A 0124	-Mount Batten, breakwater, W. head.	50°21.6' N 4°08.1' W	2 F.G. (vert.)	23 7	4	Metal column.	F.R. on radio mast on Drake's Island 0.74 mile WSW. 2 F.R. on Civic Center 0.7 mile NNW.
	-Cattewater:						
180 A 0134	--Cobbler Channel Range, (Fisher's Nose), front.	50°21.8' N 4°08.0' W	F.Bu.				Intensified 022°30'-030°30'.
			Fl.(3)R. period 10s	20 6	4	Metal column; 13.	
180.5 A 0134.1	---Rear, 404 meters 026°30' from front.	50°22.0' N 4°07.9' W	F.Bu.				Intensified 022°30'-030°-30'.
182 A 0131	--Queen Anne's Battery Range, front.	50°21.8' N 4°07.8' W	Oc.R. period 8s			White beacon, red bands, red ball topmark.	
184 A 0132	---Rear, 140 meters 048°30' from front.	50°21.9' N 4°07.8' W	Oc.R. period 8s	46 14	3	White tower, red-roofed building.	
188 A 0137	--Victoria pier, head.	50°21.8' N 4°07.6' W	2 F.R. (vert.)	25 8	4	Red metal column; 16.	
192 A 0136	--Approach, 102°.	50°21.7' N 4°07.3' W	Dir.W.R.G.	90 27	8	Red and white column.	F.G. 090°42'-100°42', F.W.- 103°12', F.R.-113°12'.
196 A 0138	--Turnchapel, 128°30'.	50°21.5' N 4°07.0' W	Dir.W.R.G.	161 49	8	Red and white tower.	F.G. 117°48'-127°48', F.W.- 129°12', F.R.-139°12'.
201 A 0141	--Clovelly Bay Range, front.	50°21.5' N 4°07.4' W	F.R.			Beacon.	
202 A 0141.1	---Rear, 198° from front.	50°21.5' N 4°07.4' W	F.R.			Red and white metal tower, white diamond daymark; 33.	
202.5 A 0126	--Pontoon.	50°21.7' N 4°07.8' W	2 F.G. (vert.)				At either end of pontoon.
208 A 0147	--Phoenix wharf.	50°21.9' N 4°08.0' W	2 F.R. (vert.)	19 6		Green metal column; 10.	
209 A 0148	--Queen Anne's, breakwater, knuckle.	50°21.9' N 4°07.9' W	Oc.G. period 8s lt. 6s, ec. 2s	16 5	2	Silver metal column; 10.	
210 A 0148.5	---Head.	50°21.9' N 4°07.9' W	Fl.(2)G. period 5s	16 5	2	Silver metal column; 10.	
224 A 0157	--Sutton wharf, head.	50°22.1' N 4°07.9' W	2 F.R. (vert.)			Metal pole; 10.	Traffic signals shown from E. side of entrance lock at N. and S. ends.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
-Mill Bay:							
240 A 0164	--Pier, 048°30'.	50°21.8' N 4°09.0' W	Dir.Q.W.R.G.	40 12	W. 13 R. 8 G. 8	White concrete tower, red bands; 36.	G. 038°30'-045°30', W.- 051°30', R.-058°30', G. 315°30'-321°30', W.- 329°30', R.-335°30'. Auxiliary light Q.Y.
244 A 0166	--E. pier, head.	50°21.7' N 4°09.2' W	Q.G.	33 10		Concrete column; 26.	
245 A 0166.2	--N. side.	50°21.8' N 4°09.1' W	Oc.G. period 4s				
246 A 0166.4	--Marina, wavescreen, S. head.	50°21.8' N 4°09.1' W	Oc.R. period 4s				
248 A 0167	--W. pier, head.	50°21.8' N 4°09.3' W	Q.R.			2 Pile.	
252 A 0168	--Trinity pier, No 1.	50°21.8' N 4°09.2' W	2 F.G. (vert.)			2 Dolphin.	2 meters apart.
253 A 0168.2	---No 3.	50°21.8' N 4°09.2' W	Fl.(2)W. period 5s	23 7		Dolphin.	
-Drake Channel:							
254 A 0161	--Eastern King.	50°21.7' N 4°09.4' W	Fl.W. period 5s			On roof of degaussing station.	Shown in fog, visible 259°- 062°. Auxiliary light Q.Y.
255 A 0162	--Western King, 271°.	50°21.6' N 4°09.8' W	Dir.W.R.G.	46 14	W. 13 R. 5 G. 5	White column, white triangular daymark point down, orange stripe.	F.G. 264°-266°, Al.W.G.-270° (W. phase increasing with bearing), F.W.-272°, Al.W.R.-276° (R. phase increasing with bearing), F.R.-284°. Auxiliary light Q.Y.
-The Narrows:							
256 A 0170	--Ravenness, 225°.	50°21.1' N 4°10.1' W	Dir.W.R.G.	35 11	W. 13 R. 5 G. 5	Column, white triangular daymark point down, orange stripe.	F.G. 217°-221°, Al.W.G.-224° (W. phase increasing with bearing), F.W.-226°, Al.W.R.-229° (R. phase increasing with bearing), F.R.-237°. Fl.(2)W. 15s shown in fog, visible 160°-305°. Auxiliary light Q.Y.
260 A 0172	--Mount Wise, 343°.	50°22.0' N 4°10.3' W	Dir.W.R.G.	24 7	W. 13 R. 5 G. 5	White hut, white triangular daymark point down, orange stripe.	F.G. 331°-338°, Al.W.G.-342° (W. phase increasing with bearing), F.W.-344°, Al.W.R.-348° (R. phase increasing with bearing), F.R.-351°. F.W. shown in fog, visible 341°30'-344°30'. Auxiliary light Q.Y.
264 A 0173	--The Bridge.	50°21.0' N 4°09.9' W	Fl.(2)Bu. period 5s fl. 0.5s, ec. 1s fl. 0.5s, ec. 3s	16 5		3 Column, white triangular daymark point down, orange stripe.	Visible 140°-210°. Auxiliary light Q.Y.
268 A 0174	--Devils Point.	50°21.6' N 4°10.0' W	Q.G.	16 5		3 Orange and white concrete column.	Fl.W. 5s shown in fog. Auxiliary light Q.Y.
272 A 0176	--Cremyll Shoal.	50°21.6' N 4°10.4' W	Fl.R. period 4s	16 5		White beacon.	Fl.(2)W. 15s shown in fog, visible 097°-338°. Auxiliary light Q.Y.
-Hamoaze:							
274 A 0178	--Ocean Court, 085°.	50°21.8' N 4°10.1' W	Q.W.R.G.	49 15	W. 11 R. 3 G. 3	White structure, orange triangular daymark point down; 10.	G. 010°-080°, W.-090°, R.- 100°. Fl.W. 5s shown in fog, visible 270°-100°. Auxiliary light Q.Y.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
276 A 0182	--Mutton Cove, landing stage.	50°21.9' N 4°10.6' W	2 F.G. (vert.)	16 5	1	Metal column; 10.	
280 A 0184	--Millbrook.	50°21.3' N 4°11.4' W	Q.W.G.	36 11	W. 11 G. 3	Column, white triangle daymark point up, orange stripe.	G. 165°-180°, W.-230°. Auxiliary light Q.Y.
282 A 0185	--Sango Point.	50°21.7' N 4°12.4' W	Q.W.	26 8	5	Beacon.	Visible 215°289°.
284 A 0186	--N. Corner, landing stage, S. head.	50°22.3' N 4°11.1' W	2 F.G. (vert.)	7 2	2	Metal column.	
286 A 0186.2	---N. head.	50°22.3' N 4°11.1' W	2 F.G. (vert.)				
292 A 0192	--Yonderberry Point, on oil jetty.	50°22.9' N 4°11.7' W	2 F.R. (vert.)				
294 A 0193	--NW. corner.	50°23.4' N 4°11.6' W	Q.W.R.G.	39 12	W. 11 R. 3 G. 3	Column.	W. 340°-355°, R.-025°, G.-055°, W.-110°, R.-140°, W.-230°. Fl.W. 5s shown in fog, visible 310°-220°. Auxiliary light Q.Y.
300 A 0204	--Saltash quay.	50°24.4' N 4°12.3' W	Fl.R. period 5s	10 3		Concrete column; 10.	Fl.R. 2.5s marks Town Quay close S.
SALCOMBE:							
308 A 0220	--Sandhill Point, 000°.	50°13.7' N 3°46.7' W	Dir.Fl.W.R.G. period 2s fl. 0.5s, ec. 1.5s	89 27	8	White beacon, red and white diamond daymark; 39.	G. 337°30'-357°30', W.-002°30', R.-012°30'.
312 A 0222	--Range, front.	50°14.5' N 3°45.2' W	Fl.W. period 2s fl. 0.3s, ec. 1.7s	16 5	8	Mast.	
316 A 0222.1	--Rear, 180 meters 042°30' from front.	50°14.6' N 3°45.2' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	148 45	8	Stone column; 7.	
320 A 0224	--Landing stage.	50°14.1' N 3°45.9' W	F.R.	13 4	3	White metal column; 10.	
324 A 0228	Start Point.	50°13.3' N 3°38.5' W	Fl.(3)W. period 10s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 5s	203 62	18	White round granite tower; 92.	Visible 184°-068°. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
			F.R.	180 55	9		Visible 210°-255° over Skerries Bank.
DARTMOUTH:							
328 A 0236	--Kingswear.	50°20.8' N 3°34.1' W	Iso.W.R.G. period 3s	30 9	8	White round fiberglass tower.	G. 318°-325°, W.-331°, R.-340°.
332 A 0242	--Marina, S. head.	50°21.4' N 3°34.5' W	2 F.R. (vert.)				
336 A 0237	--Kettle Point.	50°20.6' N 3°33.7' W	F.W.	18 5	9	Red lantern.	Visible 102°-107°.
340 A 0238	--Bayards Cove.	50°20.8' N 3°34.6' W	Fl.W.R.G. period 2s fl. 0.5s, ec. 1.5s	18 5	6	White stripe on rock.	G. 280°-289°, W.-297°, R.-005°.
344 A 0244	Berry Head.	50°24.0' N 3°29.0' W	Fl.(2)W. period 15s fl. 0.2s, ec. 2.6s fl. 0.2s, ec. 12s	191 58	19	White tower; 16.	Visible 100°-023°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks	
ENGLAND-SOUTH COAST								
TORBAY:								
348 A 0246	-Brixham, breakwater, head.	50°24.3' N 3°30.8' W	Oc.R. period 15s lt. 12s, ec. 3s	30 9	6	White tower; 21.		
357 A 0247.4	--Prince William Marina, Wave Screen, SW. head.	50°23.9' N 3°30.5' W	2 F.I.R. (vert.) period 5s	13 4	2	Mast; 13.	2 meters apart.	
358 A 0247.6	---E. head.	50°24.0' N 3°30.5' W	2 F.I.G. (vert.) period 5s	13 4	2	Mast; 13.	2 meters apart.	
360 A 0248	--New Pier, head.	50°23.8' N 3°30.6' W	Q.G.	20 6	3	White metal structure; 3.		
364 A 0249	--Fish Market Pier, head, SW. corner.	50°23.9' N 3°30.6' W	2 F.G. (vert.)	16 5	1	Building.	2 meters apart.	
368 A 0249.2	---NW. corner.	50°23.9' N 3°30.6' W	2 F.G. (vert.)	16 5	1	Building.	2 meters apart.	
372 A 0249.5	--Slipway.	50°23.9' N 3°30.7' W	Q.G.					
376 A 0250	-Paignton Harbour, E. quay, head.	50°26.0' N 3°33.3' W	Q.R.	24 7	3	Red metal column; 16.	Difficult to distinguish by day.	
-Torquay:								
380 A 0254	--Haldon pier, head.	50°27.4' N 3°31.7' W	Q.G.	29 9	6	Metal column; 23.		
384 A 0256	--Inner harbor pier, head.	50°27.5' N 3°31.5' W	2 F.G. (vert.)	19 6	5	Metal structure; 3.	Traffic signals.	
388 A 0252	--Princess Pier, head.	50°27.4' N 3°31.7' W	Q.R.	29 9	6	Metal column; 23.		
TEIGNMOUTH:								
392 A 0262	-The Den.	50°32.5' N 3°29.8' W	F.R.	33 10	6	Gray round stone tower; 20.	Visible 225°-070°. F.Bu. range lights, 021°, are shown at New Quay to assist pilots.	
396 A 0262.1	--Powderham Terrace.	50°32.5' N 3°29.7' W	F.R.	36 11	3	Black column; 33.		
400 A 0263	--Phillip Lucette Beacon.	50°32.3' N 3°29.9' W	Oc.R. period 6s	13 4	3	White stone column.		
402 A 0263.5	-Den Point, SW. head.	50°32.4' N 3°30.0' W	Oc.G. period 6s		3	Green beacon.		
			F.G.				Mounted 2 meters below Oc.G. 6s light.	
EXMOUTH:								
408 A 0274	-Custom House.	50°37.0' N 3°25.3' W	Dir.W.R.G. period 2s	21 6	6	White metal column; 7.	Iso.G. 299°-304°, Iso.W.-306°, Iso.R.-311°.	
418 A 0278	Sidmouth.	50°40.5' N 3°14.4' W	F.I.R. period 5s	16 5	2		Visible 230°-100°.	
420 A 0280	Beer, near church.	50°41.8' N 3°05.4' W	F.W.	86 26		Metal column; 16.	Difficult to distinguish.	
424 A 0284	Lyme Regis Range, front.	50°43.2' N 2°56.2' W	Oc.W.R. period 8s lt. 6s, ec. 2s	20 6	W. R.	9 7	Blue metal column; 16.	R. 284°-104°, W.-284°.
428 A 0284.1	-Rear, 280 meters 284° from front.	50°43.2' N 2°56.3' W	F.G.	26 8	9	Building.		

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ENGLAND-SOUTH COAST							
432 A 0288	Bridport, E. pier, head.	50°42.6' N 2°45.8' W	Fl.G. period 8s	16 5	4		
PORTLAND:							
448 A 0294	-Bill of Portland.	50°30.9' N 2°27.4' W	Fl.(4)W. period 20s fl. 0.1s, ec. 1.4s fl. 0.1s, ec. 1.4s fl. 0.1s, ec. 1.4s fl. 0.1s, ec. 15.4s	141 43	25	White round tower, red band; 135.	Visible 221°-141°. Gradually changes from 1 flash to 4 flashes 221°-244°, 4 flashes-117°, gradually changes from 4 flashes to 1 flash-141°. Diaphone: 1 bl. ev. 30s (bl. 3.5s, si. 26.5s).
			F.R.	63 19	13		Visible 265°-291° over The Shambles.
449 A 0293	--Calibration range.	50°30.9' N 2°27.5' W	Oc.(2)Y. period 10s lt. 1s, ec. 1s lt. 7s, ec. 1s	66 20	10		Visible 305°-125°. Shown when range is in use.
-Outer Breakwater:							
452 A 0302	--S. Ship Channel, breakwater, SW. head.	50°34.1' N 2°25.3' W	Mo.(U)W. period 15s	39 12	5		F.R. on towers 2.8 miles NW. and 0.68 mile WSW.
456 A 0310	--E. Ship Channel, NW. part of fort.	50°35.1' N 2°24.9' W	Q.R.	46 14	5	Metal framework tower; 7.	Visible 013°-268°.
-Portland (NE. Breakwater):							
464 A 0314	--A, S. head.	50°35.2' N 2°25.1' W	Fl.W. period 2.5s	71 22	10	White metal tower; 72.	
468 A 0320	--NW. end (B head) N. Channel.	50°35.7' N 2°25.9' W	Oc.R. period 15s	36 11	5	Gray metal column; 7.	
472 A 0322	--N. arm, C, SE. head.	50°35.8' N 2°26.0' W	Oc.G. period 10s	35 11	5	Gray metal column; 7.	
--Portland (Q. Pier):							
480 A 0334	---Elbow.	50°34.3' N 2°26.4' W	Iso.R. period 2s	19 6	2	Metal framework tower; 10.	
484 A 0332	---S. corner, head.	50°34.4' N 2°26.2' W	Fl.G. period 5s fl. 1s, ec. 4s	16 5	5	Metal framework tower; 10.	
488 A 0330	---N. corner, head.	50°34.4' N 2°26.2' W	F.R. period 5s fl. 1s, ec. 4s	18 5	5	Metal framework tower; 10.	
492 A 0327	-Coaling pier, catwalk, head.	50°34.3' N 2°25.9' W	V.Q.(3)W. period 5s		2	Dolphin.	F.R. lights mark catwalk.
496 A 0327.5	-Deep water berth, E. head.	50°34.3' N 2°25.9' W	2 F.R. (vert.)	16 5	2	Metal column.	
500 A 0327.6	--W. head.	50°34.3' N 2°26.0' W	2 F.R. (vert.)	16 5	2	Metal column.	
508 A 0326.2	-N. arm.	50°34.1' N 2°26.0' W	2 F.R. (vert.)	14 4	2	Metal column; 7.	
512 A 0326.5	-Loading jetty, N. head.	50°34.2' N 2°26.0' W	Q.W.	13 4	2	Metal column.	
517 A 0324	-East Ship Channel Range, front.	50°34.1' N 2°25.9' W	F.R.	20 6	3	Stone wall.	
517.1 A 0324.1	--Rear, 120 meters 210° from front.	50°34.0' N 2°25.9' W	F.R.	56 17	3	White building.	
520 A 0339	-New Channel.	50°34.9' N 2°27.7' W	L.Fl.W. period 10s fl. 2s, ec. 8s	10 3	5	Metal pile, white square daymark.	

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ENGLAND-SOUTH COAST							
528 A 0354	-N. pier, head.	50°36.6' N 2°26.6' W	2 F.G. (vert.)	29 9	6	Green column.	2 meters apart. Storm signal.
532 A 0348	-Ballast Quay Range, front.	50°36.5' N 2°26.9' W	F.R.	16 5	7	White post, red diamond daymark; 10.	
536 A 0348.1	--Rear, 17 meters 239°38' from front.	50°36.5' N 2°26.9' W	F.R.	22 7	7	White mast, red diamond daymark; 16.	Bridge traffic signals shown 530 meters W.
WEYMOUTH HARBOUR:							
540 A 0346	-S. stone pier, head.	50°36.6' N 2°26.5' W	Q.W.	33 10	9	White mast, gray metal platform; 26.	Traffic signals shown 190 meters SW.
544 A 0496	Anvil Point.	50°35.6' N 1°57.5' W	Fl.W. period 10s fl. 1s, ec. 9s	148 45	9	White round tower, dwelling; 39.	Visible 237°-076°.
548 A 0498	Swanage, pier, head.	50°36.6' N 1°57.0' W	2 F.R. (vert.)	20 6	3	Mast; 10.	
POOLE:							
560 A 0500	-Training Bank.	50°39.8' N 1°55.8' W	2 F.R. (vert.)			PORT (A) R, beacon, topmark.	
572 A 0506	-N. Haven Point.	50°41.1' N 1°57.1' W	Q.(9)W. period 15s	15 5		W. CARDINAL YBY, tower, topmark.	2 F.G. (vert.) light shown on either side of ramp at Sandbanks ferry landing. 2 F.R. (vert.) light shown on either side of ramp at South Haven Point ferry landing.
573 A 0520.6	-Furzey Island, Slipway Range, front.	50°40.9' N 1°58.9' W	Fl.Y. period 2s				Fl.G. 5s on 3 mooring dolphins 60 meters SE.
574 A 0520.61	--Rear, 35 meters 305° from front.	50°40.9' N 1°58.9' W	Fl.Y. period 2s				
576 A 0521	Bournemouth, pier, head.	50°42.8' N 1°52.5' W	2 F.R. (vert.)	28 9	1	White column; 13.	2 meters apart. Bell: . To assist berthing of vessels. Reed: 2 bl. in quick succession ev. 120s. When a vessel is expected.
580 A 0522	Boscombe, pier, head.	50°43.1' N 1°50.6' W	2 F.R. (vert.)	24 7	1	Red column; 10.	
NEEDLES CHANNEL:							
584 A 0528	-Needles.	50°39.7' N 1°35.5' W	Oc.(2)W.R.G. period 20s lt. 2s, ec. 2s lt. 14s, ec. 2s	80 24	W. 17 R. 14 G. 14	Round granite tower, red band, red lantern; 102. Helicopter platform.	R. 261°-300°, W.-083°, R.(unintens.)-212°, W.- 217°, G.-224°. Shown 24 hours. Horn: 2 bl. ev. 30s (bl. 1.5s, si. 2s, bl. 1.5s, si. 25s).
588 A 0534	-Totland Bay, on pier.	50°41.0' N 1°32.7' W	2 F.G. (vert.)	20 6	2		

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ENGLAND-SOUTH COAST							
596 A 0538.1	Hurst Point.	50°42.5' N 1°33.0' W	Fl.(4)W.R. period 15s fl. 0.9s, ec. 1.1s fl. 0.9s, ec. 1.1s fl. 0.9s, ec. 1.1s fl. 0.9s, ec. 8.1s	76 23	W. 13 R. 11	White round tower; 85.	W. 080°-104°, W. 234°-244°, R.-250°, W.-053°. Obscured beyond Isle of Wight.
			Dir.W.R.G. period 4s	62 19	W. 21 R. 18 G. 17		Iso.G. 038°48'-040°48', Iso.W.-041°48', Iso.R.- 043°48'. Range W. 7M, R. 5M, G. 5M by day. False flashes from W. sector may be seen in certain weather conditions S. of G. sector within 3M.
600 A 0542	-Lymington Range, front.	50°45.2' N 1°31.7' W	F.R.	39 12	8	Metal column; 36.	Visible 309°30'-329°30'.
604 A 0542.1	--Rear, 363 meters 319°30' from front.	50°45.4' N 1°31.9' W	F.R.	56 17	8	Metal column; 56.	Visible 309°30'-329°30'. Several lights mark banks of river.
606 A 0541	-Jack in the Basket.	50°44.3' N 1°30.6' W	Fl.R. period 2s fl. 0.4s, ec. 1.6s	30 9	3	Post, red square daymark; 39.	
607 A 0544	-Lymington River Beacon No 1.	50°44.4' N 1°30.5' W	Fl.G. period 2s fl. 0.4s, ec. 1.6s	7 2	3	STARBOARD (A) G, pile, topmark; 20.	
608 A 0543	--Cross Boom, Beacon No 2.	50°44.4' N 1°30.6' W	Fl.R. period 2s fl. 0.4s, ec. 1.6s	13 4	3	PORT (A) R, pile, topmark; 26.	
612 A 0552	-Obstruction, S. head.	50°45.4' N 1°27.1' W	Q.R.			Dolphin.	
616 A 0553.2	-Beaulieu Spit, E. head.	50°46.9' N 1°21.8' W	Fl.R. period 5s		3	Red dolphin, white band.	
624 A 0555	--Victoria pier, head.	50°42.5' N 1°31.2' W	2 F.G. (vert.)		4	Column.	2 meters apart.
628 A 0562	---Range, front.	50°42.4' N 1°30.1' W	F.G.	16 5	2	White metal post, white diamond daymark, black band.	
632 A 0562.1	----Rear, 63 meters 187°57' from front.	50°42.3' N 1°30.1' W	F.G.	30 9	2	White mast, white diamond daymark, black band.	
636 A 0558	---Pier, head.	50°42.5' N 1°30.0' W	2 F.R. (vert.)		2	Green metal column.	2 meters apart. Street lights along pier. 3 high intensity F.W. (occasional) shown.
640 A 0560	---Jetty, head.	50°42.4' N 1°30.0' W	2 F.R.	13 4	2	White wooden mast.	Second F.R. shown when harbor is full. F.Y. shown in fog.
641 A 0560.5	---Dolphin.	50°42.4' N 1°30.1' W	Q.G.		3	Dolphin.	Visible 175°-060°.
SOUTHAMPTON WATER:							
664 A 0577	-Outfall.	50°48.3' N 1°18.8' W	Iso.R. period 10s	21 6	5	Metal mast, four-sided concrete platform.	Radar reflector.
			4 F.R.	13 4	1		1 on each corner.
666 A 0580.6	-Calshot, jetty, head.	50°49.2' N 1°18.5' W	2 F.R. (vert.)				
685 A 590.11	--Hamble Common, 351°42'.	50°51.0' N 1°18.9' W	Dir.W.R.G. period 12s	16 5	4	Gray metal pole.	Oc.(2)G. 348°42'-350°42', Oc.(2)W.-352°42', Oc.(2)R.-354°42'.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
688 A 0590.14	--No 1.	50°50.4' N 1°18.6' W	Q.G.		7 2	2	Green beacon.
692 A 0590.16	--No 2.	50°50.4' N 1°18.8' W	Q.(3)W. period 10s		7 2	2	E. CARDINAL BYB, beacon, topmark.
698 A 0590.22	--Sailing Club, 028°54'.	50°51.1' N 1°18.3' W	Dir.Iso.W.R.G. period 6s		16 5	4	Gray metal pole. G. 025°54'-027°54', W.- 029°54', R.-031°54'.
728 A 0594	-BP Hamble Jetty.	50°50.9' N 1°19.5' W	2 F.G. (vert.)		16 5	2	Gray post; 3. 2 meters apart. Three 2 F.G. (vert.) on posts mark dolphin.
732 A 0596	-Prohibited Anchorage, Dir. Lt. 032°49'.	50°51.4' N 1°19.7' W	F.Y.				Uses moiré effect pattern to indicate center line.
740 A 0586	-Fawley Marine Terminal, SE. head.	50°50.0' N 1°19.4' W	2 F.R. (vert.)		30 9	10	2 meters apart. Seven 2 F.R. (vert.) on piles mark oil spill containment boom. F.R. on chimneys 1.5 miles WSW.
740.5 A 0587	--Esso Marine Terminal, Range, front.	50°50.3' N 1°19.9' W	F.G.				Visible 305°-335°. Indicates centerline of dredged channel.
740.7 A 0587.1	---Rear, 450 meters 320° from front.	50°50.5' N 1°20.1' W	F.G.				Visible 305°-335°.
741 A 0588	--Off NW. head.	50°50.7' N 1°20.2' W	2 F.R. (vert.)				Dolphin.
744 A 0581.9	-Inshore Range, front.	50°51.3' N 1°20.3' W	Fl.W. period 2s		16 5	3	Metal tower, red and white triangular daymark point up.
748 A 0582	--Common rear, about 981 meters 326°07' from Inshore, front, 327°25' from Offshore, front.	50°51.8' N 1°20.7' W	Q.Y.		26 8	5	Metal tower, red and white diamond daymark.
752 A 0582.1	-Offshore Range, front.	50°51.3' N 1°20.3' W	Fl.W. period 2s		16 5	3	Metal tower, red and white ball daymark.
756 A 0599	-Coastal Forces Base, Admiralty jetty, off head.	50°52.2' N 1°23.2' W	2 F.R. (vert.)				Dolphin. 2 F.R. (vert.) on dolphin 30 meters ENE.
760 A 0601	-Hythe, pier, head.	50°52.5' N 1°23.6' W	2 F.R. (vert.)		39 12	5	Mast; 30. 2 meters apart. Tide gauge.
SOUTHAMPTON:							
-River Itchen:							
768 A 0602	--Queen Elizabeth II Terminal, S. head.	50°53.0' N 1°23.7' W	4 F.G. (vert.)		53 16	3	Framework tower; 52. 2 meters apart.
772 A 0604	--E. side, No 1.	50°53.2' N 1°23.4' W	Q.G.				STARBOARD (A) G, dolphin, topmark.
776 A 0605.5	---No 3.	50°53.5' N 1°23.3' W	Fl.G. period 7s				STARBOARD (A) G, dolphin, topmark.
780 A 0605	--No 2, about 251 meters 099° from N. head of Empress Dock.	50°53.3' N 1°23.4' W	Fl.G. period 5s			2	STARBOARD (A) G, beacon, topmark.
784 A 0612	--Empress Dock entrance, N. side.	50°53.3' N 1°23.6' W	2 F.G. (vert.)		26 8	3	Gray metal framework tower, yellow triangular daymark point up; 20. Visible 246°-000°.
788 A 0612.2	-RoRo Terminal S.	50°53.4' N 1°23.5' W	2 F.R. (vert.)				2 meters apart.
792 A 0612.4	--N.	50°53.4' N 1°23.5' W	2 F.R. (vert.)				2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
800 A 0614	--Beacon No 4, E. side of river.	50°53.6' N 1°23.2' W	Q.G.	13 4	2	STARBOARD (A) G, beacon, topmark.	Radar reflector.
804 A 0618	--Bridge center.	50°53.9' N 1°23.1' W	F.W.				Visible up and down river to mark main channel.
808 A 0618.2	--W. pier.	50°53.9' N 1°23.1' W	2 F.R. (vert.)		2	Pile.	2 meters apart on N. and S. sides of bridge.
812 A 0618.4	--E. pier.	50°53.9' N 1°23.0' W	2 F.G. (vert.)		2	Pile.	2 meters apart on N. and S. sides of bridge.
816 A 0620.5	--Crosshouse beacon.	50°54.0' N 1°23.2' W	Oc.R. period 5s	16 5	2	PORT (A) R, pile, topmark.	Marks power cable. Private light.
820 A 0620.7	--Chapel beacon.	50°54.2' N 1°23.2' W	Fl.G. period 3s	16 5	3	STARBOARD (A) G, beacon, topmark; 16.	2 F.R. (vert.) on beacons A and C 80 meters W.
828 A 0621	--Northam, oil jetty, head.	50°54.5' N 1°22.6' W	2 F.R. (vert.)	13 4		Metal column.	2 meters apart.
832 A 0621.2	--Millstone Point, jetty, head.	50°54.6' N 1°22.6' W	2 F.R. (vert.)	23 7			2 meters apart. 2 F.R. (vert.) also mark N. end. F.R. marks tower on head of jetty.
844 A 0626	--Town Quay Range, front.	50°53.6' N 1°24.3' W	F.W. 2 F.G. (vert.)	40 12	3	Radio mast; 115.	
848 A 0626.1	--Royal Pier, rear, 410 meters 329° from front.	50°53.7' N 1°24.5' W	F.W.	72 22	2	Metal framework tower, white neon diamond daymark, red border; 75.	
854 A 0628.6	--Ferry Terminal, outer pontoon, head.	50°53.7' N 1°24.4' W	2 F.G. (vert.)				
864 A 0630	--Pumping station Range, front.	50°54.0' N 1°24.7' W	Fl.G. period 1.5s	79 24		Red mast, yellow and black bands, black triangular daymark point up.	
868 A 0630.1	--Rear, 110 meters 068° from front.	50°54.0' N 1°24.6' W	Fl.G. period 1.5s	82 25		Red mast, yellow and black bands, black "X" daymark.	
872 A 0632	--Marchwood Military Port, jetty, head.	50°53.7' N 1°25.3' W	2 F.R. (vert.)				
873 A 0632.2	---Jetty, head.	50°53.7' N 1°25.1' W	2 F.R. (vert.)				
874 A 0632.3	---Jetty, head.	50°53.6' N 1°25.2' W	2 F.R. (vert.)				
884 A 0633	--Husband's jetty.	50°53.9' N 1°25.6' W	2 F.R. (vert.)	31 9	2	Dolphin.	2 meters apart.
888 A 0637	--Upper Swinging Ground Range, front.	50°54.5' N 1°26.3' W	F.W.	85 26		Yellow mast, black and red bands, black triangular daymark point up.	
892 A 0637.1	---Rear, 70 meters 011° from front.	50°54.5' N 1°26.3' W	F.W.	89 27		Yellow mast, black and red bands, black "X" daymark.	
896 A 0640	--Container berths, SE. corner.	50°54.2' N 1°26.8' W	2 F.G. (vert.)				
912 A 0645	--Transit beacon A.	50°54.7' N 1°28.0' W	F.R.			Framework tower, red triangular daymark point up; 33.	
916 A 0646	---B.	50°54.7' N 1°28.0' W	F.R.			Framework tower, red diamond daymark; 39.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-SOUTH COAST							
ISLE OF WIGHT:							
924 A 0654	--Cowes, breakwater, head.	50°45.9' N 1°17.5' W	2 F.R. (vert.)		3		
936 A 0652	--Watch House Landing.	50°45.9' N 1°17.8' W	Iso.W. period 2s	10	3	4 Post.	
942 A 0664	--Wootton.	50°44.5' N 1°12.1' W	Q.W.			1 N. CARDINAL BY, beacon, topmark.	Channel marked by lights.
942.1 A 0665.8	---Car Ferry Terminal.	50°44.0' N 1°12.9' W	Dir.Oc.W.R.G. period 10s lt. 8s, ec. 2s				G. 220°48'-224°18', W.- 225°48', R.-230°48'.
943 A 0762	--Bembridge Harbor.	50°42.5' N 1°05.0' W	Fl.Y. period 2s			1 SPECIAL Y, pile, "X" topmark.	Tide gauge.
944 A 0760	--St. Helen's Fort.	50°42.3' N 1°05.0' W	Fl.(3)W. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 1s fl. 0.5s, ec. 6.5s	53 16		8 Large round stone structure.	
PORTSMOUTH:							
948 A 0688	-Spit Sand Fort, N. side.	50°46.2' N 1°05.9' W	Fl.R. period 5s fl. 0.7s, ec. 4.3s	59 18		7 Large round stone structure.	
952 A 0686	--South Parade pier.	50°46.7' N 1°04.5' W	2 F.G. (vert.)	16 5		1 Posts; 10.	One at each corner of pierhead.
956 A 0691	--Southsea Castle, N. corner.	50°46.7' N 1°05.3' W	Iso.W. period 2s	52 16		11 White stone tower, black band; 33.	Visible 337°-071°.
	---001°30'.		Dir.W.R.G.	36 11	W. 13 R. 5 G. 5		F.G. 351°30'-357°30', Al.W.G.-000° (W. phase increasing with bearing), F.W.-003°, Al.W.R.- 005°30' (R. phase increasing with bearing), F.R.-011°30'. Shown 24 hours.
960 A 0692.5	-Fort Blockhouse, 320°.	50°47.4' N 1°06.7' W	Dir.W.R.G.	19 6	W. 13 R. 5 G. 5	Base of mast.	Oc.G. 310°-316°, Al.W.G.- 318°30' (W. phase increasing with bearing), Oc.W.-321°30', Al.W.R.- 324° (R. phase increasing with bearing), Oc.R.-330°. Shown 24 hours. Traffic signals. 2 F.R. (vert.) 20 meters E.
964 A 0696	--Victoria, pier, head.	50°47.3' N 1°06.4' W	2 F.G. (vert.)	16 5		Metal columns.	4 F.R. lights near Clarence Monument.
968 A 0698	--Off Victoria pile.	50°47.3' N 1°06.5' W	Oc.G. period 15s			1 Green pile.	
972 A 0700	--The Point.	50°47.6' N 1°06.6' W	Q.G.			2 Pile; 16.	
974 A 0701	---Car Ferry Terminal.	50°47.6' N 1°06.4' W	2 F.R. (vert.)				
980 A 0704	--Railway Landing, Stage, S. head.	50°47.7' N 1°06.5' W	2 F.G. (vert.)	16 5		3 Post; 7.	
984 A 0705	--Common Hard, outer head.	50°47.9' N 1°06.6' W	Fl.G. period 5s	3 1		Wooden tripod.	
988 A 0707.4	--Fountain Lake jetty, W. head.	50°48.6' N 1°06.2' W	2 F.G. (vert.)				

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ENGLAND-SOUTH COAST							
992 A 0720	--Priddy's Hard, Powder jetty, head.	50°48.6' N 1°07.5' W	2 F.R. (vert.)			Pile.	
996 A 0722.2	--Shell pier, head.	50°48.4' N 1°07.3' W	2 F.R. (vert.)	40 12		Radar mast; 30.	1 meter apart.
998 A 0692.8	--Harbor Entrance.	50°47.9' N 1°07.0' W	Iso.W.R.G.	7 2	1	Concrete dolphin; 13.	G. 322°30'-330°, Al.W.G.-332°30', W.-335°, Al.W.R.-337°30', R.-345°. Shown 24 hours.
			2 F.R. (vert.)	26 8			2 meters apart.
1000 A 0726	--Royal Clarence Yard Fort.	50°48.1' N 1°07.3' W	2 F.R. (vert.)				
1004 A 0730	---Fuel jetty, off NE. side.	50°48.0' N 1°07.0' W	2 F.R. (vert.)	26 8 20 6		Dolphin.	2 meters apart.
1020 A 0734	--Gosport Landing stage, at each end.	50°47.7' N 1°07.0' W	2 F.R. (vert.)	20 6	2	Mast; 16.	2 meters apart. F.R. lights are shown from No. 1 and No. 2 jetties, Haslar Creek.
1024 A 0684	--S. side.	50°46.0' N 1°04.1' W	Q.R.	21 6	2	Dolphin; 20.	Radar reflector.
1028 A 0750	Horse Sand Fort.	50°45.0' N 1°04.4' W	Iso.G. period 2s	69 21	8	Large round stone structure.	
1036 A 0782	Eastney Point, Langstone Harbor.	50°47.2' N 1°01.7' W	Q.R.	6 2	2	Pile beacon.	F.R. on masts 610 meters and 670 meters WSW. Fl.(2)W. 5s on Roway Wreck Pile 1.2 miles SSW. F.R., Oc.(2)Y. 10s, and F.Y. lights shown 650 meters W. during firing exercises.
1037 A 0782.08	-Outfall jetty, head.	50°47.3' N 1°01.7' W	2 F.R. (vert.)	16 5	5		2 meters apart.
1044 A 0783.4	Chichester Bar.	50°46.0' N 0°56.4' W	Fl.(2)R. period 10s	33 10	4	PORT (A) R, pile, topmark.	
1046 A 0783.5	West Pole Beacon.	50°45.4' N 0°56.6' W	Fl.R. period 5s	46 14	7	PORT (A) R, tripod, topmark.	
1048 A 0780	Nab.	50°40.1' N 0°57.2' W	Fl.W. period 10s fl. 1s, ec. 9s	56 17	12	Round concrete tower, white square daymark. Helicopter platform.	AIS (MMSI No 992351136). Horn: 2 bl. ev. 30s (bl. 1.5s, si. 2s, bl. 1.5s, si. 25s).
	RACON		T(-)		10		(3 & 10cm).
ISLE OF WIGHT:							
1052 A 0768	-Sandown, pier, head.	50°39.0' N 1°09.2' W	2 F.R. (vert.)	23 7	2		2 meters apart.
1056 A 0770	-Shanklin.	50°38.0' N 1°10.0' W	Fl.R. period 5s fl. 0.3s, ec. 4.7s	10 3	3	PORT (A) R, beacon, topmark.	Radar reflector.
1064 A 0774	-St. Catherine's Point.	50°34.5' N 1°17.9' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	135 41	25	White octagonal tower, dwelling; 85.	Visible 257°-117°. DGPS Station.
			F.R.	115 35	13		Visible 099°-116°.
1066 A 0790	The Mixon.	50°42.4' N 0°46.3' W	Q.(6)+L.Fl.W. period 15s		2	S. CARDINAL YB, beacon, topmark.	
1072 A 0794	Bognor Regis, pier, head.	50°46.7' N 0°40.5' W	2 F.R. (vert.)				

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ENGLAND-SOUTH COAST							
LITTLEHAMPTON:							
1076 A 0800	-W. pier, head.	50°47.9' N 0°32.5' W	Q.R.		23 7	6 Black metal column.	
1078 A 0800.5	-Training Wall, head.	50°47.9' N 0°32.4' W	Q.G.		16 5	6 STARBOARD (A) G, beacon, topmark.	
1080 A 0801	-E. pier Range, front.	50°48.1' N 0°32.5' W	F.G.		19 6	7 Black metal column.	
1084 A 0801.1	--Rear, 64 meters 346° from front.	50°48.1' N 0°32.5' W	Oc.W. period 7.5s fl. 6s, ec. 1.5s		30 9	10 White concrete tower.	Visible 290°-042°.
1088 A 0804	-Fisherman's quay.	50°48.4' N 0°32.7' W	Fl.G. period 3s fl. 1s, ec. 2s		13 4	5 Black metal column; 10.	Visible 320°-032°.
1092 A 0808	-Swing bridge, SW. fenders.	50°48.6' N 0°33.0' W	2 F.R. (vert.)		10 3		1 meter apart. Traffic signals. Marks upstream and downstream ends.
1096 A 0808.2	--NE. fenders.	50°48.6' N 0°33.0' W	2 F.G. (vert.)		10 3		1 meter apart. Marks upstream and downstream ends.
1098 A 0809	-Littlehampton.	50°46.2' N 0°29.5' W	Fl.(5)Y. period 20s		30 9	5 Pile.	Meteorological station.
1100 A 0810	Worthing, on pier.	50°48.4' N 0°22.1' W	2 F.R. (vert.)		20 6	1 Column; 13.	
SHOREHAM:							
1104 A 0813	-E. breakwater, head.	50°49.5' N 0°14.8' W	Fl.G. period 5s		23 7	8 Green concrete column; 10.	Siren: 1 bl. ev. 120s (bl. 3s, si. 117s).
1108 A 0812	-W. breakwater, head.	50°49.5' N 0°14.9' W	Fl.R. period 5s		23 7	7 Red concrete column; 10.	
1112 A 0814	-On apex of middle pier Range, front.	50°49.7' N 0°14.9' W	Oc.W. period 5s fl. 3s, ec. 2s		26 8	10 White square building, orange top; 20.	Traffic signals. Tide signal.
1116 A 0814.1	--Rear, within upper entrance, 192 meters 355° from front.	50°49.8' N 0°14.9' W	Fl.W. period 10s fl. 1s, ec. 9s		43 13	10 Gray round stone tower; 39.	Visible 283°-103°. R. lights on radio mast 160 meters N. Traffic signals 800 meters E.
1120 A 0822	Brighton, head of Marine Palace pier (E. pier).	50°48.9' N 0°08.2' W	2 F.R. (vert.)		33 10	2 Mast, hut; 23.	
1121 A 0826	Brighton Marina, W. breakwater, head.	50°48.5' N 0°06.4' W	Q.R.		33 10	7 White round structure, red bands.	Horn: 2 bl. ev. 30s.
1122 A 0825	-E. breakwater, head.	50°48.6' N 0°06.4' W	Fl.(4)W.R. period 20s		52 16	W. 10 White pillar, green bands. R. 8	R. 260°-295°, W.-100°. White lights shown inside of breakwater walls.
1123 A 0825.2	-Breakwater, head.	50°48.6' N 0°06.4' W	Q.G.		26 8	7	
1128 A 0839	GREENWICH LIGHTSHIP.	50°24.5' N 0°00.1' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s			15 Tower, red hull; 39.	F.W. riding light. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
	RACON		M(- -) period 20s			10	(3 & 10cm).
NEWHAVEN:							
1132 A 0832	-E. pier, head.	50°46.8' N 0°03.6' E	Q.G.		39 12	5 White metal pole, green bands; 39.	

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ENGLAND-SOUTH COAST							
1136 <i>A 0830</i>	-Breakwater, head.	50°46.5' N 0°03.5' E	Oc.(2)W. period 10s lt. 1s, ec. 1s lt. 7s, ec. 1s	56 17	12	White round concrete tower, red base; 46.	
1140 <i>A 0840</i>	Beachy Head.	50°44.0' N 0°14.5' E	Fl.(2)W. period 20s fl. 1s, ec. 3s fl. 1s, ec. 15s	102 31	16	White round tower, red band; 141.	Visible 248°-101°.
1144 <i>A 0843</i>	Royal Sovereign.	50°43.5' N 0°26.1' E	Fl.W. period 20s fl. 1.4s, ec. 18.6s	93 28	12	White tower, red band, cabin, column. Helicopter platform.	Shown by day when fog signal is operating. Nautophone: 2 bl. ev. 30s (bl. 2s, si. 2s, bl. 2s, si. 24s).
1148 <i>A 0846</i>	Eastbourne, pier, head.	50°45.9' N 0°17.7' E	2 F.R. (vert.)	26 8	2	Metal column; 10.	
1150 <i>A 0848</i>	Sovereign Harbor Marina.	50°47.2' N 0°19.8' E	Fl.(3)W. period 15s	39 12	7	Concrete tower.	
1152 <i>A 0848.5</i>	-258°.	50°47.2' N 0°19.8' E	Dir.W.R.G. period 3s fl. 0.3s, ec. 2.7s	13 4	1		Fl.G. 252°30'-256°30', Fl.W.-259°30', Fl.R.-262°30'.
1153 <i>A 0848.1</i>	-S. breakwater, head.	50°47.3' N 0°20.1' E	Fl.(4)R. period 12s	10 3	6		
1154 <i>A 0848.2</i>	-N. breakwater, head.	50°47.3' N 0°20.1' E	Fl.G. period 5s	10 3	6		
1160	<i>CS2 Buoy.</i>	50°39.0' N 0°32.7' E	Fl.Y. period 5s			SPECIAL Y, pillar, topmark.	Whistle.
HASTINGS:							
1164 <i>A 0858</i>	-Beach Range, front.	50°51.3' N 0°35.4' E	F.R.	46 14	4	White metal column; 26.	
1168 <i>A 0858.1</i>	--Rear, 357 meters 356°18' from front.	50°51.5' N 0°35.4' E	F.R.	180 55	4	White pentagonal tower; 20.	
1172 <i>A 0856</i>	-W. breakwater, head.	50°51.2' N 0°35.6' E	Fl.R. period 2.5s	16 5	4	Mast; 13.	
1176 <i>A 0854</i>	-Hastings Pier, head	50°51.1' N 0°34.4' E	Q.R.		2	Metal pole.	
1188	<i>-Fairway Buoy.</i>	50°54.0' N 0°48.0' E	L.Fl.W. period 10s fl. 2s, ec. 8s			SAFE WATER RW, buoy, topmark.	Radar reflector.
1192 <i>A 0866</i>	-E. bank No 3.	50°55.9' N 0°46.3' E	Q.G.	10 3	2	STARBOARD (A) G, tripod, topmark; 10.	
1196 <i>A 0867</i>	-W. bank No 6.	50°55.7' N 0°46.5' E	Q.R.	10 3	2	Red wooden pile; 10.	Lights shown upstream.
1200 <i>A 0866.3</i>	--No 7.	50°56.0' N 0°46.3' E	Q.G.	10 3	2	Wooden piles, green triangular daymark point up.	
1204 <i>A 0866.5</i>	--No 9.	50°56.1' N 0°46.2' E	Q.G.	10 3	2	Wooden piles, green triangular daymark point up.	
1208 <i>A 0866.7</i>	--No 11.	50°56.2' N 0°46.0' E	Q.G.	10 3	6	Wooden structure, green triangular daymark point up; 10.	Traffic signals.
1212 <i>A 0864.5</i>	-E. pier No 1, head.	50°55.8' N 0°46.5' E	Q.(9)W. period 15s	23 7	5	Metal structure, green triangular daymark point up; 16.	Horn: 1 bl. ev. 7s (bl. 1s, si. 29s).
1216 <i>A 0864</i>	-West Groyne, head.	50°55.6' N 0°46.6' E	L.Fl.R. period 7s	23 7	6	Wooden tripod; 30.	AIS (MMSI No 992351156).

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ENGLAND-SOUTH COAST							
DOVER STRAIT:							
1220 A 0876	-Dungeness.	50°54.8' N 0°58.5' E	Fl.W. period 10s fl. 0.1s, ec. 9.9s	131 40	21	Black round tower, white bands, lantern; 141. Floodlit.	Visible 120°-078°. Shown 24 hours. Horn: 3 bl. ev. 60s (bl. 2s, si. 2s, bl. 2s, si. 2s, bl. 2s, si. 50s). Horn points 130°.
			F.R.G.	122 37	10		R. 057°-073°, G.-078°, R. 196°-216°.
1224 A 0897.5	-VARNE LIGHTSHIP.	51°01.2' N 1°24.0' E	Fl.R. period 5s fl. 0.5s, ec. 4.5s		15	Red hull, light tower amidships; 39.	AIS (MMSI No 992351038). Horn: 1 bl. ev. 30s (bl. 2s, si. 28s).
	-RACON		T(-)		10		(3 & 10cm).
	-Folkestone:						
1228 A 0892	--Breakwater, head.	51°04.6' N 1°11.7' E	Fl.(2)W. period 10s fl. 0.5s, ec. 2s fl. 0.5s, ec. 7s	46 14	22	Tower; 43.	Visible 210°-090°.
1232 A 0896	--E. pier (Outer harbor).	51°04.7' N 1°11.5' E	Q.G.			Metal column; 7.	
1234 A 0898	-Shakespeare Cliff, E. head.	51°06.3' N 1°16.9' E	Fl.R. period 5s fl. 0.3s, ec. 4.7s				
1234.1 A 0898.2	-W. head.	51°06.1' N 1°16.0' E	Fl.R. period 5s fl. 0.3s, ec. 4.7s				
	-Dover:						
1236 A 0900	--Admiralty pier.	51°06.7' N 1°19.7' E	Fl.W. period 7.5s fl. 1s, ec. 6.5s	69 21	20	White tower; 72.	Visible 096°-090°, obscured in the Downs by South Foreland inshore of 226°. Traffic signals. Horn: 1 bl. ev. 10s (bl. 2s, si. 8s).
			3 Fl.W. period 7.5s	26 8	1		Shown in fog.
1248 A 0912	--S. pier, near head of N. side.	51°06.9' N 1°18.9' E	2 F.R. (vert.)	16 5		Beacon; 7.	2 meters apart.
1252 A 0914	--N. pier, near head.	51°07.0' N 1°18.9' E	3 F.G. (vert.)	16 5	3	Beacon; 7.	
1256 A 0906	--Train Ferry dock, jetty, head.	51°06.9' N 1°19.0' E	Q.R.	23 7		Post; 10.	
1260 A 0915	--N. pier, spur.	51°07.0' N 1°18.8' E	Oc.G.	10 3	2	Post; 7.	
1268 A 0902	--Prince of Wales pier, head.	51°06.8' N 1°19.4' E	V.Q.G.	46 14	4	White tower; 46.	
			Fl.Y. period 1.5s				Occasional.
1272 A 0924	--S. breakwater, W. head.	51°06.8' N 1°19.8' E	Oc.R. period 30s lt. 27s, ec. 3s	69 21	18	White tower; 69.	
1276 A 0926	--Knuckle of detached mole.	51°07.0' N 1°20.5' E	Fl.(4)W.R. period 10s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 3.2s	49 15	W. 15 R. 13	White tower; 52.	R. 059°-239°, W.-059°.

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ENGLAND-SOUTH COAST							
1284 A 0935	--The Camber, Pier A, W. jetty, head.	51°07.5' N 1°20.4' E	Q.R.		26 8	Mast.	Intensified in fog. Siren: 2 bl. ev. 10s. Occasional.
1288 A 0936	--Pier B, head.	51°07.5' N 1°20.3' E	Fl.(2)R. period 5s		26 8		Intensified in fog. Siren: 1 bl. ev. 5s (bl. 1s, si. 4s). Occasional.
	--Dover (E. entrance):						
1304 A 0928	---Detached mole, N. head.	51°07.2' N 1°20.6' E	Fl.R. period 2.5s fl. 1s, ec. 1.5s		36 11	5	Fl.(2) W. 10s shown in fog.
1305 A 0929	---Eastern Arm, head.	51°07.3' N 1°20.6' E	Fl.G. period 5s		39 12	5	Q.W. Shown in fog. Traffic signals. Horn: 2 bl. ev. 30s (bl. 2s, si. 2s, bl. 2s, si. 24s). Radar reflector.
1312 A 0950	-Deal pier, head.	51°13.4' N 1°24.5' E	2 F.R. (vert.)		23 7	2 Metal framework tower.	2 meters apart.
1316	-CS4 Buoy.	51°08.5' N 1°34.0' E	Fl.(4)Y. period 15s			SPECIAL Y, pillar, topmark.	Whistle. Marks Area to be Avoided.

Section 2

East Coast of England Including Thames River and River Humber

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
DOVER STRAIT:							
1324 A 0984	-- EAST GOODWIN LIGHTFLOAT.	51°13.0' N 1°36.3' E	Fl.W. period 15s fl. 0.2s, ec. 14.8s		15	Red hull, light tower amidships; 39.	Shown by day when fog signal is operating. AIS (MMSI No 992351035). Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
	--RACON		T(-)		10		(3 & 10cm).
1326	--MPC RACON.	51°06.1' N 1°38.2' E	O(- - -)		10		(3 & 10cm).
-Goodwin Sands:							
1329	-- <i>NE. Goodwin Buoy.</i>	51°20.3' N 1°34.3' E	Q.(3)W. period 10s			E. CARDINAL BYB, pillar, topmark.	Whistle.
	--RACON		M(- -)		10		(3 & 10cm).
1330	-- <i>Outer Tongue Buoy.</i>	51°30.7' N 1°26.5' E	L.Fl.W. period 10s			SAFE WATER RW, pillar, topmark.	Whistle.
	--RACON		T(-)		10		
FALLS BANK:							
1332	-- <i>Inter Bank Buoy.</i>	51°16.5' N 1°52.3' E	Fl.Y. period 5s			SPECIAL Y, pillar, topmark.	
	--RACON		M(- -)		10		(3 & 10cm).
1336 A 0992	-- FOXTROT 3 LIGHTSHIP.	51°23.8' N 2°00.6' E	Fl.W. period 10s fl. 0.2s, ec. 9.8s		15	Red hull, light tower amidships; 39.	AIS (MMSI No 992351033). Horn: 1 bl. ev. 10s (bl. 1s, si. 9s).
	--RACON		T(-)		10		(3 & 10cm).
RAMSGATE:							
1348 A 0957.1	--W. pier, head.	51°19.7' N 1°25.3' E	F.R.	39	7	Round granite tower; 36.	
1349 A 0959	--N. breakwater, head.	51°19.6' N 1°25.5' E	Q.G.	33	5	Green pillar, platform.	
1350 A 0959.5	--S. breakwater, head.	51°19.4' N 1°25.4' E	V.Q.R.	33	5	Red pillar, platform.	
1352 A 0958	--W. ferry terminal Range, front.	51°19.5' N 1°24.8' E	Dir.Oc.W.R.G. period 10s lt. 8s, ec. 2s	33	5	White mast, black triangular daymark point up, orange stripe.	G. 259°-269°, W.-271°, R.- 281°.
1356 A 0958.1	--Rear, 493 meters 270° from front.	51°19.5' N 1°24.4' E	Oc.W. period 5s lt. 3s, ec. 2s	56	5	White mast, black triangular daymark point down, orange stripe.	Visible 263°-278°. V.Q.G. and Q.R. beacons mark channel to SW.
1360 A 0964	Broadstairs pier, SE. head.	51°21.5' N 1°26.7' E	2 F.R. (vert.)	23	4	Metal column; 16.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
1364 A 0966	North Foreland.	51°22.5' N 1°26.7' E	Fl.(5)W.R. period 20s fl. 0.5s, ec. 1.1s fl. 0.5s, ec. 1.1s fl. 0.5s, ec. 1.1s fl. 0.5s, ec. 1.1s fl. 0.5s, ec. 13.1s	187 57	W. 19 R. 16 R. 15	White octagonal tower; 85.	W. 094°-150°, R.(16M)-181°, R.(15M)-200°, W.-011°. AIS (MMSI No 992351020). DGPS Station.
1368 A 1971	Tide gauge.	51°23.7' N 1°22.7' E	Q.W.			3 N. CARDINAL BY, beacon, topmark.	Tide gauge.
1372 A 1972	-Stone pier, head.	51°23.5' N 1°22.7' E	F.R.	59 18	4	Stone tower; 66.	
1376 A 1976	Herne Bay.	51°22.9' N 1°06.9' E	Q.W.	59 18	4	Metal mast, concrete landing stage; 49.	Pier head isolated from shore.
1378 A 1977	Kentish Flats.	51°26.8' N 1°04.7' E	Fl.Y. period 5s	43 13	5	Yellow framework mast, pile.	One on each side. Horn: Mo(U) 30s. Radar reflector.
			F.R.	154 47			
			F.R.	253 77			
ENGLAND-THAMES RIVER APPROACHES							
1384 A 1979	Whitstable, W. quay.	51°21.9' N 1°01.5' E	Fl.G. period 5s	7 2		Dolphin.	
1400 A 2009.7	Isle of Grain.	51°26.7' N 0°43.4' E	Q.W.	66 20	13	Red tower, red and white diamond daymark; 66.	
1404 A 1996	Sheerness, Garrison Point, RoRo berth No 10.	51°26.9' N 0°44.8' E	2 F.R. (vert.)			Dolphin.	Reserve fog signal 310 meters SW. R. light on radio mast 340 meters SSW. Horn: 3 bl. ev. 30s (bl. 2s, si. 3s, bl. 2s, si. 3s, bl. 2s, si. 18s).
1413	Sea Reach Buoy 1.	51°29.4' N 0°52.7' E	Fl.Y. period 2.5s			SPECIAL Y, pillar, topmark.	
	RACON		T(-) period 90s		10		(3 cm).
1417	Sea Reach Buoy 7.	51°30.1' N 0°37.2' E	Fl.Y. period 2.5s			SPECIAL Y, pillar, topmark.	
	RACON		T(-) period 90s		10		(3 cm).
ENGLAND-THAMES RIVER APPROACHES FROM NORTHEASTWARD							
1420 A 2170	SUNK CENTRE LIGHTFLOAT.	51°50.1' N 1°46.0' E	Fl.(2)W. period 20s fl. 0.3s, ec. 4.8s fl. 0.3s, ec. 14.6s		16	Red hull, light tower amidships; 39.	Shown by day when fog signal is operating. AIS (MMSI No 992351034). Horn: 2 bl. ev. 60s (bl. 2s, si. 2s, bl. 2s, si. 54s).
	RACON		C(- • - •)				
1421 A 2172	SUNK INNER LIGHTFLOAT.	51°51.0' N 1°34.9' E	Fl.(5)W. period 15s		12	Red hull, light tower amidships; 36.	AIS (MMSI No 992351027). Horn: 1 bl. ev. 30s (bl. 2s, si. 28s).
	RACON		T(-)		10		(3 & 10cm).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-THAMES RIVER APPROACHES FROM NORTHEASTWARD							
1422	Buoy Barrow No 3.	51°42.0' N 1°20.3' E	Q.(3)W. period 10s			E. CARDINAL BYB, pillar, topmark.	Bell.
	RACON		M(- -)		10		(3 & 10cm).
1424 A 1956	Long Sand Bank, meteorological mast.	51°35.6' N 1°23.1' E	Mo.(U)W. period 15s	39	10	Yellow metal framework tower.	Horn: Mo.(U) ev. 30s. Radar reflector.
	AVIATION LIGHT.		F.R.	276 84			
ENGLAND-EAST COAST							
1432 A 2184	Brightlingsea Range, front.	51°48.4' N 1°01.3' E	F.R.	23 7	4	Post, white square daymark, red stripe.	Visible 020°-080°.
1436 A 2184.1	-Rear, 50 meters 041° from front.	51°48.4' N 1°01.3' E	F.R.	33 10	4	Post, white square daymark, red stripe.	
1440 A 2187	Bateman tower.	51°48.3' N 1°00.8' E	Fl.(3)W. period 20s	39 12			F.R. shown on W. Bank of River Colne and 7 masts between 1.5 and 3 miles WNW. when firing in progress.
1444 A 2192	Clacton-on-Sea, elbow of berthing arm.	51°47.0' N 1°09.5' E	2 F.G. (vert.)	16 5	4	Mast.	Shown at E. and W. ends and center of berthing arm. Reed: 2 bl. ev. 120s. When vessels are berthing.
1448 A 2194	Walton on the Naze pier, head.	51°50.6' N 1°16.8' E	2 F.G. (vert.)	17 5	2	White post; 7.	
1451 A 2196.1	Cork Sand.	51°55.5' N 1°25.4' E	V.Q.W.		2	N. CARDINAL BY, beacon, topmark.	
HARWICH HARBOR:							
-Felixstowe:							
1468 A 2203.2	--Dock entrance, N. head.	51°57.0' N 1°18.8' E	2 F.G. (vert.)				
1470 A 2217.4	--RoRo berth No 4.	51°56.9' N 1°14.8' E	2 F.R. (vert.)	16 5	2	Post.	1 meter apart.
1471 A 2217.42	---W.	51°56.9' N 1°14.7' E	2 F.R. (vert.)	16 5	2	Post.	1 meter apart.
1484 A 2204	--Navyard wharf, SE. corner.	51°56.9' N 1°17.5' E	2 F.R. (vert.)	36 11			2 F.R. (vert.) mark Groyne head 65 meters SSE.
1488 A 2204.15	---NE. corner.	51°56.9' N 1°17.5' E	2 F.R. (vert.)				
1492 A 2204.2	---N. corner.	51°57.0' N 1°17.4' E	2 F.R. (vert.)	36 11			2 meters apart.
1500 A 2204.62	---N. side pontoon, W. head.	51°57.0' N 1°17.3' E	2 F.R. (vert.)	16 5			
1504 A 2206	--Town pier.	51°56.9' N 1°17.2' E	2 F.R. (vert.)	20 6		Tripod.	
1508 A 2208	--Trinity House pier.	51°56.9' N 1°17.0' E	2 F.R. (vert.)	20 6	1	Column; 23.	2 meters apart.
1512.5 A 2213.3	--Shotley Marina Entrance, E. side.	51°57.3' N 1°16.7' E	Fl.(4)G. period 15s			STARBOARD (A) G, pile, topmark, 10.	
1512.6 A 2213.35	---W. side.	51°57.3' N 1°16.7' E	V.Q.(3)W. period 5s			E. CARDINAL BYB, pile, topmark, 10.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
1513 A 2213.5	--Shotley Marina Lock, E. side.	51°57.5' N 1°16.6' E	F.Y.	10 3	1	Orange structure; 3.	Directional 339°30'. Uses moiré effect pattern to indicate dredged channel.
1516 A 2222	--Ganges pier.	51°57.2' N 1°16.2' E	2 F.G. (vert.)	13 4	1	Green wooden post; 7.	
1520 A 2222.5	--Erwarton Ness.	51°57.1' N 1°13.2' E	Q.(6)+L.F.I.W. period 15s		4	S. CARDINAL YB, beacon, topmark.	
1524 A 2222.6	--No 2.	51°57.0' N 1°10.2' E	Q.W.			N. CARDINAL BY, beacon, topmark.	
1532 A 2223	--Smith Shoal, No 6.	51°57.0' N 1°07.9' E	Fl.(2)R. period 5s		2	Black beacon, red square daymark.	
1536 A 2214	--Parkeston, quay, E.	51°56.9' N 1°15.7' E	2 F.R. (vert.)	7 2	2	Black dolphin; 13.	
1546	Harwich Channel Buoy No 1.	51°55.9' N 1°26.8' E	Fl.Y. period 2.5s			SPECIAL Y, conical.	
	RACON		T(-)		10		(3 & 10cm).
1554	S. Galloper Buoy.	51°43.9' N 1°56.5' E	Q.(6)+L.F.I.W. period 15s			S. CARDINAL YB, pillar, topmark.	Whistle.
	RACON		T(-)		10		(3 & 10cm).
1556	N. Shipwash Buoy.	52°01.7' N 1°38.4' E	Q.W.			N. CARDINAL BY, pillar, topmark; 18.	Whistle.
	RACON		M(- -)		10		(3 & 10cm).
1560	Outer Gabbard RACON.	51°57.8' N 2°04.3' E	O(- - -)		10		(3 & 10cm).
SIZEWELL:							
1568 A 2265	-S. Pipeline, head.	52°12.5' N 1°37.5' E	Fl.R. period 10s fl. 1s, ec. 9s	41 12	3	Column, metal platform; 16.	
1572 A 2265.2	-N. Pipeline, head.	52°12.7' N 1°37.8' E	Fl.(2)R. period 7.5s fl. 0.3s, ec. 0.7s fl. 0.3s, ec. 6.2s	41 12	3	Column, metal platform; 16.	
1573 A 2265.3	-Cooling water intake.	52°12.9' N 1°38.0' E	Fl.R. period 5s fl. 0.3s, ec. 4.7s	16 5	3	Pile; 16.	
1573.1 A 2265.35	--Outfall.	52°12.9' N 1°37.6' E	Fl.R. period 5s fl. 0.3s, ec. 4.7s	16 5	3	Pile; 16.	
SOUTHWOLD:							
1576 A 2273	-Harbor, N. pier, head.	52°18.8' N 1°40.5' E	Fl.G. period 1.5s	13 4	4	Metal column; 10.	3 F.R. (vert.) shown when harbor is closed.
1580 A 2273.3	--Knuckle.	52°18.8' N 1°40.5' E	2 F.G. (vert.)		3		2 meters apart.
1584 A 2274	--S. pier, head.	52°18.7' N 1°40.5' E	Q.R.	13 4	3		
1588 A 2272	-Southwold.	52°19.6' N 1°40.9' E	Fl.W. period 10s fl. 0.2s, ec. 9.8s	122 37	24	White round tower; 102.	Visible 204°-032°30'. Shown 24 hours. AIS (MMSI No 992351019).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
LOWESTOFT:							
1600 A 2286	-Outer harbor, N. pier, head.	52°28.3' N 1°45.4' E	Oc.G. period 5s lt. 4s, ec. 1s	39 12	8	White tower, small pavilion; 30. Floodlit.	
1604 A 2284	--S. pier, head.	52°28.3' N 1°45.4' E	Oc.R. period 5s lt. 4s, ec. 1s	40 12	6	White tower, small pavilion; 30. Floodlit.	Traffic signals. Horn: 4 bl. ev. 60s. Pilot station.
1608 A 2290	-Inner harbor, N. pier, head.	52°28.3' N 1°45.3' E	2 F.Y. (vert.)	20 6	1	Metal column; 13.	
1612 A 2288	--S. pier, head.	52°28.3' N 1°45.3' E	2 F.R. (vert.)	26 8	1	Metal column; 13.	Traffic signals only visible from inside Yacht Basin. 3 F.R. (vert.) indicate vessels may not proceed. 3 F.G.W.G. (vert.) indicate vessels may proceed with instructions.
1614 A 2290.8	-Lake Lothing.	52°28.4' N 1°43.3' E	2 F.R. (vert.)				
1616 A 2292	-Sladdens Pier, new jetty, head.	52°28.3' N 1°45.3' E	2 F.G. (vert.)				
1620 A 2280	-Lowestoft.	52°29.2' N 1°45.3' E	Fl.W. period 15s fl. 0.2s, ec. 14.8s	121 37	23	White tower; 52.	Partially obscured 347°-019°. Shown 24 hours.
GREAT YARMOUTH:							
-Gorleston:							
1624 A 2304	--S. pier, head.	52°34.3' N 1°44.3' E	Fl.R. period 3s fl. 1s, ec. 2s	36 11	11	Building.	Visible 235°-340°.
1628 A 2308	--N. pier, near head.	52°34.4' N 1°44.4' E	Q.G.	26 8	6	Green metal column, ladder; 23.	Visible 258°-356°.
1640 A 2320	-Wellington Pier, head.	52°35.9' N 1°44.3' E	2 F.R. (vert.)	26 8	3	Post, shelter; 13.	
1648 A 2324	-Britannia Pier, head.	52°36.5' N 1°44.4' E	2 F.R. (vert.)	36 11	4	White metal column; 10.	
1650 A 2325	-North Scroby.	52°40.1' N 1°47.1' E	Fl.(5)Y. period 20s	33 10	5	Platform. Secondary structure: Mast; 164.	On N. and S. side.
			Fl.R. period 5s	164 50	3		
1652 A 2318.2	-Marks outfall beacon.	52°35.1' N 1°44.4' E	Fl.R. period 6s	16 5	2	Red beacon.	
1656	<i>Cross Sand Buoy.</i>	52°37.0' N 1°59.3' E	L.Fl.W. period 10s		5	SAFE WATER RW, pillar, topmark.	
	RACON		T(-)		10		(3 & 10cm).
1664	<i>Smiths Knoll Buoy.</i>	52°43.5' N 2°18.0' E	Q.(6)+L.Fl.W. period 15s			S. CARDINAL YB, pillar, topmark.	
	RACON		T(-)		10		(3 & 10cm).
1668 A 2336	Happisburgh.	52°49.2' N 1°32.2' E	Fl.(3)W. period 30s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 24s	135 41	14	White tower, three red bands; 85.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
1670	North Haisbro Buoy.	53°00.2' N 1°32.4' E	Q.W.			N. CARDINAL BY, pillar, topmark.	Bell.
	RACON		T(-)		10		(3 & 10cm).
1676 A 2342	Cromer.	52°55.5' N 1°19.0' E	Fl.W. period 5s fl. 0.1s, ec. 4.9s	276	21 84	White octagonal tower; 59.	Visible 102°-307°. Shown 24 hours. AIS (MMSI No 992351015).
	RACON		O(- - -)		25		(3 & 10cm).
1680 A 2344	-Lifeboat house.	52°56.0' N 1°18.2' E	2 F.R. (vert.)	26	5	Gray and white wooden building; 39.	
1684	Dudgeon RACON.	53°16.6' N 1°17.0' E	O(- - -)		10		(3 & 10cm).
1688 A 2346	Sheringham.	52°56.7' N 1°12.8' E	F.R.	39	3	Red post; 7.	Fishing, shown until 2030.
1692	North Well Buoy.	53°03.0' N 0°28.0' E	L.Fl.W. period 10s			SAFE WATER RW, pillar, topmark.	Whistle.
	RACON		T(-)		10		(3 & 10cm).
1720 A 2379	Kings Lynn Approach, Trial Bank Beacon.	52°50.5' N 0°14.7' E	Fl.(2)W. period 5s	43	3	Mast; 10.	
HOLBEACH RANGE:							
1724 A 2392	-NW. head.	52°53.0' N 0°06.7' E	Fl.R. period 5s fl. 0.5s, ec. 4.5s			Flagstaff.	F.R. when firing in progress. Occasional.
1728 A 2394	-SE. head.	52°51.0' N 0°10.7' E	Fl.R. period 5s fl. 0.5s, ec. 4.5s			Flagstaff.	Occasional.
1732 A 2390	-Old South Middle, No 4.	52°55.1' N 0°10.7' E	Fl.Y. period 10s			Beacon, triangular daymark point up.	
1736 A 2391	--No 3.	52°54.9' N 0°09.9' E	Fl.Y. period 5s			Beacon, triangular daymark point up.	
WITHAM RIVER ENTRANCE:							
1740 A 2398	-Tabs, head.	52°56.0' N 0°05.0' E	Q.W.G.	13	1	White mast, red square daymark; 33.	W. 091°-251°, G.-058°. Tide gauge. Radar reflector.
1744 A 2397	-Beacon, N. side of entrance, Dollypeg.	52°56.1' N 0°05.1' E	Q.G.	13	1	Beacon, black triangular daymark point up.	Radar reflector.
1748 A 2400	-New Cut Range, front.	52°55.8' N 0°04.5' E	F.W.	16	5	Post; 7.	
1752 A 2400.1	--Rear, 90 meters 240° from front.	52°55.8' N 0°04.4' E	F.W.	26	5	Post; 7.	From Scalp Sand to Boston the river is marked by F.G. and F.R. range lights.
1764 A 7560.1	Dowsing Platform B1D.	53°33.7' N 0°52.7' E	Mo.(U)W. period 15s		15	Platform.	Reserve light range 10M. Horn: Mo.(U) ev. 30s (bl. 0.7s, si. 1s, bl. 0.7s, si. 1s, bl. 2.5s, si. 24.1s).
			4 Mo.(U)R. period 15s		2		On each corner of platform.
1765 A 2352	Race Bank Offshore Wind Farm, meteorological mast.	53°18.8' N 0°44.9' E	Mo.(U)W. period 15s	39	10	Yellow mast.	Horn: Mo.(U) ev. 30s. Radar reflector.
1766 A 2421	Ingoldmells Point.	53°12.8' N 0°25.9' E	Fl.Y. period 5s		5	Wind turbine; 253.	Horn: 1 bl. ev. 10s. Radar reflector.
	AVIATION LIGHT.		F.R.				Obstruction.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
1767 A 2351.5	Docking Shoal Offshore Wind Farm, meteorological mast.	53°09.5' N 0°38.9' E	Mo.(U)W. period 15s	39 12	10	Yellow mast.	Horn: Mo.(U) ev. 30s. Radar reflector.
1768 A 2578	Inner Well Bank Rough, Huntsea Offshore Wind Farm, meteorological mast.	53°53.2' N 1°59.5' E	Mo.(U)W. period 15s	72 22	15	Mast; 348.	Horn: Mo.(U) ev. 30s.
			F.R.	328 100			
1769 A 7562.5	Anglia Field Platform A 48/19-B.	53°22.0' N 1°39.2' E	Mo.(U)W. period 15s		15	Platform.	Reserve light range 10M. Horn: Mo.(U) ev 30s (bl. 0.7s, si. 1s, bl. 0.7s, si. 1s, bl. 2.5s, si. 24.1s).
			4 Mo.(U)R. period 15s		2		On each corner of platform.
	RACON		Q(- - • -)		15		(3 & 10cm).
1771 A 7576.97	Markham Field Platform J6-A.	53°49.0' N 2°57.0' E	Mo.(U)W. period 15s		15	Platform.	Horn: Mo.(U) ev. 30s
			2 F.R.				
	RACON		M(- -)				Azimuth coverage 180°-000°. (3 & 10cm).
1771.2	<i>Inger Nielson.</i>	54°30.9' N 2°36.3' E	V.Q.(3) period 5s			E. CARDINAL BYB, pillar, topmark.	
	RACON		D(- • •) period 30s		10		
ENGLAND-RIVER HUMBER APPROACHES							
1771.5	<i>Outer Sand Buoy.</i>	53°36.4' N 0°29.6' E	Q.(3)W. period 10s			E. CARDINAL BYB, buoy, topmark.	
	RACON		O(- - -) period 30s		10		(3 and 10cm).
1771.7	Humber RACON.	53°39.1' N 0°20.0' E	T(-)		7		(3 & 10cm).
1772	Spurn RACON.	53°33.5' N 0°14.3' E	M(- -)		5		(3 & 10cm).
1780 A 2426	-Spurn Point beacon.	53°34.4' N 0°06.5' E	Fl.G. period 3s fl. 0.5s, ec. 2.5s	36 11	5	Metal tripod, green triangular daymark point up.	
1784 A 2427.2	-Pilot jetty.	53°34.7' N 0°06.5' E	2 F.G. (vert.)				At each end.
1788 A 2425	<i>Tetney Buoy SBM.</i>	53°32.3' N 0°06.8' E	2 V.Q.Y. (vert.)			Yellow monobuoy.	Q.Y. on floating hose extending up to 290 meters from buoy. Horn: Mo.(A) ev. 60s.
1796	<i>HAWKE LIGHTFLOAT.</i>	53°34.5' N 0°05.6' E	V.Q.(3)W. period 5s	16 5	5	E. CARDINAL BYB, hull with superstructure, topmark.	
1806	<i>CLEE NESS NO 4A LIGHTFLOAT.</i>	53°35.0' N 0°01.8' E	Fl.(2)R. period 10s			Red hull.	
1816	<i>MIDDLE NO 7 LIGHTFLOAT.</i>	53°35.8' N 0°01.4' W	V.Q.(6)+L.Fl.W. period 10s	16 5	5	S. CARDINAL YB, topmark.	Horn: 1 bl. ev. 20s.
1820	<i>LOWER BURCOM NO 6 LIGHTFLOAT.</i>	53°35.4' N 0°01.6' W	Fl.R. period 4s	16 5	4	PORT (A) R, name in white on sides.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-RIVER HUMBER APPROACHES							
GRIMSBY:							
1824 A 2450	-Sewer outfall.	53°34.9' N 0°03.3' W	2 F.R. (vert.)	16 5	5	PORT (A) R, pile, dolphin.	2 meters apart.
1828 A 2452	-Fish dock, E. pier.	53°35.0' N 0°03.8' W	Iso.R. period 4s	33 10	1	Brown metal column; 23.	Sounded when vessels are entering docks. Horn: 1 bl. ev. 20s (bl. 5s, si. 15s).
1832 A 2454	--Middle pier, head.	53°35.0' N 0°04.0' W	Iso.G. period 4s	33 10	8	Brown wooden mast; 23.	Traffic Signals 60 meters S.
1836 A 2456	--W. pier.	53°35.0' N 0°04.0' W	Fl.Y. period 2.5s	33 10	8	Brown wooden mast; 23.	
1840 A 2460	-Royal Dock, E. pier, head.	53°35.1' N 0°04.0' W	Fl.(2)R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	33 10	8	Dolphin; 23.	
1844 A 2472	--W. pier, head.	53°35.1' N 0°04.0' W	Oc.G. period 2s lt. 1.5s, ec. 0.5s	23 7	2	Brown metal column; 23.	Bell: 1 str. ev. 10s.
1848 A 2474	--NW. elbow.	53°35.1' N 0°04.2' W	Oc.G. period 2s lt. 1.5s, ec. 0.5s	39 12	2	Brown metal column; 23.	F.R. lights on chimney 1.2 miles W.
1856 A 2479	Outfall pipe.	53°36.0' N 0°07.5' W	2 F.R. (vert.)	13 4		Red dolphin, square daymark.	
1864 A 2481	Stallingborough, jetty.	53°37.1' N 0°09.4' W	2 F.R. (vert.)	23 7		Metal column; 16.	2 meters apart.
ENGLAND-RIVER HUMBER							
1868 A 2483	Outfall pipe.	53°37.4' N 0°09.9' W	2 F.R. (vert.)	13 4		Red beacon, square daymark.	2 meters apart.
1870	<i>NO 10A LIGHTFLOAT.</i>	53°37.5' N 0°08.6' W	Fl.(2)R. period 6s	16 5	4	Red hull.	
IMMINGHAM:							
1872 A 2484	-Humber oil terminal, SE., head.	53°37.7' N 0°09.4' W	2 Q.R. (vert.)	26 8	5	Dolphin.	Synchronized traffic signals on tower B 400 meters WNW. Horn: Mo.(N) ev. 30s (bl. 6s, si. 2s, bl. 2s, si. 20s).
1876 A 2484.2	--Berth No 2, SE., head.	53°37.8' N 0°09.8' W	2 F.R. (vert.)	16 5	2		
1880 A 2484.4	--Berth No 1, NW., head.	53°37.9' N 0°10.2' W	2 F.R. (vert.)	16 5	2		
1882 A 2484.6	--A1, NW., head.	53°37.9' N 0°10.4' W	2 Q.R. (vert.)	26 8	5	Dolphin.	2 meters apart. Horn: Mo.(A) ev. 30s (bl. 1s, si. 2s, bl. 6s, si. 21s).
1888 A 2487	-E. jetty, head.	53°37.8' N 0°10.7' W	2 F.R. (vert.)	30 9	3	Red metal framework tower; 20.	2 meters apart.
1892 A 2489	-W. jetty, elbow.	53°38.0' N 0°11.3' W	2 F.R. (vert.)	26 8	3	Column; 30.	2 meters apart.
1901 A 2491.5	--291°.	53°38.4' N 0°12.0' W	Dir.W.R.G.	56 17	3	Building.	F.G. 287°30'-288°30', Al.W.G.-290°30', F.W.- 291°30', Al.W.R.-293°30', F.R.-294°30'. Shown 24 hours.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-RIVER HUMBER							
1904 A 2491.6	--NW., head.	53°38.4' N 0°12.0' W	2 F.R. (vert.)				2 meters apart.
1908	CLAY HUTS LIGHTFLOAT.	53°38.5' N 0°11.3' W	Iso.W. period 2s	16 5	9	SAFE WATER RW, topmark.	
SOUTH KILLINGHOLME:							
1909 A 2496	-LPG jetty, SE. head.	53°38.7' N 0°12.3' W	2 Oc.R. (vert.) period 5s	16 5			2 meters apart.
1909.5 A 2496.4	--NE. head.	53°38.8' N 0°12.4' W	2 Oc.R. (vert.) period 5s	16 5			2 meters apart.
1910 A 2496.6	--S. dolphin.	53°38.7' N 0°12.3' W	2 F.R. (vert.)	13 4		Dolphin.	2 meters apart. Horn: Mo.(G) ev. 60s.
1910.5 A 2496.8	--N. dolphin.	53°38.8' N 0°12.5' W	2 F.R. (vert.)	13 4		Dolphin.	2 meters apart.
KILLINGHOLME:							
1920 A 2498	-Oil jetty, head.	53°38.9' N 0°12.6' W	2 Q.R. (vert.)	23 7			2 meters apart.
1924 A 2499.6	North Killingholme oil jetty, off S. head.	53°39.9' N 0°13.8' W	2 F.R. (vert.)				
1928 A 2506	Thorngumbald Clough Range, front.	53°42.5' N 0°13.6' W	Oc.W. period 2s lt. 1.5s, ec. 0.5s	26 8	9	White tower; 33.	Visible 130°-140°.
1932 A 2508	-Rear, 113 meters 135° from front.	53°42.5' N 0°13.5' W	Oc.W. period 2s	43 13	9	Red metal framework tower; 49.	Visible 130°-140°. Synchronized with front.
1936	<i>NORTH HOLME LIGHTFLOAT NO 17.</i>	53°40.9' N 0°13.1' W	V.Q.(9)W. period 10s			W. CARDINAL YBY, topmark.	
1940	<i>SAND END LIGHTFLOAT NO 16.</i>	53°42.5' N 0°14.4' W	Fl.R. period 4s	16 5	3	PORT (A) R, name in white on sides.	
SALT END:							
1946 A 2515	-Jetty No 1 Range, front.	53°43.6' N 0°14.9' W	Oc.Bu. period 6s lt. 4.5s, ec. 1.5s	30 9		Beacon, yellow "X" topmark.	Marks upstream limit of dredged approach. Occasional.
1946.1 A 2515.1	--Rear 18 meters 104° from front.	53°43.6' N 0°14.8' W	Oc.Bu. period 6s lt. 4.5s, ec. 1.5s	39 12		Beacon, yellow "X" topmark.	Synchronized with front.
1952 A 2518	--Jetty No 3, branch, SE. head.	53°43.5' N 0°14.6' W	2 F.G. (vert.)	23 7	2	Metal mast; 26.	2 meters apart.
1953 A 2518.5	---Dolphin.	53°43.5' N 0°14.7' W	2 F.G. (vert.)	19 6			2 meters apart.
1954 A 2520	---Range, front.	53°43.5' N 0°14.8' W	Oc.Bu. period 4s lt. 3s, ec. 1s	30 9		Beacon, yellow "X" topmark.	Marks downstream limit of dredged approach. Occasional.
1954.1 A 2520.1	----Rear 23 meters 000° from front.	53°43.5' N 0°14.6' W	Oc.Bu. period 4s lt. 3s, ec. 1s	49 15		Beacon, yellow "X" topmark.	Synchronized with front. Occasional.
1957 A 2530.2	King George Dock Entrance, E. side.	53°44.4' N 0°16.4' W	Oc.Bu. period 5s			Yellow beacon, yellow triangular daymark point up.	In line with Docking Signals 130 meters N. Marks E. side of dredged channel.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
1960 A 2580	Bridlington, N. pier, head.	54°04.8' N 0°11.2' W	Fl.W. period 2s	39 12	9	Column; 30.	Horn: 1 bl. ev. 60s (bl. 5s, si. 55s). Tide signal. Occasional. Occasional.
			F.R.				
			F.G.				
1964 A 2582	Flamborough Head.	54°07.0' N 0°05.0' W	Fl.(4)W. period 15s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 8s	213 65	24	White round tower; 89.	DGPS Station.
1968 A 2586	Filey.	54°12.6' N 0°17.0' W	F.R.	102 31	1	Green metal column; 13.	Visible 272°-308°. Occasional (fishing). Storm signals.
SCARBOROUGH:							
1972 A 2590	-W. pier, head.	54°16.9' N 0°23.3' W	2 F.R. (vert.)	16 5	4	Watch hut; 10.	
1976 A 2592	-Lighthouse Pier.	54°16.9' N 0°23.4' W	Iso.W. period 5s	56 17	9	White round tower; 49.	Visible 219°-039°. Shown during more than 12ft on bar. Diaphone: 1 bl. ev. 60s (bl. 2s, si. 58s).
1980 A 2588	-E. pier, head.	54°16.9' N 0°23.2' W	Q.G.	26 8	3	Mast; 13.	
WHITBY:							
1984 A 2599	-W. pier, head.	54°29.6' N 0°36.7' W	Q.G.	39 12	5	Green wooden tower; 23.	Visible 095°-000°. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s). Sounded when vessels are expected.
1988 A 2598	-E. pier, head.	54°29.6' N 0°36.6' W	Q.R.	39 12	5	Red wooden tower; 23.	Visible 000°-270°.
1992 A 2596	-Whitby High.	54°28.7' N 0°34.1' W	Fl.W.R. period 5s fl. 0.8s, ec. 4.2s	240 73	W. 18 R. 16	White octagonal tower, dwellings; 43.	R. 128°-143°, W.-319°.
REDCAR:							
2000 A 2616	-Luff Way on Esplanade Range, front.	54°37.1' N 1°03.7' W	F.R.	26 8	7	Metal column; 16.	Visible 182°-212°.
2004 A 2616.1	--Rear, 115 meters 197° from front.	54°37.0' N 1°03.7' W	F.R.	39 12	7	Metal column; 26.	Visible 182°-212°.
2008 A 2620	-Promenade Range, front.	54°37.1' N 1°03.9' W	Oc.R. period 2.5s lt. 1.5s, ec. 1s	30 9	7	Metal column; 16.	Visible 232°-262°.
2012 A 2620.1	--Rear, 43 meters 247° from front.	54°37.1' N 1°03.9' W	Oc.R. period 2.5s lt. 1.5s, ec. 1s	36 11	7	Brick building; 26.	Visible 232°-262°.
RIVER TEES:							
2016	-Fairway RACON.	54°40.9' N 1°06.4' W	B(-•••) period 72s				(3cm).
2020 A 2626	-South Gare.	54°38.8' N 1°08.2' W	Fl.W.R. period 12s fl. 1.5s, ec. 10.5s	53 16	W. 20 R. 17	White round tower; 43.	W. 020°-240°, R.-357°.
2024 A 2627	-Range, front.	54°37.2' N 1°10.2' W	F.R.	59 18	13	Red metal framework tower, white bands.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
2028 A 2627.1	--Rear, 560 meters 210°04' from front.	54°37.0' N 1°10.4' W	F.R.	66 20	16	Metal framework tower.	
2029 A 2634	-No 13.	54°37.5' N 1°09.7' W	Q.(2)G. period 5s	23 7		Black and white checkered beacon.	
2030 A 2636	-Jetty, N. head.	54°36.7' N 1°09.2' W	2 F.R. (vert.)				2 meters apart.
2031 A 2636.2	--S., head.	54°36.6' N 1°09.2' W	2 F.R. (vert.)				2 meters apart.
2032 A 2644	-Teas Dock, outer corner.	54°36.3' N 1°09.5' W	2 F.R. (vert.)	16 5			2 meters apart.
2044 A 2657	-Ichaboe, jetty, head.	54°35.0' N 1°12.3' W	2 F.G. (vert.)	20 6			2 meters apart.
HARTLEPOOL:							
2052 A 2664	-Old, pier head.	54°41.6' N 1°11.1' W	Fl.G. period 3s	43 13	7	White wooden framework tower, red bands; 39.	
2055 A 2664.85	-Town Wall.	54°41.8' N 1°11.4' W	2 F.G. (vert.)				Traffic signals shown 40 meters SSE.
2056 A 2663	-The Heugh.	54°41.8' N 1°10.6' W	Fl.(2)W.R. period 10s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 7.6s	62 19	19	White metal tower; 43.	R. 129°-139°, W.-010°.
2057 A 2666	-324°53'.	54°42.0' N 1°11.7' W	Dir.W.R.G. period 3s	138 42		Metal tower.	Iso.G. 323°12'-324°24', Iso.W.-325°24', Iso.R.- 326°36'.
2058 A 2667	-West Harbor, outer S. pier, head.	54°41.3' N 1°11.7' W	Oc.R. period 5s	39 12	2	Metal mast; 20.	
2059 A 2667.2	--Outer N. pier, head.	54°41.3' N 1°11.6' W	Oc.G. period 5s	39 12	2	White column; 20.	
2060 A 2667.6	--Inner N. pier, head.	54°41.4' N 1°11.7' W	F.G.	23 7	2	Metal mast; 13.	
2061 A 2667.8	--Middle pier, head.	54°41.3' N 1°11.7' W	F.R.	23 7	2	Metal mast; 13.	
2062 A 2667.4	--308°.	54°41.4' N 1°11.9' W	Dir.W.R.G. period 2s	20 6	3	Building.	Fl.G. 305°30'-307°, Fl.W.- 309°, Fl.R.-310°30'.
2064 A 2669	-Pipe jetty, head.	54°42.8' N 1°12.5' W	2 F.R. (vert.)		1	7.	Bell: 1 str. ev. 15s.
SEAHAM:							
2068 A 2675	-S. pier, head.	54°50.2' N 1°19.3' W	2 F.R. (vert.)	33 10	5	Red metal column; 23.	2 meters apart.
2072 A 2674	-N. breakwater, head.	54°50.2' N 1°19.3' W	Fl.G. period 10s fl. 1.2s, ec. 8.8s	39 12	5	White metal column, black bands; 33.	Frequently shows F.G. in bad weather.
2076 A 2676	-Wave screen, head.	54°50.2' N 1°19.4' W	3 F.R.	16 5	2	Red metal column; 13.	In shape of triangle. S. dock entrance, N. side F.G., S. side F.R. on white column (occasional).
SUNDERLAND:							
2080 A 2682	-New S. pier, head.	54°55.1' N 1°21.2' W	Fl.W. period 10s fl. 0.5s, ec. 9.5s	46 14	10	White metal tower; 33.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
2084 A 2681	-Roker Pier, head.	54°55.3' N 1°21.1' W	Fl.W. period 5s fl. 0.2s, ec. 4.8s	82 25	18	White round tower, three red bands, cupola; 75.	Visible 211°-357°. Siren: 1 bl. ev. 20s (bl. 2s, si. 18s).
2092 A 2686	-Old N. pier, head.	54°55.1' N 1°21.5' W	Q.G.	39 12	8	Metal column.	Traffic signals are displayed on the SW. end of Old N. Pier.
2094 A 2684	-Old S. pier, head.	54°55.0' N 1°21.6' W	Fl.R. period 5s fl. 0.5s, ec. 4.5s	30 9	2	PORT (A) R, tower, topmark.	
2095 A 2690	-N. dock basin.	54°55.0' N 1°21.8' W	Fl.G. period 5s			Pole.	
2096 A 2692	-N. dock, E. pier, head.	54°55.1' N 1°21.8' W	Fl.(2)G. period 10s		2	STARBOARD (A) G, beacon, topmark.	
RIVER TYNE:							
2104 A 2700	-Tynemouth, head.	55°00.9' N 1°24.2' W	Fl.(3)W. period 10s fl. 0.2s, ec. 2s fl. 0.2s, ec. 2s fl. 0.2s, ec. 5.4s	85 26	26	Gray round masonry tower, white lantern; 75.	Horn: 1 bl. ev. 10s (bl. 3s, si. 7s).
2108 A 2702	-S. pier, head.	55°00.7' N 1°24.1' W	Oc.W.R.G. period 10s lt. 8s, ec. 2s	49 15	W. 13 R. 9 G. 8	Gray round stone tower, red and white lantern; 39.	W. 075°-161°, G.-179°, W.-255°, R.-075°.
2112 A 2702.5	-Herd Groyne, 249°.	55°00.5' N 1°25.4' W	Oc.W.R.G. period 10s lt. 8s, ec. 2s	43 13	W. 19 R. 11 G. 11	Red pile structure, red and white lantern; 49.	G. 224°-246°30', W.-251°30', R.-277°30'. Oc.W. range 5M by day.
F.R.							
2116 A 2708	--Beacon on No 1 groyne.	55°00.5' N 1°25.8' W	Fl.G. period 5s	20 6	9	Green metal beacon; 13.	Radar reflector.
2140 A 2724	-Bill Point, Naval Yard.	54°57.8' N 1°32.2' W	Fl.(2)G. period 10s	13 4	1	Beacon.	
2148 A 2726	-St. Anthony's Point, N. bank.	54°57.6' N 1°33.3' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	16 5	3	Green structure; 33.	
2156 A 2728	-St. Peters, N. bank.	54°57.8' N 1°33.9' W	Fl.(3)G. period 10s	20 6	3	Green pile structure, platform.	
2160 A 2744	Cullercoats Range, front.	55°02.0' N 1°25.9' W	F.R.	89 27	3	Post; 10.	
2164 A 2744.1	-Rear, 38 meters 256° from front.	55°02.1' N 1°25.8' W	F.R.	115 35	3	Column; 13.	
BLYTH:							
2172 A 2766	-Range, front.	55°07.4' N 1°29.8' W	F.Bu.	36 11	10	Framework tower, orange diamond daymark.	
2176 A 2766.1	--Rear, 180 meters 324° from front.	55°07.5' N 1°29.9' W	F.Bu.	56 17	10	Framework tower, orange diamond daymark.	
2180 A 2754	-E. pier, head.	55°07.0' N 1°29.2' W	Fl.(4)W. period 10s fl. 0.3s, ec. 1.3s fl. 0.3s, ec. 1.3s fl. 0.3s, ec. 1.3s fl. 0.3s, ec. 4.9s	62 19	21	White tower; 46.	Horn: 3 bl. ev. 30s (bl. 1.3s, si. 2s, bl. 1.3s, si. 2s, bl. 1.3s, si. 22.1s).
F.R.							
2184 A 2760	-W. pier, head.	55°07.0' N 1°29.4' W	2 F.R. (vert.)	23 7	8	White tower; 13.	Visible 152°-249°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
2188 A 2762	-Training wall, S. head.	55°07.1' N 1°29.3' W	Fl.R. period 6s fl. 1s, ec. 5s	20 6	1	Red metal framework tower; 7.	
2192 A 2763	-W. side of channel within entrance.	55°07.2' N 1°29.4' W	2 F.R. (vert.)	17 5		Dolphin.	2 meters apart.
2196 A 2764	-W. pier, N. head.	55°07.3' N 1°29.6' W	2 Fl.(2)R. (vert.) period 6s	16 5	5	White metal structure; 10.	
2200 A 2770	-Blyth Snook Range, front.	55°07.7' N 1°29.8' W	F.Bu.	15 5	5	White hexagonal tower; 12.	
2204 A 2770.1	--Rear, 87 meters 338° from front.	55°07.8' N 1°29.9' W	F.Bu.	36 11	5	Mast, white triangular daymark point up; 23.	
2208 A 2775	-Alcan Terminal, SE. head.	55°07.8' N 1°30.0' W	2 F.G. (vert.)	13 4	1		2 meters apart.
2212 A 2775.2	--NW. head.	55°07.8' N 1°30.1' W	2 F.G. (vert.)	13 4	1		2 meters apart.
2216 A 2775.5	-Ro Ro pontoon, E. head.	55°08.0' N 1°30.7' W	2 F.R. (vert.)				
2224 A 2776	-W. coaling staiths, head.	55°08.3' N 1°31.1' W	Fl.R. period 3s		3		
2226 A 2778	-Blyth Power Station Discharge.	55°08.7' N 1°30.8' W	2 F.R. (vert.)	10 3	2	Concrete platform, piles; 20.	Visible 156°-336°.
2228 A 2780	Coquet Island.	55°20.0' N 1°32.5' W	Fl.(3)W.R. period 20s fl. 0.1s, ec. 3.3s fl. 0.1s, ec. 3.3s fl. 0.1s, ec. 13.1s	82 25	W. 19 R. 15	Gray square tower, white top; 72.	R. 330°-140°, W.-163°, R.-180°, W.-330°. Horn: 1 bl. ev. 30s (bl. 2s, si. 28s).
2232 A 2784	Warkworth, S. breakwater, head.	55°20.3' N 1°34.2' W	Fl.R. period 5s	30 9	5	White round tower, red bands, white base; 26.	
2236 A 2785	-N. breakwater, head.	55°20.4' N 1°34.1' W	Fl.G. period 6s	39 12	6	Green post.	
NORTH SUNDERLAND:							
2244 A 2804	-NW. pier, head.	55°35.0' N 1°38.9' W	F.G.	36 11	3	White tower; 26.	Visible 159°-294°. Traffic Signals. Siren: 1 bl. ev. 90s (bl. 6s, si. 94s). Occasional.
2248 A 2802	-Breakwater, head.	55°35.0' N 1°38.8' W	Fl.R. period 2.5s fl. 0.2s, ec. 2.3s	19 6		Metal tripod.	
2252 A 2810	Bamburgh.	55°36.9' N 1°43.5' W	Oc.(2)W.R.G. period 8s lt. 1s, ec. 1s lt. 5s, ec. 1s	39 12	W. 14 R. 11 G. 11	White building; 30.	G. 122°-165°, W.-175°, R.-191°, W.-238°, R.-275°, W.-289°, G.-300°. Shown 24 hours.
FARNE ISLANDS:							
2256 A 2812	-Farne, near SW. point.	55°36.9' N 1°39.4' W	Fl.(2)W.R. period 15s fl. 1s, ec. 2s fl. 1s, ec. 11s	89 27	W. 10 R. 7	White round tower; 43.	R. 119°-280°, W.-119°.
2260 A 2814	-Longstone.	55°38.6' N 1°36.5' W	Fl.W. period 20s fl. 0.2s, ec. 19.8s	75 23	18	Red tower, white band; 85.	AIS (MMSI No 992351127).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-EAST COAST							
HOLY ISLAND:							
2262 A 2816	-Holy Island Harbor, Old Law, E. beacon.	55°39.5' N 1°47.5' W	Oc.W.R.G. period 6s lt. 4s, ec. 2s	29 9	4	Stone obelisk; 69.	G. 180°30'-258°30', W.- 261°30', R.-300°.
2263 A 2816.5	--Heugh.	55°40.1' N 1°47.9' W	Oc.W.R.G. period 6s lt. 4s, ec. 2s	79 24	5	Framework tower, black triangular daymark point up; 26.	G. 135°-308°, W.-311°, R.- 135°.
2264 A 2818	Berwick Upon Tweed, breakwater, head.	55°45.9' N 1°59.1' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	49 15	6	White round stone tower, red cupola, red base; 43.	Visible 201°-009°.
			F.G.	26 8	1		Visible 009°-155°.
2268 A 2819	-Breakwater, root.	55°46.0' N 1°59.4' W	2 F.G. (vert.)	7 2			
2272 A 2820	-Near root.	55°45.9' N 1°59.5' W	Q.G.	13 4	1	White column; 10.	
2276 A 2824	-Tweed Dock, S. pier, head.	55°45.9' N 2°00.2' W	2 F.R. (vert.)	10 3			
2280 A 2823	-Carr Rock jetty.	55°45.7' N 2°00.0' W	2 F.R. (vert.)				
2284 A 2822	-Spittal Range, front.	55°45.7' N 1°59.7' W	Fl.W. period 4s	13 4		Orange mast, black bands, orange triangular daymark point down; 13.	
2288 A 2822.1	--Rear, 55 meters 207° from front.	55°45.7' N 1°59.4' W	Fl.W. period 4s	30 9		Orange mast, black bands, orange triangular daymark point down; 39.	Synchronized with front.

Section 3

East and North Coasts of Scotland Including Orkney and Shetland Islands

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2292 A 2834	Burmmouth Range, front.	55°50.6' N 2°04.2' W	F.R.	95 29	4	White post; 7.	
2296 A 2834.1	-Rear, 45 meters from front.	55°50.6' N 2°04.1' W	F.R.	115 35	4	White post; 7.	
2300 A 2840	Eyemouth Range, front.	55°52.5' N 2°05.2' W	F.G.	30 9	6	Orange column; 13.	Tide gauge.
2304 A 2840.1	-Rear, 55 meters 174° from front.	55°52.5' N 2°05.2' W	F.G.	33 10	6	Orange column; 20.	
2308 A 2841	-E. breakwater, head.	55°52.5' N 2°05.3' W	Iso.R. period 2s	26 8	8	White mast; 16.	
2312 A 2846	St. Abbs Range, front.	55°53.9' N 2°07.6' W	F.R.	7 2	1	White post, red bands.	
2316 A 2846.1	-Rear.	55°53.9' N 2°07.6' W	F.R.	13 4	1	White post, red bands.	
2320 A 2850	St. Abbs Head.	55°55.0' N 2°08.3' W	Fl.W. period 10s fl. 0.3s, ec. 9.7s	223 68	18	White tower, building; 30.	
	RACON		T(-)		18		(3 & 10cm).
2324 A 2852	Torness Power Station, breakwater, head.	55°58.4' N 2°24.4' W	Fl.R. period 5s fl. 0.5s, ec. 4.5s	33 10	5	Concrete column; 7.	
DUNBAR:							
2332 A 2860	-Victoria Harbor, middle quay.	56°00.3' N 2°30.9' W	Q.R.	20 6	3	Column; 16.	
2336 A 2856	-Bayswell Hill Range, front.	56°00.3' N 2°31.2' W	Oc.G. period 6s lt. 5s, ec. 1s	49 15	3	Column, orange triangular daymark point up; 13.	Intensified 188°-208°.
2340 A 2856.1	--Rear 198° from front.	56°00.2' N 2°31.2' W	Oc.G. period 6s	72 22	3	Column, orange triangular daymark point down; 13.	Synchronized with front. Intensified 188°-208°.
FIRTH OF FORTH:							
2344 A 2864	-Bass Rock.	56°04.6' N 2°38.5' W	Fl.(3)W. period 20s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 14.5s	151 46	10	White tower, dwelling; 66.	Visible 241°-107°.
2348 A 2866	-North Berwick, N. pier, head.	56°03.7' N 2°43.2' W	F.W.R.	23 7	3	Post; 10.	R. seaward, W. over harbor. Extinguished when vessels cannot enter.
2352 A 2868	-Fidra Island.	56°04.4' N 2°47.1' W	Fl.(4)W. period 30s fl. 0.8s, ec. 2s fl. 0.8s, ec. 2s fl. 0.8s, ec. 2s fl. 0.8s, ec. 20.8s	112 34	15	White brick tower; 56.	Visible 267°30'-268°, 271°30'-277° and 280°-266°.
2356 A 2872	-Port Seton, E. pier, head.	55°58.4' N 2°57.3' W	Iso.W.R. period 4s	34 10	W. 9 R. 6	White metal framework tower; 23.	R. 060°-105°, W.-225°, R.-275°. Bell: Sounded when vessels are expected.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2360 A 2874	-Cockenzie, jetty, head.	55°58.3' N 2°58.4' W	Q.R.	20	1	Lantern.	
2364 A 2878	-Fisherrow, E. pier, head.	55°56.8' N 3°04.1' W	Oc.W. period 6s fl. 4s, ec. 2s	16	6	Metal framework tower; 10.	
-Leith:							
2368 A 2884	--E. breakwater, head.	55°59.5' N 3°10.9' W	Iso.R. period 4s	23	9	Red lantern, concrete base; 13.	
2374 A 2887	--Entrance jetty.	55°59.5' N 3°11.0' W	L.F.I.R. period 6s fl. 2s, ec. 4s			Dolphin.	
-Granton:							
2380 A 2904	--E. breakwater, head.	55°59.3' N 3°13.2' W	Fl.R. period 2s fl. 0.3s, ec. 1.7s	18	6	White square brick building; 16.	
2388 A 2912	-Inchkeith.	56°02.0' N 3°08.2' W	Fl.W. period 15s fl. 0.4s, ec. 14.6s	220	14	Stone tower; 62.	
2390 A 2915	-Hawkcraig Point Range, front.	56°03.0' N 3°17.1' W	Iso.W. period 5s	39	14	White tower, red band; 13.	Visible 282°-302°.
2390.1 A 2915.1	--Rear, 96 meters 292° from front.	56°03.0' N 3°17.1' W	Iso.W. period 5s	52	14	White tower, red band; 26.	Visible 282°-302°.
2392 A 2916	-Oxcars, on rock.	56°01.4' N 3°16.8' W	Fl.(2)W.R. period 7s fl. 0.5s, ec. 1s fl. 0.5s, ec. 5s	52	W. 13 R. 12	White tower, red band; 72.	W. 072°-087°, R.-196°, W.-313°, R.-072°. Radar reflector.
2393 A 2915.4	-Braefoot Bay Terminal Range, front.	56°02.2' N 3°18.7' W	Fl.W. period 3s	20	15	White post, dolphin, triangular daymark point up; 7.	Visible 237°12'-257°12'. 2 F.G. (vert.) mark 4 berthing and 4 mooring dolphins.
2394 A 2915.41	--Rear, 88 meters 247°15' from front.	56°02.1' N 3°18.8' W	Fl.W. period 3s	40	15	White post, jetty, triangular daymark point down; 7.	Visible 237°12'-257°12'. Synchronized with front.
-Inverkeithing:							
2396 A 2919	--St. David's Beacon, 098°.	56°01.4' N 3°22.3' W	Fl.G. period 5s fl. 0.2s, ec. 4.8s	10	7	Pile, green square daymark.	
2408 A 2916.5	-Inchcolm E. point.	56°01.7' N 3°17.8' W	Fl.(3)W. period 15s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 10.5s	66	10	Gray metal framework tower; 33.	Partially obscured by shore 075°-145°30'.
2409 A 2917.1	-N. front, 256°45' from common rear.	56°01.8' N 3°18.3' W	Q.W.	23	7	White tower; 7.	Visible 062°30'-082°30' Synchronized with S. front.
2409.1 A 2916.9	-S. front, 246° from common rear.	56°01.8' N 3°18.3' W	Q.W.	23	7	White tower; 7.	Visible 062°30'-082°30'.
2409.2 A 2917	--Inchcolm W., common rear, 80 meters 256°45' from N. front, 84 meters 246° from S. front.	56°01.8' N 3°18.2' W	Iso.W. period 5s	36	7	White tower; 7.	Visible 062°30'-082°30'.
-River Forth:							
2412 A 2925.9	--Hawes Pier.	55°59.6' N 3°23.2' W	F.R.	7	2		
2416 A 2925	--Forth Railway Bridge, S. span.	55°59.9' N 3°23.3' W	F.W.	154	5		2 F.R. 47m 5M mark width of navigable span on each side of bridge. Shown 24 hours.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2416.1 A 2923	--N. span.	56°00.2' N 3°23.4' W	F.W.	154 47	5		2 F.R. 47m 5M mark width of navigable span on each side of bridge. Shown 24 hours.
2418 A 2929	--Forth Road Bridge.	56°00.1' N 3°24.2' W	Iso.W. period 4s	164 50	8	Underside of main span.	2 Iso.R. 4s 7m 6M and 2 Iso.G. 4s 7m 6M mark width of navigable span on each side of bridge. Shown 24 hours.
2420 A 2934	-Port Edgar, W. breakwater, head, 244°.	55°59.9' N 3°24.8' W	Fl.R. period 4s fl. 1s, ec. 3s	13 4	8	White blockhouse; 13.	3 Q.Y. lights mark breakwater. Three 2 F.R. (vert.) marks N. ends of marina pontoons inside the harbor.
2421 A 2938.3	--Queensferry Crossing, S. span.	56°00.1' N 3°24.9' W	Iso.W. period 8s	184 56	8		Iso.R. 2s 7m 5M and Q.G. 58m 5M mark width of navigable span on each side of bridge.
2422 A 2937.8	--Central Tower.	56°00.3' N 3°24.8' W	Iso.W. period 2s	23 7	9		
2423 A 2937.4	--N. span.	56°00.5' N 3°24.6' W	Iso.W. period 4s	184 56	8		Q.R. 58m 5M and Iso.G. 2s 7m 5M mark width of navigable span on each side of bridge.
2424 A 2936	--Beamer Rock, E. side.	56°00.3' N 3°24.7' W	Fl.W. period 3s fl. 0.2s, ec. 2.8s	16 5	9	White metal post.	
2424.1 A 2935	--W. side.	56°00.3' N 3°24.8' W	Fl.W. period 3s fl. 0.2s, ec. 2.8s	16 5	9	White metal post.	
2428 A 2942	-Rosyth, jetty, S. arm.	56°01.1' N 3°26.6' W	L.Fl.(2)W.R. period 12s fl. 2s, ec. 2s fl. 2s, ec. 6s	16 5	W. 9 R. 6	Brick hut; 13.	W. 010°-280°, R.-010°. 3 Q.Y. shown along S. Arm Jetty when dock in use. 4 F.R. lights on tower 230 meters WNW.
2432 A 2940	-Rosyth Dockyard Main Channel, Beacon A, 323°30'.	56°01.2' N 3°25.6' W	Dir.W.R.G. period 9s fl. 6s, ec. 3s	23 7	4	White post, red bands, red square daymark.	Oc.G. 318°-321°, Oc.W.-326°, Oc.R.-328°. Shown 24 hours.
2444 A 2945	-Middle jetty, head.	56°01.3' N 3°26.6' W	F.G.R.G. (vert.)	23 7		Foot of framework tower. Floodlit.	2.5 meters apart.
2448 A 2947	-P jetty, S. head.	56°01.4' N 3°26.6' W	F.G.R.G. (vert.)				
2452 A 2949	-Charlestown Range, front.	56°02.2' N 3°30.7' W	Iso.G. period 4s	13 4	10	Yellow pile, yellow triangular daymark point up; 20.	Visible 009°-039°.
2456 A 2949.1	--Rear.	56°02.3' N 3°30.6' W	Iso.G. period 4s	19 6	10	Yellow pile, yellow triangular daymark point down; 16.	Visible 009°-039°. Synchronized with front.
2460 A 2951	-Crombie Jetty, downstream dolphin.	56°01.9' N 3°31.8' W	2 F.G. (vert.)	26 8	4	Column; 16.	2 meters apart.
2464 A 2951.5	--Upstream dolphin.	56°02.0' N 3°32.1' W	2 F.G. (vert.)	26 8	4	Column; 16.	2 meters apart.
2466 A 2954	-Bo'ness, Carriden Outfall.	56°01.3' N 3°33.7' W	Fl.Y. period 5s		3	Yellow pile beacon, yellow rectangular daymark; 7.	
2468 A 2956	-Torry.	56°02.5' N 3°35.3' W	Q.G.	16 5	4	Green round structure; 39.	
2472 A 2960	-Grangemouth No 1.	56°02.1' N 3°38.1' W	Fl.(3)R. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 1s fl. 0.5s, ec. 6.5s	13 4	6	Pile, red rectangular daymark.	
2480 A 2962	--No 3.	56°02.3' N 3°39.2' W	Fl.R. period 4s	13 4	3	Pile, red rectangular daymark.	

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SCOTLAND-EAST COAST							
2488 A 2964	--No 5.	56°02.3' N 3°39.9' W	Fl.R. period 2s fl. 0.5s, ec. 1.5s	13 4	5	Pile, red rectangular daymark.	
2490	--No 7 Buoy, RACON.	56°02.8' N 3°10.8' W	T(-) period 60s		5		Frequency coverage 9300-9500 MHz. (3cm).
2492 A 2978	--Longannet Point.	56°02.8' N 3°41.0' W	L.Fl.G. period 10s fl. 4s, ec. 6s	16 5	6		
--Hound Point Marine Terminal:							
2493 A 2918.9	--Berth No 2, NE. dolphin.	56°00.5' N 3°21.2' W	2 F.R. (vert.)	23 7	5	Post.	Horn: 3 bl. ev. 90s (bl. 1.5s, si. 1.5s, bl. 1.5s, si. 1.5s, bl. 1.5s, si. 82.5s).
2493.1 A 2918.8	---E. end.	56°00.5' N 3°21.3' W	2 F.R. (vert.)	23 7	5	Post.	
2493.2 A 2918.7	---W. end.	56°00.4' N 3°21.4' W	2 F.R. (vert.)	23 7	5	Post.	
2494 A 2918.2	--Berth No 1, E. end.	56°00.4' N 3°21.7' W	F.R.	23 7	5	Dolphin.	
2494.1 A 2918.4	---Center.	56°00.3' N 3°21.8' W	2 F.R.	154 47	5		Aeromarine light.
2494.2 A 2918.5	---W. end.	56°00.3' N 3°21.8' W	F.R.	23 7	5	Dolphin.	
2494.3 A 2918.6	---SW. dolphin.	56°00.3' N 3°21.9' W	F.R.	23 7	5	Dolphin.	
--Burntisland:							
2496 A 3028	--Outer E. pier, head.	56°03.2' N 3°14.2' W	Fl.(2)G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	23 7	5	Mast; 16.	
2500 A 3032	--Inner E. pier, head.	56°03.3' N 3°14.3' W	2 F.G. (vert.)	20 6	3	White tower; 23.	1 meter apart.
2504 A 3030	--W. pier, inner head.	56°03.3' N 3°14.3' W	2 F.R. (vert.)	13 4	3	White mast.	
2508 A 3026	---Outer head.	56°03.2' N 3°14.2' W	Fl.(2)R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	23 7		White tower; 20.	
--Kirkcaldy:							
2512 A 3036	--E. pier, head.	56°06.8' N 3°08.9' W	Fl.G. period 5s	39 12	3	Metal column; 23.	
--Methil:							
2532 A 3050	--Outer pier, head.	56°10.8' N 3°00.5' W	Oc.G. period 6s lt. 4s, ec. 2s	26 8	5	White tower; 26.	Visible 280°-100°.
2536 A 3052	--Entrance to No 2 Dock, W. side.	56°10.8' N 3°00.5' W	2 F.R. (vert.)	20 6		Mast; 13.	2 meters apart.
2540 A 3054	---E. side.	56°10.9' N 3°00.5' W	2 F.G. (vert.)	20 6		Mast; 13.	2 meters apart.
2552 A 3060	--Elie Ness.	56°11.0' N 2°48.8' W	Fl.W. period 6s fl. 0.2s, ec. 5.8s	49 15	17	White tower; 36.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
-St. Monance:							
2556 A 3064	--Breakwater, head.	56°12.2' N 2°45.9' W	Oc.W.R.G. period 6s lt. 4.5s, ec. 1.5s	16 5	W. 7 R. 4 G. 4		G. 282°-355°, W.-026°, R.-038°.
2560 A 3066	--E. pier, head.	56°12.2' N 2°46.0' W	2 F.G. (vert.)	20 6	4	Orange tripod; 10.	Bell: Sounded when local fishing vessels are expected to return.
2564 A 3068	--W. pier.	56°12.2' N 2°46.0' W	2 F.R. (vert.)	20 6	4	Post on parapet; 13.	
-Pittweem:							
2568 A 3070	--Middle pier Range, front.	56°12.7' N 2°43.7' W	F.R.	13 4	5	White column, orange stripe; 10.	
2572 A 3070.1	--Inner end, rear, 037° from front.	56°12.8' N 2°43.6' W	F.R.	26 8	5	White column, orange stripe; 33.	
2576 A 3073	--E. breakwater.	56°12.6' N 2°43.7' W	Fl.(2)R.G. period 5s	30 9	R. 9 G. 6	Metal column, masonry base; 23.	R. 265°-345°, G.-055°.
2580 A 3073.2	-Beacon Rock.	56°12.6' N 2°43.8' W	Fl.R. period 4s	10 3	2	Mast.	
2584 A 3080	--E. pier No 2.	56°13.1' N 2°41.8' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	20 6	4	Red column; 20.	
2588 A 3078	--W. pier No 1.	56°13.2' N 2°41.8' W	2 F.R. (vert.)	16 5	4	Gray metal post.	2 meters apart. Traffic signals. Horn: 3 bl. ev. 60s (bl. 2.5s, si. 2.5s, bl. 2.5s, si. 2.5s, bl. 2.5s, si. 47.5s). Sounded when fishing boats are expected.
-Anstruther:							
2592 A 3082	--Inner end of E. pier range, front.	56°13.3' N 2°41.8' W	F.G.	23 7	4	White mast; 20.	
2596 A 3082.1	---Rear, 38 meters from front.	56°13.3' N 2°41.5' W	F.G.	36 11	4	White mast; 26.	
2600 A 3090	-Isle of May.	56°11.1' N 2°33.5' W	Fl.(2)W. period 15s fl. 0.3s, ec. 1.6s fl. 0.3s, ec. 12.8s	240 73	22	Square tower, stone dwelling; 79.	
2604 A 3100	-Crail Range, front.	56°15.4' N 2°37.9' W	F.R.	79 24	6	Stone beacon; 20.	Not shown when harbor is closed.
2608 A 3100.1	--Rear, 30 meters 295° from front.	56°15.4' N 2°37.8' W	F.R.	98 30	6	Stone beacon; 16.	
2612 A 3102	-Fife Ness.	56°16.7' N 2°35.2' W	Iso.W.R. period 10s	39 12	W. 15 R. 12	White building; 16.	W. 143°-197°, R.-217°, W.-023°. AIS (MMSI No 002320798).
2614 A 3104.5	-St Andrews, pier.	56°20.4' N 2°47.1' W	Dir.Iso.W.R.G. period 2s	56 17	9	Lookout building.	Iso.G. 272°-276°, Al.Iso.WG.-277°, Iso.W.-278°, Al.Iso.WR.-279°, Iso.R.-283°. Shown 24 hours.
2616 A 3108	-Bell Rock.	56°26.1' N 2°23.2' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	92 28	18	White round tower; 118.	
-RACON							
			M(- -) period 72s		18		(3 & 10cm).
2617 A 3107	-Meteorological Mast.	56°26.4' N 2°14.5' W	Mo.(U)W. period 15s	72 22	10	Mast; 380.	AIS (MMSI No 992351153). Horn: Mo.(U) 30s.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2620 A 3142	Tayport High.	56°27.2' N 2°53.9' W	Dir.Iso.W.R.G. period 3s	79 24	W. 14 R. 14 G. 14	White tower; 75.	G. 267°-268°, W.-270°, R.-271°.
2624 A 3129	Tentsmuir Point.	56°26.6' N 2°49.6' W	Fl.Y. period 5s fl. 1s, ec. 4s			Yellow beacon, yellow diamond daymark.	Visible 198°-208°.
2626	Abertay RACON.	56°27.4' N 2°40.6' W	T(-)		8		(3cm).
2628 A 3129.5	Barry Sands, Monifieth.	56°28.8' N 2°47.9' W	Fl.Y. period 5s fl. 1s, ec. 4s			Yellow beacon, yellow diamond daymark.	Visible 018°-028°. Marks gas pipeline.
2632 A 3216	Arbroath, E. pier, S. elbow.	56°33.2' N 2°35.0' W	Fl.G. period 3s	26 8	5	White tower; 30.	F.R. exhibited when harbor is closed. Fishing. Siren: 3 bl. ev. 60s (bl. 3s, si. 1.5s, bl. 3s, si. 1.5s, bl. 3s, si. 48s).
2633 A 3212	-Range, front.	56°33.2' N 2°35.0' W	F.R.	23 7	5	White column; 13.	
2634 A 3212.1	--Rear, 50 meters 299°15' from front.	56°33.3' N 2°35.2' W	F.R.	42 13	5	White column; 30.	
2636 A 3220	Scurdie Ness.	56°42.1' N 2°26.3' W	Fl.(3)W. period 20s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 14.5s	125 38	23	White tower; 128.	
	RACON		T(-)		14		(3 & 10cm).
2640 A 3222	Montrose Range, front.	56°42.2' N 2°27.4' W	F.R.	36 11	5	White twin pillars, red bands; 33.	
2644 A 3222.1	-Rear, N. side of entrance, 272 meters 271°31' from front.	56°42.2' N 2°27.7' W	F.R.	59 18	5	White tower, red cupola; 62.	
2648 A 3223	Montrose inner Range, front.	56°42.1' N 2°28.1' W	F.G.	69 21	5	Metal framework tower, orange triangular daymark point up; 66.	
2652 A 3223.1	-Rear, 180 meters 264°58' from front.	56°42.1' N 2°28.3' W	F.G.	108 33	5	Metal framework tower, orange triangular daymark point down; 105.	
2656 A 3226	Johnshaven Range, front.	56°47.7' N 2°20.1' W	F.R.	16 5		Metal pole, yellow square daymark; 7.	
2660 A 3226.1	-Rear, 85 meters 316° from front.	56°47.6' N 2°19.9' W	F.G.	66 20		Metal pole, yellow square daymark; 10.	F.R. shown when unsafe to navigate.
2664 A 3228	Gourdon Range, front.	56°49.8' N 2°17.2' W	F.R.	10 3	5	White rectangular daymark, house; 16.	F.G. shown when unsafe to navigate. Storm signals. Siren: 2 bl. ev. 60s (bl. 6s, si. 6s, bl. 6s, si. 42s). Fishing.
2668 A 3228.1	-Rear, 120 meters 358° from front.	56°49.8' N 2°17.1' W	F.R.	100 30	5	White tower; 20.	
2672 A 3229	-W. pier No 1.	56°49.6' N 2°17.2' W	Fl.W.R.G. period 3s fl. 1s, ec. 2s	16 5	W. 9 R. 7 G. 7	Metal column; 3.	G. 180°-344°, W.-354°, R.-180°.
2676 A 3230	-E. pier, head.	56°49.7' N 2°17.2' W	Q.W.	10 3	3	Metal column; 3.	
STONEHAVEN:							
2684 A 3238	-Outer breakwater, head.	56°57.6' N 2°12.0' W	Iso.W.R.G. period 4s	23 7	5	Metal post; 7.	G. 214°-246°, W.-268°, R.-280°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2688 A 3240	-Inner side of harbor front.	56°57.6' N 2°12.2' W	F.W.	20 6	5	Mast; 16.	For use inside harbor only.
2692 A 3240.1	--Rear, 10 meters from front.	56°57.6' N 2°12.2' W	F.R.	25 8	5	Building, lantern; 23.	
2696 A 3246	Girdle Ness.	57°08.3' N 2°02.9' W	Fl.(2)W. period 20s fl. 0.5s, ec. 2s fl. 0.5s, ec. 17s	184 56	22	White round tower; 121.	Obscured by Greg Ness when bearing more than about 020°-025°. DGPS Station.
	RACON		G(- - •)		25		(3 & 10cm).
ABERDEEN:							
2700 A 3252	-N. pier, head.	57°08.7' N 2°03.7' W	Iso.G. period 4s	36 11	10	White tower; 30.	Bell: 3 str. ev. 12s.
			F.Y.	33 10			Visible 136°-336°. Shown in fog.
2704 A 3250	-S. breakwater, head.	57°08.7' N 2°03.3' W	Fl.(3)R. period 8s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 3s	75 23	7	White tower.	
2708 A 3253	-Old S. breakwater.	57°08.6' N 2°03.7' W	Q.R.	10 3	2	Truncated concrete pillar.	
2710	<i>Aberdeen Fairway Buoy,</i> RACON.	57°09.3' N 2°01.9' W	T(-) period 70s		7	(3cm).	
2712 A 3254	-Abercromby jetty, head.	57°08.5' N 2°04.1' W	Oc.G. period 4s lt. 3s, ec. 1s	17 5	4	STARBOARD (A) G, column, topmark; 10.	Visible 230°-080°.
2716 A 3256	-S. jetty, head.	57°08.5' N 2°04.1' W	Q.R.	13 4	4	Gray metal post.	
2720 A 3258	-Torry Range, front.	57°08.4' N 2°04.5' W	F.R.	46 14	5	White tower; 43.	Shows F.G. when unsafe to navigate.
2724 A 3258.1	--Rear, 205 meters from front.	57°08.3' N 2°04.7' W	F.R.	62 19	5	White tower; 46.	Shows F.G. when unsafe to navigate.
2728 A 3264	-Lower jetty, head.	57°08.5' N 2°04.3' W	Q.G.	10 3	1	STARBOARD (A) G, column, topmark.	
2736 A 3274	Don River, S. entrance point.	57°10.4' N 2°04.7' W	Fl.W. period 3s fl. 0.5s, ec. 2.5s	52 16	5	White tower.	
2740 A 3280	Buchan Ness.	57°28.2' N 1°46.5' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	131 40	18	White tower, red band; 115.	
	RACON		O(- - -)		14		(3 & 10cm).
PETERHEAD:							
2744 A 3284	-S. breakwater, head.	57°29.8' N 1°46.5' W	Fl.(2)R. period 12s fl. 1s, ec. 1s fl. 1s, ec. 9s	78 24	7	White round metal tower, black base; 56.	
2748 A 3286	-N. breakwater, head.	57°29.8' N 1°46.3' W	Iso.R.G. period 6s	62 19	11	White metal tripod; 33.	R. 171°-236°, G.-171°. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
2752 A 3282	-Kirktown Range, front.	57°30.2' N 1°47.1' W	Oc.R. period 6s lt. 5s, ec. 1s	46 14	10	Framework mast, orange triangular daymark point up.	
2756 A 3282.1	--Rear, 91 meters from front.	57°30.2' N 1°47.1' W	Oc.R. period 6s lt. 5s, ec. 1s	69 21	10	Framework mast, orange triangular daymark point down.	Synchronized with front.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2776 A 3304	Ratray Head.	57°36.6' N 1°49.0' W	Fl.(3)W. period 30s fl. 0.7s, ec. 2s fl. 0.7s, ec. 2s fl. 0.7s, ec. 23.9s	92 28	18	White tower, lower part granite, upper brick; 112.	R. lights on masts.
	RACON		M(- -)		15		(3 & 10cm).
2784 A 3308	Cairnbulg Briggs.	57°41.1' N 1°56.5' W	Fl.W. period 10s fl. 1s, ec. 9s	30 9	10	Red beacon; 33.	
FRASERBURGH:							
2788 A 3312	-Balaclava, breakwater, head.	57°41.5' N 1°59.6' W	Fl.(2)G. period 8s fl. 0.7s, ec. 1.3s fl. 0.7s, ec. 5.3s	85 26	6	White stone tower, red band, dome; 69.	Visible 178°-326°.
2792 A 3312.2	-Spur, head.	57°41.5' N 1°59.7' W	Fl.G. period 6s fl. 0.3s, ec. 5.7s	10 3	5	White metal post; 7.	
2796 A 3314	-S. breakwater, head.	57°41.5' N 1°59.7' W	Fl.R. period 6s fl. 0.3s, ec. 5.7s	13 4	5	White metal post; 10.	Docking signals 130 meters W. and 220 meters NW.
2800 A 3316	-Middle jetty Range, front.	57°41.6' N 2°00.0' W	Iso.R. period 2s	40 12	9	White mast, red bands; 30.	Range 1M by day.
2804 A 3316.1	--Rear, N. pier, root, 75 meters 291° from front.	57°41.6' N 2°00.0' W	Iso.R. period 2s	56 17	9	Metal mast; 36.	Range 1M by day.
2808 A 3332	Kinnairds Head.	57°41.9' N 2°00.2' W	Fl.W. period 5s fl. 0.2s, ec. 4.8s	82 25	22	White tower; 33.	Visible 092°-297°.
BANNFF BAY:							
2812 A 3348	-Macduff pier, head.	57°40.3' N 2°30.0' W	Fl.(2)W.R.G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	39 12	W. 9 R. 7	White tower; 36.	G. 025°-115°, W.-174°, R.- 210°.
2816 A 3350	-Range, front.	57°40.3' N 2°29.9' W	F.R.	92 28	3	Post, red triangular daymark point up.	
2820 A 3350.1	--Rear, 60 meters 127° from front.	57°40.3' N 2°29.9' W	F.R.	180 55	3	Post, red triangular daymark point up; 16.	
2824 A 3364	Whitehills, pier, head.	57°40.8' N 2°34.8' W	Fl.W.R. period 3s fl. 0.3s, ec. 2.7s	23 7	W. 9 R. 6	White tower; 10.	R. 132°-212°, W.-245°.
2828 A 3368	Portsoy Range, front.	57°41.1' N 2°41.4' W	Fl.G. period 4s	66 20	3	Metal post, concrete block.	
2832 A 3368.1	-Rear, on hill, 173° from front.	57°41.2' N 2°41.3' W	Q.G.	72 22	3	Black and white metal post, red triangular daymark point up.	
BUCKIE:							
2836 A 3391	-W. Muck.	57°41.1' N 2°58.0' W	Q.R.	16 5	3	Tripod; 16.	
2840 A 3394	-N. breakwater, 60 meters from head.	57°40.8' N 2°57.7' W	Oc.R. period 10s lt. 7s, ec. 3s	49 15	15	White tower; 49.	Reserve light F.W.
2844 A 3396.1	--Cliff Terrace.	57°40.7' N 2°57.4' W	Iso.W.G. period 2s	66 20	W. 16 G. 12	White column; 33.	G. 090°-110°, W.-225°.
2848 A 3392	-N. breakwater, head.	57°40.9' N 2°57.6' W	2 F.R. (vert.)	20 6	9	Red column; 16.	3 F.R. (vert.) shown when harbor closed.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2856 A 3408	Lossiemouth, S. pier, head.	57° 43.4' N 3° 16.7' W	Fl.R. period 6s	36 11	5	Mast; 36.	2 F.R. range lights shown from middle jetty.
HOPEMAN:							
2864 A 3416	-S. pier, head.	57° 42.7' N 3° 26.3' W	Oc.G. period 4s lt. 3s, ec. 1s	26 8	4	Mast; 20.	Shown from Aug. 1 to Apr. 30. F.R. lights are shown from 4 radio masts 1.5M eastward.
2868 A 3418	-Elbow of N. quay Range, front.	57° 42.7' N 3° 26.1' W	F.R.	10 3			
2872 A 3418.1	--Rear, 10 meters 081° from front.	57° 42.7' N 3° 26.1' W	F.R.	13 4		Post; 7.	
BURGHHEAD:							
2876 A 3424	-N. pier, head.	57° 42.1' N 3° 30.0' W	Oc.W. period 8s lt. 6s, ec. 2s	23 7	5	Concrete tower; 20.	
2880 A 3426	-Timber spur, head.	57° 42.1' N 3° 29.9' W	Q.R.	10 3	5	Concrete structure; 10.	Visible from SW. only.
2884 A 3428	-S. pier, NW. corner.	57° 42.1' N 3° 29.8' W	Q.G.	10 3	5	Wooden structure; 10.	Visible from SW. only.
2892 A 3436	Nairn, E. pier, head.	57° 35.6' N 3° 51.6' W	Oc.W.R.G. period 4s lt. 3s, ec. 1s	20 6	5	Octagonal concrete tower; 16.	G. 359°30'-100°, W.-207°, R.-350°.
2896 A 3434	-W. pier, head.	57° 35.6' N 3° 51.5' W	Q.G.	16 5	1	Gray post.	
FIRTH OF INVERNESS:							
2900 A 3440	-Chanony.	57° 34.5' N 4° 05.4' W	Oc.W. period 6s lt. 4.5s, ec. 1.5s	40 12	12	White tower; 43.	Visible 148°-073°.
2908 A 3442	-Avoch, breakwater, head.	57° 34.0' N 4° 09.8' W	2 F.R. (vert.)	23 7	5	Concrete column.	2 meters apart. Occasional.
2912 A 3444	-Inverness.	57° 30.0' N 4° 13.2' W	Fl.W.R. period 2s fl. 0.2s, ec. 1.8s	23 7	W. 5 R. 4	Red fiberglass beacon; 16.	W. 078°-258°, R.-078°.
2916 A 3446	-Craigton Point.	57° 30.1' N 4° 14.0' W	Fl.W.R.G. period 4s fl. 0.7s, ec. 3.3s	19 6	W. 11 R. 7 G. 7	Building; 20.	W. 312°-048°, R.-064°, W.-085°, G.-104.
	-RACON		K(- • -)		13		On beacon marking center of bridge 330 meters ESE. (3 & 10cm).
-Inverness:							
2920 A 3448	--On breakwater, W. side of river entrance.	57° 29.7' N 4° 14.2' W	Fl.G. period 2s fl. 0.5s, ec. 1.5s	27 8	4	Green framework tower; 13.	
2922 A 3447.7	--Inner Beacon.	57° 29.7' N 4° 14.0' W	Q.R.	10 3	4	Pile structure, red platform; 10.	
2924 A 3449	--Turning Beacon.	57° 29.6' N 4° 14.1' W	Fl.R. period 3s fl. 0.5s, ec. 2.5s	23 7	6		
2928 A 3454	--Thornbush wharf, N. head.	57° 29.4' N 4° 14.2' W	Q.G.	19 6	4	Metal column.	
2932 A 3457	--New quay, N. head.	57° 29.3' N 4° 13.8' W	Q.R.	16 5	3	Metal column.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-EAST COAST							
2936 A 3460	--Training wall, head.	57°29.2' N 4°13.7' W	Fl.G. period 2s	16 5	4	Black metal mast, white bands; 30.	
2938	Fairway Buoy.	57°40.0' N 3°54.1' W	L.Fl.W. period 10s			SAFE WATER RW, spherical.	
	RACON		M(- -) period 75s		5		(3cm).
2944 A 3492	-Nigg Ferry, jetty, SE. corner.	57°41.5' N 4°01.3' W	2 F.G. (vert.)	19 6	2	Metal structure; 13.	
2952 A 3493	-Nigg Oil terminal, jetty, head.	57°41.5' N 4°02.6' W	Oc.G. period 5s lt. 4s, ec. 1s	102 31	5	Gray metal framework tower; 89. Floodlit.	
2956 A 3493.2	--E., head.	57°41.6' N 4°02.4' W	2 F.G. (vert.)	29 9	4	Gray post, dolphin; 16.	2 meters apart.
2960 A 3493.3	--W., head.	57°41.6' N 4°02.7' W	2 F.G. (vert.)	29 9	4	Gray post, dolphin; 16.	2 meters apart.
2968 A 3498.2	--Off E. head.	57°41.2' N 4°09.5' W	Q.G.	16 5	3	Dolphin.	
2972 A 3498.4	--Off W. head.	57°41.1' N 4°09.9' W	Fl.G. period 4s fl. 0.5s, ec. 3.5s	16 5	3	Dolphin.	
2976 A 3499	-BNOC Quay, SE. corner.	57°41.1' N 4°10.1' W	Iso.G. period 4s	29 9	6	Gray mast; 23.	
2980 A 3499.2	--SW. Corner.	57°41.1' N 4°10.4' W	Oc.G. period 8s lt. 5s, ec. 3s	16 5	4		
2982 A 3503	-Balintore Harbor.	57°45.2' N 3°54.6' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	16 5	5	Metal pole; 3.	End of jetty.
2984 A 3506	Tarbat Ness.	57°51.9' N 3°46.6' W	Fl.(4)W. period 30s fl. 0.7s, ec. 2.1s fl. 0.7s, ec. 2.1s fl. 0.7s, ec. 2.1s fl. 0.7s, ec. 20.9s	174 53	18	White tower, red bands; 135.	
	RACON		T(-)		14		(3 & 10cm).
2985 A 3508	-Portmahomack pier, head.	57°50.2' N 3°49.8' W	2 F.R. (vert.)	23 7	5	Gray column.	2 meters apart.
2988 A 3522	Lybster, S. pier, head.	58°17.8' N 3°17.4' W	Oc.R. period 6s lt. 4s, ec. 2s	33 10	3	White tower.	
2992 A 3521	Ben-a-chielt AVIATION LIGHT.	58°19.8' N 3°22.8' W	5 F.R. (vert.)	1470 448		Mast.	
WICK:							
3000 A 3528	-S. pier, head.	58°26.3' N 3°04.6' W	Fl.W.R.G. period 3s fl. 0.5s, ec. 2.5s	39 12	W. 12 R. 9 G. 9	White octagonal tower; 36.	G. 253°-270°, W.-286°, R.- 329°.
3002 A 3527	-288°30'.	58°26.6' N 3°05.3' W	Dir.W.R.G. period 4s	30 9	W. 10 R. 7 G. 7	Metal column on N. end of bridge; 23.	Iso.G. 283°30'-287°12', Iso.W.-289°42', Iso.R.- 293°30'.
3004 A 3534	-Near root of S. pier Range, front.	58°26.3' N 3°04.9' W	F.R.	16 5		Mast; 10.	
3008 A 3534.1	--Rear, 20 meters 234° from front.	58°26.3' N 3°04.9' W	F.R.	26 8		Building, lantern; 19.	
3012 A 3544	Noss Head.	58°28.7' N 3°03.0' W	Fl.W.R. period 20s fl. 0.5s, ec. 19.5s	174 53	W. 25 R. 21	White stone tower; 59.	R. 073°-191°, W.-045°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-NORTH COAST							
3016 A 3558	Duncansby Head.	58°38.6' N 3°01.5' W	Fl.W. period 12s fl. 0.3s, ec. 11.7s	220 67	22	White tower; 36.	
	RACON		T(-)		16		(3 & 10cm).
3020 A 3562	Pentland Skerries.	58°41.4' N 2°55.5' W	Fl.(3)W. period 30s fl. 0.4s, ec. 5.6s fl. 0.4s, ec. 5.6s fl. 0.4s, ec. 17.6s	171 52	23	White tower; 118.	AIS (MMSI No 992351086).
3024 A 3608	Lothar Rock.	58°43.8' N 2°58.7' W	Fl.W. period 2s fl. 0.6s, ec. 1.4s	42 13	6	Framework structure; 39.	
	RACON		M(- -)		10		(3 & 10cm).
3028 A 3608.5	South Ronaldsay, Burwick, breakwater, head.	58°44.4' N 2°58.2' W	2 F.R. (vert.)	27 8	5	Metal mast; 20.	2 meters apart.
3032 A 3568	Swilkie Point.	58°41.8' N 3°07.0' W	Fl.(2)W. period 20s fl. 0.3s, ec. 3.6s fl. 0.3s, ec. 15.8s	105 32	20	White tower; 75.	AIS (MMSI No 992351092).
	STROMA:						
3036 A 3570	-Inner sound John O'Groats pier, head.	58°38.8' N 3°04.1' W	Fl.R. period 3s fl. 0.4s, ec. 2.6s	13 4	2	White post.	Radar reflector.
3040 A 3574	Dunnet Head.	58°40.3' N 3°22.5' W	Fl.(4)W. period 30s fl. 0.7s, ec. 2s fl. 0.7s, ec. 2s fl. 0.7s, ec. 2s fl. 0.7s, ec. 21.2s	344 105	23	White stone tower.	
3052 A 3580	Thurso.	58°36.0' N 3°31.0' W	Q.G.	16 5	4	Green post; 10.	Shown from Sep. 01 to Apr. 30.
3056 A 3582	-Range, front.	58°35.9' N 3°30.7' W	F.G.	16 5	4	Gray post; 10.	
3060 A 3582.1	--Rear, 195° from front.	58°35.9' N 3°30.7' W	F.G.	19 6	4	Gray mast; 16.	
3064 A 3584	Scrabster Harbor, E. pier, head.	58°36.7' N 3°32.7' W	2 F.G. (vert.)	19 6	4	White post; 10.	
3066 A 3583.5	--Layover Quay, head.	58°36.6' N 3°32.7' W	Q.R.	19 6	4	Metal post; 10.	
3068 A 3583	-Outer pier.	58°36.6' N 3°32.5' W	Q.(2)G. period 6s	26 8	4	Post.	
3072 A 3586	-W. pier, head.	58°36.7' N 3°32.7' W	2 F.R. (vert.)	13 4	4	Metal post; 10.	1 meter apart.
SCOTLAND-ORKNEY ISLANDS							
3074 A 8235	Foinhaven Oilfield, Storage Tanker 204/04.	60°19.0' N 4°16.4' W	Mo.(U)W. period 15s		15	Storage tanker.	Reserve light range 10M. Horn: Mo.(U) 3 bl. ev. 30s (bl. 0.7s, si. 1s, bl. 0.7s, si. 1s, bl. 2.5s, si. 24.1s).
			Mo.(U)R. period 15s		2		One light on each corner of platform.
	RACON		X(- • • -)				(3 & 10cm).
3076 A 3607.5	Swona.	58°44.2' N 3°04.2' W	Fl.W. period 8s fl. 0.4s, ec. 7.6s	56 17	9	White concrete column; 20.	Visible 261°-210°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-ORKNEY ISLANDS							
3080 A 3607	-N. head.	58°45.1' N 3°03.0' W	Fl.(3)W. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 1s fl. 0.5s, ec. 6.5s	52 16	10	Pillar; 7.	
3084 A 3600	Tor Ness.	58°46.7' N 3°17.7' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	69 21	17	White tower; 26.	
3088 A 3602	Cantick Head.	58°47.2' N 3°07.8' W	Fl.W. period 20s fl. 0.4s, ec. 19.6s	115 35	13	White tower.	
SCAPA FLOW AND APPROACHES:							
3092 A 3604	-Ruff Reef, end of reef, off Cantick Head.	58°47.5' N 3°07.8' W	Fl.W. period 10s fl. 1s, ec. 9s	33 10	6	Black beacon; 33.	
3096 A 3606	-Long Hope, South Ness pier, head.	58°48.1' N 3°12.2' W	Fl.W.R.G. period 3s fl. 0.7s, ec. 2.3s	19 6	W. 7 R. 5 G. 5	White building; 16.	G. 082°-242°, W.-252°, R.- 082°.
3100 A 3610	-Hoxa Head.	58°49.3' N 3°02.1' W	Fl.W.R. period 3s fl. 0.3s, ec. 2.7s	49 15	W. 9 R. 6	White metal framework tower; 23.	W. 026°-163°, R.-201°, W.- 215°.
3104 A 3610.2	-Stanger Head.	58°50.0' N 3°04.7' W	Fl.R. period 5s fl. 0.2s, ec. 4.8s	82 25	8	Pillar; 7.	
3108 A 3610.4	-Roan Head.	58°50.7' N 3°03.9' W	Fl.(2)R. period 6s fl. 0.5s, ec. 1s fl. 0.5s, ec. 4s	39 12	7	White pillar; 6.	
3112 A 3610.6	-Nevi Skerry.	58°50.7' N 3°02.6' W	Fl.(2)W. period 6s fl. 0.5s, ec. 1s fl. 0.5s, ec. 4s	23 7	6	ISOLATED DANGER BRB, beacon, topmark; 30.	
3116 A 3610.8	-Calf of Flotta.	58°51.3' N 3°03.9' W	Q.R.	26 8	4	Pillar.	
3120 A 3610.9	-Flotta Marine Terminal, jetty No 1, T, E. head.	58°50.7' N 3°06.8' W	2 F.R. (vert.)	33 10	3		3 meters apart.
3124 A 3610.92	--T, W. head.	58°50.7' N 3°06.9' W	2 F.R. (vert.)	33 10	3		2 meters apart.
3128 A 3610.94	--E. dolphin.	58°50.8' N 3°06.7' W	Q.R.	26 8	3		
3132 A 3610.96	--W. dolphin.	58°50.7' N 3°07.1' W	Q.R.	26 8	3		
3136 A 3611	-Single Point Mooring Tower No 1.	58°52.2' N 3°07.3' W	Fl.Y. period 5s fl. 0.5s, ec. 4.5s	39 12	3		
3140 A 3611.2	--No 2.	58°52.3' N 3°05.8' W	Fl.(4)Y. period 15s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 8.5s	39 12	3		
3144 A 3612	-Gibraltar pier.	58°50.3' N 3°07.8' W	2 F.G. (vert.)	23 7	3	Metal post.	2 meters apart.
3146 A 3612.5	-Sutherland pier.	58°50.2' N 3°07.9' W	Q.G.	26 8	3	Mast; 19.	
-St. Margaret's Hope:							
3148 A 3615	--Pier, head.	58°49.9' N 2°57.5' W	2 F.G. (vert.)	19 6	2	Metal post; 16.	2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-ORKNEY ISLANDS							
3152 A 3616	--In village Range, front.	58°49.6' N 2°57.5' W	F.G.	33 10	7	Metal mast, orange triangular daymark point up; 13.	
3156 A 3616.1	--Rear, 86 meters 174° from front.	58°49.5' N 2°57.6' W	F.G.	49 15	7	Metal mast, orange triangular daymark point up; 13.	
3160 A 3614	--Needle Point.	58°50.1' N 2°57.3' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	19 6	3		
3164 A 3626	-Rose Ness.	58°52.3' N 2°49.9' W	Fl.W. period 6s fl. 0.5s, ec. 5.5s	79 24	8	White tower; 23.	
3168 A 3632	-Scapa.	58°57.4' N 2°58.3' W	Fl.G. period 3s fl. 0.5s, ec. 2.5s	19 6	8	White metal mast; 16.	
3172 A 3635	-Barrel of Butter.	58°53.4' N 3°07.5' W	Fl.(2)W. period 10s fl. 1s, ec. 2s fl. 1s, ec. 6s	19 6	7	Gray metal platform, round masonry tower.	
3176 A 3636	-Cava, on The Calf.	58°53.2' N 3°10.6' W	Fl.W.R. period 3s fl. 0.3s, ec. 2.7s	36 11	W. 10 R. 8	White round tower; 26.	W. 351°-143°, R.-196°, W.-251°, R.-271°, W.-298°.
3180 A 3640	-Houton Range, front.	58°55.0' N 3°11.5' W	Fl.G. period 3s fl. 1s, ec. 2s	26 8		White pole, black bands, red triangular daymark point up; 20.	Visible 312°-320°.
3184 A 3640.1	--Rear, 200 meters 316°02' from front.	58°55.1' N 3°11.6' W	F.G.	52 16		White pole, black bands, red triangular daymark point up; 16.	Visible 312°-320°.
3188 A 3641	-Houton Bay pier.	58°55.1' N 3°11.0' W	2 F.R. (vert.)	16 5	4	Mast; 13.	2 meters apart.
3192 A 3642	-RoRo Terminal.	58°55.0' N 3°11.0' W	Iso.R. period 4s	23 7	5	Metal mast; 16.	
	-Hoy Sound:						
3196 A 3644	--Graemsay Island Range, front.	58°56.4' N 3°18.5' W	Iso.W. period 3s	56 17	12	White tower; 39.	Visible 070°-255°. When within 1/2 mile of shore on range line, rear light disappears below foreground.
3200 A 3644.1	---Rear, NE. point of island 2.2 km. 104° from front.	58°56.1' N 3°16.3' W	Oc.W.R. period 8s lt. 6s, ec. 2s	115 35	W. 20 R. 16	White tower; 108.	R. 097°-112°, W.-163°, R.-178°, W.-332°. Obscured locally on bearing 104°.
3204 A 3650	--Skerry of Ness.	58°56.9' N 3°17.8' W	Fl.W.G. period 4s fl. 0.3s, ec. 3.7s	23 7	W. 7 G. 5	White concrete column, platform; 33.	W. 165°-090°, G.-125°.
	-Stromness:						
3208 A 3662	--N. pier, head.	58°57.8' N 3°17.6' W	Fl.R. period 3s fl. 0.5s, ec. 2.5s	26 8	5	Metal mast; 16.	
3212 A 3656	--In the town Range, front.	58°57.6' N 3°18.0' W	F.R.	95 29	11	Metal post, white tower; 19.	Visible 307°-327°. Shown 24 hours.
3216 A 3656.1	---Rear, 55 meters 317° from front.	58°57.7' N 3°18.1' W	F.R.	128 39	11	Metal post, white tower; 13.	Visible 307°-327°. Shown 24 hours.
3220 A 3654	--Pier extension, SE., head.	58°57.6' N 3°17.8' W	Iso.R. period 6s	49 15	5	Metal framework tower; 39.	
3224 A 3700	Brough head.	59°08.2' N 3°20.3' W	Fl.(3)W. period 25s fl. 0.1s, ec. 4s fl. 0.1s, ec. 4s fl. 0.1s, ec. 16.7s	171 52	18	White tower, dwelling; 36.	AIS (MMSI No 992351101).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-ORKNEY ISLANDS							
3228 A 3676	Copinsay.	58°53.8' N 2°40.3' W	Fl.(5)W. period 30s fl. 0.7s, ec. 2.5s fl. 0.7s, ec. 2.5s fl. 0.7s, ec. 2.5s fl. 0.7s, ec. 2.5s fl. 0.7s, ec. 16.5s	259 79	14	White tower; 52.	
3232 A 3680	Auskerry.	59°01.5' N 2°34.3' W	Fl.W. period 20s fl. 0.4s, ec. 19.6s	112 34	20	White tower; 112.	
3236 A 3684	Helliar Holm.	59°01.1' N 2°54.1' W	Fl.W.R.G. period 10s fl. 0.5s, ec. 9.5s	59 18	W. 14 R. 11 G. 11	White tower; 43.	G. 256°-276°, W.-292°, R.-098°, W.-116°, G.-154°.
3240 A 3685	Balfour, pier.	59°01.9' N 2°54.4' W	Fl.(2)W.R.G. period 5s fl. 0.5s, ec. 1s fl. 0.5s, ec. 3s	16 5	W. 3 R. 2 G. 2	Gray building; 10.	G. 270°-010°, W.-020°, R.-090°.
KIRKWALL:							
3244 A 3688	-Pier, head.	58°59.3' N 2°57.6' W	Iso.W.R.G. period 5s	42 13	W. 15 R. 13 G. 13	White concrete tower, orange band.	G. 153°-183°, W.-192°, R.-210°.
3246 A 3688.5	--E., head.	58°59.3' N 2°57.5' W	2 F.G. (vert.)	20 6	3	Metal mast.	2 meters apart.
3248 A 3693	-Harbor entrance, N.	58°59.2' N 2°57.5' W	2 F.R. (vert.)	20 6	1	Metal post.	2 meters apart.
3252 A 3694	-W. pier, head.	58°59.2' N 2°57.5' W	2 F.G. (vert.)	20 6	1	Metal post.	2 meters apart.
3254 A 3729	Bay of Backaland.	59°09.4' N 2°44.9' W	Fl.R. period 3s fl. 0.5s, ec. 2.5s	16 5	4	Metal post; 10.	Visible 192°-250°.
3264 A 3708	-Whitehall Pier, N., head.	59°08.6' N 2°35.8' W	2 F.G. (vert.)	27 8	4	Metal mast; 16.	2 meters apart.
3268 A 3706	Papa Stronsay, NE., head.	59°09.3' N 2°34.9' W	Fl.(4)W. period 20s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 13.6s	27 8	9	White metal framework tower; 16.	
3270 A 3715	Loth, RoRo Terminal, W. head.	59°11.5' N 2°41.8' W	2 F.G. (vert.)	26 8	4	Metal mast; 20.	2 meters apart.
3272 A 3716	Kettletoft, pier, head.	59°13.8' N 2°35.8' W	Fl.W.R.G. period 3s fl. 0.5s, ec. 2.5s	23 7	W. 7 R. 5 G. 5	White tower; 19.	W. 351°-011°, R.-180°, G.-351°.
3276 A 3718	Start Point.	59°16.6' N 2°22.6' W	Fl.(2)W. period 20s fl. 0.2s, ec. 3.8s fl. 0.2s, ec. 15.8s	79 24	18	White tower, black stripes; 75.	
3280 A 3722	North Ronaldsay.	59°23.4' N 2°22.9' W	Fl.W. period 10s fl. 0.3s, ec. 9.7s	141 43	24	Red brick tower, two white bands; 138.	
RACON					T(-)		(3 & 10cm).
3284 A 3724	-Nouster, pier, head.	59°21.4' N 2°26.3' W	Q.R.	16 5		Post.	
3288 A 3728	Calf Sound.	59°14.2' N 2°45.8' W	Fl.(3)W.R.G. period 10s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 5.5s	20 6	W. 8 R. 6 G. 6	White tower; 30.	R. 205°24'-214°54', W.-222°18', G.-300°48', W.-305°42'.
3290 A 3734	Rapness, RoRo Terminal, E. end.	59°14.9' N 2°51.4' W	2 F.R. (vert.)	26 8	4	Metal mast; 20.	2 meters apart.

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SCOTLAND-ORKNEY ISLANDS							
3292 A 3736	Noup Head.	59° 19.9' N 3° 04.2' W	Fl.W. period 30s fl. 0.2s, ec. 29.8s	259 79	20	White tower; 79.	Visible 335°-282°. Partially obscured 240°-275°.
3296 A 3737.2	Pierowall, E. pier, head.	59° 19.3' N 2° 58.5' W	Fl.W.R.G. period 3s fl. 0.5s, ec. 2.5s	23 7	W. 11 R. 7 G. 7	Metal mast; 19.	G. 254°-276°, W.-291°, R.- 308°, G.-215°.
3300 A 3737.4	-W. pier, head.	59° 19.4' N 2° 58.5' W	2 F.R. (vert.)	19 6	3	Metal mast; 16.	2 meters apart.
3304 A 3738	Moclett Bay, pier, head.	59° 19.6' N 2° 53.5' W	Fl.W.R.G. period 5s fl. 1s, ec. 4s	23 7	W. 5 R. 3 G. 3	Gray building; 16.	G. 306°-341°, W.-040°, R.- 074°.
3308 A 3740	Egilsay Pier, S. head.	59° 09.3' N 2° 56.6' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	13 4	4	White structure, concrete base; 10.	
FAIR ISLE:							
3312 A 3750	-Skadan.	59° 30.8' N 1° 39.2' W	Fl.(4)W. period 30s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 18.4s	105 32	22	White tower; 85.	Visible 260°-146°. Obscured close inshore 260°-282°.
3314 A 3753	-N. Haven.	59° 32.2' N 1° 36.4' W	Oc.W.R.G. period 8s lt. 6s, ec. 2s	33 10	6	Metal column, concrete base; 10.	G. 203°36'-208°06', W.- 211°06', R.-220°36'.
3316 A 3756	-Skroo.	59° 33.1' N 1° 36.6' W	Fl.(2)W. period 30s fl. 0.6s, ec. 2s fl. 0.6s, ec. 26.8s	262 80	22	White tower; 46.	Visible 086°42'-358°.
SCOTLAND-SHETLAND ISLANDS							
3320 A 3766	Sumburgh Head.	59° 51.2' N 1° 16.5' W	Fl.(3)W. period 30s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 24.6s	300 91	23	White tower; 56.	V.Q.R. (occasional) on masts about 0.75 mile N. and 4.5 miles NW. AIS (MMSI No 992320181). DGPS Station.
3322 A 3767	Pool of Virkie Marina, E. breakwater, head.	59° 53.1' N 1° 17.0' W	2 F.G. (vert.)	20 6	5	Metal pole; 7.	2 meters apart.
3324 A 3772	Mousa, Perie Bard Islet.	59° 59.8' N 1° 09.5' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	65 20	10	White metal framework tower; 20.	
3326 A 3774	-Aithsvoe.	60° 02.3' N 1° 12.9' W	Fl.R. period 3s	10 3	2	White metal post; 7.	Visible 305°-339°.
3340 A 3776	Kirkabister Ness.	60° 07.2' N 1° 07.3' W	Fl.(2)W. period 10s fl. 0.5s, ec. 2s fl. 0.5s, ec. 7s	59 18	10	White building; 52.	
3342 A 3776.5	Bressay, Cro of Ham.	60° 08.3' N 1° 07.5' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	39 12	3	White metal post; 3.	
LERWICK:							
3344 A 3778	-Twageos Point.	60° 08.9' N 1° 08.0' W	L.Fl.W. period 6s fl. 2s, ec. 4s	26 8	6	White beacon.	
3348 A 3779	-Maryfield Ferry terminal, head.	60° 09.4' N 1° 07.5' W	Oc.W.R.G. period 6s lt. 4s, ec. 2s	23 7	5		W. 008°-013°, R.-111°, G.- 008°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-SHETLAND ISLANDS							
3352 A 3780	-Breakwater, N. head.	60°09.3' N 1°08.3' W	2 F.R. (vert.)	16 5	4	Column.	
3356 A 3782	-Victoria pier, elbow.	60°09.3' N 1°08.3' W	2 F.G. (vert.)	16 5	4	Column; 16.	
3360 A 3781	--Head.	60°09.3' N 1°08.4' W	Fl.R. period 3s fl. 0.3s, ec. 2.7s	16 5	1		
3364 A 3783	-N. jetty.	60°09.4' N 1°08.4' W	Q.R.	16 5	1		
3368 A 3783.4	-Oil jetty head, SW. corner.	60°09.5' N 1°08.5' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	16 5		Post; 7.	
3372 A 3784	-North Ness.	60°09.6' N 1°08.7' W	Iso.W.G. period 4s	13 4	5	Column; 10.	W. 024°-158°, G.-216°, W.-301°.
3376 A 3786	-Loofa Baa, N. of North Ness.	60°09.8' N 1°08.7' W	Q.(6)+L.Fl.W. period 15s	13 4	5	S. CARDINAL YB, beacon, topmark; 20.	
3377 A 3787	-Shearers jetty.	60°09.6' N 1°09.1' W	2 F.R. (vert.)	13 4	1		
3378 A 3787.1	-Holmsgarth jetty, head.	60°09.7' N 1°09.1' W	Q.G.	13 4	5	White metal post; 10.	
3380 A 3787.2	-Holmsgarth Quay, Ro-Ro terminal, head.	60°09.8' N 1°09.3' W	Fl.R. period 3s fl. 0.3s, ec. 2.7s	30 9	2	Dolphin.	
3384 A 3787.4	-Shell jetty, head.	60°10.0' N 1°09.4' W	Q.(2)R. period 8s	19 6	2		
3388 A 3787.7	-North Harbor, pier, head.	60°10.3' N 1°09.3' W	Fl.R. period 3s fl. 0.3s, ec. 2.7s	36 11	2		
			F.R.	36 11			
3392 A 3788	-N. entrance.	60°10.5' N 1°09.4' W	Dir.W.R.G. period 6s fl. 5s, ec. 1s	89 27	8	Yellow triangular daymark point up, orange stripe.	Oc.R. 211°-214°, Oc.W.-216°, Oc.G.-221°.
3394 A 3787.6	-Gremista Marina, S. breakwater, head.	60°10.2' N 1°09.5' W	Iso.R. period 4s	10 3	2	White post; 7.	
3396 A 3790	-Greenhead.	60°10.9' N 1°09.0' W	Q.(4)R. period 10s	13 4	3		
3402 A 3787.8	-Heogan, new quay, head.	60°10.3' N 1°08.5' W	Fl.G. period 4s	20 6	3	White metal post; 10.	
3403 A 3793.5	-Skibby Bass.	60°11.1' N 1°08.8' W	Fl.(2)R. period 5s fl. 0.5s, ec. 0.5s fl. 0.5s, ec. 3.5s		3		
3404 A 3794	Rova Head , E. point.	60°11.4' N 1°08.5' W	Fl.W.R.G. period 4s	39 12	W. 12 R. 9 G. 9	White metal framework tower; 23.	R. 090°-182°, W.-191°, G.-213°, R.-241°, W.-261°30', G.-009°, R.-040°. Synchronized with upper directional light.
			Dir.Fl.W.R.G. period 4s	46 14	W. 16 R. 13 G. 13		R. 176°30'-182°, W.-191°, G.-196°30'.
3405 A 3795	Dales Voe.	60°11.8' N 1°11.2' W	Fl.(2)W.R.G. period 8s fl. 0.4s, ec. 1.4s fl. 0.4s, ec. 5.8s	16 5	W. 4 R. 3 G. 3	White metal post; 7.	G. 220°-227°, W.-233°, R.-240°.
3406 A 3795.5	-Quay.	60°11.6' N 1°10.6' W	2 F.R. (vert.)	29 9	3	Metal column; 98.	2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-SHETLAND ISLANDS							
3406.5 A 3795.6	Laxfirth, pier, head.	60°12.7' N 1°12.1' W	2 F.G. (vert.)	13	2	Pole.	1 meter apart.
3407 A 3795.7	Hoo Stack.	60°15.0' N 1°05.4' W	Fl.(4)W.R.G. period 12s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 5.7s	131 40	W. 7 R. 5 G. 5	White metal framework tower; 26.	R. 169°-180°, W.-184°, G.- 193°, W.-169°.
			Fl.(4)W.R.G. period 12s	108 33	W. 9 R. 6 G. 6		R. 177°-180°, W.-184°, G.- 187°. Synchronized.
3408 A 3796	Moul of Eswick, 9.26 meters from N. extremity.	60°15.7' N 1°05.9' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s	164 50	W. 9 R. 6 G. 6	White tower; 23.	R. 028°-200°, W.-207°, G.- 018°, W.-028°.
WHALSAY:							
3412 A 3802	-Symbister Ness, 549 meters from SW. point.	60°20.4' N 1°02.3' W	Fl.(2)W.G. period 12s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 9.5s	36 11	W. 8 G. 6	White tower; 23.	W. 354°-203°, G.-246°.
3413 A 3803.8	Marrister.	60°21.4' N 1°01.4' W	Fl.G. period 6s fl. 0.3s, ec. 5.7s	13 4		4 Green mast, platform; 13.	
3416 A 3804	-Suther Ness.	60°22.1' N 1°00.2' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s	33 10	W. 10 R. 8 G. 8	White metal framework tower; 23.	W. 012°-038°, R.-135°, W.- 143°, G.-158°, R.-173°, W.-206°, G.-240°.
3417 A 3804.2	-Wether Holm.	60°22.3' N 1°01.3' W	Fl.W. period 5s	20 6		White metal framework tower; 16.	
3418 A 3805	-Laxo Voe, Ferry Terminal.	60°21.1' N 1°10.3' W	2 F.G. (vert.)	13 4		Gray metal mast; 16.	1 meter apart.
3420 A 3807	Out Skerries.	60°25.5' N 0°43.7' W	Fl.W. period 20s fl. 0.2s, ec. 19.8s	144 44		20 White tower; 98.	
3424 A 3810	Muckle Skerry.	60°26.4' N 0°51.8' W	Fl.(2)W.R.G. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 8s	49 15	W. 7 R. 5 G. 5	White metal framework tower; 16.	W. 046°-192°, R.-272°, G.- 348°, W.-353°, R.-046°.
3426 A 3811	-Lunna Holm, S. entrance.	60°27.3' N 1°02.5' W	Fl.(3)W.R.G. period 15s	62 19	W. 10 R. 7 G. 7	White round tower; 26.	R. 043°06'-090°, W.-094°, G.- 209°, W.-275°, R.- 018°42'.
3428 A 3812	-Firths Voe.	60°27.3' N 1°10.8' W	Oc.W.R.G. period 8s lt. 6s, ec. 2s	29 9	W. 15 R. 10 G. 10	White tower; 26.	W. 189°-194°, G.-257°, W.- 261°, R.-339°, W.-066°.
3429 A 3812.5	--Linga Island.	60°26.8' N 1°09.1' W	Q.(4)W.R.G. period 8s	33 10	W. 7 R. 4 G. 4	Concrete column; 7.	R. 052°-146°, G.-154°, W.- 312°.
			Q.(4)W.R.G. period 8s	33 10			R. 145°-148°, W.-152°, G.- 155°. Synchronized.
3429.5 A 3812.8	Rumble Rock.	60°28.2' N 1°07.2' W	Fl.W. period 10s fl. 0.5s, ec. 9.5s	26 8		4 Concrete pillar, square platform.	
RACON							
			O(---)			8	(3 & 10cm).
3430 A 3813.1	-Ulsta Ferry Terminal.	60°29.8' N 1°09.5' W	Oc.W.R.G. period 6s	33 10	W. 4 R. 3 G. 3	Metal post.	G. 012°-026°15', W.-041°15', R.-052°30'.
3431 A 3813.5	-Toft, Ferry Terminal.	60°28.0' N 1°12.4' W	2 F.R. (vert.)	23 7		1 Metal post; 16.	Visible 085°-330°. 2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-SHETLAND ISLANDS							
3432 A 3814	-Ness of Sound, W. side.	60°31.4' N 1°11.2' W	Fl.(3)W.R.G. period 12s fl. 0.3s, ec. 1s fl. 0.3s, ec. 1s fl. 0.3s, ec. 9.1s	59 18	W. R. G.	9 6 6	White tower; 26. G. 306°18'-345°, W.-350°, R.-160°, W.-165°, G.-217°.
3436 A 3815	-Brother Island.	60°30.9' N 1°14.1' W	Dir.W.R.G. period 8s	52 16	W. R. G.	10 7 7	Concrete column; 7. Q.(4)G. 323°30'-328°, Q.(4)W.-330°, Q.(4)R.-333°30'.
3437 A 3815.3	--Mio Ness.	60°29.7' N 1°13.7' W	Q.(2)W.R. period 10s	39 12	W. R.	7 4	White round tower; 16. W. 282°-238°, R.-282°.
3438 A 3815.6	--Tinga Skerry.	60°30.5' N 1°14.8' W	Q.(2)G. period 10s	29 9		5	White round tower; 16.
3440 A 3816	-Northern entrance, Bagi Stack.	60°43.5' N 1°07.5' W	Fl.(4)W. period 20s fl. 0.3s, ec. 1s fl. 0.3s, ec. 1s fl. 0.3s, ec. 1s fl. 0.3s, ec. 15.8s	148 45		10	White metal framework tower; 23.
3444 A 3817	--Gruney Island.	60°39.2' N 1°18.2' W	Fl.W.R. period 5s fl. 0.5s, ec. 4.5s	174 53	W. R.	8 6	White tower; 23. R. 064°-180°, W.-012°.
	--RACON		T(-)			14	(3 & 10cm).
3448 A 3817.5	--Point of Fethaland.	60°38.0' N 1°18.7' W	Fl.(3)W.R. period 15s	213 65	W. R.	19 15	White tower; 23. R. 080°-103°, W.-160°, R.-206°, W.-340°.
3452 A 3818	--Muckle Holm.	60°34.8' N 1°16.0' W	Fl.(4)W. period 10s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 3.7s	105 32		10	White metal framework tower; 23.
3456 A 3819	--Little Holm.	60°33.4' N 1°15.9' W	Iso.W. period 4s	39 12		6	White metal framework tower; 23.
3460 A 3820	--Outer Skerry.	60°33.0' N 1°18.3' W	Fl.W. period 6s fl. 1s, ec. 5s	39 12		8	White column, black bands.
3464 A 3820.5	--Quey Firth.	60°31.4' N 1°19.6' W	Oc.W.R.G. period 6s lt. 4s, ec. 2s	72 22	W. R. G.	12 8 8	White tower; 16. W. 154°-290°, G.-327°, W.-334°, R.-085°.
3468 A 3821	--Lamba S., head.	60°30.7' N 1°17.8' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s Dir.W.R.G. period 3s	98 30 79 24	W. R. G. W. R. G.	8 5 10 7 7	White tower; 26. Secondary structure: Concrete column; 7. Fl.G. 285°30'-288°, Fl.W.-293°, Fl.R.-295°30'. Synchronized.
3472 A 3822.5	-Little Roe.	60°30.0' N 1°16.3' W	Fl.(3)W.R. period 10s	52 16	W. R.	5 4	White fiberglass structure, orange band; 16. R. 036°-095°30', W.-036°.
3476 A 3822	- Gluss Isle Range, front.	60°29.8' N 1°19.4' W	F.W.	128 39		19	Gray metal tower, square daymark; 105. Reserve light range 9M. Shown 24 hours.
3480 A 3822.1	--Rear, 0.75 mile 194°44' from front.	60°29.0' N 1°19.8' W	F.W.	226 69		19	Gray metal tower, square daymark; 72. Reserve light range 9M. Shown 24 hours.
3484 A 3822.3	Fugla Ness, common front.	60°27.5' N 1°19.4' W	Iso.W. period 4s	89 27		14	Gray tower, orange daymark; 33.
3488 A 3822.29	--Rear, about 400 meters 212°17' from common front.	60°27.3' N 1°19.7' W	Iso.W. period 4s	148 45		14	Gray metal tower, black trapezoidal daymark; 52. Synchronized with front.
3492 A 3822.31	--Rear, about 410 meters 202°55' from common front.	60°27.3' N 1°19.6' W	Iso.W. period 4s	148 45		14	Gray metal tower, black trapezoidal daymark; 39.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-SHETLAND ISLANDS							
3496 A 3823.1	Sella Ness.	60°26.8' N 1°16.7' W	Dir.W.R.G. period 10s fl. 7.5s, ec. 2.5s	62 19	W. 16 R. 3 G. 3	Gray metal framework tower, building; 3.	Oc.G. 123°30'-130°30', Al.W.G.-132°30' (W. phase increasing with bearing), Oc.W.-134°30', Al.W.R.-136°30' (R. phase increasing with bearing), Oc.R.-143°30'. Range 2/1M by day.
3497 A 3823.3	-Tug jetty, E. side, head.	60°26.8' N 1°16.2' W	2 F.G. (vert.)	26 8	3	Column.	2 meters apart.
3498 A 3823.32	-Finger pier, head.	60°26.8' N 1°16.2' W	Iso.G. period 4s	13 4	3	Metal column.	
3499 A 3823.34	-Garth Pier, N. arm, head.	60°26.7' N 1°16.2' W	Fl.(2)G. period 5s fl. 0.4s, ec. 1s fl. 0.4s, ec. 3.2s	13 4	3	Metal column.	
3501 A 3823.64	-Calback Ness, jetty.	60°27.4' N 1°16.7' W	2 F.R. (vert.)	30 9	3	Metal mast; 16.	2 meters apart.
3502 A 3823.7	-No 1 jetty, E.	60°27.3' N 1°17.0' W	2 F.R. (vert.)	23 7	3	Dolphin.	2 meters apart.
3503 A 3823.8	-No 4 jetty, W.	60°27.9' N 1°18.3' W	2 F.R. (vert.)	23 7	3	Dolphin.	2 meters apart.
3504 A 3822.6	-Calback Ness, N. point Skaw Taing Range, front.	60°29.1' N 1°16.8' W	Oc.W.R.G. period 5s lt. 3s, ec. 2s	69 21	W. 8 R. 5 G. 5	Orange and white fiberglass structure; 16.	W. 049°-078°, G.-147°, W.- 154°, R.-169°, W.-288°.
3505 A 3822.61	--Rear, 195 meters 150°30' from front.	60°29.0' N 1°16.7' W	Oc.W. period 5s lt. 3s, ec. 2s	115 35	8	White round tower, orange band near top; 16.	Visible 145°-156°.
3512 A 3822.8	-Ness of Bardister.	60°28.2' N 1°19.5' W	Oc.W.R.G. period 8s lt. 6s, ec. 2s	65 20	W. 9 R. 6 G. 6	Orange and white fiberglass structure; 16.	W. 180°30'-240°, R.-310°30', W.-314°30', G.-030°30'.
3516 A 3823.6	-Ungam Island.	60°27.3' N 1°18.5' W	V.Q.(2)W. period 5s	6 2	2	White column; 7.	Radar reflector.
3520 A 3824	Vatsetter, Whitehill.	60°34.8' N 1°00.2' W	Fl.W.R. period 3s fl. 0.3s, ec. 2.7s	79 24	W. 9 R. 6	White metal framework tower; 16.	W. 147°-163°, R.-211°, W.- 352°, R.-003°.
3524 A 3828	Balta Islet, S. extremity.	60°44.4' N 0°47.7' W	Fl.W.R. period 10s	59 18	W. 10 R. 8	White metal framework tower; 16.	W. 249°-008°, R.-058°, W.- 154°.
3526 A 3829	-Marina, breakwater, head.	60°45.6' N 0°50.2' W	Fl.R. period 6s	6 2	2	Red pole; 3.	
3528 A 3830	Uyea Sound.	60°41.2' N 0°55.5' W	Fl.(2)W. period 8s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 5.7s	20 6	7	Metal framework tower on concrete structure; 26.	
3530 A 3830.85	Yell, Gutcher, Ferry Terminal.	60°40.4' N 0°59.6' W	2 F.R. (vert.)	23 7	2	Concrete pedestal; 3.	
			Oc.W.R.G. period 8s lt. 6s, ec. 2s	13 4	2		G. 222°-232°, W.-236°, R.- 246°.
3530.3 A 3830.4	Unst, Head of Mula.	60°40.8' N 0°57.6' W	Fl.W.R.G. period 5s	157 48	W. 10 R. 7 G. 7	Metal framework tower; 10.	G. 292°-357°, W.-002°, R.- 157°, W.-161°30'.
3530.5 A 3830.5	Unst, Belmont, Ferry Terminal.	60°41.0' N 0°58.1' W	2 F.G. (vert.)	20 6	2	Gray metal mast; 16.	1 meter apart.
3540 A 3832	North Unst , Muckle Flugga.	60°51.3' N 0°53.1' W	Fl.(2)W. period 20s fl. 0.5s, ec. 3.5s fl. 0.5s, ec. 15.5s	215 66	22	White tower; 64.	Obstruction lights mark mast 3.9 miles SE.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-SHETLAND ISLANDS							
3542 A 3834	Holm of Skaw.	60°49.9' N 0°46.3' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	26 8	8	White metal framework tower; 20.	
3544 A 3838	Esha Ness.	60°29.3' N 1°37.6' W	Fl.W. period 12s fl. 0.4s, ec. 11.6s	199 61	25	White square tower; 40.	
3548 A 3840	Hillswick, S. end of Ness.	60°27.2' N 1°29.7' W	Fl.(4)W.R. period 15s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s	110 34	W. 9 R. 6	White metal framework tower; 16.	W. 217°-093°, R.-114°.
3552 A 3844	Muckle Roe, Swarbacks Minn, N. side of entrance.	60°21.0' N 1°27.1' W	Fl.W.R. period 3s fl. 0.3s, ec. 2.7s	100 30	W. 9 R. 6	White metal framework tower; 23.	W. 314°-041°, R.-075°, W.- 137°.
3553 A 3844.5	Aith. Breakwater, RNLI berth.	60°17.2' N 1°22.3' W	Q.G.	16 5	3	Green post; 6.	
3554 A 3845	W. Burru Firth, Transport pier head.	60°17.7' N 1°32.3' W	2 F.G. (vert.)	13 4	4	Gray pole.	1 meter apart.
3554.5 A 3844.9	W. Burra Firth. Outer.	60°17.8' N 1°33.6' W	Oc.W.R.G. period 8s	88 27	W. 9 R. 7 G. 7	White square masonry tower; 7.	G. 136°-142°, W.-150°, R.- 156°. Shown 24 hours.
3555 A 3845.5	-Inner.	60°17.8' N 1°32.0' W	F.W.R.G.	29 9	W. 15 R. 9 G. 9	White square masonry tower; 7.	G. 095°-098°, W.-102°, R.- 105°. Range 2M by day. Shown 24 hours.
3556 A 3847	Ve Skerries.	60°22.4' N 1°48.8' W	Fl.(2)W. period 20s fl. 0.7s, ec. 2s fl. 0.7s, ec. 16.6s	56 17	11	White concrete tower; 52.	
	RACON		T(-)		15		(3 & 10cm).
3560 A 3850	White Ness, Ram's Head.	60°12.0' N 1°33.5' W	Fl.W.R.G. period 8s fl. 1s, ec. 7s	56 17	W. 9 R. 6 G. 6	White metal framework tower; 16.	G. 265°-355°, W.-012°, R.- 090°, W.-136°. Partially obscured 030°-090° beyond Vaila Island.
3561 A 3854.7	North Havra.	60°09.8' N 1°20.3' W	Fl.(3)W.R.G. period 12s	80 24	W. 11 R. 8 G. 8	White fiberglass tower; 10.	G. 001°-053°30', W.-060°30', R.-144°, G.-334°, W.- 337°30', R.-001°.
3562 A 3860	Foula Island South Ness.	60°06.8' N 2°03.8' W	Fl.(3)W. period 15s fl. 0.1s, ec. 2.8s fl. 0.1s, ec. 2.8s fl. 0.1s, ec. 9.1s	118 36	17	White tower.	Visible 221°-123°.
3564 A 3858	Fugla Ness.	60°06.4' N 1°20.9' W	Fl.(2)W.R.G. period 10s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 7.5s	66 20	W. 10 R. 7 G. 7	White tower; 26.	G. 014°-032°, W.-082°, R.- 134°, W.-272°.

SCOTLAND-NORTH COAST

3568 A 3868	Sule Skerry.	59°05.1' N 4°24.5' W	Fl.(2)W. period 15s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 11s	113 34	21	White tower; 89.	AIS (MMSI No 992351082).
	RACON		T(-)		20		(3 & 10cm).
3572 A 3870	Sula Sgeir.	59°05.7' N 6°09.5' W	Fl.W. period 15s fl. 1s, ec. 14s	243 74	11	Square metal structure; 16.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-NORTH COAST							
3574 A 3869	Rona.	59°07.3' N 5°48.8' W	Fl.(3)W. period 20s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 13.2s	374 114	22	White square tower, three buildings; 30.	AIS (MMSI No 992351081).
3576 A 3880	Cape Wrath.	58°37.5' N 5°00.0' W	Fl.(4)W. period 30s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 3.6s fl. 0.2s, ec. 18.4s	400 122	22	White tower; 66.	AIS (MMSI No 992351087).
3580 A 3874	Loch Eriboll White Head.	58°31.0' N 4°38.8' W	Fl.W.R. period 10s fl. 0.5s, ec. 9.5s	62 19	W. 13 R. 10	White metal framework tower; 16.	W. 030°-172°, R.-191°, W.- 212°.

Section 4

West Coast of Scotland Including The Hebrides and Firth of Clyde

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
3584 A 3880.6	Rubha na Lecaig, (Ministers Point).	58°27.4' N 5°04.5' W	Fl.(2)W. period 10s fl. 0.3s, ec. 1s fl. 0.3s, ec. 8.4s	100 30	8	Concrete pedestal.	
3585 A 3881	Loch Bervie.	58°27.5' N 5°03.0' W	Dir.W.R.G.	49 15	16	Yellow framework tower. Floodlit.	F.G. 326°-326°30', Al.G.W.- 326°45', F.W.-327°15', Al.R.W.-327°30', F.R.- 328°.
3588 A 3881.3	No 1.	58°27.3' N 5°02.8' W	Fl.R. period 4s fl. 0.3s, ec. 3.7s			Red pole; 7.	
3592 A 3881.4	No 2.	58°27.3' N 5°02.8' W	Q.R.			Red pole; 7.	
3596 A 3881.5	No 3.	58°27.3' N 5°02.8' W	Fl.G. period 4s fl. 0.3s, ec. 3.7s			Green pole; 7.	
3598 A 3881.7	-Creag Mhor.	58°27.0' N 5°02.4' W	Iso.W.R.G. period 2s	52 16	4	Metal pole.	R. 136°30'-146°30', W.- 147°30', G.-157°30'.
3600 A 3882	Stoer Head.	58°14.4' N 5°24.2' W	Fl.W. period 15s fl. 0.4s, ec. 14.6s	194 59	18	White tower; 46.	
3602 A 3882.7	Kyleskv, fishing jetty.	58°15.3' N 5°01.0' W	2 F.G. (vert.)	19 6	3	Gray mast; 16.	2 meters apart.
LOCH INVER:							
3604 A 3883	-Glas Leac.	58°08.7' N 5°16.3' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s	24 7	5	Concrete pedestal.	W. 071°-078°, R.-090°, G.- 103°, W.-111°, R.-243°, W.-247°, G.-071°.
3606 A 3883.2	-Off Aird Ghlas.	58°08.9' N 5°15.1' W	Q.G.	10 3	1	Black column, white bands.	
3608 A 3883.7	-Soyea Island.	58°08.5' N 5°19.6' W	Fl.(2)W. period 10s fl. 0.3s, ec. 1s fl. 0.3s, ec. 8.4s	112 34	6	Yellow pedestal.	
3612 A 3886	Ullapool, Ferry pier.	57°53.6' N 5°09.5' W	2 F.R. (vert.)	21 6		Post; 10.	1 meter apart.
3612.5 A 3886.2	--Extension, SE. corner.	57°53.7' N 5°09.3' W	Fl.R. period 3s	21 6	1	Pole; 10.	
3616 A 3885	Rubha Cadail.	57°55.5' N 5°13.4' W	Fl.W.R.G. period 6s fl. 1s, ec. 5s	35 11	W. 9 R. 6 G. 6	White tower; 30.	G. 311°-320°, W.-325°, R.- 103°, W.-111°, G.-118°, W.-127°, R.-157°, W.- 199°.
3620 A 3885.5	-Ullapool Point.	57°53.6' N 5°09.9' W	Iso.R. period 4s	26 8	6	Gray metal mast; 19.	Visible 258°-108°.
3624 A 3887	Cailleach.	57°55.8' N 5°24.2' W	Fl.(2)W. period 12s fl. 0.3s, ec. 1.5s fl. 0.3s, ec. 9.9s	196 60	9	White metal framework tower; 16.	Visible 015°-236°.
3626 A 3887.5	Aultbea, Aird pier, head.	57°50.3' N 5°35.6' W	2 F.G. (vert.)	26 8	3	Gray metal pole; 20.	2 meters apart.
3628 A 3888	NATO POL Jetty, NW. corner.	57°49.7' N 5°35.1' W	2 F.G. (vert.)	16 5	2	Metal post.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
3632 A 3888.2	-Off N. head.	57°49.7' N 5°35.1' W	Fl.G. period 4s fl. 0.4s, ec. 3.6s			Dolphin.	
3636 A 3888.3	-Off S. head.	57°49.5' N 5°35.1' W	Fl.G. period 4s fl. 0.4s, ec. 3.6s			Dolphin.	
3640 A 3900	Rubha Reidh.	57°51.5' N 5°48.7' W	Fl.(4)W. period 15s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 7.1s	120 37	24	White tower, dwellings; 82.	AIS (MMSI No 992320797).
3644 A 3902	Loch Gairloch, Glas Eilean.	57°42.8' N 5°42.4' W	Fl.W.R.G. period 6s fl. 0.5s, ec. 5.5s	29 9	W. 6 R. 4 G. 4	Metal pedestal, concrete base.	W. 080°-102°, R.-296°, W.-333°, G.-080°.
3648 A 3903	-Gairloch pier.	57°42.6' N 5°41.0' W	Q.R.	20 6	2	Gray column; 7.	
3660 A 3904	Rona.	57°34.7' N 5°57.5' W	Fl.W. period 12s fl. 0.2s, ec. 11.8s	225 69	12	White tower; 43.	Visible 050°-358°. AIS (MMSI No 992351045).
3664 A 3905.3	--SW. corner.	57°34.7' N 5°57.9' W	2 F.R. (vert.)				
3668 A 3905	-Sgeir Shuas.	57°35.0' N 5°58.6' W	Fl.R. period 2s fl. 0.3s, ec. 1.7s	20 6	3		Visible 070°-199°.
3672 A 3905.4	--No 9 Range, front.	57°34.4' N 5°58.1' W	Q.W.R.G.	10 3	W. 4 R. 3 G. 3	White and orange beacon.	W. 135°-138°, R.-318°, G.-135°.
3676 A 3905.6	--Rear, No 10, 136°31' from front.	57°34.3' N 5°57.9' W	Iso.W. period 6s	92 28	5	White beacon.	
3678 A 3905.35	--Undesignated beacon.	57°34.6' N 5°58.0' W	Q.R.	10 3	3	Red beacon.	
3680 A 3905.8	--No 1.	57°34.3' N 5°58.3' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	299 91	3	Orange beacon.	
3684 A 3906	-Rubha Chuiltairbh.	57°34.1' N 5°57.2' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	20 6	5	White beacon.	
3688 A 3906.2	-No 11.	57°33.1' N 5°57.6' W	Q.Y.	20 6	4	Orange beacon.	
3692 A 3906.4	-No 3.	57°32.6' N 5°57.9' W	Fl.(2)W. period 10s	30 9	4	White beacon, orange stripes.	
3696 A 3906.6	-No 12.	57°32.0' N 5°58.1' W	Q.R.	16 5	3	Orange beacon.	
3700 A 3907	-Garbh Eilean, No 8.	57°30.7' N 5°58.6' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	25 8	5	White beacon.	
3704 A 3916	Crowlin, Eilean Beag.	57°21.2' N 5°51.4' W	Fl.W. period 6s fl. 0.3s, ec. 5.7s	105 32	6	White metal framework tower; 16.	
3708 A 3909.6	Eyre Point.	57°20.0' N 6°01.3' W	Fl.W.R. period 3s fl. 0.4s, ec. 2.6s	20 6	W. 9 R. 6	White metal framework tower; 16.	W. 215°-267°, R.-288°, W.-063°.
3712 A 3909.2	Isle of Skye, Loch Sligachan, Sconser Ferry Terminal.	57°18.9' N 6°06.6' W	Q.R.	26 8	3	Gray post.	
3720 A 3908	-Portree pier, head.	57°24.6' N 6°11.4' W	2 F.R. (vert.)	21 6	4	Post.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
3724 A 3910	-Ru Na Lachan.	57°29.0' N 5°52.1' W	Oc.W.R. period 8s lt. 6s, ec. 2s	69 21	10	Metal framework tower; 10.	W. 337°-022°, R.-117°, W.-162°.
3725 A 3910.2	-Applecross Pier.	57°28.4' N 5°52.4' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	10 3	3	STARBOARD (A) G, post, topmark.	
3735 A 3920	Broadford Bay, pier, head.	57°14.9' N 5°54.3' W	Fl.G. period 4s	13 4	3	Metal post; 6.	
3744 A 3925	Kyle Akin, jetty, head.	57°16.5' N 5°45.2' W	2 F.R. (vert.)	33 10			Visible 075°-270°. 2 meters apart.
3748 A 3926	Kyle Akin.	57°16.4' N 5°43.4' W	Q.R.	19 6		Metal post.	
3756 A 3928	Kyle of Loch Alsh, W. side, pier, head.	57°16.8' N 5°42.9' W	2 F.G. (vert.)	20 6	5	Post; 10.	1 meter apart.
3760 A 3928.2	-E. side, pier, head.	57°16.7' N 5°42.8' W	2 F.G. (vert.)	19 6	4	Post; 10.	1 meter apart.
3762 A 3928.4	-Kyle, Old Ferry pontoons.	57°16.8' N 5°43.0' W	2 F.G. (vert.)	10 3	1	Gray pole.	0.5 meters apart. Shown from Apr. to Sep.
3764 A 3930	-Butec, jetty, W. head.	57°16.7' N 5°42.5' W	Oc.G. period 6s lt. 4s, ec. 2s	16 5	3	White metal post; 10.	Red obstruction lights and floodlighting. Synchronized with E. end.
3768 A 3930.2	--E. head.	57°16.7' N 5°42.5' W	Oc.G. period 6s lt. 4s, ec. 2s	16 5	3	White metal post; 10.	Synchronized with W. end.
3772 A 3927	-Eileanan Dubha.	57°16.6' N 5°42.4' W	Fl.(2)W. period 10s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 7.5s	29 9	8	White metal framework tower; 16.	Partially obscured 104°-146° beyond adjacent islet.
3774 A 3927.5	--Island, close W.	57°16.6' N 5°42.7' W	Fl.G. period 6s fl. 0.3s, ec. 5.7s	16 5	4	Metal box, concrete base.	
3780 A 3960	-Sgeir Dhearg.	57°00.6' N 5°49.6' W	Fl.(2)W.G. period 8s	20 6	5	Gray beacon; 25.	G. 190°-055°, W.-190°.
3788 A 3952	-Point of Sleat.	57°01.1' N 6°01.1' W	Fl.W. period 3s fl. 1s, ec. 2s	67 20	9	White tower; 22.	
3790 A 3956	-Mallaig Harbor.	57°00.5' N 5°49.5' W	Iso.W.R.G. period 4s	20 6	W. R. G. 9 6 6	Gray metal framework tower, concrete base; 36.	G. 181°-185°, W.-197°, R.-201° 3 F.R. (vert.) shown when vessels may not enter harbor.
			Fl.G. period 3s fl. 1s, ec. 2s	46 14	6		
3792 A 3948	-Armadale Bay.	57°03.9' N 5°53.6' W	Oc.R. period 6s lt. 4s, ec. 2s	21 6	6	Building.	
	-Isle Ormsay:						
3800 A 3944	--Eilean Siannach.	57°08.6' N 5°46.8' W	Oc.W. period 8s lt. 6s, ec. 2s	58 18	12	White tower; 62.	Visible 157°-030°.
3804 A 3942	--Isle Ormsay, N., head.	57°09.1' N 5°46.9' W	Fl.R. period 6s fl. 0.5s, ec. 5.5s	27 8	4	White metal framework tower, stone column; 26.	
3808 A 3940	Sandaig, NW. point.	57°10.1' N 5°42.3' W	Fl.W. period 6s fl. 0.3s, ec. 5.7s	43 13	8	White metal framework tower; 16.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
3812 A 3938	Kyle Rhea.	57° 14.2' N 5° 40.0' W	Fl.W.R.G. period 3s fl. 0.5s, ec. 2.5s	22 7	W. R. G.	8 5 5	White tower; 23. R. 170°-219°, W.-228°, G.- 338°, W.-346°, R.-044°.
3816 A 3934	Sgeir-na-Caillich.	57° 15.6' N 5° 38.9' W	Fl.(2)R. period 6s fl. 0.3s, ec. 1s fl. 0.3s, ec. 4.4s	10 3		4	Beacon.
SCOTLAND-HEBRIDES							
3820 A 3968	Butt of Lewis.	58° 30.9' N 6° 15.7' W	Fl.W. period 5s fl. 0.2s, ec. 4.8s	170 52		25	Red brick tower; 121. Visible 056°-320°. AIS (MMSI No 002320799). DGPS Station.
3824 A 3972	Tiumpán Head.	58° 15.7' N 6° 08.3' W	Fl.(2)W. period 15s fl. 0.4s, ec. 1.5s fl. 0.4s, ec. 12.7s	180 55		18	White tower; 69.
STORNOWAY:							
3828 A 3976	-Arnish Point.	58° 11.5' N 6° 22.2' W	Fl.W.R. period 10s fl. 0.5s, ec. 9.5s	56 17	W. R.	9 7	White round tower; 46. W. 088°-198°, R.-302°, W.- 013°.
3832 A 3978	-Stoney Field.	58° 11.6' N 6° 21.3' W	Fl.W.R.G. period 3s fl. 1s, ec. 2s	26 8		11	Metal pole; 10. G. 320°-073°, R.-102°, W.- 109°, G.-205°.
3836 A 3977	-Sandwick Bay, NW. side.	58° 12.2' N 6° 22.2' W	Oc.W.R.G. period 6s fl. 4s, ec. 2s	32 10		9	Metal pole; 10. G. 334°-341°, W.-347°, R.- 354°.
3840 A 3979	-Eilean na Gothail.	58° 12.2' N 6° 22.9' W	Fl.G. period 6s fl. 0.5s, ec. 5.5s	26 8			Metal column; 10.
3844 A 3980	-Patent slip jetty, outer head.	58° 12.2' N 6° 22.9' W	2 F.G. (vert.)				Concrete column; 7.
3848 A 3981	-No 1 pier, SW. corner.	58° 12.4' N 6° 23.3' W	Q.W.R.G.	16 5		11	Pole; 10. G. 307°-335°, W.-352°, R.- 019°.
3860 A 3984	Milaid.	58° 01.1' N 6° 22.0' W	Fl.W. period 15s fl. 1s, ec. 14s	56 17		10	White metal framework tower.
3864 A 3986	Rubha Uisenish.	57° 56.3' N 6° 28.3' W	Fl.W. period 5s fl. 0.4s, ec. 4.6s	79 24		11	White tower; 23.
3868 A 3990	Eilean Glas.	57° 51.4' N 6° 38.5' W	Fl.(3)W. period 20s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 14.5s	141 43		23	White tower, red bands; 98. AIS (MMSI No 992356014).
RACON						16	(3 & 10cm).
3872 A 3992	-Dun Cor Mor.	57° 51.0' N 6° 44.0' W	Fl.R. period 5s fl. 0.4s, ec. 4.6s	33 10		5	White painted structure; 6.
EAST LOCH TARBERT:							
3876 A 3993	-Sgeir Ghlas.	57° 52.4' N 6° 45.3' W	Iso.W.R.G. period 4s	29 9	W. R. G.	9 6 6	White round concrete tower; 18. G. 282°-319°, W.-329°, R.- 153°, W.-164°, G.-171°, obsc.-282°.
3881 A 3994.25	-Jane's Tower.	57° 45.8' N 7° 02.0' W	Q.(2)G. period 5s	20 6		4	Concrete pedestal; 3. Visible 318°-273°. Q.W. and Oc.W. 3s in line 014°45' mark entrance to Leverburgh.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-HEBRIDES							
3882 A 3995	Berneray, breakwater, head.	57°42.9' N 7°10.0' W	Iso.R. period 4s	20 6	4	Gray column; 17.	
3884 A 3995.6	-Vallay Island.	57°39.7' N 7°26.3' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s	13 4	8	Gray column, white concrete base; 10.	W. 206°-085°, G.-140°, W.-145°, R.-206°.
3885 A 3995.8	--Pier, head.	57°39.3' N 7°26.3' W	2 F.G. (vert.)	20 6	4	Gray metal column; 16.	Shown Mar. to Oct.
LOCH MADDY:							
3888 A 3996	-Weavers Point.	57°36.5' N 7°06.0' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	79 24	7	White metal framework tower; 16.	
3892 A 3996.4	-Glas Eilean Mor.	57°35.9' N 7°06.7' W	Fl.(2)G. period 4s	26 8	5	Aluminum column.	
3894 A 3996.6	-Rubna Nam Pleac.	57°35.7' N 7°06.7' W	Fl.R. period 4s fl. 0.3s, ec. 3.7s	23 7	5	White post; 7.	
3896 A 3997	-Ruigh Liath, E. islet.	57°35.7' N 7°08.4' W	Q.G.	20 6	5	Concrete pillar.	
3897 A 3998	-Vallaquie Island.	57°35.5' N 7°09.3' W	Dir.FI.(3)W.R.G. period 8s fl. 0.4s, ec. 1.2s fl. 0.4s, ec. 1.2s fl. 0.4s, ec. 4.4s	36 11	5	Metal post.	G.195-205°, W.-210°, R.-220°.
			Dir.FI.(3)W.R.G. period 8s fl. 0.4s, ec. 1.2s fl. 0.4s, ec. 1.2s fl. 0.4s, ec. 4.4s	36 11	8		G. 249°-254°, W.-257°, R.-262°.
3898 A 3999.2	Lochmaddy Range, front.	57°35.8' N 7°09.3' W	2 F.G. (vert.)	26 8	4	Column; 26.	2 meters apart.
3898.1 A 3999.21	-Rear, 110 meters 298° from front.	57°35.8' N 7°09.3' W	Oc.G. period 8s lt. 6s, ec. 2s	33 10	4	Column, dolphin; 13.	Visible 284°-304°.
3899 A 3999.5	Grimsay, Kallin Harbor, breakwater, NE. corner.	57°28.9' N 7°12.3' W	2 F.R. (vert.)	20 6	5	Gray metal column; 16.	1 meter apart.
3900 A 4004	Ushenish.	57°17.9' N 7°11.6' W	Fl.W. period 20s fl. 0.4s, ec. 19.6s	176 54	19	White tower; 39.	Visible 193°-018°.
3904 A 4000	Loch Carnan Range, front.	57°22.0' N 7°16.0' W	Fl.R. period 2s fl. 0.5s, ec. 1.5s	23 7	5	Post, white diamond daymark, red stripe.	
3908 A 4000.1	-Rear, 58 meters 222° from front.	57°22.0' N 7°16.3' W	Iso.R. period 10s	37 11	5	Post, white diamond daymark, red stripe.	
3912 A 4028	Flannan Isles.	58°17.3' N 7°35.4' W	Fl.(2)W. period 30s fl. 0.2s, ec. 5.8s fl. 0.2s, ec. 23.8s	330 101	20	White tower; 75.	When close-up, obscured over two small arcs by islands W. of Eilean Mor. AIS (MMSI No 992351080).
3914 A 4030	Gasker Island.	57°59.1' N 7°17.2' W	Fl.(3)W. period 10s fl. 0.3s, ec. 1s fl. 0.3s, ec. 1s fl. 0.3s, ec. 7.1s	125 38	12	White metal framework tower; 16.	
3916 A 4032	-Loch Carloway, Aird Laimishader.	58°17.1' N 6°49.5' W	Fl.W. period 6s fl. 0.3s, ec. 5.7s	207 63	7	White metal framework tower.	Obscured by shore in certain directions.
3920 A 4036	-Greinam, Breascleit Beacon.	58°13.3' N 6°46.2' W	Fl.W.R. period 6s fl. 0.5s, ec. 5.5s	27 8	W. 8 R. 7	White beacon; 18.	R. 143°-169°, W.-143°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-HEBRIDES							
3924 A 4008	Calvay.	57°08.5' N 7°15.4' W	Fl.(2)W.R.G. period 10s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 7.5s	52 16	7	White framework tower; 20.	W. 111°-190°, G.-202°, W.- 286°, R.-111°. AIS (MMSI No 992351139).
3928 A 4010.1	RoRo terminal, head.	57°09.2' N 7°18.2' W	2 F.G. (vert.)		3	Metal column.	
3932 A 4009.5	-N. side.	57°09.0' N 7°17.0' W	Fl.G. period 6s	10 3	3	Metal post; 6.	
3933 A 4011.5	Acairseid Mhor Range, front.	57°03.9' N 7°17.2' W	Oc.R. period 6s lt. 4s, ec. 2s	29 9	4	Orange post, white triangular daymark point up.	
3934 A 4011.51	-Rear, 24 meters 285° from front.	57°03.9' N 7°17.2' W	Oc.R. period 6s lt. 4s, ec. 2s	33 10	4	Orange post, white triangular daymark point down.	
3935 A 4011.7	Isle of Barra, Ardveenish.	57°00.2' N 7°24.4' W	Oc.W.R.G. period 3s	20 6	W. R. G. 6	Gray metal column; 13.	G. 300°-304°, W.-306°, R.- 310°.
3936 A 4012	Sgeir Dubh.	56°56.4' N 7°28.9' W	Q.(3)G. period 6s	20 6	5	White concrete column, green bands; 26.	In line 283° with Sgeir Liath.
3937 A 4012.5	-Channel Rock.	56°56.2' N 7°28.9' W	Fl.W.R. period 6s fl. 0.6s, ec. 5.4s	13 4	W. R. 4	White concrete column, red bands; 23.	W. 121°30'-277°, R.-121°30'.
3938	Castlebay S. Buoy.	56°56.1' N 7°27.2' W	Fl.(2)R. period 8s			PORT (A) R, can.	
	RACON		T(-) period 70s		5		(3 & 10cm).
3939	Bo Vich Chaun Buoy.	56°56.2' N 7°23.3' W	Q.(6)+L.Fl.W. period 15s			S. CARDINAL YB, pillar, topmark.	
	RACON		M(- -) period 72s		5		(3 & 10cm).
	CASTLEBAY:						
3944 A 4019	-Sgeir Liath Range, front.	56°56.7' N 7°30.6' W	F.Bu.	29 9	6	White framework tower, orange triangular daymark point up; 16.	Visible 280°-310°.
3948 A 4019.1	--Rear, 457 meters 295° from front.	56°56.9' N 7°31.0' W	F.Bu.	49 15	6	White framework tower, orange triangular daymark point down; 13.	Visible 291°-299°.
3952 A 4020	Barra Head.	56°47.1' N 7°39.2' W	Fl.W. period 15s fl. 0.3s, ec. 14.7s	683 208	18	White stone tower; 59.	Obscured by islands NE. AIS (MMSI No 992351095).
3954 A 4020.3	Haskier Island.	57°42.0' N 7°41.3' W	Fl.W. period 20s fl. 0.3s, ec. 19.7s	144 44	23	White fiberglass tower; 30.	AIS (MMSI No 992351140).
	RACON		M(- -)		14		(3 & 10cm).
3955 A 4020.5	Monach Islands.	57°31.6' N 7°41.6' W	Fl.(2)W. period 15s	154 47	18	Red brick tower; 135.	
3958 A 4047	St. Kilda Range, front.	57°48.4' N 8°34.3' W	Oc.W. period 5s lt. 4s, ec. 1s	85 26	3	Cairn; 3.	
3959 A 4047.1	-Rear, 100 meters 270° from front.	57°48.3' N 8°34.2' W	Oc.W. period 5s lt. 4s, ec. 1s	125 38	3	Cairn; 7.	Structure difficult to identify. Synchronized with front.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
3960 A 4050	Trodday.	57° 43.6' N 6° 17.9' W	Fl.(2)W.R.G. period 10s fl. 0.3s, ec. 1.5s fl. 0.3s, ec. 7.9s	171 52	W. 12 R. 9 G. 9	White metal framework tower; 23.	W. 062°-088°, R.-130°, W.- 322°, G.-062°. AIS (MMSI No 992351084).
SKYE:							
3964 A 4056	-Watnish Point.	57° 36.5' N 6° 38.0' W	Fl.W. period 20s fl. 1s, ec. 19s	70 21		White metal framework tower; 23.	
3968 A 4052	-Uig, pier, head.	57° 35.1' N 6° 22.3' W	Iso.W.R.G. period 4s	30 9	W. 7 R. 4 G. 4	Gray mast.	W. 180°-006°, G.-050°, W.- 073°, R.-180°.
-Loch Dunvegan:							
3972 A 4058	--Uiginish Point.	57° 26.8' N 6° 36.6' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s	52 16	W. 7 G. 5 R. 5	White metal framework tower; 16.	G. 041°-132°, W.-145°, R.- 148°, W.-253°, R.-263°, W.-273°, G.-306°. Obscured by Fiadhairt Point 148°-167°.
3976 A 4060	--N. corner of pier.	57° 26.5' N 6° 35.4' W	2 F.R. (vert.)	16 5		Post.	When a vessel is expected.
3980 A 4064	-Ness (Neist) Point.	57° 25.4' N 6° 47.3' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	140 43		White tower; 62.	AIS (MMSI No 992320187).
3984 A 4068	--Ardtreck Point.	57° 20.4' N 6° 25.8' W	Fl.W. period 6s fl. 0.5s, ec. 5.5s	59 18		White metal framework tower; 49.	
3986 A 4069	--Elgol.	57° 08.8' N 6° 06.5' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	13 4		Gray pole; 16.	
3988 A 4074	Sanday Island.	57° 02.8' N 6° 28.0' W	Fl.W. period 10s	105 32		White tower; 30.	Visible 152°-061°.
3992 A 4076	Oigh Sgeir.	56° 58.1' N 6° 40.8' W	Fl.(3)W. period 30s fl. 0.2s, ec. 3s fl. 0.2s, ec. 3s fl. 0.2s, ec. 23.4s	136 41		White tower; 128.	AIS (MMSI No 992351094).
RACON							
			T(-)		14		(3 & 10cm).
3996 A 4096	Skerryvore.	56° 19.4' N 7° 06.8' W	Fl.W. period 10s fl. 0.4s, ec. 9.6s	150 46		Gray granite tower; 157.	AIS (MMSI No 992351091).
RACON							
			M(- -)		18		(3 & 10cm).
4000 A 4098	Dubh Artach.	56° 08.0' N 6° 38.1' W	Fl.(2)W. period 30s fl. 0.2s, ec. 3.8s fl. 0.2s, ec. 25.8s	144 44		Gray granite tower, red band; 125.	AIS (MMSI No 992351088).
4004 A 4092	Scarinish.	56° 30.0' N 6° 48.3' W	Fl.W. period 3s fl. 0.2s, ec. 2.8s	37 11		White square tower; 10.	Visible 210°-030°.
4005 A 4093	-Range, front.	56° 30.6' N 6° 47.9' W	F.R.	26 8		Gray metal column; 16.	
4005.5 A 4093.1	--Rear, 100 meters 286°30' from front.	56° 30.6' N 6° 47.8' W	F.R.	36 11		Gray metal column; 13.	
4008 A 4102	Eileanan Liathanaich (Grey Islands), SE. extremity.	56° 20.6' N 6° 16.4' W	Fl.W.R. period 6s fl. 0.3s, ec. 5.7s	40 12	W. 8 R. 6	White framework tower; 16.	R. 088°-108°, W.-088°.
4012 A 4080	Eigg, on E. point of Eilean Chathastail.	56° 52.3' N 6° 07.3' W	Fl.W. period 6s fl. 0.3s, ec. 5.7s	80 24		White tower; 26.	Visible 181°-045°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
4016 A 4082	Ardnamurchan.	56°43.6' N 6°13.6' W	Fl.(2)W. period 20s fl. 0.5s, ec. 2s fl. 0.5s, ec. 17s	180 55	24	Gray granite tower; 118.	Visible 002°-217°. AIS (MMSI No 992351046).
4020 A 4084	Cairns of Coll, Suil Ghorm.	56°42.3' N 6°26.7' W	Fl.W. period 12s fl. 0.5s, ec. 11.5s	74 23	10	White tower; 25.	
4024 A 4087	-Loch Eatharna, Arinagour, Pier, near head.	56°36.9' N 6°31.3' W	2 F.R. (vert.)	39 12	3	Gray metal column; 26.	1.5 meters apart.
SOUND OF MULL:							
4028 A 4107	-Ardmore Point.	56°39.4' N 6°07.7' W	Fl.(2)W. period 10s fl. 0.8s, ec. 2.3s fl. 0.8s, ec. 6.1s	59 18	13	White metal framework tower; 16.	
4030 A 4109	-Kilchoan, Mingary, pier, near head.	56°41.3' N 6°05.6' W	Q.R.	26 8	3	Gray pole.	
4032 A 4112	-Rubha nan Gall.	56°38.3' N 6°04.0' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	56 17	10	White tower; 62.	
4036 A 4122	-Eileanan Glasa (Green Island), Dearg Sgeir.	56°32.3' N 5°54.8' W	Fl.W. period 6s fl. 0.3s, ec. 5.7s	23 7	8	White metal framework tower; 23.	
4040 A 4124	-Ardtornish Point.	56°31.1' N 5°45.2' W	Fl.(2)W.R.G. period 10s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 7.7s	26 8	W. 8 R. 6 G. 6	White metal framework tower; 16.	G. 185°-301°, W.-308°, R.-342°, W.-057°, R.-095°, W.-109°, G.-154°.
4042 A 4125	-Lochaline.	56°32.2' N 5°46.5' W	2 F.R. (vert.)	13 4	3	Metal post.	2 meters apart.
4043 A 4125.3	--Beacon.	56°32.4' N 5°46.5' W	Dir.W.R.G. period 6s		4	Orange concrete structure; 7.	Oc.G. 353°-356°, Oc.W.-358°, Oc.R.-002°.
4044 A 4126	-Grey Rocks.	56°29.8' N 5°42.8' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	36 11	6	White framework tower; 20.	
4048 A 4127	Craignure Range, front.	56°28.3' N 5°42.3' W	F.R.	32 10		Concrete mast.	
4052 A 4127.1	-Rear, 150 meters 244° from front.	56°28.2' N 5°42.4' W	F.R.	40 12		Concrete mast.	
4056 A 4174	Duart Point, William Black Memorial Tower.	56°26.8' N 5°38.8' W	Fl.(3)W.R. period 18s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 13.5s	45 14	W. 5 R. 3	Gray granite building; 30.	W. 162°-261°, R.-275°, W.-353°, R.-008.5°.
4058 A 4174.5	Loch Spelve.	56°23.2' N 5°42.0' W	Fl.G. period 5s	10 3	2	Metal pole, green triangular daymark point up.	
LOCH CRENAN:							
4060 A 4164	-Off Airds Point.	56°32.2' N 5°25.2' W	Fl.W.R.G. period 2s fl. 0.3s, ec. 1.7s	6 2	W. 3 R. 1 G. 1	Red column.	R. 196°-246°, W.-258°, G.-041°, W.-058°, R.-093°, W.-139°.
4064 A 4165	-Eriska.	56°32.2' N 5°24.1' W	Q.G.	6 2	2	Green column.	Visible 128°-329°.
4068 A 4172	Lady's Rock.	56°26.9' N 5°37.0' W	Fl.W. period 6s fl. 0.5s, ec. 5.5s	40 12	5	Red metal framework tower, white concrete base; 39.	AIS (MMSI No 992351093).
4072 A 4170	Lismore.	56°27.3' N 5°36.4' W	Fl.W. period 10s fl. 0.2s, ec. 9.8s	103 31	17	White tower; 85.	Visible 237°-208°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
4076 A 4160	Sgeir Bhuidhe.	56°33.6' N 5°24.6' W	Fl.(2)W.R. period 7s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 4.5s	26 8	W. R.	9 6	White tower, concrete base; 26. R. 184°-220°, W.-184°.
LOCH LINNHE:							
4080 A 4132	-Corran Point.	56°43.3' N 5°14.5' W	Iso.W.R.G. period 4s	38 12	W. R. G.	10 7 7	White tower; 43. R. 132°-195°, W.-215°, G.-020°, W.-030°, R.-069°.
4082 A 4132.4	-Pier, head.	56°43.4' N 5°14.6' W	Fl.R. period 5s	23 7		3	Gray mast; 26.
4084 A 4133	-Corran Narrows NE.	56°43.6' N 5°13.9' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	14 4		4	White metal framework tower; 13. Visible 002°-214°.
4092 A 4140	-Corpach, entrance to Caledonian Canal lock.	56°50.5' N 5°07.4' W	Iso.W.R.G. period 4s	21 6		5	White tower, black top; 20. G. 287°-310°, W.-335°, R.-030°.
4093 A 4150	-Glensanda Quarry Berth, jetty, SW. corner.	56°34.1' N 5°32.0' W	Fl.R. period 3s fl. 0.6s, ec. 2.4s	16 5		4	Metal post; 7.
4094 A 4150.2	--NE. corner.	56°34.1' N 5°31.9' W	Fl.R. period 3s fl. 0.6s, ec. 2.4s	16 5		4	Metal post; 7.
4095 A 4151	-Breakwater, head.	56°33.9' N 5°32.3' W	2 F.R. (vert.)	16 5		3	Metal post; 10. 1 meter apart.
DUNSTAFFNAGE BAY:							
4096 A 4175.4	-Pier, NE. head.	56°27.2' N 5°26.2' W	2 F.G. (vert.)	13 4		2	Pontoon.
OBAN:							
4100 A 4176	-Kerrera, Northspit, W. side of entrance.	56°25.5' N 5°29.6' W	Fl.R. period 3s fl. 0.3s, ec. 2.7s	30 9		5	White column, red bands; 33.
4104 A 4178	-Dunollie.	56°25.4' N 5°29.0' W	Fl.(2)W.R.G. period 6s fl. 0.6s, ec. 1s fl. 0.6s, ec. 3.8s	22 7	W. R. G.	8 6 6	Stone tower; 20. G. 351°-020°, W.-047°, R.-120°, W.-138°, G.-143°.
4105 A 4179	-Rubh'a' Chruidh.	56°25.3' N 5°29.3' W	Q.R.	10 3		4	White post, platform; 10.
4108 A 4180	-Middle of N. pier.	56°24.9' N 5°28.5' W	2 F.G. (vert.)	27 8		4	Metal column; 20.
4112 A 4183	-N. Lighthouse, Commissioner's pier.	56°24.7' N 5°28.9' W	2 F.G. (vert.)	23 7		4	Metal post; 13.
4120 A 4186	Sgeirean Dubha, Sound of Kerrera, 274 meters from shore.	56°22.8' N 5°32.3' W	Fl.(2)W. period 12s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 9.5s	24 7		5	White metal framework tower, concrete base; 23.
4128 A 4190	Fladda.	56°14.9' N 5°40.8' W	Fl.(2)W.R.G. period 9s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 6.6s	42 13	W. R. G.	11 9 9	White tower; 43. R. 169°-186°, W.-337°, G.-344°, W.-356°, R.-026°.
4132 A 4192	Dubh Sgeir.	56°14.8' N 5°40.2' W	Fl.W.R.G. period 6s fl. 0.5s, ec. 5.5s	30 9	W. R. G.	6 4 4	White framework tower; 23. W. 000°-010°, R.-028°, W.-199°, G.-000°.
RACON				M(- -)		5	(3 & 10cm).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
4136 A 4196	Isles of the Sea.	56°13.0' N 5°49.1' W	Fl.W. period 6s fl. 0.5s, ec. 5.5s	79 24	9	White metal framework tower; 16.	Partially obscured 215°-240°.
4140 A 4200	Scalasaig, Colonsay, S. of harbor, head.	56°04.0' N 6°10.9' W	Fl.(2)W.R. period 10s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 7.5s	26 8	W. 8 R. 6	White metal framework tower; 16.	R. 108°-230°, W.-337°, R.-354°.
4144 A 4202	-Pier head Range, front.	56°04.1' N 6°11.0' W	Iso.G. period 4s	26 8	2	Concrete column; 19.	For use of ferries only.
4148 A 4202.1	--Rear, 60 meters 262° from front.	56°04.1' N 6°11.1' W	Iso.G. period 4s	34 10	2	Concrete column; 27.	
LOCH MELFORT:							
4150 A 4205	-Fearnach Bay, pier.	56°16.1' N 5°30.2' W	F.R.	20 6	3	Metal mast; 30.	Shown Apr. 1 to Oct. 31. Private light.
4151 A 4206	-Craobh Marina.	56°12.8' N 5°33.5' W	Iso.W.R.G. period 5s	34 10	W. 5 R. 3 G. 3	Metal structure.	G. 114°-162°, W.-183°, R.-200°.
SOUND OF JURA:							
4152 A 4208	-Reisa an t-Struith.	56°07.8' N 5°38.9' W	Fl.(2)W. period 12s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 9.5s	41 12	7	White metal framework tower; 23.	
-Crinan Canal:							
4156 A 4212	--27 meters E. of lock entrance.	56°05.5' N 5°33.3' W	Fl.W.G. period 3s fl. 0.3s, ec. 2.7s	26 8	4	White tower, red band; 21.	W. 114°-146°, G.-280°.
4160 A 4214	--E. wing of lock entrance.	56°05.5' N 5°33.3' W	2 F.R. (vert.)	41 12		Mast; 23.	
4164 A 4218	--W. wing of lock entrance.	56°05.5' N 5°33.3' W	2 F.G. (vert.)	41 12		Mast; 23.	
4168 A 4226	-Ruadh Sgeir.	56°04.3' N 5°39.8' W	Fl.W. period 6s fl. 0.5s, ec. 5.5s	49 15	9	White tower; 23.	
4172 A 4230	-Skervuille.	55°52.5' N 5°49.9' W	Fl.W. period 15s fl. 1s, ec. 14s	73 22	9	White tower; 83.	
4176 A 4230.6	-Eilean nan Gabhar, S. point.	55°50.0' N 5°56.2' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	30 9	8	White metal framework tower; 15.	Visible 225°-010°.
4180 A 4232	-Na Cuiltean, off SE. point of Jura.	55°48.6' N 5°54.9' W	Fl.W. period 10s fl. 0.5s, ec. 9.5s	30 9	9	White metal framework tower; 16.	
4182 A 4259	Gahmna Gigha.	55°43.8' N 5°41.1' W	Fl.(2)W. period 6s fl. 0.3s, ec. 1.4s fl. 0.3s, ec. 4s	23 7	5	Concrete column; 16.	
WEST LOCH TARBERT:							
4184 A 4260	-Dunskeig Bay.	55°45.2' N 5°35.0' W	Q.(2)W. period 10s	36 11	8	Silver metal post; 10.	
4188 A 4262	-Eileen Triaghe.	55°45.4' N 5°35.7' W	Fl.(2)R. period 5s	16 5	3	Red post.	Radar reflector.
4192 A 4263	-Corran.	55°46.1' N 5°34.3' W	Q.G.	10 3	3	Green post.	Radar reflector.

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SCOTLAND-WEST COAST							
4196 A 4264	-Sgeir Mhein.	55°47.1' N 5°32.4' W	Q.R.	10 3	3	Red post.	Radar reflector.
4200 A 4265	-Black Rocks.	55°47.9' N 5°30.2' W	Q.G.		3	Green post.	Radar reflector.
4204 A 4266.4	-Kennacraig, ferry terminal, head.	55°48.4' N 5°29.0' W	2 F.G. (vert.)	26 8	3	Silver metal post, dolphin; 7.	1 meter apart.
4206 A 4268	Machrihanish Airfield, AVIATION LIGHT.	55°26.4' N 5°42.7' W	Mo.(MH)R.	174 53		Identifying beacon.	Occasional.
4208 A 4236	Rhuda Mhail.	55°56.2' N 6°07.4' W	Fl.(3)W. period 15s	148 45	19	White tower; 113.	
4212 A 4237	Carragh an t'Struih.	55°52.3' N 6°05.8' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	25 8	9	White tower; 16.	Visible 354°-180°.
4216 A 4238	Carraig Mhor.	55°50.4' N 6°06.1' W	Fl.(2)W.R. period 6s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 3.7s	23 7	W. 8 R. 6	White tower; 23.	R. 161°-175°, W.-347°, R.- 028°.
4220 A 4240	McArthur's Head.	55°45.8' N 6°02.9' W	Fl.(2)W.R. period 10s	128 39	W. 13 R. 10	White tower; 43.	W. 139°-159°, R.-244°, W.- 088°.
4224 A 4242	Chuirn, about 1.9 km S. of Ardmore Point.	55°40.1' N 6°01.2' W	Fl.(3)W. period 18s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 13.7s	84 26	8	White tower; 16.	Visible 150°-040°.
4228 A 4248	Port Ellen, Carraig Fhada Point, W. entrance of harbor.	55°37.2' N 6°12.7' W	Fl.W.R.G. period 3s fl. 0.3s, ec. 2.7s	66 20	W. 8 R. 6 G. 6	White square tower; 56.	W. 140°-248°, G.-311°, W.- 340°, R.-030°.
4232 A 4256	Rhinn of Islay.	55°40.4' N 6°30.8' W	Fl.W. period 5s fl. 0.2s, ec. 4.8s	150 46	18	White tower; 95.	Visible 256°-184°.
4236 A 4254	Loch Indaal, Ruhda an Duin, 726 meters N. of Port Charlotte.	55°44.7' N 6°22.3' W	Fl.(2)W.R. period 7s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 4.5s	50 15	W. 11 R. 8	White stone tower; 42.	R. 197°-218°, W.-249°, R.- 350°, W.-036°.
4240 A 4252	-Bruichladdich, pier, head.	55°45.8' N 6°21.6' W	2 F.R. (vert.)	20 6	5	Column; 13.	
4244 A 4272	Mull of Kintyre.	55°18.6' N 5°48.2' W	Fl.(2)W. period 20s fl. 0.4s, ec. 1.5s fl. 0.4s, ec. 17.7s	297 91	24	White tower, white building; 38.	Visible 347°-178°.
4248 A 4274	Sanda Island.	55°16.5' N 5°35.0' W	Fl.W. period 10s fl. 0.3s, ec. 9.7s	165 50	15	White tower, buildings; 49.	Visible 242°-121°. AIS (MMSI No 992351116).
4252 A 4276	Davaar.	55°25.7' N 5°32.4' W	Fl.(2)W. period 10s fl. 0.3s, ec. 1.7s fl. 0.3s, ec. 7.7s	121 37	15	White tower on N. side of balcony; 66.	Visible 073°-330°.
CAMPBELTOWN:							
4256 A 4279	-Kilkerran Range, front.	55°25.0' N 5°35.4' W	F.Y.	24 7	6	Beacon, orange chevron daymark point up; 20.	Sodium vapor discharge lamp. Difficult to distinguish.
4260 A 4279.1	--Rear, 250 meters 240°18' from front.	55°24.9' N 5°35.6' W	F.Y.	91 28	6	Beacon, orange chevron daymark point down; 23.	Sodium vapor discharge lamp. Difficult to distinguish.
4264 A 4284	-Old pier, head.	55°25.5' N 5°36.0' W	2 F.G. (vert.)	22 7	4	Column; 17.	
4268 A 4282	-New pier, head.	55°25.5' N 5°35.9' W	2 F.R. (vert.)	17 5	4	Mast; 12.	

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SCOTLAND-WEST COAST							
4272 A 4290	Port Crannaich, breakwater, head.	55°35.6' N 5°27.8' W	Fl.R. period 10s	20 6	6	Metal column; 10.	
4273 A 4291	Loch Ranza. ferry terminal. NW corner.	55°42.5' N 5°18.1' W	2 F.G. (vert.)	13 4	3	Metal Pole.	1 meter apart.
LOCH FYNE:							
4276 A 4296	-Sgat More, S. head.	55°50.9' N 5°18.5' W	Fl.W. period 3s fl. 0.7s, ec. 2.3s	30 9	12	White round tower, concrete base; 26.	
4280 A 4297	-Portavadie, jetty.	55°52.5' N 5°19.2' W	2 F.G. (vert.)	20 6	4	Pole.	2 meters apart.
4282 A 4297.5	-Eilean na Beithe.	55°52.7' N 5°19.6' W	Fl.W.R.G. period 3s	23 7	5	Metal post, concrete base; 10.	G. 036°-056°, W.-078°, R.-106°.
4284 A 4298	-East Loch Tarbert, Madadh Maol.	55°52.0' N 5°24.2' W	Fl.R. period 2.5s fl. 0.5s, ec. 2s	13 4	3	Red column.	
4288 A 4299	--Eilean a'Choic.	55°52.0' N 5°24.3' W	Q.G.	10 3	2	Green column.	
4296 A 4304	-Ardrihaig, breakwater, head.	56°00.8' N 5°26.6' W	L.Fl.W.R.G. period 6s fl. 2s, ec. 4s	30 9	4	White tower; 20.	G. 287°-339°, W.-350°, R.-035°. Freight pier floodlit. Entrance to lock marked by F.G. and F.R. lights.
4300 A 4308	-Otter Spit.	56°00.6' N 5°21.1' W	Fl.G. period 3s fl. 0.7s, ec. 2.3s	23 7	8	Green tank, concrete pyramid; 36.	
4304 A 4310	Glas Eilean.	56°01.1' N 5°21.2' W	Fl.R. period 5s fl. 1s, ec. 4s	38 12	7	Red column, pedestal.	
4308 A 4314	-Paddy Rock, Sgeir an Eirionnaich.	56°06.5' N 5°13.5' W	Fl.W.R. period 3s fl. 0.7s, ec. 2.3s	22 7	8	Black metal framework tower, black round tower, white stripes; 23.	R. 044°-087°, W.-192°, R.-210°, W.-044°.
4316 A 4326	Pladda.	55°25.5' N 5°07.1' W	Fl.(3)W. period 30s fl. 0.7s, ec. 3.1s fl. 0.7s, ec. 3.1s fl. 0.7s, ec. 21.7s	130 40	17	White tower; 95.	
4320 A 4330	Pillar Rock Point.	55°31.0' N 5°03.7' W	Fl.(2)W. period 20s fl. 0.5s, ec. 2s fl. 0.5s, ec. 17s	124 38	18	White square tower; 75.	
4324 A 4336	Brodick Bay, ferry terminal.	55°34.7' N 5°08.1' W	2 F.R. (vert.)	20 6	4	Gray post.	
4324.5 A 4336.3	-Brodick Pier.	55°34.6' N 5°08.4' W	2 F.R. (vert.)	13 4	4	Gray post.	
4328 A 4332	-SW. extremity of island.	55°30.7' N 5°04.2' W	Fl.G. period 3s fl. 0.6s, ec. 2.4s	46 14	6	White tower; 56.	Visible 282°-147°.
SCOTLAND-FIRTH OF CLYDE							
4332 A 4344	Runnaneun Point.	55°43.8' N 5°00.2' W	Fl.R. period 6s fl. 1s, ec. 5s	26 8	12	White metal tower; 25.	
4336 A 4346	Cumbræ, W. side of Little Cumbræ Island.	55°43.2' N 4°58.0' W	Fl.W. period 6s	92 28	14	White tower; 36.	Visible 334°-193°.
4338 A 4346.5	-Sheanawally Point.	55°44.1' N 4°56.4' W	Fl.W. period 10s	20 6	5	Metal post.	Visible 061°-300°.

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SCOTLAND-FIRTH OF CLYDE							
MILLPORT:							
4340 A 4348	-W. extremity of outer islet.	55°44.9' N 4°55.6' W	Q.G.	18 5	2	Post.	
4344 A 4350	-Pier, head, Range, front.	55°45.0' N 4°55.9' W	F.R.	24 7	5	Column; 20.	
4348 A 4352	--Rear, on shore, 137 meters 333° from front.	55°45.1' N 4°55.9' W	F.R.	29 9	5	Column; 23.	
4348.2 A 4355	-Hunterston Ore/Coal Jetty. NE. corner	55°45.3' N 4°52.6' W	2 F.G. (vert.)	36 11	5	Green metal column.	3 meters apart.
4348.4 A 4355.2	--SW. corner.	55°45.1' N 4°52.9' W	2 F.G. (vert.)	36 11	5	Green metal column.	3 meters apart.
4348.6 A 4358	-NATO Pier, head	55°46.1' N 4°51.8' W	2 F.G. (vert.)				
4348.8 A 4358.2	--Elbow	55°46.0' N 4°51.8' W	2 F.G. (vert.)				
4349 A 4359	Largs Marina, S. breakwater head.	55°46.4' N 4°51.7' W	Oc.G. period 10s lt. 7s, ec. 3s	12 4	4	STARBOARD (A) G, column, topmark; 7.	
4350 A 4359.2	-W. Breakwater, head.	55°46.4' N 4°51.7' W	Oc.R. period 10s lt. 7s, ec. 3s	12 4	4	PORT (A) R, column, topmark; 7.	
4352 A 4360	Largs, N. pier, head.	55°47.7' N 4°52.3' W	2 F.G. (vert.)	20 6	5	Metal post.	2 meters apart.
4354 A 4361	Ascog Patches, No 13.	55°49.7' N 5°00.2' W	Fl.(2)W. period 10s	16 5	5	ISOLATED DANGER BRB, pile, topmark; 23.	
4356 A 4362	Toward Point.	55°51.7' N 4°58.8' W	Fl.W. period 10s fl. 0.2s, ec. 9.8s	70 21	22	White tower; 63.	
ROTHESAY:							
4364 A 4370	--W. head.	55°50.3' N 5°03.3' W	2 F.R. (vert.)	33 10	5	Column; 26.	1 meter apart. Bell: Sounded during reduced visibility.
4372 A 4374	Loch Striven, jetty, S. head.	55°53.7' N 5°02.9' W	2 F.G. (vert.)				
4376 A 4374.2	-N. head.	55°53.8' N 5°02.9' W	2 F.G. (vert.)				
4380 A 4398	Gantock Beacon.	55°56.4' N 4°55.1' W	Fl.R. period 6s fl. 0.8s, ec. 5.2s	39 12	6	White round tower; 44.	
DUNOON:							
4384 A 4400.1	-Pier, S. head.	55°56.7' N 4°55.2' W	2 F.R. (vert.)	20 6	6	Metal pole.	2 meters apart.
4388 A 4400.2	-Jetty, head.	55°56.8' N 4°55.3' W	2 F.R. (vert.)	17 5	6	Column; 6.	
4392 A 4392	Wemyss Bay.	55°52.6' N 4°53.5' W	2 F.G. (vert.)	23 7	5	Metal mast; 39.	2 meters apart.
4396 A 4405	McInroy's Point.	55°57.1' N 4°51.3' W	2 F.G. (vert.)	16 5	6	Gray metal column.	2 meters apart.
4400 A 4406	Hunter's Quay, NW. corner pierhead.	55°58.3' N 4°54.5' W	2 F.R. (vert.)	19 6	6	Gray metal column.	2 meters apart.

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SCOTLAND-FIRTH OF CLYDE							
4403 A 4408	Barons Point, No 3.	55°59.2' N 4°51.0' W	Fl.R. period 5s	16	5	2 Black metal post.	
4404 A 4404	Cloch Point.	55°56.5' N 4°52.7' W	Fl.W. period 3s fl. 0.6s, ec. 2.4s	79	24	8 White round tower, black band, white dwellings.	
GOUROCK BAY:							
4416 A 4414	-Kempock Point.	55°57.8' N 4°49.1' W	Fl.G. period 6s	36	11	3 Metal column; 12.	Port closure signals on roof of Navy building 0.9 mile E.
4424 A 4409	-Ravenrock Point.	56°02.1' N 4°54.4' W	Fl.W. period 4s fl. 0.7s, ec. 3.3s	39	12	10 White metal framework tower, white column; 26.	
	-204°.		Dir.W.R.G.	29	9		F.R. 201°30'-203°, Al.W.R.- 203°30' (W. phase increasing with bearing), F.W.-204°30', Al.W.G.- 205° (G. phase increasing with bearing), F.G.- 206°30'.
4428 A 4411	-Port Dornaige.	56°03.8' N 4°53.6' W	Fl.W. period 6s fl. 0.7s, ec. 5.3s	27	8	11 White column; 13.	Visible 206°-026°.
4429 A 4410.3	-Jetty, S. corner.	56°03.9' N 4°52.6' W	L.Fl.G. period 12s fl. 2s, ec. 10s	19	6	5 Metal pole.	3 F.G. (vert.) port closure signals close N.
4430 A 4410.32	--N. corner.	56°04.0' N 4°52.5' W	F.G.	19	6	5 Metal pole.	Occasional.
4432 A 4412.8	-Finnart No 2 Jetty, S. head.	56°06.7' N 4°50.4' W	2 F.G. (vert.)	19	6		
4436 A 4412.7	--N. head Range, front.	56°06.7' N 4°50.4' W	2 F.G. (vert.)	19	6		
4436.1 A 4412.71	--Rear, 82 meters 066° from front.	56°06.7' N 4°50.4' W	Q.G.	26	8		Visible 051°-081°.
4440 A 4411.4	-Dog Rock (Carraig nan Ron).	56°06.0' N 4°51.7' W	Fl.W. period 2s fl. 0.7s, ec. 1.3s	23	7	11 White column; 17.	
LOCH GOIL:							
4441 A 4411.6	-The Perch Range, front.	56°06.9' N 4°54.3' W	Dir.W.R.G.	9	3	8 Metal column, orange rectangular daymark.	F.G. 314°30'-316°30', Al.W.G.-317°30', F.W.- 318°30', Al.W.R.-319°30', F.R.-324°30'.
			Fl.R. period 3s	9	3		Visible 187°-322°. Occasional.
4441.1 A 4411.61	--Rear, 700 meters 318° from front.	56°07.2' N 4°54.7' W	F.W.	23	7	5 Metal column, orange rectangular daymark; 10.	Visible 312°-322°30'.
4442 A 4411.8	-Rubha Ardnahein.	56°06.2' N 4°53.6' W	Fl.R. period 5s	9	3	3 Metal column, orange rectangular daymark; 10.	Visible 132°-312°. Occasional.
4444 A 4412	-Cnap Point Range, front.	56°07.4' N 4°50.0' W	Q.W.	26	8	10 White column; 17.	
4444.1 A 4412.1	--Rear, 87 meters 031° from front.	56°07.4' N 4°49.9' W	F.W.	43	13	White metal framework tower, red rectangular daymark.	
4448 A 4413.6	-Strone.	56°07.7' N 4°49.1' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	9	3	3 Green metal post.	Radar reflector.
4452 A 4413.7	-Jetty, head.	56°07.8' N 4°49.1' W	2 F.G. (vert.)			Column; 6.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-FIRTH OF CLYDE							
4456 A 4413.72	--Elbow.	56°07.9' N 4°49.1' W	2 F.G. (vert.)			Column; 6.	
4464 A 4420	Rosneath Patch, S. head.	55°58.5' N 4°47.4' W	Fl.(2)W. period 10s fl. 0.8s, ec. 1.4s fl. 0.8s, ec. 7s	18 5	10	ISOLATED DANGER BRB, pile, topmark; 23.	
4466 A 4421	-Beacon 8N, 080°.	55°59.1' N 4°44.2' W	Dir.W.R.G.	13 4	W. 16 R. 13 G. 13	SPECIAL Y, pile, "X" topmark.	F.G. 075°-077°30', Al.W.G.- 079°30', F.W.-080°30', Al.W.R.-082°30', F.R.- 085°.
	-138°.		Dir.W.R.G.				F.G. 132°-134°, Al.W.G.-137°, F.W.-139°, Al.W.R.-142°.
	-Passing Lt.		Fl.Y. period 3s	20 6	3		
4472 A 4421.2	-Beacon No 1.	55°59.1' N 4°43.9' W	V.Q.(4)Y. period 5s	30 9		SPECIAL Y, beacon, "X" topmark.	In line 080° with Beacon 8N.
4475 A 4422	Rosneath Patch Beacon 7N, Range, front.	56°00.1' N 4°45.4' W	Dir.W.R.G.	16 5	W. 16 R. 13 G. 13	Green pile structure, green triangular daymark point up.	Al.W.G. 353°-355°, F.W.-357°, Al.W.R.-000°, F.R.-002°.
	115°.		Dir.W.R.G.				Al.W.G. 111°-114°, F.W.-116°, Al.W.R.-119°, F.R.-121°.
	Passing Lt.		Oc.G. period 6s	20 6	3		
4476 A 4422.1	Ardencaple Castle, rear, about 940 meters 356° from front.	56°00.5' N 4°45.4' W	2 F.G. (vert.)	86 26	12	Stone tower on NW. corner of castle; 46.	Visible 335°-020°. 3 meters apart.
4490 A 4423.5	Rosneath Bay, 149°.	56°00.1' N 4°46.7' W	Dir.W.R.G.	30 9	W. 16 R. 13 G. 13	Orange metal column; 23.	F.G. 144°-145°, Al.W.G.-148°, F.W.-150°, Al.W.R.-153°, F.R.-154°.
	Passing Lt.		Oc.R. period 8s lt. 6s, ec. 2s		3		
4492 A 4423	Rhu Narrows.	56°00.7' N 4°47.7' W	Dir.W.R.G.	16 5	W. 16 R. 13 G. 13	PORT (A) R, beacon, topmark.	Al.W.G. 291°-294°, F.W.-296°, Al.W.R.-299°, F.R.-301°.
4504 A 4425.5	-POL Jetty, N. arm.	56°00.4' N 4°47.5' W	2 F.R. (vert.)		5	White concrete column; 10.	Visible 150°-330°.
4508 A 4422.5	-Rhu Point, 318°.	56°00.9' N 4°47.2' W	Dir.W.R.G.		W. 16 R. 13 G. 13	Metal beacon, orange trapezoidal daymark.	Al.W.G. 315°-317°, F.W.-319°, Al.W.R.-321°, F.R.-325°.
4518 A 4425	-Castle Point.	56°00.2' N 4°46.5' W	Fl.(2)R. period 10s fl. 0.8s, ec. 1.4s fl. 0.8s, ec. 7s	26 8	6	Red mast; 16.	
4519 A 4426	-Rhu Spit.	56°00.8' N 4°47.3' W	Fl.W. period 3s fl. 0.4s, ec. 2.6s	19 6	6	White round tower, green band; 26.	
4524 A 4426.5	-Mambeg, 331°.	56°03.7' N 4°50.5' W	Dir.W.R.G. period 5s fl. 1s, ec. 4s	23 7	W. 5 R. 3 G. 3	White column; 13.	Fl.G. 329°-330°30', Fl.W.- 331°30', Fl.R.-332°30'. Shown 24 hours.
4528 A 4427.4	-Faslane Base wharf, S. elbow.	56°03.2' N 4°49.2' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	36 11	5	Metal mast.	
4530 A 4427.45	--Head.	56°03.1' N 4°49.2' W	2 F.G. (vert.)			Building.	
4532 A 4427.5	--Camban Point, S dolphin.	56°03.1' N 4°49.2' W	Fl.R. period 5s fl. 0.5s, ec. 4.5s	10 3	2	Dolphin.	Port closure signals on N. dolphin.
4536 A 4427.6	---Middles.	56°03.3' N 4°49.2' W	2 F.G. (vert.)	46 14	5	Metal mast.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-FIRTH OF CLYDE							
4542 A 4427.9	--Berth No 7.	56°03.6' N 4°49.2' W	2 F.G. (vert.)	23 7		Gray mast; 16.	2 meters apart.
4544 A 4428.6	-Garelohead, S. fuel jetty, head.	56°04.2' N 4°49.7' W	2 F.G. (vert.)	33 10	5	White floodlit tower; 40.	2 meters apart.
4549 A 4428.8	--N. head.	56°04.4' N 4°49.7' W	2 F.G. (vert.)	33 10	5	White floodlit tower; 39.	2 meters apart.
GREENOCK:							
4552 A 4438	-Anchorage Range, front.	55°57.6' N 4°46.6' W	F.G.	23 7	12	Yellow metal column.	
4556 A 4440	--Rear, 32 meters 196° from front.	55°57.6' N 4°46.6' W	F.G.	30 9	12	Yellow metal column.	
4560 A 4444	-Clydeport Container Terminal.	55°57.5' N 4°45.9' W	Q.G.	26 8	8	Gray metal column.	
4564 A 4442	--Range, front.	55°57.4' N 4°45.9' W	F.G.	59 18		Building.	
4568 A 4442.1	--Rear, 360 meters 194°30' from front.	55°57.3' N 4°46.0' W	F.G.	108 33		Pylon. Floodlit.	
4572 A 4458	-Victoria Harbor, W. side of entrance.	55°56.8' N 4°44.7' W	2 F.G. (vert.)	23 7		Green mast; 16.	2 meters apart.
4580 A 4470	-Garvel Embankment, W. end.	55°56.8' N 4°43.5' W	Oc.G. period 10s fl. 6s, ec. 4s	30 9	4	Mast.	
4584 A 4472	--Maurice Clark Point.	55°56.6' N 4°42.8' W	Q.G.	22 7	2	Green stone tower.	
PORT GLASGOW:							
4588 A 4476	-Beacon, off the entrance.	55°56.3' N 4°41.3' W	F.G.	24 7	9	Black and white checkered tower, cupola; 26.	
4592 A 4478	-Steamboat quay.	55°56.3' N 4°41.4' W	F.G.	39 12	12	Black and white checkered column; 36.	Visible 210°-290°.
4596 A 4484	Garrison.	55°55.9' N 4°34.1' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	33 10	8	Green pedestal, green masonry base; 36.	
4600 A 4486	Dumbuck.	55°55.8' N 4°32.5' W	Fl.G. period 2s fl. 0.3s, ec. 1.7s	33 10	8	Green masonry tower; 39.	
4604 A 4488	Longhaugh.	55°55.7' N 4°31.0' W	Fl.G. period 2s fl. 0.3s, ec. 1.7s	33 10	8	Green pedestal, green masonry base; 36.	
4608 A 4490	Dunglass.	55°55.7' N 4°30.1' W	Fl.R. period 2s fl. 0.3s, ec. 1.7s	32 10	6	Red pedestal; 35.	
4612 A 4494	Bowling.	55°55.8' N 4°29.2' W	Fl.R. period 4s fl. 1s, ec. 3s	32 10	6	Red metal column.	
4616 A 4496	Donalds quay.	55°55.5' N 4°28.1' W	Fl.R. period 4s fl. 1s, ec. 3s	32 10	6	Red framework tower, red hut; 36.	
4620 A 4498	St. Patricks Stone.	55°55.2' N 4°27.9' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	32 10	8	Green pedestal, masonry base; 36.	
4628 A 4501	Erskine.	55°54.8' N 4°27.3' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	32 10	8	Green pedestal; 35.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-FIRTH OF CLYDE							
4636 A 4504	Rashielee.	55°54.3' N 4°26.6' W	Fl.G. period 2s fl. 0.3s, ec. 1.7s	32 10	8	Green pedestal; 35.	
4640 A 4506	Dalmuir West.	55°54.4' N 4°26.3' W	Fl.R. period 2s fl. 0.3s, ec. 1.7s	32 10	6	Red metal column, masonry base; 36.	
4644 A 4510	-East.	55°54.2' N 4°25.1' W	Fl.R. period 4s fl. 1s, ec. 3s	32 10	6	Red framework tower, red base; 36.	
4648 A 4508	Newshot Island.	55°54.2' N 4°25.5' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	32 10	8	Green pedestal; 35.	
4652 A 4511	Algies.	55°53.8' N 4°24.7' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	23 7	8	Green metal gantry; 20.	
4654 A 4511.2	Slipway.	55°53.7' N 4°24.3' W	Fl.R. period 4s fl. 0.3s, ec. 3.7s	16 5	3	Red metal pole.	Marks end of slipway.
4656 A 4512	Blythswood.	55°53.4' N 4°24.1' W	Fl.G. period 2s fl. 0.3s, ec. 1.7s	32 10	8	Green tower, green base; 35.	
4660 A 4513	Renfrew West.	55°53.2' N 4°23.1' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	32 10	8	Green metal column; 35.	
4672 A 4516	Braehead.	55°52.6' N 4°21.8' W	Fl.G. period 2s fl. 0.3s, ec. 1.7s	32 10	8	Green pedestal; 35.	
4680 A 4519	Shieldhall East, wharf, head.	55°52.1' N 4°20.3' W	Fl.G. period 2s fl. 0.3s, ec. 1.7s	55 17	8	Green mast; 58.	
4684 A 4520	Linthouse.	55°52.1' N 4°19.9' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	32 10	8	Green metal framework tower; 36.	
4688 A 4521	Fairfield.	55°52.1' N 4°19.4' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	32 10	8	Green mast; 35.	
4693 A 4527	-Garden Festival Swing Bridge.	55°51.5' N 4°17.4' W	Fl.R. period 10s	10 3	1	PORT (A) R, pile, topmark; 10.	Marks N. channel limit. 3 F.R. in form of triangle mark center of channel when bridge is closed.
4694 A 4527.2	-S. side of bridge.	55°51.5' N 4°17.4' W	Fl.G. period 10s	10 3	1	STARBOARD (A) G, pile, topmark; 10.	Marks S. channel limit.
4695 A 4527.4	-N. channel limit.	55°51.5' N 4°17.3' W	Fl.R. period 10s	10 3	1	PORT (A) R, pile, topmark; 10.	Marks N. channel limit.
4696 A 4527.6	-S. channel limits.	55°51.5' N 4°17.3' W	Fl.G. period 10s	10 3	1	STARBOARD (A) G, pile, topmark; 10.	Marks S. channel limit.

SCOTLAND-WEST COAST

ARDROSSAN:

4700 A 4532	-055°.	55°38.6' N 4°49.2' W	Dir.W.R.G.	49 15	W. 14 R. 11 G. 11	Metal framework tower; 39.	F.G. 050°-051°12', Al.W.G.- 053°48' (W. phase increasing with bearing), F.W.-056°12', Al.W.R.- 058°48' (R. phase increasing with bearing), F.R.-060°.
			F.R.	43 13	6		Passing light visible 325°- 145°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
4704 A 4538	-Pier, head.	55°38.5' N 4°49.6' W	Iso.W.G. period 4s	37 11	9	White tower; 29.	G. 317°-035°, W.-317°.
4708 A 4536	-N. breakwater, head.	55°38.5' N 4°49.6' W	Fl.R. period 5s	22 7	5	Red gantry; 3.	
IRVINE:							
4716 A 4546	-S. side of entrance.	55°36.2' N 4°42.0' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	19 6	5	Green metal column, platform; 20.	
4724 A 4548	-Range, front.	55°36.4' N 4°41.6' W	F.G.	33 10	5	Green mast; 33.	Visible 019°-120°.
4728 A 4548.1	--Rear, 101 meters 051° from front.	55°36.4' N 4°41.5' W	F.R.	50 15	5	Green mast; 50.	Visible 019°-120°.
TROON HARBOR:							
4732 A 4554	-W. pier, head.	55°33.1' N 4°41.0' W	Fl.(2)W.G. period 5s fl. 0.6s, ec. 0.9s fl. 0.6s, ec. 2.9s	35 11	9	White tower; 26.	G. 036°-090°, W.-036°.
4740 A 4558	-E. pier, head.	55°33.0' N 4°41.0' W	Q.R.	19 6	3	Red metal pole, dolphin; 13.	
4744 A 4562	Lady Isle.	55°31.6' N 4°44.0' W	Fl.W. period 2s fl. 0.5s, ec. 1.5s	63 19	11	White tower, red stripes; 16.	
RACON			T (-)		11		(3 & 10cm).
AYR HARBOUR:							
4752 A 4574	-Near pilot's house, Range, front.	55°28.1' N 4°38.4' W	F.R.	33 10	5	Red tower, white lantern; 20.	Traffic signals.
4756 A 4574.1	--Rear, 130 meters 098° from front.	55°28.1' N 4°38.3' W	Oc.R. period 10s fl. 8s, ec. 2s	58 18	9	Masonry tower, white lantern; 72.	
4760 A 4568	-S. pier, head.	55°28.2' N 4°38.8' W	Q.W.	24 7	7	White tower; 20.	Visible 012°-161°.
			F.G.	18 5	5		Visible 012°-082°.
4764 A 4566	-N. breakwater, head.	55°28.2' N 4°38.8' W	Q.R.	29 9	5	White metal framework tower; 30.	
4768 A 4582	Ailsa Craig.	55°15.1' N 5°06.5' W	Fl.W. period 4s fl. 0.1s, ec. 3.9s	60 18	17	White tower; 36.	Visible 145°-028°.
4772 A 4580	Turnberry.	55°19.5' N 4°50.7' W	Fl.W. period 15s fl. 0.4s, ec. 14.6s	95 29	12	White tower; 79.	
4776 A 4588	Girvan, S. pier, head.	55°14.7' N 4°51.9' W	2 F.G. (vert.)	26 8	4	Metal mast, white tower; 20.	Traffic signals 220 meters SE.
4778 A 4588.4	-N. breakwater, head.	55°14.8' N 4°51.8' W	Fl.(2)R. period 6s	23 7	4	Pole, concrete base; 13.	
4780 A 4586	-N. groyne, head.	55°14.7' N 4°51.7' W	Fl.R. period 4s	16 5	2	Metal framework tower.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
SCOTLAND-WEST COAST							
LOCH RYAN:							
4784 A 4592	-Cairn Ryan Point.	54°58.5' N 5°01.8' W	Fl.(2)R. period 10s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 7.4s	46 14	12	White tower, balcony; 49.	
4786 A 4594	-Cairnryan Ferry Terminal, mooring dolphin.	54°57.8' N 5°01.0' W	Fl.R. period 5s fl. 0.5s, ec. 4.5s	18 5	5	Mast.	
4796 A 4604	Corsewall.	55°00.4' N 5°09.6' W	Fl.(5)W. period 30s fl. 0.2s, ec. 3.5s fl. 0.2s, ec. 3.5s fl. 0.2s, ec. 3.5s fl. 0.2s, ec. 3.5s fl. 0.2s, ec. 15s	112 34	22	White tower; 112.	Visible 027°-257°. AIS (MMSI No 992351018).
4804 A 4607	Portpatrick Range, front.	54°50.5' N 5°07.0' W	F.G.			Sea wall, orange stripe.	Occasional. Private light.
4808 A 4607.1	-Rear, 68 meters 050°30' from front.	54°50.5' N 5°06.9' W	F.G.	26 8		Building, orange stripe.	Occasional. Private light.
4812 A 4608	Crammag Head.	54°39.9' N 4°57.9' W	Fl.W. period 10s fl. 1s, ec. 9s	114 35	18	White tower; 23.	
4816 A 4610	Mull of Galloway.	54°38.1' N 4°51.4' W	Fl.W. period 20s fl. 0.5s, ec. 19.5s	325 99	28	White round tower; 85.	Visible 182°-105°.
4818 A 4620	Port William Range, front.	54°45.6' N 4°35.1' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	23 7	3	Metal mast; 20.	
4818.1 A 4620.1	-Rear, 130 meters 105° from front.	54°45.6' N 4°35.1' W	F.G.	33 10	2	Bracket on building.	
4820 A 4622	Isle of Whithorn Harbor.	54°41.8' N 4°21.7' W	Q.G.	13 4	3	Gray column.	
4822 A 4624	-Range, front.	54°42.0' N 4°22.0' W	Oc.R. period 8s lt. 6s, ec. 2s	23 7	7	Orange metal mast, orange diamond daymark; 13.	
4823 A 4624.1	--Rear, 35 meters 355° from front.	54°42.0' N 4°22.0' W	Oc.R. period 8s	29 9	7	Orange metal mast, orange diamond daymark; 10.	Synchronized with front.
4823.5 A 4624.2	Isle of Whithorn.	54°41.8' N 4°21.6' W	Fl.W.R. period 3s fl. 0.5s, ec. 2.5s	66 20	W. R. 4	White square tower; 13.	W. 310°-005°, R.-040°.
4824 A 4630	Garlieston, pier, head.	54°47.5' N 4°21.7' W	2 F.R. (vert.)	26 8	3	Column; 16.	1 meter apart.
4827 A 4633.99	Little Ross, front.	54°46.1' N 4°05.0' W	Fl.(2)W. period 5s	69 21	5	Stone beacon; 33.	
4828 A 4634	-Rear, 201° from front.	54°46.0' N 4°05.1' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	165 50	12	White tower; 66.	Obscured in Wigton Bay S. of 103°.
4832 A 4640	Hestan Islet, E. head.	54°50.0' N 3°48.4' W	Fl.(2)W. period 10s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 7.5s	138 42	9	White metal framework tower.	

Section 5

West Coast of England and North and West Coasts of Wales Including Bristol Channel

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST							
SILLOTH:							
4844 A 4670	-Lees Scar Rock.	54°51.8' N 3°24.7' W	Fl.G. period 5s fl. 1s, ec. 4s	36 11	4	White structure, piles; 13.	Visible 005°-317°.
4848 A 4671	--East Cote.	54°52.8' N 3°22.8' W	F.G.	50 15	12	White structure, piles; 39.	Visible 046°-058°, intensified 052°.
4852 A 4672	-Groyne, head.	54°52.1' N 3°24.0' W	2 F.G. (vert.)	13 4	4	Dolphin.	F.G.W.G. (vert.) traffic signals exhibited from New Dock Signal Mast.
4856 A 4672.6	-Outfall.	54°52.4' N 3°23.4' W	2 F.G. (vert.)			STARBOARD (A) G, beacon, topmark.	
MARYPORT:							
4860 A 4676	-S. pier, head.	54°43.1' N 3°30.5' W	Fl.W. period 1.5s fl. 0.2s, ec. 1.3s	32 10	6	Metal framework tower.	
4861 A 4677	--Outfall.	54°42.8' N 3°31.4' W	Fl.G. period 5s			STARBOARD (A) G, beacon, topmark.	
WORKINGTON:							
4864 A 4688	-Pier, head, S. side of entrance.	54°39.1' N 3°34.6' W	Fl.W. period 5s fl. 1s, ec. 4s	36 11	5	Red brick building; 20.	Q.G. marks end of outer S. pier extension.
4868 A 4692	-Range, front.	54°38.9' N 3°34.1' W	F.R.	32 10	3	White pyramidal tower, orange band; 23.	
4872 A 4692.1	--Rear, 134 meters 131°49' from front.	54°38.9' N 3°34.0' W	F.R.	40 12	3	White pyramidal tower, orange band; 30.	
WHITEHAVEN:							
4880 A 4698	-W. pier, head.	54°33.2' N 3°35.8' W	Fl.G. period 5s fl. 1s, ec. 4s	52 16	8	White round tower; 46.	
4884 A 4700	-N. pier, head.	54°33.2' N 3°35.7' W	Fl.R. period 5s	26 8	10	White round tower; 20.	
4888 A 4702	-North Wall quay, head.	54°33.1' N 3°35.5' W	2 F.R. (vert.)	25 8	2	Mast.	Lock control signals 30 meters E.
4892 A 4710	St. Bees Head.	54°30.8' N 3°38.2' W	Fl.(2)W. period 20s fl. 1.5s, ec. 2s fl. 1.5s, ec. 15s	336 102	18	White round tower; 56.	Visible 340°-230°.
ENGLAND-WEST COAST-ISLE OF MAN							
4896 A 4720	Point of Ayre.	54°24.9' N 4°22.1' W	Fl.(4)W. period 20s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 12.3s	106 32	19	White tower, two red bands; 98.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST-ISLE OF MAN							
	RACON		M(— —)		13		(3 & 10cm).
PEEL:							
4924 A 4734	-Breakwater, head.	54° 13.7' N 4° 41.7' W	Oc.W. period 7s lt. 5s, ec. 2s	37 11	6	White tower; 26.	
4928 A 4730	-Pier, head, E. side of harbor entrance.	54° 13.5' N 4° 41.7' W	Oc.R. period 7s lt. 5s, ec. 2s	27 8		White tower, red band, building.	
4932 A 4732	-Castle jetty, head.	54° 13.6' N 4° 41.7' W	Oc.G. period 7s lt. 5s, ec. 2s	18 5		White tower, three green bands; 13.	
PORT ERIN:							
4936 A 4740	-Range, front.	54° 05.3' N 4° 45.4' W	F.R.	33 10		White tower, red band; 36.	
4940 A 4740.1	--Rear, on E. shore, 39 meters 099° 06' from front.	54° 05.3' N 4° 45.4' W	F.R.	62 19		White column, red band, lantern; 13.	
4944 A 4744	-Raglan pier, head.	54° 05.1' N 4° 45.7' W	Oc.G. period 5s lt. 4s, ec. 1s	26 8		White tower, green band; 23.	
4952 A 4745	Thousla Rock.	54° 03.7' N 4° 48.0' W	Fl.R. period 3s fl. 0.7s, ec. 2.3s	30 9	4	White octagonal concrete tapered pillar, red lantern.	
4956 A 4748	Chicken Rock.	54° 02.3' N 4° 50.4' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	125 38	21	Granite tower; 144.	
	RACON		C(— • — •)				(3 & 10cm).
PORT ST. MARY:							
4960 A 4752	-The Carrick.	54° 04.3' N 4° 42.5' W	Q.(2)W. period 5s	21 6	3	ISOLATED DANGER BRB, pillar, topmark; 26.	
4964 A 4756	-Inner pier, head.	54° 04.4' N 4° 44.0' W	Oc.R. period 3s lt. 2s, ec. 1s	25 8		White tower, red band; 26.	
4968 A 4754	-Alfred pier, head.	54° 04.3' N 4° 43.7' W	Oc.R. period 10s lt. 6s, ec. 4s	25 8	5	White tower, red band; 23.	
CASTLETOWN HARBOUR:							
4972 A 4760	-New pier, head.	54° 04.3' N 4° 38.8' W	Oc.R. period 15s lt. 13s, ec. 2s	27 8	5	White tower, red band; 30.	
4976 A 4761	-Irish quay.	54° 04.4' N 4° 38.9' W	Oc.R. period 4s lt. 3s, ec. 1s	16 5		White tower, red band; 13.	Visible 142°-322°. 2 F.R. shown from each swing bridge.
4980 A 4760.5	-N. side of entrance.	54° 04.4' N 4° 38.9' W	Oc.G. period 4s lt. 3s, ec. 1s	11 3		White metal post, concrete column.	
4984 A 4762	Langness, Dreswick Point.	54° 03.3' N 4° 37.5' W	Fl.(2)W. period 30s fl. 0.6s, ec. 5.1s fl. 0.6s, ec. 23.7s	75 23	12	White tower; 62.	
4988 A 4764	Derby Haven, breakwater, SW. head.	54° 04.6' N 4° 36.9' W	Is.G. period 2s	15 5	5	White tower, green band.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST-ISLE OF MAN							
DOUGLAS BAY:							
4992 A 4770	-Douglas Head.	54°08.6' N 4°28.0' W	Fl.W. period 10s fl. 0.5s, ec. 9.5s	104 32	15	White tower, buildings; 66.	Visible 220°-037°. Unintensified 110°-220°.
5028 A 4784	Laxey, pier, head.	54°13.5' N 4°23.2' W	Oc.R. period 3s lt. 2s, ec. 1s	22 7	5	White tower, red band; 13.	Visible 318°-047°.
5032 A 4785	-Breakwater, head.	54°13.5' N 4°23.2' W	Oc.G. period 3s lt. 2s, ec. 1s	22 7	5	White tower, green band; 13.	
5036 A 4786	Maughold Head.	54°17.8' N 4°18.6' W	Fl.(3)W. period 30s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 24.5s	212 65	15	White tower; 75.	
RAMSEY:							
5040 A 4796	-S. pier, head.	54°19.4' N 4°22.5' W	Iso.R. period 5s	26 8	10	White tower, red band, black base; 26.	
5044 A 4798	-N. pier, head.	54°19.0' N 4°22.0' W	Q.G.	30 9	10	White tower, black base; 25.	
5048 A 4799	-Mooragh Bank.	54°19.3' N 4°22.8' W	Iso.G. period 4s	11 3		Green metal post, dolphin; 10.	Not visible seaward. 2 F.R. (horiz.) marks center of each side of swing bridge.
ENGLAND-WEST COAST							
MORECAMBE BAY:							
5052 A 4820	-Walney.	54°02.9' N 3°10.7' W	Fl.W. period 15s fl. 0.5s, ec. 14.5s	70 21	23	White stone tower; 79.	Obscured 122°-127° within 3 miles of the shore.
5054 A 4821	-Halfway Shoal.	54°01.4' N 3°11.9' W	Q.R.	52 16	10	Framework beacon, red and yellow checkered rectangular daymark.	Emergency light.
5056 A 4823	-Haws Point.	54°03.0' N 3°10.0' W	Q.R.	26 8	6	Black pile.	
5060 A 4840	-Cartmel.	54°09.6' N 2°59.6' W	F.W.	82 25	9		
-Walney Channel:							
5064 A 4822	--Range light, front.	54°03.2' N 3°09.1' W	Q.W.	23 7	14	Beacon, orange rectangular daymark.	Visible 035°12'-046°12'.
5068 A 4822.1	---Rear, 0.61 mile 040°42', from front.	54°03.6' N 3°08.5' W	Iso.W. period 2s	43 13	14	Beacon, orange rectangular daymark.	Visible 035°12'-046°12' and 111°54'-122°54'.
5072 A 4824	--Range light, front.	54°04.4' N 3°09.7' W	Q.W.	29 9	14	White round fiberglass tower.	Visible 359°36'-010°36'.
5076 A 4824.1	---Rear, 0.77 mile 005°06' from front.	54°05.2' N 3°09.6' W	Iso.W. period 2s	46 14	14	Red brick column, white face.	Visible 359°36'-010°36'.
5080 A 4825	--No 5, W. side of channel opposite Ramsden Dock entrance, front.	54°05.2' N 3°13.5' W	Q.W.	23 7	14	White platform, black pile structure, orange triangular daymark point down.	Visible 291°54'-302°54'.
5084 A 4825.1	---Rear, No 6, 0.58 mile 297°24' from front.	54°05.4' N 3°14.4' W	Iso.W. period 2s	43 13	14	Beacon, orange triangular daymark point up.	Visible 291°54'-302°54'.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST							
5088 A 4833.2	--W. pile, W. side.	54°05.3' N 3°13.4' W	Q.R.	26 8	4	Black pile.	
5092	-Morecambe Buoy.	53°52.0' N 3°23.0' W	Q.(9)W. period 15s			W. CARDINAL YBY, pillar.	Whistle. Radar reflector.
5094	-Lune Deep Buoy.	53°55.8' N 3°10.9' W	Q.(6)+L.FL.W. period 15s			S. CARDINAL YB, pillar, topmark.	Whistle.
	-RACON		T(-)		10		(3 & 10cm).
5096 A 4852	--Middle of stone pier W. side harbor, front.	54°04.4' N 2°52.5' W	F.R.	34 10	2	Green mast; 21.	
5100 A 4852.1	--Rear, root of E. pier, 140 meters 090° from front.	54°04.4' N 2°52.4' W	F.R.	45 14	2	Green mast; 32.	
5112 A 4847	--Sewer, outfall.	54°04.3' N 2°53.7' W	Fl.G. period 2s fl. 0.5s, ec. 1.5s	13 4	2	Metal framework tower.	
5116 A 4862	--SW. quay Range, front.	54°01.9' N 2°55.1' W	F.Bu.	37 11	2	Post, orange and black diamond daymark; 7. Secondary structure: LED chevron daymark point up.	Marks center of dredged channel into the harbor.
			F.I.R.				Ascending ripple light.
5120 A 4862.1	---Rear, 137 meters 102°15' from front.	54°01.9' N 2°55.0' W	F.Bu.	46 14	2	Mast, orange and black diamond daymark; 16. Secondary structure: LED chevron daymark point up.	
			F.I.R.				Ascending ripple light.
5124 A 4860	--S. breakwater, head.	54°01.9' N 2°55.6' W	2 F.G. (vert.)	30 9	5	White metal framework tower; 20.	2 meters apart. Siren: 1 bl. ev. 30s (bl. 7s, si. 23s). Radar reflector.
5128 A 4864	--N. pier, head.	54°02.0' N 2°55.3' W	2 F.R. (vert.)	35 11	2	Mast; 18.	Obscured from seaward.
5132 A 4863	--S. pier, head.	54°01.9' N 2°55.4' W	Oc.G. period 7.5s lt. 6s, ec. 1.5s	30 9	6	White metal tower, red base; 20.	
5136 A 4863.3	--S. outfall.	54°01.7' N 2°55.7' W	Fl.(2)G. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 8s	16 5	2	Metal post.	
	-Lune River:						
5144 A 4876	--Plover Scar.	53°58.9' N 2°52.9' W	Fl.W. period 2s	20 6	6	White stone tower, black lantern; 26.	
	-Fleetwood:						
5152 A 4892	--On esplanade, Range, front.	53°55.7' N 3°00.4' W	Fl.G. period 2s	46 14	9	Stone tower; 39.	Visible 154°30'-157°30'. Shown 24 hours.
5156 A 4892.1	---Rear, in town, 320 meters 156° from front.	53°55.6' N 3°00.4' W	Fl.G. period 4s	93 28	9	Stone tower; 82.	Visible 154°30'-157°30'. Shown 24 hours.
5160 A 4893	--Steep Breast.	53°55.8' N 3°00.5' W	Iso.G. period 2s	11 3	2	Black wooden post, platform, black base; 26.	
5164 A 4902	--S. side of ferry dock.	53°55.6' N 3°00.2' W	2 F.G. (vert.)	20 6	1	Red metal column; 10.	
5168 A 4900	--Knott End pier, head.	53°55.7' N 3°00.0' W	2 F.R. (vert.)	10 3	2	Platform, column; 34.	
5172 A 4896	--Groyne.	53°55.7' N 3°00.8' W	Fl.G. period 3.5s	21 6		Post, platform.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST							
BLACKPOOL:							
5176 A 4918	-N. pier, head.	53°49.2' N 3°03.8' W	2 F.G. (vert.)		3		2 meters apart.
5180 A 4920	-Central pier, head.	53°48.6' N 3°03.9' W	2 F.G. (vert.)		4	Triangular metal structure.	2 meters apart.
5184 A 4922	-S. pier, head.	53°47.7' N 3°03.6' W	2 F.G. (vert.)		4	Building.	
5188	Gut Buoy.	53°41.0' N 3°09.0' W	L.F.I.W. period 10s			SAFE WATER RW, spherical.	
RIBBLE RIVER:							
-Lytham St. Annes:							
5192 A 4927.6	--N. training wall.	53°43.2' N 3°02.8' W	Fl.R. period 5s	20	6	3 Tripod, red metal perch; 39.	
5200 A 4940	Southport, pier, head.	53°39.4' N 3°01.4' W	2 F.G. (vert.)	20	6	5 White post.	Visible 033°-213°.
RIVER MERSEY:							
5213 A 4952	-New Brighton breakwater No 13.	53°26.5' N 3°02.1' W	2 F.G. (vert.)	13	4	6 Metal mast, green triangular daymark point up; 39.	2 meters apart.
5214 A 4952.2	--Corner, No 12.	53°26.6' N 3°02.2' W	2 F.G. (vert.)	13	4	6 Metal mast, green triangular daymark point up; 33.	2 meters apart.
5215 A 4952.4	--No 11, NW. head.	53°26.8' N 3°02.8' W	2 F.G. (vert.)	13	4	6 Metal mast, green triangular daymark point up; 36.	2 meters apart.
5215.4 A 4952.6	--No 2.	53°24.7' N 3°08.6' W	Fl.W.	20	6	Beacon, double cone topmark point up.	
-Seacombe:							
5216 A 4954	--N. corner of head of ferry pier.	53°24.6' N 3°00.9' W	3 F.G.	16	5	5 Metal column; 10.	In shape of triangle.
5220 A 4956	--Center of head.	53°24.6' N 3°00.9' W	F.Y.	27	8	6 Tower on building; 33.	
5224 A 4958	--S. corner of head.	53°24.6' N 3°00.9' W	3 F.G.	16	5	5 Metal column; 10.	In shape of triangle. Bell: 3 str. ev. 20s.
5232 A 4972	--Woodside Landing Stage, N. head.	53°23.8' N 3°00.5' W	3 F.G.	15	5	4 Metal column; 16.	In shape of triangle.
5236 A 4974	--S. head.	53°23.7' N 3°00.5' W	2 F.G. (vert.)	15	5	7 Metal column.	
5240 A 4975	-Cammell Laird, SE. corner of slip.	53°24.0' N 3°00.3' W	Fl.(2)G. period 6s	18	5	5 White structure; 29.	
5244 A 4977	-Tranmere Terminal, N. dolphin.	53°22.9' N 3°00.1' W	Fl.G. period 3s	23	7	7 Dolphin.	
5248 A 4978	-N. Stage, N. head.	53°22.8' N 3°00.0' W	2 F.G. (vert.)	32	10	3	2 meters apart. Bell: (50 meters SE.) 2 str. ev. 10s.
5252 A 4978.2	--S. head.	53°22.8' N 3°00.0' W	2 F.G. (vert.)	32	10	5	
5256 A 4979	-S. Stage, N. head.	53°22.7' N 2°59.9' W	3 F.G. (triangular-shaped)	29	9	3	
5260 A 4979.2	--S. head.	53°22.6' N 2°59.9' W	2 F.G. (vert.)	32	10	5	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST							
5273 A 4980.7	-Outfall.	53°22.2' N 2°59.6' W	2 F.G. (vert.)			Beacon, green triangular daymark point up.	
5276 A 4981	-Bromborough Dock, jetty, N. head.	53°21.7' N 2°59.0' W	3 F.G. (triangular-shaped)	16 5	3	Metal post and cross bar.	
5278 A 4983	--Sewer outfall.	53°21.2' N 2°58.3' W	2 F.G. (vert.)				
-Eastham Channel:							
5280 A 4985	--Jetty, S. head.	53°20.8' N 2°58.1' W	3 F.G. (triangular-shaped)	16 5		Metal post and cross bar.	
5300 A 4994	--Eastham Locks, Center Island.	53°19.4' N 2°56.8' W	Oc.W.R.G.			Inbound traffic signals. Secondary structure: Outbound traffic signals.	Bell: When tide serves.
F.W.R.G.							
-Garston:							
5320 A 5024	--NW. dolphin.	53°20.9' N 2°54.6' W	Fl.G. period 2s	38 12	9	Mast, black dolphin.	
5324 A 5020	--E. jetty, head.	53°20.9' N 2°54.6' W	Fl.R. period 2s	36 11	8	Gray framework tower, diamond daymark; 26.	
5328 A 5026	--Stalbridge dock, S. side of entrance.	53°20.9' N 2°54.4' W	2 F.G. (vert.)	34 10	3	Blue cylindrical metal tower; 33.	Docking signals.
-Liverpool:							
5336 A 5063	--Liverpool Landing Stage, N. head.	53°24.5' N 3°00.1' W	3 F.R. (triangular-shaped)	10 3	4	Metal column; 3.	
5340 A 5058	---S. head.	53°24.3' N 2°59.9' W	2 F.R. (vert.)				
5344 A 5091	--Langton River Entrance.	53°26.1' N 3°00.5' W	Iso.W.R.G. period 4s				R. 034°-039°, W.-049°, G.-054°.
F.R.							
5348 A 5092	--213 meters from lock entrance.	53°26.2' N 3°00.5' W	Fl.W.R.G. period 2s				R. 069°-074°, W.-084°, G.-089°.
F.R.							
5352 A 5093	--122 meters from lock entrance.	53°26.3' N 3°00.5' W	Oc.W.R.G. period 4s lt. 3s, ec. 1s				R. 069°-74°, W.-084°, G.-089°.
F.R.							
--Gladstone Dock:							
5356 A 5102	--212 meters from lock entrance.	53°26.9' N 3°01.0' W	Oc.W.R.G. period 4s lt. 3s, ec. 1s				R. 062°-067°, W.-077°, G.-082°.
F.R.							
5364 A 5104	--122 meters from lock entrance.	53°26.9' N 3°01.0' W	Fl.W.R.G. period 2s				R. 062°-067°, W.-077°, G.-082°.
F.R.							
RIVER DEE:							
5380 A 5115	-Hilbre Island.	53°23.0' N 3°13.7' W	Fl.R. period 3s fl. 0.5s, ec. 2.5s	46 14	5	White metal framework tower; 10.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-WEST COAST							
5384 A 5116	-West Hoyle Spit (Earwig). Outer 090°.	53°21.2' N 3°24.1' W	Dir.W.R.G. period 2s		W. 10 R. 7 G. 7	Perch pile.	Iso.G. 087°30'-089°30', Iso.W.-090°30', Iso.R.- 092°30'. Range 3/2M by day. Occasional.
			Q.G.		5		
5384.1 A 5116.05	-Port of Mostyn, Inner 177°30'.	53°19.3' N 3°16.0' W	Dir.W.R.G. period 2s		W. 10 R. 7 G. 7	Yellow framework tower.	Iso.G. 175°30'-177°30', Iso.W.-178°, Iso.R.-180°. Range 3/2M by day.
5388 A 5118	-N. training wall, outer end, opposite Flint.	53°15.1' N 3°06.5' W	Fl.R. period 2s	12 4		6 Metal framework tower; 26.	
5392 A 5119	-S. training wall, near outer end.	53°14.0' N 3°04.5' W	Fl.G. period 5s	10 3		6 Metal framework tower, green triangular daymark point up; 23.	
LIVERPOOL BAY:							
5395 A 5120	Gwynn Y Mor, offshore wind farm, meteorological mast.	53°28.8' N 3°30.5' W	Mo.(U)W. period 15s	39 12	10	Yellow concrete pile.	Horn: Mo(U) ev. 30s. Radar reflector.
			F.R.	262 80	2		
WALES-NORTH AND WEST COASTS							
RHYL:							
5396 A 5125	-Breakwater, head.	53°19.5' N 3°30.3' W	Q.R.	22 7	2	Beacon.	F.W. on tower 820 meters SE.
5400 A 5127	Llanddulas, Llysaen jetty.	53°17.6' N 3°39.4' W	2 F.G. (vert.)				
5408 A 5132	Llandudno, pier, head.	53°19.9' N 3°49.5' W	2 F.G. (vert.)	27 8	4	Mast; 16.	2 meters apart.
5412	<i>West Constable Buoy.</i>	53°23.1' N 3°49.2' W	Q.(9)W. period 15s			W. CARDINAL YBY, pillar, topmark.	
	RACON		M(- -)		10		(3 & 10cm).
5416 A 5138	Conwy River, entrance.	53°18.1' N 3°50.8' W	L.Fl.G. period 15s	16 5	2	Perch; 36.	
MENAI STRAIT:							
5420 A 5140	-Menai, Trwyn-duPoint.	53°18.8' N 4°02.5' W	Fl.W. period 5s fl. 1s, ec. 4s	62 19	12	White round tower, black bands; 95.	Visible 101°-023°. Partially obscured 019°-023°. Sounded continuously. F.R. marks radio mast about 4 km SW. of Trwyn-Du. Bell: 1 str. ev. 30s.
5428 A 5146	-Beaumaris, on pier.	53°15.7' N 4°05.3' W	2 Fl.(3)G. period 10s	17 5	6	Mast; 13.	
5440 A 5155	-St. George's pier.	53°13.5' N 4°09.4' W	Fl.G. period 10s fl. 1s, ec. 9s			Mast.	
5444 A 5156.5	-Price Point.	53°13.1' N 4°10.4' W	Fl.W.R. period 2s	15 5	3	White beacon; 16.	R. 059°-239°, W.-259°.
5448 A 5157	-Britannia Tubular Bridge Caernarvon shore, front.	53°12.9' N 4°11.0' W	F.W.			Metal framework tower; 16.	Shown from Apr. to Sep.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-NORTH AND WEST COASTS							
5452 A 5157.1	--Rear, 45 meters 231° from front.	53° 12.9' N 4° 11.0' W	F.W.			Metal framework tower; 30.	Shown from Apr. to Sep.
5456 A 5157.1	-Center of span.	53° 12.9' N 4° 11.0' W	Iso.W. period 5s	89 27	3	Bridge.	1 on either side of bridge.
5464 A 5160	Point Lynas.	53° 25.0' N 4° 17.4' W	Oc.W. period 10s lt. 7.3s, ec. 2.7s	128 39	18	White tower; 36.	Visible 109°-315°. Shown 24 hours. DGPS Station.
5465 A 5164.4	-Main Breakwater.	53° 25.0' N 4° 19.8' W	Fl.G. period 15s	36 11	3	White mast; 20.	Visible 141°-271°.
5466 A 5164.5	-Inner Breakwater.	53° 25.0' N 4° 19.9' W	2 F.R. (vert.)	39 12	5	White mast; 23.	Visible 164°-239°. 2 meters apart.
5468 A 5166	Wylfa Power station pier, head.	53° 25.5' N 4° 29.5' W	2 F.G. (vert.)	42 13	6		
5472 A 5168	Skerries.	53° 25.3' N 4° 36.5' W	Fl.(2)W. period 15s fl. 0.1s, ec. 3.2s fl. 0.1s, ec. 11.6s	119 36	20	White round tower, red band; 75.	Shown in reduced visibility. AIS (MMSI No 992351121). Horn: 2 bl. ev. 60s (bl. 1s, si. 2s, bl. 1s, si. 56s).
			Iso.R. period 4s	85 26	10		Visible 233°-252°.
	RACON		T(-)		25		(3 & 10cm).
WALES-WEST COAST							
HOLYHEAD:							
5476 A 5174	-Breakwater, head.	53° 19.9' N 4° 37.2' W	Fl.(3)G. period 10s	70 21	14	White square stone tower, black band; 62.	Siren: 1 bl. ev. 20s (bl. 3s, si. 17s).
			Fl.Y.				Visible 354°-046°.
5478 A 5174.5	--Elbow.	53° 19.5' N 4° 37.6' W	2 F.G. (vert.)		2	Metal structure.	Visible 226°-089°.
-Old Harbor:							
5484 A 5178	--128 meters E. off breakwater, head.	53° 18.9' N 4° 37.0' W	2 F.G. (vert.)	26 8	5	Concrete mast, dolphin; 26.	
5492 A 5181	--South quay, head.	53° 18.7' N 4° 37.2' W	2 F.R. (vert.)	23 7		Metal mast, red square daymark; 16.	Visible in dredged channel. 2 meters apart.
5496 A 5182	--Outer dredged channel, N. side.	53° 18.8' N 4° 37.5' W	Fl.G. period 3s	23 7		Beacon.	Visible in dredged channel.
5500 A 5184	--Inner dredged channel, N. side.	53° 18.8' N 4° 37.6' W	Fl.G. period 5s	20 6		Beacon.	
-Inner Harbor:							
5504 A 5186	--E. side of entrance, near N. end of public quay.	53° 18.8' N 4° 37.4' W	2 F.R. (vert.)	20 6	5	Mast.	
5512 A 5198	-New Harbor, Mackenzie pier.	53° 19.0' N 4° 38.0' W	Fl.R. period 5s				
5520 A 5204	South Stack.	53° 18.4' N 4° 42.0' W	Fl.W. period 10s fl. 0.2s, ec. 9.8s	197 60	24	White round tower; 92.	Obscured by N. Stack to the N. (disused). Visible when in line with Rhoscolyn Beacon. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
5522 A 5205	Valley Airfield AVIATIONLIGHT.	53° 14.9' N 4° 31.5' W	Mo.(VY)R.				Occasional.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-WEST COAST							
CAERNARVON BAY:							
-Menai Strait:							
5528 A 5210	--Llandwyn Island, SW. head.	53°08.0' N 4°24.8' W	Fl.W.R. period 2.5s fl. 0.3s, ec. 2.2s	39 12	W. 7 R. 4	White tower.	R. 280°-015°, W.-120°.
5532 A 5212	--Abermenai.	53°07.6' N 4°19.6' W	Fl.W.R. period 3.5s fl. 0.5s, ec. 3s	20 6		White mast; 16.	W. 245°-065°, R.-245°.
5536 A 5213	--Tidal basin, S. pier, head.	53°08.6' N 4°16.6' W	2 F.G. (vert.)	16 5		Stone column.	
5540 A 5214	--Pile pier, head.	53°08.7' N 4°16.4' W	2 F.G. (vert.)	16 5		White tower, black stripes; 13.	
5544 A 5220	-Port Dinorwic, pier, head.	53°11.2' N 4°12.6' W	F.W.R.	16 5		Post; 9.	R. 225°-357°, W.-225°.
5548 A 5234	Bardsey.	52°45.0' N 4°47.9' W	Fl.R. period 10s fl. 0.7s, ec. 9.3s	129 39	18	White square tower, red bands; 98.	Visible 260°-198°. Partially obscured 250°-260° when in Tremadoc Bay.
5552 A 5238	St. Tudwal's W. Island.	52°48.0' N 4°28.2' W	Fl.W.R. period 15s fl. 1s, ec. 14s	151 46	W. 14 R. 10	White round tower; 35.	W. 349°-169°, R.-221°, W.- 243°, R.-259°, W.-293°, R.-349°. Obscured by East Island 211°-231°.
5556 A 5246	Barmouth, N. Bank.	52°42.8' N 4°03.7' W	Q.(6)+L.Fl.W. period 15s			S. CARDINAL YB, beacon, topmark.	
5560 A 5254	Aberystwyth, S. pier, head.	52°24.4' N 4°05.5' W	Fl.(2)W.G. period 10s fl. 1s, ec. 1s fl. 1s, ec. 7s	39 12	10	Green column, white bands; 39.	G. 030°-053°, W.-210°. 2 F.R. range lights shown near inner end of S. pier.
5564 A 5256	-Timber jetty, head.	52°24.4' N 4°05.3' W	Q.W.R.	29 9		Red column, white bands; 13.	W. 244°-141°, R.-175°.
5566 A 5257	Aberaeron, S. pier.	52°14.6' N 4°15.9' W	Fl.(3)G. period 10s	36 11		White post, green bands.	Visible 050°-243°.
5566.5 A 5257.2	-N. pier.	52°14.6' N 4°15.9' W	Fl.(4)W.R.G. period 15s	33 10		White post, red bands.	G. 050°-104°, W.-178°, R.- 232°.
5568 A 5258	New Quay, pier, head.	52°12.9' N 4°21.2' W	Fl.W.G. period 3s fl. 1s, ec. 2s	39 12	W. 8 G. 5	Post.	W. 135°-252°, G.-295°.
5569.1 A 5258.6	-Cardigan Beacon.	52°06.4' N 4°41.4' W	Fl.(2)W. period 5s			ISOLATED DANGER BRB, beacon, topmark.	
FISHGUARD HARBOUR:							
5572 A 5262	-N. breakwater, head.	52°00.8' N 4°58.2' W	Fl.G. period 4.5s fl. 0.5s, ec. 4s	60 18	13	Octagonal concrete tower; 67.	Bell: 1 str. ev. 8s.
5576 A 5264	-E. breakwater, head.	52°00.3' N 4°58.9' W	Fl.R. period 3s fl. 0.3s, ec. 2.7s	33 10		Metal framework tower; 36.	
5580 A 5266	-Range, front.	52°00.7' N 4°59.3' W	F.G.	253 77		White mast, white diamond daymark.	
5584 A 5266.1	--Rear, 46 meters 282° from front.	52°00.7' N 4°59.3' W	F.G.	291 89		White mast, white diamond daymark; 26.	
5588 A 5270	Penanglas, near point, FOG SIGNAL.	52°01.5' N 4°59.4' W				White obelisk.	Diaphone: 2 quick bl. ev. 60s.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-WEST COAST							
5592 A 5274	Strumble Head.	52°01.8' N 5°04.4' W	Fl.(4)W. period 15s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 8s	148 45	26	White round tower; 56.	Visible 038°-257°. Shown 24 hours.
5596 A 5276	South Bishop.	51°51.2' N 5°24.7' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	144 44	16	White round tower; 36.	Horn: 3 bl. ev. 45s (bl. 1s, si. 1s, bl. 1s, si. 1s, bl. 1s, si. 40s).
	RACON		O(---)		10		(3 & 10cm).
5600 A 5278	The Smalls.	51°43.3' N 5°40.2' W	Fl.(3)W. period 15s fl. 0.1s, ec. 2.5s fl. 0.1s, ec. 2.5s fl. 0.1s, ec. 9.7s	118 36	18	Gray round tower, red top; 135.	Shown in reduced visibility. AIS (MMSI No 992351123). Horn: 2 bl. ev. 60s (bl. 1s, si. 2s, bl. 1s, si. 56s).
			Iso.R. period 4s	108 33	13		Visible 253°-285°.
	RACON		T(-)		10		(3 & 10cm).
5604 A 5282	Skokholm.	51°41.6' N 5°17.2' W	Fl.W.R. period 10s fl. 0.2s, ec. 9.8s	177 54	8	White octagonal tower; 59.	W. 301°-154°, R.-301°. Partially obscured 226°-258°.
MILFORD HAVEN:							
5608 A 5284	-St. Ann's Head.	51°40.9' N 5°10.4' W	Fl.W.R. period 5s fl. 0.7s, ec. 4.3s	157 48	W. 18 R. 14	White octagonal tower; 43.	W. 233°-247°, R.-332°, W.-131°. Partially obscured 124°-129°. Horn: (150 meters WSW. of light) 2 bl. ev. 60s (bl. 5s, si. 5s, bl. 5s, si. 45s). Radar reflector.
5612 A 5285	-Middle Channel Rocks.	51°40.3' N 5°09.8' W	Fl.(3)G. period 7s fl. 0.1s, ec. 1.6s fl. 0.1s, ec. 1.6s fl. 0.1s, ec. 3.5s	58 18	8	Black round metal tower, aluminum lantern.	
5616 A 5286	-Entrance, First Range, front, West Blockhouse Point.	51°41.3' N 5°09.5' W	F.W.	178 54	13	White concrete tower, black rectangular daymark, white stripe; 43.	Visible 004°30'-040°30'. Range 10M by day.
	-RACON		Q(---)				Azimuth coverage 010°-230°. (3 & 10cm).
5620 A 5286.3	-- Watwick Point , common rear 926 meters 022°30' from front.	51°41.8' N 5°09.2' W	F.W.	262 80	15	Black rectangular daymark, white stripe; 164.	Visible 013°30'-031°30'. Range 10M by day.
	--RACON		Y(-•-)				(3 & 10cm).
5624 A 5286.1	-Auxiliary front, in line 021°18' with common rear Watwick Point.	51°41.3' N 5°09.5' W	F.R.	175 53	12	White concrete tower, black diamond daymark; 49.	Visible 014°-031°. Range 5M by day. Watwick Point marks E. side of channel.
5628 A 5286.2	-Auxiliary front, in line 023°42' with common rear Watwick Point.	51°41.3' N 5°09.5' W	F.R.	175 53	12	White concrete tower, black diamond daymark; 35.	Visible 014°-031°. Range 5M by day, visible 017°-028°. Watwick Point marks W. side of channel.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-WEST COAST							
5632 A 5287	Great Castle Head.	51°42.6' N 5°07.0' W	F.W.R.G.	89 27	W. 5 R. 3 G. 3	White square tower, black stripe; 16.	R. 243°-281°, G.-299°, W.- 029°. Shown by day on request.
			Dir.W.R.G.				F.G. 038°15'-039°00', Al.W.G.-039°30', F.W.- 040°30', Al.W.R.-041°00', F.R.-041°45'.
	--Range, front.		Oc.W. period 4s	89 27	15		Visible 031°12'-048°12'. Range 10M by day, visible 032°12'-047°12'.
5636 A 5287.1	Little Castle Head , rear, 890 meters 039°42' from front.	51°43.0' N 5°06.5' W	Oc.W. period 8s lt. 6s, ec. 2s	173 53	15	White round concrete tower, white rectangular daymark, black stripe; 85.	Visible 031°12'-048°12'. Range 10M by day, visible 032°12'-047°12'.
5640 A 5291	-West Blockhouse Point.	51°41.3' N 5°09.5' W	Q.W.R.	70 21	W. 9 R. 7	Red lantern, white base; 7.	W. 220°-250°, R.-020°, W.- 036°, R.-049°.
5644 A 5292	-Dale Fort.	51°42.1' N 5°08.9' W	Fl.(2)W.R. period 5s fl. 0.5s, ec. 1s fl. 0.5s, ec. 3s	64 20	W. 5 R. 3	Metal column; 10.	R. 222°-276°, W.-019°.
5648 A 5292.39	-Popton Point Range, front, 274° from common rear.	51°41.7' N 5°03.0' W	Iso.Y. period 1.5s	36 11	13	White diamond daymark, black stripe.	Visible 084°-104°. Range 5M by day, visible 089°30'-098°30'.
5652 A 5292.4	--Common rear.	51°41.6' N 5°02.1' W	Oc.W. period 4s lt. 3s, ec. 1s	62 19	14	Metal framework tower, white triangular daymark point up, black stripe.	Visible 085°-105°. Range 7M by day, visible 090°30'-099°30'.
			Iso.Y. period 1.5s				
			F.Bu.	98 30	8		
5656 A 5292.41	--Front, 275° from common rear.	51°41.7' N 5°03.0' W	Iso.W. period 1.5s	36 11	14	Metal framework tower, white round daymark, black stripe.	Visible 085°-105°. Range 7M by day, visible 090°30'-099°30'.
5660 A 5294.9	-S. Range, front, 330 meters 260° from rear.	51°42.2' N 5°00.4' W	Oc.W. period 3s lt. 2s, ec. 1s	138 42	14	Metal framework tower, white rectangular daymark, black stripe; 33.	Visible 070°-090°. Range 7M by day, visible 075°30'-084°30'.
5664 A 5295	--Common rear.	51°42.2' N 5°00.1' W	Oc.W.Y. period 3s lt. 2s, ec. 1s	167 51	W. 14 Y. 13	Metal framework tower, white rectangular daymark, black stripe; 26.	W. 070°-090° and Y. 077°- 097°. Range W. 7M and Y. 5M by day, visible W. 075°30'- 084°30' and Y. 082°30'- 091°30'.
5668 A 5295.1	-N. Range, front, 320 meters 267° from rear.	51°42.2' N 5°00.3' W	Oc.Y. period 3s lt. 2s, ec. 1s	135 41	13	Metal framework tower, white octagonal daymark, black stripe; 16.	Visible 077°-097°. Range 5M by day, visible 082°30'-091°30'.
5669 A 5313.6	-Dragon Terminal, W. side, front.	51°42.0' N 5°00.2' W	F.Bu.	30 9	7	Dolphin.	Shown on request from Milford Haven Port Control. Horn: Mo.(U) ev. 30s. Occasional.
			3 F.R. (vert.)	26 8			
5669.1 A 5313.61	--Rear, 090°50' from front.	51°42.0' N 4°59.4' W	F.Bu.	69 21	7	White rectangular daymark, gray stripe.	Shown on request from Milford Haven Port Control. Occasional.
	-Milford:						
5672 A 5307	--E. pier Range, front.	51°42.6' N 5°02.1' W	F.Bu.	16 5		Black hut; 16.	LED strip light.
5676 A 5307.1	--Rear, 299 meters 348° from front.	51°42.7' N 5°02.2' W	F.Bu.	66 20		Black column; 13.	LED strip light.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-WEST COAST							
5680 A 5308	--W. pier, head.	51°42.2' N 5°02.2' W	2 F.R. (vert.)	29 9		White mast; 29.	
5692 A 5310.2	-Newton Noyes, pier, head.	51°42.1' N 5°00.7' W	2 F.R. (vert.)	19 6	3	Black metal mast; 16.	2 F.R. (vert.) also shown at elbow.
5696 A 5311.2	-Wear Spit Range, front.	51°41.8' N 4°58.8' W	Q.R.	24 7	8	Black round column, triangular daymark point up, red and white stripes.	
5700 A 5311.21	--Rear, 0.78 mile 098°24' from front, on SW. Martello tower.	51°41.6' N 4°57.5' W	Iso.R. period 4s	46 14	3		
5704 A 5311	-Pennar Range, front.	51°41.6' N 4°58.2' W	Q.W.	24 7	8	Pile, black triangular daymark point up, white stripe.	
5708 A 5311.1	--Llanreath, rear, 640 meters 101°48' from front.	51°41.5' N 4°57.7' W	Iso.W. period 4s	29 9	14	Pile, black triangular daymark point up, white stripe.	Visible 097°-105°.
5712 A 5316	-Pembroke dock Range, front.	51°41.8' N 4°57.3' W	Q.G.	16 5		White diamond daymark, black stripe.	
5716 A 5316.1	--Rear, 82 meters 153° from front.	51°41.8' N 4°57.3' W	Q.G.	30 9		White diamond daymark, black stripe.	
WALES-BRISTOL CHANNEL							
5720 A 5317	--Carr jetty, head.	51°41.9' N 4°57.4' W	2 F.G. (vert.)	49 15			
5724 A 5317.2	---Elbow.	51°41.9' N 4°57.4' W	2 F.G. (vert.)	49 15			
5725 A 5319.5	-Fish Farm, NW. head.	51°42.1' N 4°55.5' W	2 F.G. (vert.)				
5726 A 5319.6	--SE. head.	51°42.1' N 4°55.3' W	2 F.G. (vert.)				
5728 A 5322	<i>St. Gowan Buoy.</i>	51°31.9' N 4°59.7' W	Q.(6)+L.FI.W. period 15s			S. CARDINAL YB, pillar, topmark.	Whistle.
	RACON		T(-)		10		(3 & 10cm).
CARMARTHEN BAY:							
5732 A 5328	-Caldy Island, S. side.	51°37.9' N 4°41.1' W	Fl.(3)W.R. period 20s fl. 0.9s, ec. 1.1s fl. 0.9s, ec. 1.1s fl. 0.9s, ec. 15.1s	214 65	W. 13 R. 9	White round tower; 52.	R. 173°-212°, W.-088°, R.-102°.
	-Tenby:						
5736 A 5336	--Harbor pier, head.	51°40.4' N 4°41.9' W	F.R.	24 7	7	Metal mast; 16.	
5740 A 5338	--Harbor pier, near head.	51°40.4' N 4°41.8' W	F.W.	20 6	1	Post; 10.	
5744 A 5342	-Saundersfoot, S. pier, head.	51°42.6' N 4°41.7' W	Fl.R. period 5s fl. 1s, ec. 4s	21 6	7	Stone cupola; 12.	
5748 A 5356	-Burry Port.	51°40.6' N 4°15.0' W	Fl.W. period 5s	24 7	7	White tower, red top.	
5754	<i>W. Helwick Buoy.</i>	51°31.4' N 4°23.6' W	Q.(9)W. period 15s			W. CARDINAL YBY, pillar, topmark.	Whistle.
	RACON		T(-)		10		(3 & 10cm).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-BRISTOL CHANNEL							
SWANSEA BAY:							
5756 A 5358	-Mumbles.	51°34.0' N 3°58.3' W	Fl.(4)W. period 20s fl. 0.8s, ec. 1.7s fl. 0.8s, ec. 1.7s fl. 0.8s, ec. 1.7s fl. 0.8s, ec. 11.7s	114 35	15	White octagonal tower; 56.	Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
-Swansea:							
5760 A 5360	--Railway pier.	51°34.2' N 3°58.4' W	2 F.R. (vert.)	36 11	9	White framework tower; 23.	
5764 A 5364	--W. pier, head.	51°36.5' N 3°55.7' W	Fl.(2)R. period 10s fl. 1.5s, ec. 1.5s fl. 1.5s, ec. 5.5s	36 11	9	Yellow metal column; 23.	F.R. lights on radio mast 1.3 miles NNE.
5768 A 5367	--E. breakwater, head.	51°36.4' N 3°55.6' W	2 F.G. (vert.)	32 10	6	Yellow framework tower; 23.	
5769 A 5370	--Barrage, E. side.	51°36.9' N 3°55.6' W	2 F.G. (vert.)	16 5	1	Metal post; 10.	2 meters apart.
5770 A 5370.2	--W. side.	51°36.9' N 3°55.7' W	2 F.R. (vert.)	16 5	1	Metal post; 10.	2 meters apart.
5772 A 5367	--New Approach jetty, Range, front.	51°36.5' N 3°55.5' W	Oc.G. period 4s	16 5	2		Mark E. limit of dredged area. Obscured when bearing less than 020°. Conspicuous R. and G. traffic signals 300 meters N.
5776 A 5367.1	---Rear, 260 meters 020° from front.	51°36.7' N 3°55.4' W	F.G.		6		
5780 A 5369	-Car Ferry terminal, S. head.	51°36.8' N 3°55.5' W	2 F.G. (vert.)	30 9	5		3 meters apart.
-Neath River Entrance:							
5784 A 5374	--Monkstone.	51°36.3' N 3°51.9' W	Fl.(2)G. period 6s	20 6	5	Green mast; 43.	F.R. lights on chimney 1.45 miles ENE. Emergency light.
5788 A 5376	--Middle of training wall.	51°36.7' N 3°51.3' W	Fl.G. period 1.5s	20 6	5	Green mast; 43.	
5792 A 5377	--Training wall, N. head.	51°37.1' N 3°50.8' W	Fl.(3)G. period 10s	20 6	5	Green mast; 30.	Reserve light 2 F.G. (vert.).
5794 A 5373	--Entrance.	51°37.2' N 3°50.6' W	F.Bu.		8	Metal framework mast; 26.	
			2 F.R. (vert.)				
5797 A 5381	-Baglan Brook. Pumping station.	51°37.4' N 3°49.9' W	2 F.G. (vert.)			Green beacon.	
-Port Talbot:							
5800 A 5391	--Range, front.	51°35.0' N 3°47.7' W	Oc.R. period 3s lt. 2s, ec. 1s	39 12	6	Metal framework tower, yellow and orange diamond daymark; 39.	Shown on request.
5804 A 5391.1	---Rear, 400 meters 059°49' from front.	51°35.0' N 3°47.7' W	Oc.R. period 6s	105 32	6	Metal framework tower, yellow and orange diamond daymark; 98.	Shown on request.
5805 A 5389	-N. breakwater, head.	51°34.8' N 3°49.0' W	Fl.(4)R. period 10s fl. 0.7s, ec. 1s fl. 0.7s, ec. 1s fl. 0.7s, ec. 1s fl. 0.7s, ec. 4.2s	36 11	3	Metal framework tower.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-BRISTOL CHANNEL							
5806 A 5390	-S. breakwater, head.	51°34.4' N 3°49.0' W	Fl.G. period 3s fl. 0.5s, ec. 2.5s	36 11	3	Metal framework tower.	
5807 A 5394	--Ore terminal, head.	51°34.4' N 3°48.2' W	2 F.Y. (vert.)	29 9	1	Concrete column, dolphin.	2 meters apart.
5808 A 5395	--Dredged area, NE. side.	51°34.8' N 3°48.3' W	Fl.R. period 2s	26 8	2	Concrete column, dolphin.	
5808.1 A 5395.2	---E. side.	51°34.6' N 3°48.0' W	Fl.R. period 2s	20 6	1	Pile structure.	
5808.2 A 5395.3	----N. limit.	51°34.5' N 3°47.7' W	Iso.W. period 2s	23 7	1	Mast.	Marks N. limit of 15 meter dredged area.
5808.3 A 5395.4	----S. limit.	51°34.3' N 3°47.7' W	Iso.W. period 2s		2	Metal column.	Marks S. limit of 17.2 meter dredged area.
5808.4 A 5395.6	--S. side.	51°34.3' N 3°48.4' W	Fl.G. period 2s	26 8	2	Concrete column on dolphin.	
5808.5 A 5395.8	--SW. side.	51°34.4' N 3°48.7' W	Fl.G. period 2s	26 8	2	Concrete column on dolphin.	
5809	<i>Cabenda Buoy.</i>	51°33.3' N 3°52.4' W	V.Q.(6)+L.Fl.W. period 10s			S. CARDINAL YB, pillar, topmark.	
	RACON		C(- • - •)				(3 & 10cm).
5810	<i>W. Scarweather Buoy.</i>	51°28.3' N 3°55.5' W	Q.(9)W. period 15s			W. CARDINAL YBY, pillar, topmark.	Bell.
	RACON		T(-) period 30s		10		(3 & 10cm).
5812 A 5402	Porthcawl, breakwater, SE. head.	51°28.4' N 3°42.0' W	F.W.R.G.	34 10	W. 6 R. 4 G. 4	White hexagonal tower, black base; 30.	G. 302°-036°, W.-082°, R.-116°.
5816 A 5406	Nash Point.	51°24.1' N 3°33.1' W	Fl.(2)W.R. period 15s fl. 0.1s, ec. 3.7s fl. 0.1s, ec. 11.1s	184 56	W. 21 R. 16	White round tower; 122.	R. 280°-290°, W.-100°, R.-120°, W.-128°. DGPS Station.
5820 A 5406.6	St. Hilary, AVIATION LIGHT.	51°27.4' N 3°24.2' W	Q.R.	1135 346	11	Mast; 751.	
			4 F.R. (vert.)		6		
5824 A 5407	Breaksea Point, intake structure.	51°22.5' N 3°24.5' W	Fl.R.	37 11		Concrete tower.	
5832 A 5410	Wenvoe, AVIATION LIGHT.	51°27.6' N 3°16.9' W	Q.W.	1276 389	12	Mast; 879.	Shown 24 hours. F.R. lights on radio mast nearby.
BARRY DOCK:							
5836 A 5412	-W. breakwater, head.	51°23.5' N 3°15.5' W	Fl.W. period 2.5s fl. 0.1s, ec. 2.4s	40 12	10	White round tower; 30.	
5840 A 5419	-No 3 Dock, entrance.	51°23.6' N 3°15.6' W	2 F.R. (vert.)			Dolphin.	2 meters apart.
5844 A 5413	-E. breakwater, head.	51°23.5' N 3°15.4' W	Q.G.	24 7	8	Mast; 17.	
5856 A 5411	Barry Harbor, Yorke Rock breakwater, head.	51°23.4' N 3°17.1' W	2 F.G. (vert.)	16 5	5	Column; 13.	
5860 A 5426	Flat Holm.	51°22.5' N 3°07.1' W	Fl.(3)W.R. period 10s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 1.6s fl. 0.4s, ec. 5.6s	164 50	W. 15 R. 12	White round tower; 98.	R. 106°-140°, W.-151°, R.-203°, W.-106°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
WALES-BRISTOL CHANNEL							
5864 A 5428	Monkstone Rock.	51°24.9' N 3°06.0' W	Fl.W. period 5s fl. 0.9s, ec. 4.1s	43 13	12	Red fiberglass column, round masonry tower; 75.	
CARDIFF:							
5876 A 5440	-Queen Alexandra dock, S. jetty.	51°27.1' N 3°09.5' W	2 F.G. (vert.)				
5880 A 5440.3	--N. jetty.	51°27.2' N 3°09.7' W	2 F.R. (vert.)				
5900 A 5430	Penarth, Promenade pier, head.	51°26.1' N 3°09.9' W	2 F.R. (vert.)	26 8	3	Brown mast; 36.	2 meters apart. Port signals. Reed: Mo.(BA) ev. 60s. Sounded 10 min. before a vessel is expected.
USK RIVER:							
5904 A 5454	-East Usk.	51°32.4' N 2°58.0' W	Fl.(2)W.R.G. period 10s fl. 1s, ec. 2s fl. 1s, ec. 6s	36 11	W. 11 R. 10 G. 10	White round tower; 43.	R. 324°-017°, W.-037°, G.-115°.
			Oc.W.R.G. period 10s fl. 8s, ec. 2s	33 10	W. 11 R. 9 G. 9		G. 013°-017°, W.-019°, R.-023°.
5908 A 5460	-Alexandra Dock, W. pier, head.	51°32.9' N 2°59.2' W	2 F.R. (vert.)	30 9	6	White metal framework tower; 21.	2 meters apart. Traffic signals.
5912 A 5462	--E. pier, head.	51°33.0' N 2°59.1' W	2 F.G. (vert.)	30 9 24 7	6	White framework tower; 20.	2 meters apart.
5920 A 5467	-Julian's Pill Range, front.	51°33.3' N 2°57.9' W	F.Bu.	17 5	5	Mast; 10.	
5921 A 5467.1	--Rear, 44 meters 062° from front.	51°33.3' N 2°57.9' W	F.Bu.	26 8	5	Mast; 20.	
5928 A 5470	-Alpha Steel Wharf, S. head.	51°33.3' N 2°57.9' W	2 F.G. (vert.)	13 4			2 meters apart.
5932 A 5470.2	--N. head.	51°33.4' N 2°57.9' W	2 F.G. (vert.)	13 4			2 meters apart.
5944 A 5472.5	-Birdport, jetty.	51°33.7' N 2°58.1' W	2 F.G. (vert.)	19 6			2 meters apart.
5948 A 5473	-Dallimores wharf.	51°33.9' N 2°58.6' W	2 F.G. (vert.)				
5952 A 5474	-Transporter Bridge, W. side.	51°34.3' N 2°59.2' W	2 F.R. (vert.)				2 F.Y. (vert.) shown on transporter car. Headway indicator lights for George Street bridge shown from E. pier of bridge.
5956 A 5474.2	--E. side.	51°34.2' N 2°59.1' W	2 F.G. (vert.)				On upstream and downstream sides of bridge piers.
			Fl.R. period 5s				Air draft indicator light.
			Fl.G. period 5s				Air draft indicator light.
5972 A 5478	-Newport Bridge, center.	51°35.4' N 2°59.6' W	F.Y.				
5976	<i>English and Welsh Grounds Buoy.</i>	51°26.9' N 3°00.1' W	L.Fl.W. period 10s			SAFE WATER RW, pillar, topmark.	Whistle.
	RACON		T(-)		7		(3 & 10cm).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-BRISTOL CHANNEL							
5984 A 5535	Charston Rock.	51°35.3' N 2°41.6' W	Fl.W. period 3s fl. 0.5s, ec. 2.5s	16 5	8	White round stone tower, black stripe; 23.	
5988 A 5536	Redcliffe Range, front.	51°36.2' N 2°41.3' W	F.Bu. (neon)	51 16		Black metal framework tower, white daymarks, lantern; 33.	Visible 358°-028°.
5992 A 5536.1	--Rear, 320 meters 012°51' from front.	51°36.4' N 2°41.2' W	F.Bu. (neon)	108 33	10	Metal mast; 98.	
5994 A 5541	Chapel Rock.	51°36.4' N 2°39.1' W	Fl.W. period 2.6s fl. 0.4s, ec. 2.2s	19 6	8	Black metal framework tower, white lantern; 26.	
AVON RIVER:							
5996 A 5489	-Portbury wharf Range, front.	51°29.5' N 2°44.2' W	Oc.G. period 5s lt. 3s, ec. 2s	23 7	3	Gray mast; 26.	Visible 171°30'-211°30'. Visible 1M 184°30'-198°30' by day.
6000 A 5489.1	--Rear, 100 meters 191°33' from front.	51°29.5' N 2°44.2' W	Oc.G. period 5s lt. 3s, ec. 2s	39 12	3	Gray mast; 39.	Visible 171°30'-211°30'. Visible 1M 184°30'-198°30' by day. Synchronized with front.
6010 A 5490	-Seabank Range, front.	51°30.1' N 2°43.8' W	I.Q.W.	43 13	5	White mast; 33.	Visible 070°18'-103°18'. Visible 1M 076°48'-096°48' by day.
	-086°48'		F.W.G.	20 6	5		F.G. 085°48'-086°42', Al.W.G.-086°54', F.W.- 089°42'. Range 1M by day.
6010.1 A 5490.1	--Rear, 500 meters 086°47' from front.	51°30.1' N 2°43.4' W	I.Q.W.	52 16	5	White mast; 43.	Visible 070°18'-103°18'. Visible 1M 076°48'-096°48' by day.
6012 A 5490.2	-W. Dock pier, head.	51°30.2' N 2°43.7' W	L.Fl.G. period 15s fl. 3s, ec. 12s	16 5	6	White pillar; 6.	
6016 A 5490.4	--Pier corner.	51°30.1' N 2°43.8' W	Fl.G. period 2s fl. 0.8s, ec. 1.2s	23 7	7	White pillar; 16.	Diaphone: (40 meters NE.) 1 bl. ev. 30s.
6020 A 5490.6	--Knuckle Range, front.	51°29.9' N 2°43.7' W	Oc.G. period 5s lt. 4s, ec. 1s	19 6	6	White pillar; 10.	
6020.1 A 5490.61	---Rear, 165 meters 099°34' from front.	51°29.9' N 2°43.5' W	F.G.	43 13	6	Building.	Visible 044°-134°.
6024 A 5492	--Avonmouth Docks, N. pier, head.	51°30.5' N 2°43.1' W	Fl.W. period 4s fl. 0.3s, ec. 3.7s	50 15	10	Round stone tower; 52.	Visible 060°-228°30'.
6032 A 5492.21	---S. pier, head.	51°30.4' N 2°43.1' W	Oc.R.G. period 30s lt. 27s, ec. 3s	30 9	10	Round stone tower; 30.	R. 294°-036°, G.-194°, Bell: 1 str. ev. 10s.
6036 A 5494	--King Road Range, front, N. pier, head.	51°30.5' N 2°43.1' W	Oc.R. period 5s lt. 4.5s, ec. 0.5s	16 5	9	White obelisk, red bands; 7.	Visible 062°-082°.
6040 A 5494.1	---Rear, 546 meters 072°26' from front.	51°30.6' N 2°42.6' W	Q.R.	49 15	10	Red framework tower, orange bands, white round daymark, black stripes; 43.	Visible 066°-078°.
6044 A 5497	---Oil jetty, head.	51°30.6' N 2°42.9' W	2 F.G. (vert.)	20 6	2	Black column; 10.	2 meters apart.
--King Road:							
6052 A 5500.9	---Avonmouth Range, front.	51°30.1' N 2°42.6' W	Iso.R. period 2s	20 6	3	White mast, orange square daymark; 13.	Visible 010°-160°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-BRISTOL CHANNEL							
6056 A 5501	---Rear 142 meters 127°12' from front.	51°30.1' N 2°42.5' W	Iso.R. period 2s	33 10	3	White mast, orange square daymark; 26.	Visible 048°-138°.
	-Nelson Point Channel:						
6060 A 5504	--Monoliths.	51°30.2' N 2°42.8' W	Fl.R. period 5s fl. 1.5s, ec. 3.5s	16 5	3	White column, white square daymark, black stripes; 13.	Visible 317°-137°.
6062 A 5505	-St. George Range, front.	51°29.8' N 2°42.7' W	Oc.G. period 5s lt. 4s, ec. 1s	23 7	1	White mast, orange rectangular daymark; 16.	Visible 158°-305°.
6062.1 A 5505.1	--Rear, about 40 meters 173°17' from front.	51°29.7' N 2°42.7' W	Oc.G. period 5s	43 13	1	White mast, orange rectangular daymark; 33.	Visible 158°-305°. Synchronized with front.
6064 A 5507	-Gloucester Bank, Nelson Point.	51°29.9' N 2°42.5' W	Fl.R. period 3s	30 9	3	White mast; 23.	
6068 A 5508	-Broad Pill, N. jetty, head.	51°29.7' N 2°42.0' W	Q.R.	13 4	1	White framework tower.	
6072 A 5511	-Custom House, Somerset Bank.	51°28.9' N 2°40.9' W	Fl.G. period 2s fl. 0.2s, ec. 1.8s	16 5	1	White column; 12.	
6076 A 5512	-Adam and Eve, Somerset Bank.	51°28.8' N 2°40.5' W	Q.(3)G. period 6s	25 8	1	White column; 12.	
6080 A 5513	-Chapel Pill, Somerset Bank.	51°28.9' N 2°40.1' W	Q.(2)G. period 4s	24 7	1	White column; 12.	
6084 A 5514	-Lower Horseshoe, Gloucester Bank.	51°29.3' N 2°39.9' W	Fl.R. period 2s	16 5	1	White column; 12.	
6088 A 5515	-Upper Horseshoe, Gloucester Bank.	51°29.3' N 2°39.7' W	Fl.(3)R. period 6s	16 5	1	White column; 12.	
6092 A 5516	-Fir Tree, Gloucester Bank.	51°29.2' N 2°39.5' W	Q.(2)R. period 4s	18 5	1	White column; 12.	
6100 A 5518	-Sea Mills.	51°28.8' N 2°39.0' W	Iso.R. period 5s	23 7	1	White framework tower; 16.	Visible 342°-148°.
6104 A 5520	-Miles Dock, Somerset Bank, upper.	51°28.4' N 2°39.0' W	Fl.G. period 2s fl. 0.2s, ec. 1.8s	22 7	1	White column; 12.	
6108 A 5519	--Lower.	51°28.5' N 2°39.1' W	Q.(3)G. period 6s	18 5	1	White column; 12.	
6112 A 5522	-Leigh Woods, Somerset Bank, upper.	51°28.2' N 2°38.7' W	Fl.G. period 2s fl. 0.2s, ec. 1.8s	18 5	1	White column; 12.	
6116 A 5521	--Lower.	51°28.3' N 2°38.9' W	Q.(2)G. period 4s	18 5	1	White column; 12.	
6120 A 5523	-Black Rock Quarry, Gloucester Bank.	51°28.1' N 2°38.0' W	Fl.R. period 2s fl. 0.2s, ec. 1.8s	18 5	1	White column; 12.	
6128 A 5525	-Round Point, Gloucester Bank.	51°27.5' N 2°37.8' W	Q.(2)R. period 4s	25 8	1	White column; 12.	
6132 A 5526	-Nightingale Valley, Somerset Bank.	51°27.5' N 2°37.9' W	Q.(3)G. period 6s	18 5	1	White column; 12.	
6140 A 5486	Portishead, pier, head.	51°29.7' N 2°45.3' W	Iso.G. period 2s	18 5	3	White column; 12.	
6144 A 5484	-Portishead Point.	51°29.7' N 2°46.4' W	Q.(3)W. period 10s	30 9	16	Black metal framework tower, white concrete base; 30.	Visible 060°-262°. Horn: 1 bl. ev. 20s (bl. 2s, si. 18s).
6156 A 5480	Clevedon pier, head.	51°26.6' N 2°51.9' W	2 F.G. (vert.)	23 7	3	Post; 3.	2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-BRISTOL CHANNEL							
WESTON-SUPER-MARE:							
6164 A 5566	-Pier, head.	51°20.9' N 2°59.2' W	2 F.G. (vert.)	19 6		White post; 7.	1 meter apart.
6168 A 5582	Hinkley Point.	51°12.9' N 3°08.0' W	2 F.G. (vert.)	24 7	3	Metal column.	2 meters apart.
RIVER PARRETT:							
6172 A 5570	-Burnham.	51°14.9' N 3°00.3' W	Fl.W. period 7.5s fl. 0.3s, ec. 7.2s	23 7	12	White square tower, red stripe, piles; 30.	Visible 074°-164°.
	-076°.		Dir.W.R.G.	13 4	W. 12 R. 10 G. 10		F.G. 071°-075°, F.W.-077°, F.R.-081°.
6176 A 5572	-Seafront Range, front.	51°14.4' N 3°00.0' W	F.R.	20 6	3	White square, orange stripe, sea wall.	
6180 A 5572.1	--Rear 118° from front.	51°14.4' N 2°59.9' W	F.R.	40 12	3	Church tower.	
6188 A 5573	-Stert Reach.	51°11.4' N 3°02.0' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	12 4	7	White beacon.	Visible 187°-217°.
6196 A 5584	Watchet Harbor, W. breakwater.	51°11.0' N 3°19.7' W	Oc.G. period 3s lt. 2.5s, ec. 0.5s	31 9	9	Red hexagonal metal tower, green cupola, white lantern; 16.	
6200 A 5584.2	-E. breakwater.	51°11.0' N 3°19.7' W	2 F.R. (vert.)		3		Traffic signals 40 meters S.
6204 A 5586	Minehead, pier, head.	51°12.8' N 3°28.4' W	Fl.(2)G. period 5s		4	Metal post, parapet; 7.	Visible 127°-262°.
6204.5 A 5586.4	-Outfall.	51°13.0' N 3°28.3' W	Q.G.	20 6	7	STARBOARD (A) G, beacon, topmark.	
6208 A 5590	Lynmouth Foreland.	51°14.7' N 3°47.2' W	Fl.(4)W. period 15s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 8s	220 67	18	White round tower; 50.	Visible 083°-275°. Shown 24 hours.
6212 A 5592	-River training arm.	51°13.9' N 3°49.8' W	2 F.R. (vert.)	20 6	5	Column.	
6216 A 5593	-Harbor Arm.	51°13.9' N 3°49.8' W	2 F.G. (vert.)	20 6	5	Column.	
6220 A 5594	Ilfracombe, Lantern Hill, N. side of harbor.	51°12.6' N 4°06.8' W	Fl.(2)G. period 5s	127 39	6	Chapel, white lantern; 36.	
6224 A 5596	-Inner pier, head.	51°12.6' N 4°06.7' W	2 F.G. (vert.)	20 6	1	Post; 8.	
6228 A 5600	Bull Point.	51°11.9' N 4°12.1' W	Fl.(3)W. period 10s fl. 0.2s, ec. 1.6s fl. 0.2s, ec. 1.6s fl. 0.2s, ec. 6.2s	177 54	20	White round tower; 35.	Visible 056°-260°.
			F.R.	157 48	12		Visible 058°-096°.
BIDEFORD:							
6232 A 5610	-Instow Landing Range, front.	51°03.6' N 4°10.7' W	Oc.W. period 6s lt. 5s, ec. 1s	71 22	15	White framework tower, white rectangular daymark; 59.	Visible 103°30'-132°. Shown 24 hours.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
ENGLAND-BRISTOL CHANNEL							
6236 A 5610.1	--Rear, 427 meters 118° from front.	51°03.5' N 4°10.3' W	Oc.W. period 10s lt. 7.5s, ec. 2.5s	126 38	15	White tower; 30.	Visible 103°-132°30'. Shown 24 hours.
6240 A 5612	Crow Point, Taw River.	51°04.0' N 4°11.4' W	Fl.W.R. period 2.5s fl. 0.5s, ec. 2s	27 8	W. R. 5	White framework tower; 22.	R. 225°-232°, W.-237°, R.-358°, W.-015°, R.-045°.
6242 A 5615	Clovelly Harbor, pier, head.	50°59.9' N 4°23.8' W	Fl.G. period 5s	16 5	5	Green metal structure.	Visible to seaward.
6244 A 5616	Lundy Island.	51°12.1' N 4°40.6' W	Fl.W. period 15s fl. 0.1s, ec. 14.9s	157 48	17	White round tower; 56.	Visible 009°-285°.
6248 A 5618	-SE. point.	51°09.7' N 4°39.4' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	175 53	15	White round tower; 52.	Visible 170°-073°.
6252 A 5621	Hartland Point.	51°01.3' N 4°31.5' W	Q.(6)W. period 15s	98 30	8	Metal post adjacent to old lighthouse; 3.	
ENGLAND-WEST COAST							
PADSTOW:							
6256 A 5630	-Stepper Point.	50°34.1' N 4°56.7' W	L.Fl.W. period 10s fl. 2s, ec. 8s	41 12	4	Metal column; 7.	
6260 A 5634	-N. quay, head.	50°32.5' N 4°56.1' W	2 F.G. (vert.)	21 6	2	Metal column; 20.	F.W. shown from each inner quay.
6264 A 5636	-S. quay, head.	50°32.4' N 4°56.1' W	2 F.R. (vert.)	24 7	2	Metal column; 20.	
6268 A 5631	-St. Saviours Point.	50°32.7' N 4°56.0' W	L.Fl.G. period 10s	3 1		Green triangular daymark point up.	
6272 A 5638	Trevoze Head.	50°32.9' N 5°02.2' W	Fl.W. period 7.5s fl. 0.1s, ec. 7.4s	204 62	21	White round tower, dwellings; 89.	R. light on radio mast 180 meters ESE.
NEWQUAY:							
6276 A 5642	-N. pier, head.	50°25.0' N 5°05.1' W	2 F.G. (vert.)	16 5	2	Bracket on wall.	
6280 A 5644	-S. pier, head.	50°25.5' N 5°05.1' W	2 F.R. (vert.)	14 4	2	Round stone tower; 7.	
6284 A 5655	Godrevy Island.	50°14.5' N 5°24.0' W	Fl.W.R. period 10s fl. 1s, ec. 9s	92 28	8	Metal post adjacent to Old Lighthouse.	W. 022°-101°, R.-145°, W.-272°. 4 F.R. (vert.) shown on TV tower 6.5 miles SE.
HAYLE:							
6292 A 5658.1	-Old rear.	50°11.4' N 5°26.1' W	F.W.	76 23	4	Pile structure, red and white lantern; 16.	
6294 A 5658.5	-Perch.	50°11.7' N 5°26.1' W	Oc.G. period 4s lt. 3s, ec. 1s			Wooden pole.	
6296 A 5665	St. Ives, inner pier, head.	50°12.8' N 5°28.5' W	2 F.G. (vert.)	27 8	5	White round metal tower; 33.	
6300 A 5666	-W. pier, head.	50°12.8' N 5°28.7' W	2 F.R. (vert.)	18 5	3	Gray column; 16.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
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ENGLAND-WEST COAST

6304 A 5670	Pendeen.	50°09.9' N 5°40.3' W	Fl.(4)W. period 15s fl. 0.1s, ec. 2.3s fl. 0.1s, ec. 2.3s fl. 0.1s, ec. 2.3s fl. 0.1s, ec. 7.7s	195 59	16	White round tower, dwellings; 56.	Visible 042°-240°.
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Section 6

Ireland and Northern Ireland

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-SOUTH COAST							
6308 A 5702	Fastnet Rock.	51°23.3' N 9°36.2' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	174 53	18	Gray granite tower; 177.	AIS (MMSI No 992501123). Fog detector light: V.Q.W.
	RACON		G(- - •)		18		(3 & 10cm).
6312 A 5703	Cooper Point, Long Island, E. end.	51°30.3' N 9°32.1' W	Q.(3)W. period 10s	52 16	8	White round tower.	
6316 A 5704	Schull Harbor Range, front.	51°31.6' N 9°32.5' W	Oc.W. period 5s lt. 4s, ec. 1s	16 5	11	White metal mast, orange triangular daymark point up.	
6320 A 5704.1	-Rear, 91 meters 346° from front.	51°31.7' N 9°32.4' W	Oc.W. period 5s lt. 4s, ec. 1s	26 8	11	White metal mast, orange triangular daymark point down.	
6324 A 5705	Baltimore, Barrack Point.	51°28.3' N 9°23.7' W	Fl.(2)W.R. period 6s fl. 0.3s, ec. 1.4s fl. 0.3s, ec. 4s	130 40	W. 6 R. 3	White tower; 26.	R. 168°-294°, W.-038°.
6328 A 5707	Castle Haven, on Reen Point.	51°31.0' N 9°10.5' W	Fl.W.R.G. period 10s fl. 0.5s, ec. 9.5s	31 9	W. 5 R. 3 G. 3	White tower; 13.	G. 253°-338°, W.-001°, R.- 151°.
6332 A 5708	Galley Head.	51°31.8' N 8°57.2' W	Fl.(5)W. period 20s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 9.9s	174 53	23	White tower; 69.	Visible 256°-065°.
6336 A 5709	Courtmacsherry Harbor, Land Point.	51°38.2' N 8°41.0' W	Fl.(2)W.R. period 5s	49 15	6	White metal column; 10.	W. 315°-332°, R.-315°.
6340 A 5710	Old Head of Kinsale.	51°36.3' N 8°32.0' W	Fl.(2)W. period 10s fl. 0.1s, ec. 1.6s fl. 0.1s, ec. 8.2s	236 72	20	Black tower, two white bands; 98.	AIS (MMSI No 992501107).
6344 A 5712	Kinsale, Charles Fort, E. side of harbor.	51°41.8' N 8°30.0' W	Fl.W.R.G. period 5s fl. 1s, ec. 4s	60 18	W. 9 R. 6 G. 7	Fort, lantern.	G. 348°-358°, W.-004°, R.- 168°. Shown 24 hours.
CORK HARBOR AND COBH (QUEENSTOWN):							
6356 A 5718	Roche's Point.	51°47.6' N 8°15.3' W	Fl.W.R. period 3s	98 30	W. 18 R. 12	White tower; 49.	R. 266°-292°, W.-016°, R.- 033°, W. (unintensified) 033°-159°, R.-206°. AIS (MMSI No 992501099).
6360 A 5722	-White Bay Range, front.	51°48.5' N 8°15.2' W	Oc.R. period 5s lt. 4.5s, ec. 0.5s	35 11	5	White hut; 6.	
6364 A 5722.1	--Rear, 113 meters 034°35' from front.	51°48.6' N 8°15.2' W	Oc.R. period 5s	70 21	5	White hut; 8.	Synchronized with front.
6368 A 5728	-Fort Davis Range, front.	51°48.8' N 8°15.8' W	Dir.W.R.G.	95 29	17	39.	F.G. 352°-352°45', Al.W.G.- 353°30', F.W.-355°30', Al.W.R.-356°15', F.R.- 357°. Shown 24 hours. Range 3M by day.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-SOUTH COAST							
6372 A 5728.1	--Rear, Dognose landing quay, 203 meters 354°30' from front.	51°48.9' N 8°15.8' W	Oc.W. period 5s	112 34	10	Metal framework tower, orange square daymark; 39.	
6376 A 5732	-Corkbeg, Whitegate, oil pier, T head.	51°49.9' N 8°15.7' W	2 F.G. (vert.)			Dolphin; 10.	
6380 A 5736	-Spit Bank, E. elbow, off Cobh (Queenstown).	51°50.7' N 8°16.5' W	Iso.W.R. period 4s	33 10	W. 10 R. 7	White house, red piles; 33.	R. 087°-196°, W.-221°, R.- 358°.
6392 A 5748	-Haulbowline Basin, E. side of entrance.	51°50.6' N 8°18.0' W	2 F.R. (vert.)	26 8		Dolphin.	
6396 A 5749	--W. side.	51°50.6' N 8°18.1' W	2 F.R. (vert.)	26 8		Dolphin.	
6404 A 5758	-Monkstown, SE. corner of pier.	51°51.0' N 8°19.9' W	Fl.R. period 2.5s fl. 0.2s, ec. 2.3s	12 4	4	Red tower.	Visible 209°-356°.
6406 A 5757	-Verolme Cork Dockyard pier, NW. corner.	51°50.9' N 8°19.7' W	2 F.G. (vert.)			Dolphin.	
6417 A 5763	-Cattle berth, jetty, head.	51°54.0' N 8°24.6' W	2 F.G. (vert.)			Mooring dolphin.	
6420 A 5764	-Tivoli, N. side of river.	51°54.1' N 8°26.1' W	Fl.G. period 3s fl. 0.5s, ec. 2.5s	10 3	10	Wall, lantern; 3.	Visible 275°-095°.
6428 A 5774	Ballycotton Island.	51°49.5' N 7°59.1' W	Fl.W.R. period 10s fl. 0.3s, ec. 9.7s	195 59	W. 18 R. 14	Black tower within white walls, black lantern; 49.	W. 238°-048°, R.-238°. AIS (MMSI No 992501093).
6432 A 5776	Youghal.	51°56.6' N 7°50.5' W	Fl.W.R. period 2.5s fl. 0.5s, ec. 2s	79 24	W. 17 R. 13	White tower; 49.	W. 183°-273°, R.-295°, W.- 307°, R.-351°, W.-003°.
6436 A 5778	Mine Head.	51°59.5' N 7°35.2' W	Fl.(4)W. period 30s fl. 0.3s, ec. 3.7s fl. 0.3s, ec. 3.7s fl. 0.3s, ec. 3.7s fl. 0.3s, ec. 17.7s	285 87	12	White tower, black band; 69.	Visible 228°-052°. AIS (MMSI No 992501085).
DUNGARVAN BAY:							
6440 A 5782	-Ballinacourty Point.	52°04.7' N 7°33.2' W	Fl.(2)W.R.G. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 8s	52 16	W. 10 R. 8 G. 8	White tower; 43.	G. 245°-274°, W.-302°, R.- 325°, W.-117°.
WATERFORD:							
6460 A 5798	-Hook Head.	52°07.3' N 6°55.8' W	Fl.W. period 3s fl. 0.1s, ec. 2.9s	152 46	18	White tower, two black bands; 115.	AIS (MMSI No 992501079).
	-RACON		K(- • -)		10		Azimuth coverage 237°-177°. (3 & 10cm).
6464 A 5800	-Dunmore East.	52°08.9' N 6°59.3' W	Fl.W.R. period 8s fl. 1.8s, ec. 6.2s	44 13	W. 16 R. 13	Gray granite tower, white lantern; 52.	W. 225°-310°, R.-004°.
6468 A 5801	--E. breakwater extension.	52°08.9' N 6°59.3' W	Fl.(3)R. period 10s	20 6	4		Visible 000°-310°.
6472 A 5802	--West wharf.	52°08.9' N 6°59.4' W	Fl.(3)G. period 10s	20 6	4		Visible 165°-246°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-SOUTH COAST							
6476 A 5806	--Duncannon, 002°.	52°13.1' N 6°56.3' W	Dir.W.R.G.	43 13	10	White tower, fort; 26.	F.G. 359°30'-001°09', Al.W.G.-001°39', F.W.- 002°21', Al.W.R.-002°51', F.R.-004°30'.
			Oc.W.R. period 4s lt. 3s, ec. 1s	43 13	W. 9 R. 7		R. 119°-149°, W.-172°.
6484 A 5808	-Passage Point, on spit.	52°14.2' N 6°57.7' W	Fl.W.R. period 5s fl. 0.5s, ec. 4.5s	23 7	W. 6 R. 5	Red pile structure with white lantern; 43.	W. 101°-127°, R.-180°, W.- 302°, R.-021°.
6488 A 5810	-Cheek Point.	52°16.1' N 6°59.3' W	Q.W.R.	20 6	5	White mast; 16.	R. 289°-007°, W.-007°.
6492 A 5812	-Kilmokea.	52°16.4' N 6°58.9' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s				
6496 A 5814	-Snowhill Range front.	52°16.4' N 7°00.9' W	Fl.W.R. period 2.5s fl. 0.3s, ec. 2.2s	18 5	3	White mast; 19.	W.-222°-020°, R.-057°, W.-107°
6500 A 5814.1	--Rear, Glass House, mill, 750 meters 255° from front.	52°16.3' N 7°01.5' W	Q.W.	39 12	5	White framework tower; 36.	
	-Queens Channel:						
6504 A 5818	--S. side of E. entrance Range, front.	52°15.3' N 7°02.2' W	Oc.R. period 6s	26 8	5	Black tower, white band; 23.	
6508 A 5820	---Rear, Faithleg Demesne, 550 meters 098° from front.	52°15.3' N 7°01.8' W	Q.W.	50 15	5	White mast; 20.	
6512 A 5822	--Giles Quay.	52°15.4' N 7°04.2' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	29 9			Visible 255°-086°.
6516 A 5826	-Cove, S. side of river.	52°15.0' N 7°05.1' W	Fl.W.R. period 5s	20 6	W. 6 R. 4	White tower; 23.	R. 111°-161°, W.-234°, R.- 087°, W.-111°.
6520 A 5828	-Smelting House Point.	52°15.1' N 7°05.2' W	Q.W.	25 8	3	White mast; 31.	Traffic signal lights are shown on both sides of Redmond Bridge.
6524 A 5830	-Ballycar, S. side of river.	52°15.0' N 7°05.4' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	17 5	3	Red and white beacon.	
6532 A 5836	Kilmore, breakwater, head.	52°10.2' N 6°35.1' W	Q.R.G.	23 7	5	Metal column; 10.	R. 269°-354°, G.-003°, R.- 077°.
6536 A 5837	-Carne, pier, head.	52°11.9' N 6°20.8' W	Fl.R. period 3s	20 6	4	Metal column; 10.	
IRELAND-EAST COAST							
6540 A 5838	Tuskar Rock.	52°12.1' N 6°12.4' W	Q.(2)W. period 7.5s	108 33	24	White tower; 112.	AIS (MMSI No 992501065).
	RACON		T(-)		18		(3 & 10cm).
	ROSSLARE:						
6544 A 5842	-Pier, head.	52°15.4' N 6°20.3' W	Oc.W.R.G. period 5s lt. 4s, ec. 1s	50 15	W. 13 R. 10 G. 10	Red metal tower; 15.	G. 098°-188°, W.-208°, R.- 246°, G.-284°, W.-286°, R.-320°, W.-098°.
6556	<i>South Arklow Buoy.</i>	52°40.2' N 5°58.9' W	Q.(6)W.+L.Fl. period 15s			S. CARDINAL YB, pillar, topmark.	AIS (MMSI No 992501040).
	RACON		O(- - -)		10		(3 & 10cm).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-EAST COAST							
6560 A 5847	Arklow Head, Roadstone jetty.	52°46.7' N 6°08.4' W	Fl.R. period 3s	30 9	4	Hut.	
6564 A 5848	Arklow Harbor, S. pier, head.	52°47.6' N 6°08.2' W	Fl.W.R. period 6s fl. 1s, ec. 5s	36 11	13	White column; 20.	R. 160°-223°, W.-350°, R.-033°.
6568 A 5849	-N. pier, head.	52°47.6' N 6°08.3' W	L.Fl.G. period 7s fl. 2s, ec. 5s	23 7	10	White column.	Visible 170°-287°.
6572 A 5850	Wicklow Head.	52°58.0' N 6°00.0' W	Fl.(3)W. period 15s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 9.9s	121 37	23	White tower; 46.	AIS (MMSI No 992501031).
WICKLOW HARBOR:							
6576 A 5854	-E. pier, head.	52°59.0' N 6°02.1' W	Fl.W.R. period 5s	35 11	6	White tower, red base, gallery, cupola; 23.	R. 136°-293°, W.-136°.
6580 A 5856	-W. pier, head.	52°59.0' N 6°02.2' W	Iso.G. period 4s	15 5	6	Metal column.	
6584 A 5858	-W. Packet quay, head.	52°58.9' N 6°02.1' W	Fl.W.G. period 10s	15 5	6	Metal column.	W. 256°-076°, G.-256°.
6588	<i>Codling Buoy.</i>	53°03.0' N 5°40.8' W	Q.(3)W. period 10s	24 7	9	E. CARDINAL BYB, pillar, topmark.	AIS (MMSI No 992501028).
	RACON		G(- - •)		10		(3 & 10cm).
DUBLIN BAY:							
6592 A 5865	-Kish Bank.	53°18.6' N 5°55.5' W	Fl.(2)W. period 20s fl. 0.2s, ec. 1.9s fl. 0.2s, ec. 17.7s	94 29	21	White concrete tower, red band; 102. Helicopter platform.	AIS (MMSI No 992501017).
	-RACON		T(-)		15		(3 & 10cm).
6594	<i>-Dublin Bay Buoy.</i>	53°19.9' N 6°04.6' W	Mo.(A)W. period 10s			SAFE WATER RW, spherical, topmark.	
	-RACON		M(- -)		5		(3 & 10cm).
6596 A 5868	-Muglins.	53°16.5' N 6°04.6' W	Fl.R. period 5s fl. 0.7s, ec. 4.3s	46 14	11	White conical tower, red band; 30.	
-Dun Laoghaire (Kingstown):							
6600 A 5872	--E. pier, head.	53°18.1' N 6°07.6' W	Fl.(2)R. period 8s fl. 1s, ec. 1s fl. 1s, ec. 5s	53 16	17	Granite tower, red lantern; 39.	Synchronized with W. pier, head. Shown in reduced visibility. Fog detector light: V.Q.W. 7M.
6604 A 5874	--W. pier, head.	53°18.2' N 6°07.9' W	Fl.(2)G. period 8s fl. 1s, ec. 1s fl. 1s, ec. 5s	36 11	7	Granite tower, green lantern; 29.	Synchronized with E. pier, head.
6608 A 5876	--Carlisle pier, head.	53°17.7' N 6°07.8' W	Fl.R. period 3s fl. 0.3s, ec. 2.7s	10 3	2	Gray pole.	
6612 A 5877	-St. Michael's Pier, NE. pile.	53°17.9' N 6°07.8' W	2 F.G. (vert.)	49 15	2	Metal pole, black metal pile.	1 meter apart. Fl.W. traffic signals 170 meters SW. and 160 meters SSW.
6616 A 5878	--Traders wharf, head.	53°17.9' N 6°08.5' W	2 F.R. (vert.)	36 11	2	Metal pole; 30.	2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-EAST COAST							
6620 A 5882	--Poolbeg.	53°20.5' N 6°09.1' W	Fl.R. period 4s fl. 1s, ec. 3s	66 20	10	Red round tower; 66.	
6622 A 5889	-Coal Quay, E. head.	53°20.5' N 6°11.8' W	2 F.R. (vert.)	16 5	2	Dolphin.	
6625 A 5887.9	Cape Ferry Quay, SE. corner.	53°20.7' N 6°11.6' W	2 F.G. (vert.)	23 7	2	Column.	
6626 A 5886.4	-AVIATION LIGHT.	53°20.4' N 6°11.4' W	2 Fl.W. (vert.)	659 201	11	Chimney; 689.	Marked by additional lights. F.R. marks chimney 80 meters E.
			F.W. (neon)	538 164			
6628 A 5884	--Bull.	53°20.7' N 6°09.0' W	Fl.G. period 4s fl. 1s, ec. 3s	50 15	10	Green round tower; 49.	
6632 A 5886	--North Bank.	53°20.7' N 6°10.6' W	Oc.G. period 8s lt. 7s, ec. 1s	32 10	16	Green square tower, concrete piles; 36.	
6648 A 5894	--N. wall quay, head.	53°20.7' N 6°13.0' W	Fl.W. period 2s fl. 0.2s, ec. 1.8s	39 12	10	Black round tower, white bands; 39.	Traffic signals 750 meters W.
6652 A 5898	-Baily.	53°21.7' N 6°03.2' W	Fl.W. period 15s fl. 0.7s, ec. 14.3s	134 41	18	Granite tower; 43.	AIS (MMSI No 992501010). Fog detector light: V.Q.W.
6656 A 5900	-Howth.	53°23.6' N 6°04.0' W	Fl.(2)W.R. period 7.5s fl. 0.7s, ec. 1.3s fl. 0.7s, ec. 4.8s	43 13	W. 12 R. 9	White concrete structure; 33. Floodlit.	W. 256°-295°, R.-256°.
6657 A 5900.3	--W. pier, head.	53°23.5' N 6°04.1' W	Fl.G. period 3s	23 7	6	Green mast, square concrete base; 16.	
6658 A 5900.5	--Trawler pier, head.	53°23.5' N 6°04.0' W	Q.R.	23 7	6	Red mast, square concrete base; 16.	
6662 A 5903.6	Burren Rocks.	53°29.4' N 6°02.5' W	Fl.G. period 5s fl. 0.3s, ec. 4.7s	25 8	5	STARBOARD (A) G, beacon, topmark.	
6664 A 5904	Rockabill.	53°35.8' N 6°00.0' W	Fl.W.R. period 12s fl. 0.2s, ec. 11.8s	148 45	W. 17 R. 13	White tower, black band; 105.	W. 178°-329°, R.-178°. AIS (MMSI No 992501246).
6668 A 5906	Skerries Bay, pier, head.	53°35.1' N 6°06.5' W	Oc.R. period 6s	23 7	7	White column; 25.	Visible 103°-154°.
6672 A 5908	Balbriggan Island.	53°36.8' N 6°10.9' W	Fl.(3)W.R.G. period 10s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 5s	39 12	W. 13 R. 10 G. 10	White tower; 52.	G. 159°-193°, W.-288°, R.- 305°.
6673 A 5909	Platin AVIATION LIGHT.	53°41.0' N 6°23.4' W	Aero.Q.R.	489 149	11	Chimney; 351.	
			Aero.F.R.	381 116			
			Aero.F.R.	266 81			
DROGHEDA HARBOR ENTRANCE:							
6682 A 5910.5	-Port approach.	53°43.3' N 6°14.7' W	Dir.W.R.G.	33 10	W. 19 R. 15 G. 15	Metal beacon.	F.G. 268°-269°, Al.W.G.- 269°-30', F.W.-270°-30', Al.W.R.-271°, F.R.-272°. Shown 24 hours. Range 3/2M by day.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-EAST COAST							
6692 A 5912	--Aleria, N. side of entrance to River Boyne.	53°43.3' N 6°14.2' W	Q.G.	59 18	4	Green stone beacon.	
IRELAND AND NORTHERN IRELAND-EAST COAST							
DUNDALK BAY:							
6696 A 5920	-Dundalk pile.	53°58.5' N 6°17.7' W	Fl.W. period 15s fl. 0.4s, ec. 14.6s	33 10	10	White house, green piles; 33.	Shown in reduced visibility.
6700 A 5920.4	--No 4.	53°58.8' N 6°18.3' W	Fl.R. period 3s	13 4	2	PORT (A) R, post, topmark; 30.	
6702	--Hellyhunter Buoy.	54°00.3' N 6°02.0' W	Q.(6)+L.Fl.W. period 15s			S. CARDINAL YB, pillar, topmark.	
	--RACON		K(- • -)		5		(3 & 10cm).
CARLINGFORD LOUGH:							
6704 A 5928	-Haulbowline.	54°01.2' N 6°04.6' W	Fl.(3)W. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 1s fl. 0.5s, ec. 6.5s	105 32	10	Gray granite tower; 112.	AIS (MMSI No 992501235).
6708 A 5932	-Range, front.	54°01.8' N 6°05.4' W	Oc.W. period 3s lt. 2.3s, ec. 0.7s	23 7	11	Framework tower, red triangular daymark point up, white lantern; 26.	Visible 296°-324°. AIS (MMSI No 992501237).
6712 A 5934	--Rear, 457 meters 310°26' from front.	54°02.0' N 6°05.7' W	Oc.W. period 3s lt. 2.3s, ec. 0.7s	40 12	11	Framework tower, red triangular daymark point down, white lantern; 46.	Visible 296°-324°. Synchronized with front.
6714 A 5938	-Greenore pier, head.	54°02.1' N 6°08.0' W	Fl.R. period 7.5s	33 10	5	Metal pole; 23.	LED.
6720 A 5944	-Carlingford, W. pier, head.	54°02.6' N 6°11.0' W	Fl.G. period 3s	15 5	3	Red pillar; 7.	
6724 A 5946	-Newry River Range, front.	54°06.4' N 6°16.5' W	Iso.W. period 4s	16 5	2	Stone column; 8.	
6728 A 5946.1	--Rear, 274 meters 310°25' from front.	54°06.5' N 6°16.6' W	Iso.W. period 4s	48 15	2	Stone column; 8.	
6732 A 5948	-Warren Point, breakwater, head.	54°05.8' N 6°15.2' W	Fl.G. period 3s	19 6	3		
6736 A 5949	--Deep water quay.	54°05.9' N 6°15.5' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	16 5	3	Green post; 7.	
6740 A 5952	-Kilkeel Harbor, pier, head.	54°03.5' N 5°59.3' W	Fl.W.R. period 2s fl. 0.5s, ec. 1.5s	26 8	W. 11 R. 9	Black metal post; 10.	R. 296°-313°, W.-017°. AIS (MMSI No 992356010). Storm signal.
6752 A 5953	Annalong, E. breakwater, head.	54°06.6' N 5°53.8' W	Oc.W.R.G. period 5s lt. 4s, ec. 1s	27 8	9	Red framework tower, white lantern; 20.	G. 204°-249°, W.-309°, R.-024°. 3 F.R. (vert.) shown during port closure. 1.5 meters apart.
6756 A 5958	St. John's Point.	54°13.6' N 5°39.6' W	Q.(2)W. period 7.5s	120 37	25	Black round tower, yellow bands; 131.	Fog detector light: V.Q.W., visible on bearing 270°. AIS (MMSI No 992351005).
	-Auxiliary.		Fl.W.R. period 3s fl. 1s, ec. 2s	45 14	W. 15 R. 11		W. 064°-078°, R.-156°.

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IRELAND AND NORTHERN IRELAND-EAST COAST							
6760 A 5962	Ardglass, inner pier, head.	54° 15.8' N 5° 36.4' W	Iso.W.R.G. period 4s	34 10	W. 10 R. 8 G. 8	Tower; 33.	G. 232°-308°, W.-314°, R.- 010°.
6764 A 5962.4	-Outer pier, head.	54° 15.8' N 5° 36.0' W	Fl.R. period 3s	33 10	5	Red metal post; 13.	
6768 A 5963.3	Angus Rock.	54° 19.9' N 5° 31.5' W	Fl.R. period 5s fl. 1s, ec. 4s	48 15	5	White tower, red top; 43.	
6776 A 5970	Portavogie Harbor, S. pier.	54° 27.5' N 5° 26.1' W	Iso.W.R.G. period 5s	30 9	W. 10 R. 8 G. 8	Square masonry tower; 16.	G. 148°-258°, W.-275°, R.- 348°.
6780	<i>Skulmartin Buoy.</i>	54° 32.0' N 5° 25.0' W	L.Fl.W. period 10s			SAFE WATER RW, spherical.	Whistle. Radar reflector.
6784 A 5973	Ballywalter, breakwater, head.	54° 32.7' N 5° 28.9' W	Fl.W.R.G. period 3s	13 4	9	Metal column; 10.	G. 240°-267°, W.-277°, R.- 314°. Difficult to distinguish.
6788 A 5974	Donaghadee Harbor.	54° 38.7' N 5° 31.9' W	Iso.W.R. period 4s	56 17	W. 17 R. 12	White tower; 52.	W. 118°-326°, R.-357°.
6792 A 5976	Mew Island.	54° 41.9' N 5° 30.8' W	F.Fl.(4)W. period 30s fl. 0.7s, ec. 4.3s fl. 0.7s, ec. 4.3s fl. 0.7s, ec. 4.3s fl. 0.7s, ec. 14.3s	115 35	18	Black tower, white band; 121.	AIS (MMSI No 992351109).
	RACON		O(---)		14		(3 & 10cm).
6794 A 5980	Bangor Harbor, N. pier, head.	54° 40.0' N 5° 40.3' W	Iso.R. period 12s	30 9	9	Red concrete column; 36.	
6796 A 5988	Kilroot Point, jetty, head.	54° 43.5' N 5° 44.6' W	Oc.G. period 10s lt. 8s, ec. 2s	20 6	9	Green mast; 7.	
6800 A 5987	Kilroot Power Station Intake basin.	54° 43.2' N 5° 45.9' W	Oc.G. period 4s				Q.R. and 4 F.R. (vert) on chimney 500 meters N.
6801 A 5987.5	-Unloading jetty.	54° 43.3' N 5° 45.3' W	2 F.G. (vert.)	19 6	2	Mast; 16.	2 meters apart.
6804 A 5986	Cloghan, jetty, N. head.	54° 44.3' N 5° 42.3' W	Fl.G. period 3s fl. 1s, ec. 2s		2	Green post.	Horn: 1 bl. ev. 15s.
6808 A 5986.4	-S. head.	54° 44.1' N 5° 42.5' W	Fl.G. period 3s fl. 1s, ec. 2s		2	Green post.	
CARRICKFERGUS HARBOR:							
6812 A 5992	-E. pier, head.	54° 42.6' N 5° 48.4' W	Fl.G. period 7.5s fl. 0.7s, ec. 6.8s	18 5	4	Green metal column; 12.	
6816 A 5993	-W. pier, head.	54° 42.6' N 5° 48.4' W	Fl.R. period 7.5s fl. 0.7s, ec. 6.8s	18 5	4	Red metal column; 12.	
BELFAST-VICTORIA CHANNEL:							
6819 A 5999	-No 8.	54° 39.8' N 5° 50.4' W	Q.(2)R. period 6s fl. 0.4s, ec. 1s fl. 0.4s, ec. 4.2s		7	Red beacon.	
6820 A 6000	-No 9.	54° 39.6' N 5° 50.9' W	Q.(3)G. period 6s			Green beacon.	

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IRELAND AND NORTHERN IRELAND-EAST COAST							
6822 A 6001	-No 10.	54°39.4' N 5°50.9' W	Q.(2)R. period 6s fl. 0.4s, ec. 1s fl. 0.4s, ec. 4.2s			Red beacon.	
6824 A 6002	-No 11.	54°39.3' N 5°51.3' W	Fl.G. period 3s			Green beacon.	
6828 A 6003	-No 12.	54°39.0' N 5°51.4' W	Q.(4)R. period 6s			Red beacon.	
6832 A 6004	-No 13.	54°38.9' N 5°51.8' W	Q.(3)G. period 6s			Green beacon.	
6836 A 6005	-No 14.	54°38.6' N 5°51.9' W	Q.(2)R. period 6s			Red beacon.	
6840 A 6006	-No 15.	54°38.4' N 5°52.5' W	Fl.G. period 3s			Green beacon.	
6844 A 6007	-No 16.	54°38.2' N 5°52.4' W	Q.(2)R. period 6s fl. 0.4s, ec. 1s fl. 0.4s, ec. 4.2s		8	Red beacon.	
6856 A 6011	-No 19.	54°37.6' N 5°53.5' W	Q.G.			Green beacon.	
6872 A 6014.7	-Dolphin.	54°37.7' N 5°53.4' W	2 F.G. (vert.)				
6874 A 6015	-Daisy Range, front	54°37.4' N 5°53.2' W	Fl.R. period 5s fl. 0.5s, ec. 4.5s			PORT (A) R, pile, topmark.	
6876 A 6015.1	--Rear, 120 meters 122° from front.	54°37.4' N 5°53.1' W	Fl.(2)R. period 5s			Beacon, red triangular daymark point up.	
6888 A 6017	--M2.	54°37.4' N 5°53.2' W	Fl.(4)R. period 6s			PORT (A) R, pile, topmark.	
6892 A 6019	--M1.	54°37.3' N 5°53.3' W	Q.G.		7 2	STARBOARD (A) G, pile, topmark.	
6896 A 6019.3	--M3.	54°37.1' N 5°53.4' W	Fl.G. period 4s fl. 1.5s, ec. 2.5s		5 2	STARBOARD (A) G, pile, topmark.	
-Musgrave Channel:							
6900 A 6019.6	--E. side.	54°36.8' N 5°53.5' W	Fl.(2)R. period 6s		5 2	Pile.	
6904 A 6019.8	-East Twin Island, W. side.	54°37.4' N 5°53.6' W	Q.(6)R. period 9s			PORT (A) R, pile, topmark.	
6908 A 6020	-West Twin Island, off NE. point.	54°37.4' N 5°53.7' W	Fl.G. period 4s fl. 1.5s, ec. 2.5s		33 10	STARBOARD (A) G, column, topmark.	
6916 A 6020.6	-Thompson Dock, W. side of entrance.	54°37.0' N 5°54.0' W	Fl.R. period 1.5s fl. 0.4s, ec. 1.1s		25 8	Metal framework tower; 50.	
6920 A 6021	-River Lagan, Barnett Dock entrance, off Ballast Quay.	54°36.8' N 5°54.6' W	2 F.R. (vert.)			Dolphin.	
6928 A 6021.6	--Queens wharf, N. head.	54°36.7' N 5°54.6' W	Fl.R. period 5s fl. 0.5s, ec. 4.5s		22 7	PORT (A) R, pile, topmark; 16.	
6932 A 6021.8	---S. head.	54°36.4' N 5°54.9' W	Q.R.		22 7	PORT (A) R, pile, topmark.	
6936 A 6022	--H1.	54°37.6' N 5°53.6' W	Fl.G. period 2.5s fl. 0.5s, ec. 2s			STARBOARD (A) G, pile, topmark.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND AND NORTHERN IRELAND-EAST COAST							
6948 A 6022.2	--H2.	54°37.4' N 5°53.9' W	Oc.R. period 4s fl. 3.5s, ec. 0.5s				Pile, square daymark.
6952 A 6022.4	--H3.	54°37.4' N 5°53.9' W	Oc.G. period 4s fl. 3.5s, ec. 0.5s				Pile, triangular daymark point up.
6956 A 6023	--H4.	54°37.2' N 5°54.2' W	Fl.R. period 4s fl. 1.5s, ec. 2.5s				Pile, square daymark.
6960 A 6022.6	Container terminal.	54°37.3' N 5°54.2' W	Fl.(3)G. period 6s	33 10			
6964 A 6024	--H5.	54°37.2' N 5°54.4' W	Fl.G. period 2s fl. 0.5s, ec. 1.5s				Pile, triangular daymark point up.
6968 A 6025	--Power Station.	54°37.2' N 5°54.4' W	Q.R.				Pile.
6972 A 6028	Black Head.	54°46.0' N 5°41.3' W	Fl.W. period 3s fl. 0.2s, ec. 2.8s	148 45	27	White octagonal tower; 52.	AIS (MMSI No 992351002).
LOUGH LARNE:							
6984 A 6031	-Sandy Point.	54°51.3' N 5°47.9' W	Iso.W.R. period 5s	75 23	W. 16 R. 12	Gray tower; 92.	W. 232°06'-239°42', R.-000°.
6988 A 6033.4	-N. beacon No 2.	54°51.1' N 5°47.5' W	Fl.R. period 3s fl. 0.6s, ec. 2.4s	12 4	4	Red pile structure.	
6992 A 6035	-Beacon No 4.	54°50.8' N 5°47.5' W	Fl.(2)R. period 6s	12 4	4	Red pile structure.	
6996 A 6034	-NE. corner of Continental Pier, head.	54°51.0' N 5°47.6' W	2 F.G. (vert.)	23 7	1	Dolphin.	Visible 167°-240°. 2 meters apart. Occasional.
7000 A 6033	-Range, front.	54°49.6' N 5°47.8' W	Fl.W. period 2.5s fl. 1s, ec. 1.5s	20 6	12	Red pile structure, white diamond daymark, red stripe.	Visible 179°-189°.
7004 A 6033.1	--Rear, 610 meters 184° from front.	54°49.3' N 5°47.8' W	Oc.W. period 5s	45 14	12	Round aluminum tower, white diamond daymark, red stripe.	Visible 179°-189°.
7008 A 6037	-Ballylumford, jetty, NW. head.	54°50.5' N 5°47.2' W	2 F.R. (vert.)	26 8	2	Post, dolphin; 13.	
7012 A 6037.2	--SE. side.	54°50.5' N 5°47.1' W	2 F.R. (vert.)	25 8		Post, dolphin; 13.	
7016 A 6042	East Maiden.	54°55.7' N 5°43.7' W	Fl.(3)W. period 15s fl. 0.1s, ec. 2.5s fl. 0.1s, ec. 2.5s fl. 0.1s, ec. 9.7s	105 32	18	White tower, black band; 75.	AIS (MMSI No 992351110).
	Auxiliary.		Fl.R. period 5s fl. 0.7s, ec. 4.3s	48 15	8		Visible 142°-182° over Russel and Highland Rocks. Shown 24 hours.
	RACON		M(- -)		11		(3 & 10cm).
7017 A 6043	S. Carnlough Harbor, N. pier.	54°59.6' N 5°59.3' W	Fl.G. period 3s fl. 0.5s, ec. 2.5s	12 4	5	White concrete column, black bands; 20.	
7018 A 6043.2	-S. pier.	54°59.6' N 5°59.3' W	Fl.R. period 3s fl. 0.5s, ec. 2.5s	20 6	5	White concrete column, black bands; 13.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND AND NORTHERN IRELAND-EAST COAST							
7020 A 6044	Red Bay, pier, head.	55°03.9' N 6°03.1' W	Fl.W. period 3s fl. 0.5s, ec. 2.5s	33 10	5	Metal pole; 10.	
RATHLIN ISLAND:							
7028 A 6060	-Rue Point, S. extremity.	55°15.5' N 6°11.5' W	Fl.(2)W. period 5s fl. 0.5s, ec. 1s fl. 0.5s, ec. 3s	52 16	14	White octagonal concrete tower, black bands; 36.	
7032 A 6062	-Rathlin East.	55°18.1' N 6°10.3' W	Fl.(4)W. period 20s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 12.3s	243 74	26	White tower, black band; 89.	Visible 110°-006° and 036°-058°.
	-RACON		G(- - •)		15		(3 & 10cm). Azimuth coverage 089°-003°.
7036 A 6064	-Rathlin West.	55°18.0' N 6°16.8' W	Fl.R. period 5s fl. 0.4s, ec. 4.6s	204 62	22	White tower, lantern at base; 59.	Visible 015°-225°. Fog detector light: V.Q.W., visible on bearing 119°. AIS (MMSI No 992351000).
7038 A 6065	-Manor House pier.	55°17.6' N 6°11.7' W	Oc.W.R.G. period 4s lt. 3s, ec. 1s		5		G. 020°-023°, W.-026°, R.-029°.
7039	Skerries Buoy.	55°13.9' N 6°36.9' W	Fl.R. period 5s fl. 0.3s, ec. 4.7s			PORT (A) R, can.	AIS (MMSI No 992351096).
7040 A 6071	Portrush, N. pier, head.	55°12.3' N 6°39.6' W	Fl.R. period 3s	19 6	3	Red metal mast, concrete base.	Visible 220°-156°.
7044 A 6072	-S. pier, head.	55°12.3' N 6°39.5' W	Fl.G. period 3s	19 6	3	Green metal mast, concrete base.	Visible 289°-120°.
7056 A 6073	Portstewart Point.	55°11.3' N 6°43.3' W	Oc.R. period 10s lt. 7s, ec. 3s	70 21	5	Red square concrete hut; 10.	Visible 040°-220°.
7060 A 6076	River Bann, entrance Ballaghran Point.	55°10.3' N 6°46.3' W	Fl.R. period 5s	21 6	2	White pyramidal concrete tower; 14.	
7062 A 6076.5	Ballyaghan.	55°09.9' N 6°45.9' W	Fl.(2)R. period 5s			Red beacon, square daymark.	
7064 A 6074	Coleraine, front.	55°10.0' N 6°46.2' W	Oc.W. period 5s	20 6	2	White pyramidal metal tower; 17.	The river is marked by Fl.G. on starboard side, and Fl.R. on port side.
7068 A 6074.1	-Rear, 245 meters 165° from front.	55°09.9' N 6°46.2' W	Oc.W. period 5s	45 14	2	White square concrete tower.	
7072 A 6075	-W. mole.	55°10.3' N 6°46.4' W	Fl.G. period 5s	13 4	2	STARBOARD (A) G, mast, topmark; 10.	Visible 170°-000°.

NORTHERN IRELAND-EAST AND NORTH COASTS

7076 A 6084	Inishowen Head.	55°13.6' N 6°55.7' W	Fl.(2)W.R.G. period 10s fl. 1s, ec. 2s fl. 1s, ec. 6s	92 28	W. 18 R. 14 G. 14	White tower, black bands; 75.	G. 197°-211°, W.-249°, R.-000°.
7080 A 6088	-Warren Point.	55°12.6' N 6°57.1' W	Fl.W. period 1.5s fl. 0.2s, ec. 1.3s	36 11	4	White round tower, green abutment; 26.	Visible 232°-061°.
7084 A 6092	-Magilligan Point.	55°11.7' N 6°58.1' W	Q.R.	24 7	4	Red pile structure.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
NORTHERN IRELAND-EAST AND NORTH COASTS							
7088 A 6095	-McKinney's Bank.	55°11.0' N 7°00.5' W	Fl.R. period 5s	13 4	3	Red pile structure.	
7092 A 6096	-Moville, 549 meters from quay.	55°11.0' N 7°02.1' W	Fl.W.R. period 2.5s	37 11	4	White house, green piles; 44.	W. 240°-064°, R.-240°.
7096 A 6098	-Glenburnie.	55°10.4' N 7°01.6' W	Oc.R. period 6s	10 3	3	Red pile structure.	
7100 A 6100	-Salt pans, N. Middle Bank, NE. head.	55°10.5' N 7°03.1' W	Fl.R. period 2.5s	13 4	3	Red pile structure.	
7104 A 6101	-Clare, W. side of N. Middle Bank.	55°09.9' N 7°05.0' W	Q.R.	13 4	3	Red pile structure.	
7108 A 6104	-Redcastle, outer edge of Ridge Shoal.	55°08.8' N 7°07.6' W	Oc.G. period 5s	13 4	5	STARBOARD (A) G, pile, topmark.	
NORTHERN IRELAND AND IRELAND-NORTH COAST							
LOUGH FOYLE:							
7112 A 6105	-Vance.	55°08.6' N 7°07.9' W	Fl.R. period 5s	13 4	3	PORT (A) R, pile, topmark.	
7116 A 6106	-Whitecastle, SE. side of channel.	55°08.0' N 7°09.4' W	Q.R.	13 4	3	PORT (A) R, pile, topmark.	
7120 A 6107	-Cabry, NW. side of channel.	55°07.1' N 7°11.3' W	Fl.G. period 2.5s fl. 0.2s, ec. 2.3s	13 4	3	STARBOARD (A) G, pile, topmark.	
7124 A 6108	-Quigleys Point, off point on SE. side of channel.	55°07.0' N 7°11.2' W	Fl.R. period 2s fl. 0.2s, ec. 1.8s	13 4	3	PORT (A) R, pile, topmark.	Q.W. 16M and R. obstruction lights 4.6 miles SSE.
7128 A 6110	-Greenbank, off Aught Point, W. side of channel.	55°06.5' N 7°12.1' W	Q.G.	13 4	3	STARBOARD (A) G, pile, topmark.	
7132 A 6112	-Lepers Point, off Aught Point, E. side of channel.	55°06.4' N 7°12.0' W	Q.R.	13 4	3	PORT (A) R, pile, topmark.	
7140 A 6114	-Ture, on spit, SE. side of channel.	55°05.8' N 7°12.8' W	Fl.R. period 4s	13 4	3	PORT (A) R, pile, topmark.	
7144 A 6116	-Aught.	55°05.8' N 7°12.9' W	Fl.G. period 5s	13 4	3	Green pile, lantern.	
7148 A 6117	-Drumskellan, off Ture Point, W. side of channel.	55°05.6' N 7°13.1' W	Fl.G. period 2.5s	13 4	3	STARBOARD (A) G, pile, topmark.	
7152 A 6124	-Kilderry, W. side of channel.	55°04.1' N 7°14.0' W	Fl.G. period 2s	13 4	3	STARBOARD (A) G, pile, topmark.	
7156 A 6120	-Crummin Point, off point, W. side of channel.	55°04.7' N 7°13.6' W	Q.G.	13 4	3	STARBOARD (A) G, pile, topmark.	
7160 A 6122	-Willsboro, E. side of channel.	55°04.6' N 7°13.5' W	Fl.(2)R. period 4s	13 4	3	PORT (A) R, pile, topmark.	
7164 A 6130	-Faghan, SE. side of channel.	55°03.1' N 7°14.5' W	Fl.R. period 4s	13 4	3	PORT (A) R, pile, topmark.	
7168 A 6127	-Muff, W. side of channel.	55°03.6' N 7°14.3' W	Fl.G. period 2s	13 4	3	STARBOARD (A) G, pile, topmark.	
7172 A 6128	--Coneyburrow.	55°03.3' N 7°14.5' W	Q.G.	13 4	3	STARBOARD (A) G, pile, topmark.	
7176 A 6131	-Culmore, on point.	55°02.8' N 7°15.2' W	Q.G.	13 4	3	STARBOARD (A) G, pile, topmark.	
7180 A 6134.5	-Lisahally Quay, NE. corner.	55°02.6' N 7°15.7' W	2 F.R. (vert.)	16 5	3		2 meters apart.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
NORTHERN IRELAND AND IRELAND-NORTH COAST							
7188 A 6130.2	-Coolkeeragh wharf, NE. head.	55°03.0' N 7°14.6' W	Q.(2)R. period 2s				
7192 A 6130.3	--SW. head.	55°02.9' N 7°14.7' W	Fl.R. period 5s				
7193 A 6130.5	--NE. head.	55°02.9' N 7°14.7' W	2 F.R. (vert.)				
7193.2 A 6130.6	--SW. head.	55°02.8' N 7°15.0' W	Fl.R. period 2s				
7193.4 A 6130.8	-Jetty.	55°02.7' N 7°15.0' W	Fl.R. period 2s				
7196 A 6136	-Ballynagard, W. side of channel.	55°02.3' N 7°16.4' W	Fl.W. period 3s	19 6	3	Green round tower, white lantern.	
7200 A 6138	-Otter Bank, E. side of channel.	55°02.0' N 7°16.7' W	Fl.R. period 4s	20 6	3	Red round tower, white structure.	
7204 A 6142	-Mountjoy, E. side of channel.	55°01.2' N 7°17.5' W	Q.R.	16 5	3	White beacon, red base.	
7208 A 6140	-Brook Hall, W. side of channel.	55°01.7' N 7°17.1' W	Q.G.	20 6	3	White tower, green base.	
7216 A 6152	-Rosse's Bay Channel Range, front.	55°00.7' N 7°17.5' W	Oc.W. period 10s	13 4	3	Beacon, white triangular daymark point up.	Visible 127°-190°.
			Oc.R. period 5s	16 5	3		
7220 A 6152.1	--Rear, 085° from front.	55°00.7' N 7°16.9' W	Oc.W. period 10s	23 7	3	Beacon, white triangular daymark point down.	Synchronized with front.
7224 A 6158	-Clooney.	55°00.7' N 7°18.1' W	Fl.R. period 4s	13 4	3	PORT (A) R, pile, topmark.	
7228 A 6162	-St. Columb's, on Clooney Bank.	55°00.6' N 7°18.6' W	Fl.R. period 4s	13 4	3	PORT (A) R, pile, topmark.	
7232 A 6163	-Aberfoyle, off Columbs Point.	55°00.3' N 7°19.0' W	Fl.R. period 2s	16 5	3	White structure, red piles.	
7236 A 6164	Inishtrahull.	55°25.8' N 7°14.6' W	Fl.(3)W. period 15s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 9.8s	194 59	19	White tower; 75.	Obscured 256°-261° within 3M. AIS (MMSI No 992501229).
	RACON		T(-)		24		Azimuth coverage 060°-310°. (3 & 10cm).
LOUGH SWILLY:							
7240 A 6168	-Fanad Head.	55°16.6' N 7°37.9' W	Fl.(5)W.R. period 20s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 9s	127 39	W. 18 R. 14	White tower; 72.	R. 100°-110°, W.-313°, R.-345°, W.-100°. AIS (MMSI No 992501215).
7244 A 6172	-Dunree Head.	55°11.9' N 7°33.2' W	Fl.(2)W.R. period 5s fl. 0.6s, ec. 0.9s fl. 0.6s, ec. 2.9s	161 49	W. 12 R. 9	House; 20.	R. 320°-328°, W.-183°, R.-196°.
7248 A 6174	-Buncrana, pier, head.	55°07.6' N 7°27.8' W	Iso.W.R. period 4s	36 11	W. 13 R. 10	Red tower, white band; 20.	R. 300°-052°, W.-139°, R.-195°.
7252 A 6176	-Rathmullan, pier, head.	55°05.7' N 7°31.6' W	Fl.G. period 3s		5	Green structure.	Visible 206°-345°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
NORTHERN IRELAND AND IRELAND-NORTH COAST							
MULROY BAY AND LOUGH:							
7256 A 6180	-Ravedy Island, N. head.	55° 15.1' N 7° 46.9' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	30 9	3	Concrete tower; 15.	Visible 177°-357°.
7260 A 6186	-Dundooan Rocks.	55° 13.0' N 7° 48.0' W	Q.G.	13 4	1	Green concrete tower; 13.	
7264 A 6190	-Crannoge Point, W. side of lough.	55° 12.3' N 7° 48.4' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	16 5	2	Green concrete tower; 13.	
IRELAND-WEST COAST							
7268 A 6196	-Downings Bay, pier, head.	55° 11.4' N 7° 50.4' W	Fl.R. period 3s	16 5	2	Red post.	Visible 283°-090.
7272 A 6198.5	-Portnablahy Range, front.	55° 10.8' N 7° 55.8' W	Oc.W. period 6s	23 7	2	Red concrete column, white band.	
7276 A 6198.51	--Rear, 81 meters 125°15' from front.	55° 10.8' N 7° 55.6' W	Oc.W. period 6s	39 12	2	White concrete column, red band.	
7280 A 6200	Tory Island.	55° 16.4' N 8° 14.9' W	Fl.(4)W. period 30s fl. 0.8s, ec. 4.2s fl. 0.8s, ec. 4.2s fl. 0.8s, ec. 4.2s fl. 0.8s, ec. 14.2s	130 40	18	Black tower, white band; 89.	Visible 302°-277°.
	RACON		M(- -)		12		(3 & 10cm).
7284 A 6203	Bloody Foreland.	55° 09.5' N 8° 17.0' W	Fl.W.G. period 7.5s	47 14	W. G. 6 4	White concrete hut; 12.	W. 062°-232°, G.-062°.
7285 A 6203.5	Glassagh, Range, front.	55° 06.8' N 8° 18.9' W	Oc.W. period 8s lt. 6s, ec. 2s	39 12	3	White concrete column, black band; 19.	
7285.1 A 6203.51	--Rear, 46 meters 137°25' from front.	55° 06.8' N 8° 18.9' W	Oc.W. period 8s lt. 6s, ec. 2s	56 17	3	Black concrete column, white band; 16.	Synchronized with front.
7288 A 6204	Inishsirr Island, NW.	55° 07.4' N 8° 20.8' W	Fl.W. period 3.7s fl. 0.7s, ec. 3s	65 20	4	White square concrete tower; 13.	Visible 083°-263°.
7288.4 A 6204.2	-Gola Island Range, front.	55° 05.1' N 8° 21.0' W	Oc.W. period 3s lt. 2s, ec. 1s	29 9	2	White concrete beacon, black band; 20.	
7288.8 A 6204.21	--Rear, 86 meters 171°14' from front.	55° 05.1' N 8° 21.0' W	Oc.W. period 3s	43 13	2	Black concrete beacon, white band; 16.	Synchronized with front.
7289 A 6204.4	-Bo Island.	55° 04.8' N 8° 20.1' W	Fl.G. period 3s fl. 0.3s, ec. 2.7s	10 3		Green concrete beacon; 23.	
7292 A 6206	Rinnalea Point.	55° 02.6' N 8° 23.6' W	Fl.W. period 7.5s fl. 0.3s, ec. 7.2s	62 19	9	Square tower; 7.	Visible 132°-167°. F.W.light 0.6 miles SW.
7296 A 6208	Aranmore.	55° 00.8' N 8° 33.5' W	Fl.(2)W. period 20s fl. 0.2s, ec. 4.3s fl. 0.2s, ec. 15.3s	233 71	18	White tower; 75.	Visible 007°-234°. AIS (MMSI No 992501205).
			Fl.R. period 3s fl. 0.7s, ec. 2.3s	200 61	13		Visible 203°-234°.
7297 A 6214.9	-Cloghcor Range, front.	54° 58.5' N 8° 29.7' W	Iso.W. period 8s	46 14	2	White concrete beacon, black band; 30.	

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IRELAND-WEST COAST							
7297.1 A 6214.91	--Rear, 111 meters from front.	54°58.5' N 8°29.6' W	Iso.W. period 8s	56 17	2	Black concrete beacon, white band; 10.	Synchronized with front.
7297.5 A 6214.95	-Aphort Range, front.	54°58.3' N 8°31.3' W	Oc.W. period 4s	33 10	1	Concrete beacon; 23.	
7297.51 A 6214.96	--Rear, 346 meters from front.	54°58.5' N 8°31.6' W	Oc.W. period 4s	39 12	1	Black concrete beacon, white band; 23.	
NORTH SOUND OF ARAN ISLAND:							
7298 A 6211.2	-Black Rocks.	54°59.4' N 8°29.6' W	Fl.R. period 3s	10 3	1	Red concrete column; 13.	Base of structure submerged at high water.
SOUTH SOUND OF ARAN ISLAND:							
7300 A 6213.6	-Illancrone Island.	54°56.3' N 8°28.4' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	23 7	6	White square concrete tower; 11.	
7304 A 6213.8	-Wyon (Wine) Point.	54°56.5' N 8°27.3' W	Fl.(2)W.R.G. period 10s	25 8	W. 6 R. 3	White square tower; 16.	G. 352°-021°, W.-042°, R.- 121°, W.-150°, R.-208°.
7308 A 6214	-Turk Rocks.	54°57.3' N 8°28.2' W	Fl.G. period 5s fl. 0.5s, ec. 4.5s	20 6	2	Green square concrete tower; 30.	
7312 A 6214.2	-Aileen Reef.	54°58.2' N 8°28.8' W	Q.R. (neon)	20 6	1	Red square concrete beacon, base with steps; 30.	
7316 A 6214.4	-Stream Rock.	54°58.7' N 8°28.6' W	Fl.W. period 5s fl. 1s, ec. 4s	11 3	2	White square brickwork tower; 16.	
RUTLAND ISLAND SOUTH CHANNEL:							
7320 A 6214.6	-Corren's Rock.	54°58.1' N 8°26.7' W	Fl.R. period 3s fl. 1s, ec. 2s	12 4	2	Red square concrete tower; 19.	
7324 A 6214.8	-Teige's Rocks.	54°58.6' N 8°26.8' W	Fl.W. period 3s fl. 0.3s, ec. 2.7s	12 4	2	White round concrete tower, square base; 16.	
7328 A 6215	Dawros Head.	54°49.6' N 8°33.6' W	L.Fl.W. period 10s fl. 2s, ec. 8s	128 39	4	White square column; 10.	
7332 A 6216	Rathlin O'Birne Island.	54°39.9' N 8°49.9' W	Fl.W.R. period 15s fl. 0.3s, ec. 14.7s	116 35	W. 12 R. 10	White tower; 66.	R. 195°-307°, W.-195°. AIS (MMSI No 992501203).
RACON					O(- - -)		
					13	Azimuth coverage 284°-203°. (3 & 10cm).	
7336 A 6222	St. John's Point, Donegal Bay.	54°34.1' N 8°27.6' W	Fl.W. period 6s fl. 1.5s, ec. 4.5s	98 30	14	White tower; 46.	AIS (MMSI No 992501197).
KILLEYBEGS:							
7340 A 6224	-Rotten Island.	54°36.9' N 8°26.4' W	Fl.W.R. period 4s fl. 1s, ec. 3s	66 20	W. 15 R. 11	White tower; 47.	W. 255°-008°, R.-039°, W.- 208°.
7352 A 6228	-Black Rock jetty.	54°38.3' N 8°26.5' W	2 F.R. (vert.)	23 7	Gray metal post, white base; 10.		

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-WEST COAST							
SLIGO HARBOR:							
7360 A 6232	-Blackrock.	54° 18.4' N 8° 37.0' W	Fl.W.R. period 5s fl. 0.3s, ec. 4.7s	78 24	W. 10 R. 8	White tower, black band; 83.	W. 130°-107°, R.-130°. AIS (MMSI No 992501195).
7362 A 6257	Sligo Airport, AVIATION LIGHT.	54° 16.5' N 8° 36.0' W	Al.Fl.W.G. period 2.5s	39 12	23	Control tower; 20.	Occasional.
NEEDLES CHANNEL:							
7364 A 6236	-Lower Rosses, N. of point.	54° 19.7' N 8° 34.4' W	Dir.Fl.(2)W.R.G. period 10s fl. 1s, ec. 1s fl. 1s, ec. 7s	25 8	10	White hut, piles.	G. 061°-066°, W.-070°, R.-075°.
7368 A 6244	-Metal Man Rock Range, front.	54° 18.2' N 8° 34.5' W	Fl.(3)W. period 6.1s fl. 0.4s, ec. 1s fl. 0.4s, ec. 1s fl. 0.4s, ec. 2.9s	10 3	7	Statue on tower; 16.	
7372 A 6244.1	--Rear, near NW. point, 365 meters 125° from front.	54° 18.1' N 8° 34.2' W	Fl.(3)W. period 6.1s fl. 0.4s, ec. 1s fl. 0.4s, ec. 1s fl. 0.4s, ec. 2.9s	43 13	7	Tower; 39.	Synchronized with front.
7376 A 6260	Inishcrone, Killala Bay.	54° 13.2' N 9° 05.8' W	Fl.W.R.G. period 1.5s	25 8	2	Concrete column; 16.	W. 098°-116°, G.-136°, R.-187°.
7378 A 6265	Killala Bay Bone Rock, NE. end.	54° 15.8' N 9° 11.2' W	Q.W.	23 7		N. CARDINAL BY, pillar, topmark.	
7380 A 6266	Broadhaven, Gubacashel Point, W. side of entrance.	54° 16.0' N 9° 53.3' W	Iso.W.R. period 4s	87 27	W. 17 R. 12	White tower; 50.	R. 110°-133°, W.-355°, R.-021°.
7384 A 6268	Eagle Island.	54° 17.0' N 10° 05.5' W	Fl.(3)W. period 15s fl. 0.7s, ec. 2s fl. 0.7s, ec. 2s fl. 0.7s, ec. 8.9s	220 67	18	White tower; 36.	AIS (MMSI No 992501189).
7388 A 6270	Blackrock.	54° 04.1' N 10° 19.2' W	Fl.W.R. period 12s fl. 0.3s, ec. 11.7s	282 86	W. 19 R. 14	White tower; 49.	W. 276°-212°, R.-276°. AIS (MMSI No 992501183).
7392 A 6272	Blacksod Point.	54° 06.0' N 10° 03.6' W	Fl.(2)W.R. period 7.5s fl. 0.5s, ec. 1s fl. 0.5s, ec. 5.5s	42 13	W. 12 R. 9	White tower, dwelling; 39.	R. 189°-210°, W.-018°.
7396 A 6272.5	Achill Island, Ridge Point.	54° 01.8' N 9° 58.5' W	Fl.W. period 5s fl. 0.5s, ec. 4.5s	69 21	5	Mast; 16.	
7400 A 6273.3	-Saulia, pier.	53° 57.1' N 9° 55.5' W	Fl.G. period 3s fl. 0.5s, ec. 2.5s	39 12		Green concrete column; 10.	
7402 A 6273.8	-Beacon	53° 52.1' N 9° 56.5' W	Fl.R. period 2s fl. 0.2s, ec. 1.8s	16 5		Red square concrete tower.	
7404 A 6274	-Carrigin-a-tShrutha.	53° 52.3' N 9° 56.7' W	Q.(2)R. period 5s			Red concrete beacon on rock; 16.	
7408 A 6279	Roonagh Quay Range, front.	53° 45.8' N 9° 54.2' W	Iso.Bu. period 10s	29 9			
7412 A 6279.1	--Rear, 54 meters 144° from front.	53° 45.7' N 9° 54.2' W	Iso.Bu. period 10s	49 15			Synchronized with front.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-WEST COAST							
7416 A 6276	-Achillbeg Island.	53°51.5' N 9°56.8' W	Fl.W.R. period 5s fl. 1s, ec. 4s	184 56	W. 14 R. 16 R. 9	White round tower, square building; 30.	R. 262°-281°, W.-342°, R.-060°, W.-092°, R.(intensified)-099°, W.-118°. Obscured by Clare Island and the Bills. AIS (MMSI No 992501181).
7420 A 6275.3	-Purteen, pier, head.	53°57.9' N 10°06.0' W	Q.R.			Red concrete pillar; 10.	
7424 A 6277.5	Clare Island, E. pier.	53°48.0' N 9°57.0' W	Fl.R. period 3s	15 5	3		
7428 A 6278	-Inishgort, island, S. point.	53°49.6' N 9°40.2' W	L.Fl.W. period 10s fl. 2s, ec. 8s	36 11	10	White tower; 26.	AIS (MMSI No 992501179).
7432 A 6280	Inishbofin, Lyon Head.	53°36.7' N 10°09.5' W	Fl.W.R. period 7.5s fl. 0.7s, ec. 6.8s	44 13	W. 7 R. 4	White post, concrete structure; 16.	W. 036°-058°, R.-184°, W.-325°, R.-036°.
7436 A 6282	Gun Rock, off S. side of Inishbofin.	53°36.6' N 10°13.2' W	Fl.(2)W. period 6s fl. 0.6s, ec. 1.4s fl. 0.6s, ec. 3.4s	27 8	4	White column, white hut; 15.	Visible 296°-253° except where obscured by islands.
7440 A 6284	Cleggan Point.	53°34.5' N 10°07.7' W	Fl.(3)W.R.G. period 15s fl. 0.5s, ec. 3.5s fl. 0.5s, ec. 3.5s fl. 0.5s, ec. 6.5s	66 20	W. 6 R. 3 G. 3	White column, white hut; 16.	G. 345°-091°, W.-124°, R.-221°.
7444 A 6288	Slyne Head.	53°24.0' N 10°14.0' W	Fl.(2)W. period 15s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 12.4s	115 35	19	Black tower; 79.	
	RACON		T(-)		16		(3 & 10cm).
7448 A 6290	Inishnee.	53°22.8' N 9°54.5' W	Fl.(2)W.R.G. period 10s fl. 0.5s, ec. 1s fl. 0.5s, ec. 8s	30 9	W. 5 R. 5 G. 5	White concrete blockhouse; 13.	G. 314°-017°, W.-030°, R.-080°, W.-194°.
7452 A 6292	Croaghnaकेela Island.	53°19.4' N 9°58.1' W	Fl.W. period 3.7s fl. 0.7s, ec. 3s	22 7	5	White concrete pillar; 14.	Visible 034°-045°, 218°-286°, 311°-325°.
GALWAY BAY:							
7456 A 6302	-Kiggaul Bay, head.	53°14.0' N 9°43.0' W	Fl.W.R.G. period 3s fl. 0.6s, ec. 2.4s	15 5	5	White concrete blockhouse, concrete base; 10.	G. 310°-329°, W.-349°, R.-059°.
7460 A 6304	-Cashla Bay, W. side of entrance.	53°14.2' N 9°35.2' W	Fl.(3)W.R. period 10s fl. 0.6s, ec. 1s fl. 0.6s, ec. 1s fl. 0.6s, ec. 6.2s	25 8	W. 8 R. 6	White metal column, concrete structure; 16.	W. 216°-000°, R.-069°. Shown 24 hours.
7462 A 6304.5	-Lion Point, 010°.	53°15.8' N 9°33.9' W	Dir.W.R.G. period 5s	20 6	W. 8 R. 6 G. 6	White square concrete tower, black stripe, column; 13.	Iso.G. 005°-008°30', Iso.W.-011°30', Iso.R.-015°. Range 3/2M by day.
7464 A 6305	-Rossaveil pier range, front.	53°16.0' N 9°33.4' W	Oc.W. period 3s lt. 2s, ec. 1s	39 12	3	White post, red triangular daymark point up.	
7468 A 6305.1	--Rear, 47 meters 116° from front.	53°16.0' N 9°33.0' W	Oc.W. period 3s lt. 2s, ec. 1s	46 14	3	White post, red triangular daymark point down.	
7472 A 6296	--Eeragh Island.	53°08.9' N 9°51.3' W	Fl.W. period 15s fl. 0.2s, ec. 14.8s	115 35	18	White tower, two black bands; 101.	Visible 297°-262°. AIS (MMSI No 992501172).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-WEST COAST							
-Aran Islands:							
7480 A 6298	--Straw Island.	53°07.1' N 9°37.8' W	Fl.(2)W. period 5s fl. 0.4s, ec. 1.3s fl. 0.4s, ec. 2.9s	37 11	12	White tower; 36.	
7484 A 6299	--Killeany Bay Range, front.	53°06.3' N 9°39.7' W	Oc.W. period 5s	21 6	3	White column, white square base; 13.	Visible 142°-197°.
7488 A 6299.1	---Rear, 43 meters 192° from front.	53°06.3' N 9°39.7' W	Oc.W. period 5s	26 8	2	White column, white square base; 13.	Visible 142°-197°.
7492 A 6300	-Kilronan, pier, head.	53°07.1' N 9°40.0' W	2 F.R.	16 5	3	Beacon.	Visible 167°-347°. 2 meters apart.
7494 A 6301	-Kilkieran, Pier.	53°19.3' N 9°43.8' W	Fl.R. period 3s	13 4	4	Red metal pole.	
7496 A 6334	--Inisheer.	53°02.8' N 9°31.5' W	Iso.W.R. period 12s	112 34	W. 16 R. 11	White tower, black band; 112.	W. (visible beyond 7M) 225°-231°, W.-245°, R.-269°, W.-115°. AIS (MMSI No 992501165).
	--RACON		K(- • -)		13		Azimuth coverage 216°-144°. (3 & 10cm).
7500 A 6332	-Black Head.	53°09.2' N 9°15.8' W	Fl.W.R. period 5s fl. 1s, ec. 4s	67 20	W. 11 R. 8	White square concrete tower; 26.	W. 045°-268°, R.-276°. AIS (MMSI No 992501168).
7504 A 6308	-Spiddle, pier, E. head.	53°14.4' N 9°18.5' W	Fl.W.R.G. period 3.5s	35 11	8	Yellow metal column; 10.	G. 265°-308°, W.-024°, R.-066°.
7508 A 6317	-Galway Harbor, Leverets.	53°15.3' N 9°01.9' W	Q.W.R.G.	31 9	10	Black round concrete tower, white bands.	G. 015°-058°, W.-065°, R.-103°, G.-143°30', W.-146°30', R.-015°.
7512 A 6318	--Rinmore.	53°16.1' N 9°02.0' W	Iso.W.R.G. period 4s	24 7	5	White square tower.	G. 359°-008°, W.-018°, R.-027°.
7516 A 6320	--Approach channel, port entry.	53°16.1' N 9°02.8' W	Dir.W.R.G.	23 7	3		F.G. 322°15'-323°45', Al.G.W.-324°45', F.W.-325°15', Al.R.W.-326°15', F.R.-331°15', Fl.R.-332°15'.
7524 A 6322	-Nimmo, pier, head.	53°16.0' N 9°02.8' W	Fl.Y. period 2s	24 7	7	Mast; 20.	
7528 A 6338	Loop Head.	52°33.7' N 9°55.9' W	Fl.(4)W. period 20s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 12.4s	277 84	23	White tower; 75.	Visible 280°-218°.
7530	<i>Ballybunnion Buoy.</i>	52°32.5' N 9°46.9' W	V.Q.W.			N. CARDINAL BY, pillar.	
	RACON		M(- -)		6		(3 & 10cm).
RIVER SHANNON:							
7533 A 6340.5	-Corlis Pt. Range, front.	52°37.1' N 9°36.4' W	Iso.W. period 4s	30 9	10	Concrete hut.	AIS (MMSI No 992501156).
7534 A 6340.51	--Querrin Quay, rear, 046°42' from front.	52°37.7' N 9°35.3' W	Iso.W. period 4s	92 28	10	Framework mast.	F.R. on top of mast.
7536 A 6342	-Scattery Island.	52°36.3' N 9°31.1' W	Fl.(2)W. period 8s fl. 0.5s, ec. 1s fl. 0.5s, ec. 6s	50 15	10	White tower; 39.	Visible 208°-092°.
7540 A 6343	-Tarbert Island.	52°35.5' N 9°21.8' W	Q.W.R.	58 18	W. 14 R. 10	White round tower; 85.	W. 069°-277°, R.-287°, W.-339°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-WEST COAST							
7544 A 6344.6	-Tarbert Range, front.	52°34.4' N 9°18.8' W	Iso.W. period 3s	42 13	3	White metal framework tower, triangular daymark point up.	Visible 123°12'-133°12'.
7548 A 6344.61	--Rear, 400 meters 128°15' from front.	52°34.2' N 9°18.5' W	Iso.W. period 5s	59 18	3	White beacon, green stripe.	
7552 A 6345	-Garraunbaun Point.	52°35.6' N 9°13.9' W	Fl.(3)W.R. period 10s fl. 0.3s, ec. 1s fl. 0.3s, ec. 1s fl. 0.3s, ec. 7.1s	52 16	W. 8 R. 5	White square column; 10.	R. 052°-072°, W.-242°, R.- 262°.
7556 A 6346	-Rinealon Point.	52°37.1' N 9°09.8' W	Fl.W. period 2.5s fl. 0.2s, ec. 2.3s	13 4	7	White structure.	Visible 234°-088°.
7560 A 6347.15	-Foynes Harbor, W. channel Range, front.	52°36.9' N 9°06.5' W	Oc.W. period 4s lt. 3s, ec. 1s	112 34	12	Gray metal pole; 108	
7564 A 6347.16	--E. jetty, rear, 107°54' from front.	52°36.8' N 9°06.1' W	Oc.W. period 4s lt. 3s, ec. 1s	112 34	12	Gray metal pole; 125.	
7568 A 6347.41	-Colleen Point.	52°36.9' N 9°06.9' W	I.Q.G.	8 2	2	Green metal pile; 23.	
7576 A 6348	-Beeves Rocks.	52°39.0' N 9°01.3' W	Fl.W.R. period 5s fl. 1s, ec. 4s	40 12	W. 12 R. 9	Dark stone tower; 60.	W. 064°30'-091°, R.-238°, W.-265°, W. (unintensified) 265°- 064°30'.
7580 A 6350	-Shannon AVIATION LIGHT.	52°41.7' N 8°55.7' W	Al.FI.W.G. period 5s	130 40		Control tower.	
TRALEE BAY:							
7584 A 6392	-Little Samphire Island.	52°16.3' N 9°52.9' W	Fl.W.R.G. period 5s fl. 1s, ec. 4s	56 17	W. 14 R. 11 G. 11	Round stone tower.	R. 262°-275°, R. 280°-090°, G.-140°, W.-152°, R.- 172°.
7588 A 6394	-Great Samphire Island.	52°16.1' N 9°52.2' W	Q.R.	49 15	3	Red pole.	Visible 242°-097°.
7592 A 6396	-Fenit, pier, head.	52°16.2' N 9°51.8' W	2 F.R. (vert.)	39 12	3	Mast; 23.	Visible 148°-058°.
7596 A 6406	Brandon pier, head.	52°16.0' N 10°09.6' W	2 F.G. (vert.)	15 5	4	Column; 10.	
7600 A 6408	Inishtearaght Island.	52°04.5' N 10°39.7' W	Fl.(2)W. period 20s fl. 0.1s, ec. 4.9s fl. 0.1s, ec. 14.9s	275 84	18	White tower; 56.	Visible 318°-221°. AIS (MMSI No 992501143).
RACON				O(---)		18	Azimuth coverage 313°-221°. (3 & 10cm).
7604 A 6410	Dingle Harbor.	52°07.3' N 10°15.5' W	Fl.W.R.G. period 3s	64 20	6	White metal tower; 23.	G. 310°-328°, W.-000°, R.- 024°.
VALENTIA HARBOUR:							
7612 A 6416	-Cromwell (Fort) Point.	51°56.0' N 10°19.3' W	Fl.W.R. period 2s fl. 0.5s, ec. 1.5s	54 16	W. 17 R. 10	White tower; 48.	W. 104°-304°, R.-351°. F.R. lights mark 4 radio masts 1.25 miles WSW. AIS (MMSI No 992501141).
7616 A 6417	-Valentia Harbour.	51°55.5' N 10°18.4' W	Dir.Oc.W.R.G. period 4s lt. 3s, ec. 1s	82 25	W. 11 R. 8 G. 8	White conical tower, red stripe.	G. 136°-140°, W.-142°, R.- 146°. Range 3/2M by day.
7622 A 6417.5	-Harbor Rock.	51°55.8' N 10°18.9' W	Q.(3)W. period 10s	15 5	5	E. CARDINAL YBY, mast, topmark.	Visible 080°-040°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
IRELAND-WEST COAST							
7624 A 6422	Skelligs Rock.	51°46.1' N 10°32.5' W	Fl.(3)W. period 15s fl. 0.3s, ec. 2.3s fl. 0.3s, ec. 2.3s fl. 0.3s, ec. 9.5s	175 53	12	White tower; 39.	Visible 262°-115°. Partially obscured within 6 miles 110°-115°. AIS (MMSI No 992501137).
7628 A 6426	Darrynane Bay Range, front.	51°45.9' N 10°09.2' W	Oc.W. period 3s	34 10	4	Beacon; 14.	
7632 A 6426.1	-Rear, 034° from front.	51°46.0' N 10°08.9' W	Oc.W. period 3s	52 16	4	Beacon; 17.	
7636 A 6430	Bull Rock.	51°35.5' N 10°18.1' W	Fl.W. period 15s fl. 0.8s, ec. 14.2s	300 91	18	Square structure; 75.	AIS (MMSI No 992501134).
	RACON		N(- •)		16		(3 & 10cm).
BANTRY HEAD:							
7640 A 6434	-Bearhaven.	51°37.1' N 9°55.1' W	Fl.(2)W.R. period 10s fl. 1s, ec. 2s fl. 1s, ec. 6s	203 62	W. 14 R. 9	White round tower; 66.	R. 319°-348°, W.-066°, R.- 205°. F.R. on radio tower 3.45 miles WNW. AIS (MMSI No 992501131).
7644 A 6436	--Castletown.	51°38.8' N 9°54.3' W	Dir.Oc.W.R.G. period 5s lt. 4s, ec. 1s	23 7	W. 15 R. 12 G. 12	White hut, black stripe; 20.	G. 019°30'-023°, W.-023°30', R.-027°. AIS (MMSI No 992501125).
7648 A 6438	--Castletownbere harbor, Perch rock.	51°38.8' N 9°54.5' W	Fl.G. period 5s		4	STARBOARD (A) G, beacon, topmark; 26.	
7650 A 6438.5	--Cametringane Spit.	51°38.9' N 9°54.5' W	Q.R.			Red square column.	
7652 A 6439	---Range, front.	51°39.2' N 9°54.4' W	Oc.Bu. period 6s lt. 4s, ec. 2s	13 4	6	White concrete column, red stripe; 10.	Visible 005°-013°.
7656 A 6439.1	---Range, rear 80 meters 008° from front.	51°39.2' N 9°54.4' W	Oc.Bu. period 6s lt. 4s, ec. 2s	22 7	6	White rectangular daymark, red stripe; 13.	Visible 005°-013°.
7658 A 6440	-Oilean na gCadrach.	51°38.4' N 9°53.9' W	Q.W.	10 3	3	Black beacon, yellow base; 16.	
7659 A 6441	-Bearhaven, Beal Lough.	51°39.3' N 9°51.2' W	Fl.G. period 3s	16 5	2	STARBOARD (A) G, pillar, topmark; 23.	
7660 A 6442	-Roancarrimore.	51°39.2' N 9°44.8' W	Fl.W.R. period 5s fl. 1s, ec. 4s	43 13	W. 11 R. 9	Steel tower; 23.	W. 312°-050°, R.-122°, R.(unintensified)-207°, R. 246°-312°. AIS (MMSI No 992501130).
7672 A 6445	---SW. Dolphin.	51°41.2' N 9°32.1' W	Q.Y.	13 4	2	Metal mast, dolphin.	
7676 A 6445.2	---NE. Dolphin.	51°41.3' N 9°31.7' W	Q.Y.	33 10	2	Metal mast, dolphin.	
7678 A 6445.7	---W. Battery.	51°40.9' N 9°31.7' W	Fl.(3)G. period 15s	10 3	2	STARBOARD (A) G, spar, topmark; 10.	
7680 A 6432	-Sheep's (Sheep) Head.	51°32.6' N 9°50.9' W	Fl.(3)W.R. period 15s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 9s	272 83	W. 15 R. 9	White building; 23.	R. 011°18'-016°36', W.- 212°30'. Partially obscured 212°30'- 233°. AIS (MMSI No 992501129).
7684 A 6448	Mizen Head.	51°27.0' N 9°49.2' W	Iso.W. period 4s	180 55	12	Concrete platform, lantern.	Visible 313°-133°. AIS (MMSI No 992501127).
7688 A 6450	Crookhaven, Rock Island Point.	51°28.6' N 9°42.3' W	L.Fl.W.R. period 8s fl. 2s, ec. 6s	67 20	W. 13 R. 11	White tower; 46.	Outside harbor, W. 131°-281°, R.-340°. Inside harbor, R. 281°-348°, W.-111°. AIS (MMSI No 992501124).

Section 7

North Coast of France and Channel Islands

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
7692 A 1836	Corn-Carhai, Roches de Portsall.	48°35.2' N 4°43.9' W	Fl.(3)W. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	62 19	9	White octagonal tower, black top; 66.	
7700 A 1838	Portsall.	48°33.8' N 4°42.2' W	Oc.(4)W.R.G. period 12s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 5s, ec. 1s	30 9	W. 13 R. 10 G. 10	White column, red top; 23.	G. 058°-084°, W.-088°, R.-058°.
L'ABERWRACH:							
7704 A 1826	-Grand Chenal First Range, front, Ile Vrach, N. side of entrance.	48°36.9' N 4°34.5' W	Q.R.	66 20	7	White square tower, orange top, dwelling; 49.	
7708 A 1826.1	--Rear, Lanvaon, 3 km. 100°06' from front.	48°36.6' N 4°32.1' W	Q.W.	180 55	12	White rectangular tower, orange triangular daymark point up; 89.	Intensified 090°-110°. Synchronized with front.
7712 A 1831	-Leading light.	48°35.9' N 4°33.9' W	Dir.Oc.(2)W.R.G. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	17 5	W. 13 R. 11 G. 11	White structure; 13.	G. 125°42'-127°12', W.-128°42', R.-130°12'.
7716 A 1822	Ile Vierge.	48°38.3' N 4°34.1' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	253 77	27	Gray truncated conical tower; 269.	Visible 337°-325°. AIS (MMSI No 992271317).
7720 A 1820	Pontusval Pointe de Beg-Pol.	48°40.6' N 4°20.7' W	Oc.(3)W.R. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	52 16	W. 10 R. 7	White square tower, black top, white dwelling; 49.	W. 096°-056°, R.-096°. 3 Q.Y. (occasional) at base. 9 Q.W. (vert.) on radio tower 2.4M S.
7724 A 1818	Mogueriec Range, front.	48°41.4' N 4°04.5' W	Iso.W.G. period 4s	30 9	W. 11 G. 6	White tower, green top; 33.	W. 158°-166°, G.-158°.
7728 A 1818.1	-Rear, 440 meters 162° from front.	48°41.1' N 4°04.5' W	Iso.G. period 4s	72 22	7	White tower, green top; 36.	Visible 142°-182°. Synchronized with front.
7732 A 1816	Ile de Batz.	48°44.7' N 4°01.6' W	Fl.(4)W. period 25s fl. 0.5s, ec. 3.6s fl. 0.5s, ec. 3.6s fl. 0.5s, ec. 3.6s fl. 0.5s, ec. 12.2s	226 69	23	Gray tower, black lantern; 141.	AIS (MMSI No 992271315).
	Auxiliary light.		F.R.	214 65	7		Visible 024°-059°.
BAIE DE MORLAIX:							
7740 A 1808	-Ar Chaden, on Pighet Islet.	48°44.0' N 3°58.3' W	Q.(6)+L.Fl.W.R. period 15s	46 14	W. 8 R. 6	S. CARDINAL YB, tower, topmark; 72.	R. 262°-289°30', W.-293°, R.-326°, W.-110°.
7744 A 1810	-Men-Guen-Bras.	48°43.8' N 3°58.1' W	Q.W.R.G.	46 14	W. 9 R. 6 G. 6	N. CARDINAL BY, tower, topmark; 65.	W. 068°-073°, R.-197°, W.-257°, G.-068°.
7748 A 1812	-Roscoff, Range, front.	48°43.6' N 3°58.7' W	Oc.(3)G. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	22 7	7	White column, green top; 23.	Visible 078°-318°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
7752 A 1812.1	--Rear, 430 meters 209° from front.	48°43.3' N 3°58.9' W	Oc.(3)W. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	79 24	15	Gray square tower, white front; 79.	Visible 062°-242°. Synchronized with front.
7756 A 1805	-Bloscon, jetty, head.	48°43.2' N 3°57.7' W	Fl.W.G. period 4s fl. 1s, ec. 3s	30 9	W. 10 G. 7	White round tower, green top; 20.	W. 200°-210°, G.-200°. Auxiliary light Fl.W. 2s shown in fog only when vessels are entering.
7758 A 1804	-Le Menk.	48°43.3' N 3°56.7' W	Q.(9)W.R. period 15s	20 6	W. 6 R. 4	W. CARDINAL YBY, tower, topmark; 36.	W. 160°-188°, R.-160°.
7760 A 1800.1	-Ile Louet Range, front in line 176° with La Lande.	48°40.5' N 3°53.4' W	Oc.(3)W.G. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	56 17	W. 12 G. 8	White square tower, black top; 39.	G. 244°-305°, W.-244°.
7764 A 1800	-La Lande , common rear.	48°38.2' N 3°53.1' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	279 85	23	White square tower, black top; 62.	
7768 A 1799.9	-Ile Noire, E. side of entrance, front, in line 190°30' with La Lande.	48°40.3' N 3°52.5' W	Oc.(2)W.R.G. period 6s lt. 3s, ec. 1s lt. 1s, ec. 1s	49 15	W. 11 R. 8 G. 8	White square tower, red lantern; 46.	G. 051°-135°, R.-211° W.- 051°.
7772 A 1796	-Anse de Primel Range, front.	48°42.4' N 3°49.2' W	Q.R.	115 35	7	White pylon, white lantern, red stripe; 23.	Visible 134°-168°.
7776 A 1796.1	--Rear, 202 meters 152° from front.	48°42.4' N 3°49.1' W	Q.R.	184 56	7	White rectangular wall, red stripe; 13.	Synchronized with front.
BAIE DE LANNION:							
7780 A 1792	-Bec-Lequer.	48°44.3' N 3°32.9' W	Oc.(4)W.R.G. period 12s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 5s, ec. 1s	197 60	W. 12 R. 9 G. 9	West face of white house, red lantern; 26.	G. 007°-084°, W.-098°, R.- 129°.
7784 A 1794	-Locquemau Range, front.	48°43.4' N 3°34.5' W	Q.R.	69 21	7	White pylon, red top; 62.	Visible 068°-228°.
7788 A 1794.1	--Rear, 484 meters 121° from front.	48°43.3' N 3°34.1' W	Q.R.	128 39	7	White gabled building, red lantern; 20.	Visible 016°-232°. Synchronized with front.
7790 A 1791	Pointe de Lan Kerellec.	48°46.7' N 3°35.0' W	Iso.W.R.G. period 4s	49 15	W. 8 R. 5 G. 5	Gray round tower; 13.	G. 058°-064°, W.-069°, R.- 130°.
7792 A 1790	Les Triagoz.	48°52.3' N 3°38.8' W	Fl.(2)W.R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	102 31	W. 14 R. 11	Gray square tower, red lantern; 98.	W. 010°-339°, R.-010°. Reserve light range 10/7M.
7796 A 1786	Les Sept Iles.	48°52.7' N 3°29.4' W	Fl.(3)W. period 20s fl. 0.2s, ec. 4s fl. 0.2s, ec. 4s fl. 0.2s, ec. 11.4s	194 59	23	Gray tower, dwelling; 66.	AIS (MMSI No 992271326).
7800 A 1784	Mean Ruz.	48°50.3' N 3°29.0' W	Oc.W.R. period 4s lt. 3s, ec. 1s	85 26	W. 12 R. 9	Pink square tower; 49.	W. 226°-242°, R.-226°.
PERROS-GUIREC:							
7804 A 1782	-Mole Ouest.	48°48.2' N 3°26.6' W	Fl.(2)R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	12 4	6	White pile, red top; 13.	
7808 A 1774	-Passe de l'Est Range, front.	48°47.8' N 3°26.7' W	Q.W.	92 28	14	White house; 23.	Intensified 214°30'-234°30'.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
7812 A 1774.1	-- Kerprigent , rear, 2.9 km. 224°48' from front.	48°46.8' N 3°28.2' W	Q.W.	259 79	21	White tower; 46.	Intensified 221°-228°. Synchronized with front.
7816 A 1780	- Jetee Est (Linkin), head.	48°48.3' N 3°26.3' W	Fl.(2)G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	13 4	6	White tower, green top; 13.	
7820 A 1770	- Passe del'Ouest Kerjean .	48°47.8' N 3°23.4' W	Dir.Oc.(2+1)W.R.G. period 12s lt. 4s, ec. 1s lt. 4s, ec. 1s lt. 1s, ec. 1s	256 78	W. 10 R. 8 G. 8	White tower, black top; 52.	G. 133°42'-143°12', W.- 144°48', R.-154°18'.
7824 A 1768	Port Blanc , on Tourelle du Voleur.	48°50.2' N 3°18.5' W	Fl.W.R.G. period 4s fl. 1s, ec. 3s	56 17	W. 14 R. 11 G. 11	White tower; 39.	G. 140°-148°, W.-152°, R.- 160°.
RIVIERE DE TREGUIER:							
7832 A 1760	- La Corne .	48°51.3' N 3°10.6' W	Fl.(3)W.R.G. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	46 14	W. 8 R. 6 G. 6	White tower, red base; 75.	W. 052°-059°, R.-173°, G.- 213°, W.-220°, R.-052°.
7836 A 1762	- Grande Passe Range , front, Port de la Chaîne.	48°51.5' N 3°07.9' W	Oc.W. period 4s lt. 3s, ec. 1s	39 12	11	White house; 16.	Visible 042°-232°.
7840 A 1762.1	-- Saint Antonie , rear, 1.4 km. 137° from front.	48°51.0' N 3°07.1' W	Oc.R. period 4s lt. 3s, ec. 1s	112 34	15	White and red house; 20.	Intensified 134°-140°.
7844 A 1738	Les Heaux-de-Brehat .	48°54.5' N 3°05.2' W	Fl.(4)W.R.G. period 15s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 8s	157 48	W. 15 R. 11 G. 11	Gray tower; 187.	R. 227°-247°, W.-270°, G.- 302°, W.-227°.
7848 A 1734	Roches-Douvres .	49°06.3' N 2°48.9' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	197 60	24	Pink tower, green top, building; 213.	
PLATEAU DE BARNOUIC:							
7852 A 1730	- Roche Barnouic , NE. of plateau.	49°01.5' N 2°48.5' W	V.Q.(3)W. period 5s	49 15	7	E. CARDINAL BYB, tower, topmark; 62.	
7856 A 1726	La Horaine .	48°53.5' N 2°55.2' W	Fl.(3)W. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	43 13	7	Gray octagonal tower, black hut; 75.	
7860 A 1740	Ile de Brehat , Le Paon, N. side of island.	48°52.0' N 2°59.1' W	Oc.W.R.G. period 4s	72 22	W. 11 R. 8 G. 8	White tower; 39.	W. 033°-078°, G.-181°, W.- 196°, R.-307°, W.-316°, R.-348°.
7864 A 1742	- Rosedo .	48°51.4' N 3°00.3' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	95 29	20	White tower; 43.	Reserve light range 15M.
7868 A 1744	- Men Joliguet .	48°50.1' N 3°00.2' W	Fl.(2)W.R.G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	20 6	W. 11 R. 8 G. 8	Yellow tower, black band, two triangular topmarks points together; 26.	R. 255°-279°, W.-283°, G.- 175°.
TRIEUX:							
7872 A 1746	- Rocher Men Grenn , in Baiede Lanneros.	48°51.3' N 3°03.9' W	Q.(9)W. period 15s	22 7	7	W. CARDINAL YBY, tower, topmark; 33.	
7876 A 1748	- La Croix Range , front.	48°50.3' N 3°03.3' W	Q.W.	49 15	18	Two gray towers, white on NE. side, red tops; 75.	Intensified 215°-235°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
7880 A 1748.1	--Bodic, rear, W. bank of river, 3.8 km. 224°42' from front.	48°48.8' N 3°05.5' W	Q.W.	180 55	22	Green top, white trapezoidal daymark; 75.	Intensified 221°-229°. Synchronized with front.
7884 A 1745	-Chenal du Ferlas, Roche Quinonec.	48°49.4' N 3°03.7' W	Dir.W.R.G.	39 12	W. 10 R. 8 G. 8	Gray round tower; 20.	Q.G. 254°-257°, Q.W.- 257°42', Q.R.-260°42'.
7888 A 1745.4	--Kermouster, mouth of the Trieux.	48°49.6' N 3°05.2' W	Dir.W.R.G. period 2s fl. 0.4s, ec. 1.6s	54 16	W. 10 R. 8 G. 8	White structure; 7.	Fl.G. 267°-270°, Fl.W.-272°, Fl.R.-274°.
7892 A 1752	-Coatmer Range, front.	48°48.3' N 3°05.8' W	Q.R.G.	52 16	7	White gabled structure; 36.	R. 200°-250°, G.-053°.
7896 A 1752.1	--Rear, 660 meters 218°42' from front.	48°48.0' N 3°06.0' W	Q.R.	164 50	7	White gabled structure; 26.	Visible 197°-242°.
7900 A 1758	-Les Perdrix.	48°47.8' N 3°05.8' W	Fl.(2)W.G. period 6s fl. 0.2s, ec. 1.4s fl. 0.2s, ec. 4.2s	16 5	W. 6 G. 3	Green tower; 36.	G. 165°-197°, W.-202°30' G.- 040°.
PAMPOL:							
7904 A 1722	-Pointe de Porz-Don.	48°47.5' N 3°01.6' W	Oc.(2)W.R. period 6s lt. 3s, ec. 1s lt. 1s, ec. 1s	43 13	W. 15 R. 11	White house; 26.	W. 269°-272°, R.-279°.
7908 A 1724	-Jetee de Kerno Range, front.	48°47.1' N 3°02.5' W	Q.R.	16 5	7	Red and white hut; 13.	
7912 A 1724.1	--Rear, 360 meters 262°12' from front.	48°47.0' N 3°02.8' W	Q.R.	46 14	10	White cylindrical structure, red top; 39.	Intensified 260°12'-264°12'.
7916 A 1720	-L'Ost-Pic (Lost Pic), on detached rock E. of Mets de Goelo.	48°46.8' N 2°56.4' W	Fl.(4)W.R. period 15s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6.5s	66 20	W. 9 R. 6	Two white towers, red tops; 49.	W. 105°-116°, R.-221°, W.- 253°, R.-291°, W.-329°.
7920 A 1716	Le Grand Lejon.	48°45.0' N 2°39.9' W	Fl.(5)W.R. period 20s fl. 0.1s, ec. 2.7s fl. 0.1s, ec. 2.7s fl. 0.1s, ec. 2.7s fl. 0.1s, ec. 2.7s fl. 0.1s, ec. 8.7s	56 17	W. 18 R. 14	Red truncated conical tower, white bands; 82.	R. 015°-058°, W.-283°, R.- 350°, W.-015°
7924 A 1714	Ile Harbor Roches de St. Quay.	48°40.0' N 2°48.5' W	Fl.W.R.G. period 4s	52 16	W. 9 R. 6 G. 6	White tower, red top, white dwelling; 43.	R. 011°-133°, G.-270°, R.- 306°, G.-358°, W.-011°.
7926 A 1713.55	Saint-Quay-Portrieux.	48°38.8' N 2°49.4' W	Iso.W.R.G. period 4s	52 16	W. 15 R. 11 G. 11	Concrete tower; 39.	W. 159°-179°, G.-316°, W.- 320°30', R.-159°. Reserve light range 11/8M.
7928 A 1712	-N. mole, head.	48°38.7' N 2°49.4' W	Fl.G. period 2.5s fl. 0.5s, ec. 2s	35 11	2	White and green octagonal metal tower; 39.	Visible 265°-155°.
7932 A 1713	-S. mole, head.	48°38.7' N 2°49.4' W	Fl.R. period 2.5s fl. 0.5s, ec. 2s	26 8	2	White mast, red top; 20.	
7936 A 1710	Binic, Penthièvre Mole, head.	48°36.1' N 2°49.0' W	Fl.(4)G. period 15s	39 12	6	Green beacon, green triangular daymark point up; 39.	Unintensified 020°-110°.
7940 A 1708	Le Legue, Point a l'Aigle, jetty.	48°32.1' N 2°43.0' W	V.Q.G.	43 13	8	White tower, green top; 46.	Visible 160°-070°.
7948 A 1704	Dahouet, Petite Muette Tower.	48°34.8' N 2°34.3' W	Fl.W.R.G. period 4s fl. 1s, ec. 3s	33 10	W. 9 R. 6 G. 6	Green and white tower; 56.	G. 055°-114°, W.-146°, R.- 196°, G.-331°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
7952 A 1703	Le Rohein.	48°38.8' N 2°37.8' W	Q.(9)W.R.G. period 15s	43 13	W. 8 R. 5 G. 5	W. CARDINAL YBY, tower, topmark; 49.	R. 072°-105°, W.-180°, G.- 193°, W.-237°, G.-282°, W.-301°, G.-330°, W.- 072°.
7954 A 1701	-Erquy, jetty, head.	48°38.0' N 2°28.7' W	Fl.(2)W.R.G. period 6s	36 11	W. 10 R. 7 G. 7	White tower, red top; 33.	W. 081°-094°, G.-111°, W.- 120°, R.-081°.
7956 A 1702	Inside jetty extremity.	48°38.1' N 2°28.4' W	Fl.(3)R. period 12s	33 10	3	Red and white tower; 33.	
7960 A 1698	Cap Frehel.	48°41.0' N 2°19.1' W	Fl.(2)W. period 10s fl. 0.3s, ec. 2.2s fl. 0.3s, ec. 7.2s	279 85	29	Gray square tower, green lantern; 108.	Reserve light range 15M.
7964 A 1697	St. Cast, mole, head.	48°38.4' N 2°14.6' W	Iso.W.G. period 4s	36 11	W. 9 G. 6	Green and white structure; 30.	G. 180°-206°, W.-217°, G.- 235°, W.-245°, G-340°, obsc.-180°.
ST. MALO:							
7972 A 1680	-Le Buron.	48°39.3' N 2°03.7' W	Fl.(4)G. period 15s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6.5s	49 15	7	Green tower; 75.	
7976 A 1674	-Les Courtis.	48°40.5' N 2°05.8' W	Fl.G. period 4s fl. 1s, ec. 3s	46 14	7	Green tower; 69.	
7980 A 1676	-Grand Jardin Range, front.	48°40.2' N 2°05.0' W	Fl.(2)R. period 10s fl. 0.3s, ec. 2.2s fl. 0.3s, ec. 7.2s	79 24	15	Gray truncated conical tower, red top; 125.	Forms range 129°42' with La Ballue for Chenal de la Petite Porte. Forms range 089°06' with Rochebonne for Chenal de la Grande Porte. AIS (MMSI No 992271314).
7984 A 1676.1	--Rochebonne , rear 7.7 km. 089° from front.	48°40.3' N 1°58.7' W	F.R.	131 40	24	Gray square tower, west face white, red top; 65.	Intensified 088°12'-089°42'. Rear range 089°06' with 7980. AIS (MMSI No 992271311).
7988 A 1675	-La Plate.	48°40.8' N 2°01.9' W	Q.W.R.G.	36 11	W. 10 R. 7 G. 7	N. CARDINAL BY, tower, topmark; 72.	W. 140°-203°, R.-210°, W.- 225°, G.-140°.
7996 A 1695	-Saint Briac, mouth of Le Fremur.	48°37.0' N 2°08.2' W	Dir.W.R.G. period 4s	33 10	W. 13 R. 11 G. 11	White post, hut; 20.	Iso.G. 121°30'-124°30', Iso.W.-125°30', Iso.R.- 129°30'.
8000 A 1686	-Les Bas Sablons Range, front.	48°38.1' N 2°01.3' W	F.G.	66 20	22	White square tower, black top; 62.	Intensified 127°12'-130°12'. Shown 24 hours. AIS (MMSI No 992271312).
8004 A 1686.1	--La Ballue , rear, 1.65 km. 128°36' from front.	48°37.6' N 2°00.2' W	F.G.	226 69	25	Gray square tower; 121.	Intensified 128°-129°30'. Rear range 129°42' with 7980. Shown 24 hours. AIS (MMSI No 992271313).
8006 A 1673	-Saint Enogat Range, front.	48°38.3' N 2°04.1' W	Iso.W. period 4s	10 3	6	White metal mast; 13.	Visible 126°-236°.
8006.1 A 1673.1	--Dinard, rear 158°12' from front.	48°37.0' N 2°03.3' W	Iso.W. period 4s	279 85	8	White water tower; 115.	Visible 143°-210°. Synchronized with front.
8008 A 1682	-Mole des Noires, head.	48°38.5' N 2°01.9' W	V.Q.R.	36 11	6	White pyramidal tower, red top; 33.	Horn: 2 bl. ev. 20s (bl. 3s, si. 3s, bl. 3s, si. 11s).
BAIE DU MONT SAINT MICHEL:							
8012 A 1670	-Le Herpin.	48°43.8' N 1°48.9' W	Iso.W. period 4s	66 20	13	White tower, black top and base; 92.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
8016 A 1672	-La Houle-sous-Cancale, pier, head.	48°40.1' N 1°51.1' W	Oc.(3)G. period 12s lt. 4.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s	39 12	7	White pylon, black top, hut; 36.	
8020 A 1654	Iles Chausey.	48°52.2' N 1°49.4' W	Fl.W. period 5s fl. 0.3s, ec. 4.7s	128 39	23	Gray square tower; 62.	Horn: (about 80 meters SE.) 1 bl. ev. 30s (bl. 3s, si. 27s).
8024 A 1655	-La Crabiere E., 332°06'.	48°52.5' N 1°49.4' W	Dir.Oc.(3)W.R.G. period 12s lt. 4.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s	16 5	W. 9 R. 6 G. 6	S. CARDINAL YB, beacon, topmark; 36.	W. 079°-291°, G.-329°, W.-335°, R.-079°.
8028 A 1656	Le Pignon.	48°53.5' N 1°43.4' W	Fl.(2)W.R. period 6s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 3.5s	33 10	W. 9 R. 6	Black tower, white band; 65.	R. 005°-150°, W.-005°.
GRANVILLE:							
8036 A 1660	-Pointe du Roc.	48°50.1' N 1°36.8' W	Fl.(4)W. period 15s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 7.3s	161 49	23	Gray tower, red top; 52.	Horn: (about 310 meters NE.) 4 bl. ev. 60s (bl. 2s, si. 3s, bl. 2s, si. 3s, bl. 2s, si. 3s, bl. 2s, si. 43s).
8040 A 1666	-Le Loup.	48°49.6' N 1°36.2' W	Fl.(2)W. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	27 8	11	ISOLATED DANGER BRB, tower, topmark; 79.	Radar reflector.
8044 A 1662	-W. jetty.	48°49.9' N 1°36.3' W	Fl.R. period 2.5s fl. 0.5s, ec. 2s	39 12	4	Red pylon; 30.	Synchronized with E. jetty.
8048 A 1664	-E. jetty.	48°50.0' N 1°36.2' W	Fl.G. period 2.5s fl. 0.5s, ec. 2s	36 11	4	White pylon, green top, hut; 26.	Synchronized with W. jetty.
8052 A 1668	-Herel marina, jetty, head.	48°49.9' N 1°35.9' W	Fl.(2)R. period 6s fl. 0.5s, ec. 1.5s fl. 0.5s, ec. 3.5s	39 12	5	White metal post, red top; 30.	Fl.(2)G. 6s shown on inner jetty. Horn: 2 bl. ev. 40s (bl. 2s, si. 3s, bl. 2s, si. 33s).
8054 A 1649	Le Ronquet.	49°00.1' N 1°38.1' W	Fl.(2)W.R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	36 11	W. 6 R. 4	ISOLATED DANGER BRB, tower, topmark.	W. 293°-100°, R.-293°.
8056 A 1650	Regneville, Pointe d'Agon.	49°00.2' N 1°34.6' W	Oc.(2)W.R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	39 12	W. 10 R. 7	White tower, red top, dwellings; 39.	R. 063°-110°, W.-063°.
8060 A 1651	-Havre de Regneville, 028°.	49°00.6' N 1°33.4' W	Dir.Oc.W.R.G. period 4s lt. 3s, ec. 1s	30 9	W. 12 R. 9 G. 9	Dwelling; 20.	G. 024°-027°, W.-029°, R.-033°.
8064 A 1648	Le Senequet.	49°05.5' N 1°39.8' W	Fl.(3)W.R. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	59 18	W. 9 R. 6	White tower; 85.	R. 083°30'-116°30', W.-083°30'.
8068 A 1644	Portbail, Entrance Range, front.	49°19.7' N 1°42.5' W	Q.W.	46 14	10	White pylon, red top; 26.	
8072 A 1644.1	-Rear, 870 meters 042° from front.	49°20.1' N 1°42.0' W	Oc.W. period 4s lt. 3s, ec. 1s	65 20	10	Belfry; 115.	
8076 A 1646	-Digue, submersible.	49°19.5' N 1°43.0' W	Q.(2)R. period 5s fl. 0.2s, ec. 0.8s fl. 0.2s, ec. 3.8s	16 5	4	White mast, red top; 23.	

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FRANCE-NORTH COAST							
8080 A 1638	Cap de Carteret.	49°22.4' N 1°48.4' W	Fl.(2+1)W. period 15s fl. 0.3s, ec. 2.3s fl. 0.3s, ec. 5.9s fl. 0.3s, ec. 5.9s	265 81	26	Gray tower, green top; 59.	
8084 A 1640	-Carteret, W. jetty, head.	49°22.0' N 1°47.3' W	Oc.R. period 4s lt. 3s, ec. 1s	23 7	7	White metal post, red top; 10.	
8088 A 1641	-Submerged breakwater, head.	49°22.2' N 1°47.2' W	Fl.G. period 2.5s fl. 0.5s, ec. 2s	13 4	2	White metal post, green top; 10.	
8092 A 1632	Dielette.	49°33.2' N 1°51.8' W	Iso.W.R.G. period 4s	39 12	W. 10 R. 7 G. 7	White tower, green top; 36.	G. 070°-135°, W.-145°, R.-180°.
8095 A 1513	La Foraine.	49°42.9' N 1°58.3' W	V.Q.(9)W. period 10s	39 12	6	W. CARDINAL YBY, beacon tower; 43.	
CHANNEL ISLANDS (U.K.)							
JERSEY:							
8100 A 1620	-La Corbiere.	49°10.7' N 2°15.0' W	Iso.W.R. period 10s	119 36	W. 18 R. 16	White round stone tower; 62.	W. 250-294°, R.-328°, W.-148°, R.-250°.
8104 A 1621	-Beacon, about 815 meters 071° from Point Corbiere.	49°10.9' N 2°14.3' W	F.R.		5	Red rectangular daymark, white stripe.	Visible 331°-151°.
8108 A 1616	--Noirmont Point.	49°09.9' N 2°10.1' W	Fl.(4)W. period 12s fl. 0.7s, ec. 1.5s fl. 0.7s, ec. 1.5s fl. 0.7s, ec. 1.5s fl. 0.7s, ec. 4.7s	59 18	10	Black tower, white band; 33.	
-St. Aubins Bay:							
8112 A 1614	--St. Aubin, N. pier, head.	49°11.2' N 2°09.9' W	Iso.R. period 4s Dir.W.R.G.	41 12 16 5	10	Metal column.	F.G. 248°-253°, F.W.-255°, F.R.-260°.
8116 A 1614.2	--Fort, pier, head.	49°11.2' N 2°09.5' W	Fl.R. period 4s fl. 0.5s, ec. 3.5s	26 8	1		
8120 A 1604	--Elizabeth Post Range, front.	49°10.6' N 2°06.9' W	Oc.G. period 5s lt. 4s, ec. 1s	33 10	11	Metal framework tower, dolphin, red rectangular daymark.	
8124 A 1604.1	--Albert pier, rear, 230 meters 022°40' from front.	49°10.7' N 2°06.9' W	Oc.R. period 5s lt. 4s, ec. 1s	59 18	12	Metal framework tower, red rectangular daymark; 49.	Synchronized with front.
8128 A 1606	--Platte Rock.	49°10.2' N 2°07.3' W	Fl.R. period 1.5s fl. 0.3s, ec. 1.2s	20 6	5	Red metal column.	
8132 A 1609	--S. end of old harbor Range, front.	49°10.7' N 2°06.7' W	F.G.			White column.	
8136 A 1609.1	--Rear, 80 meters 078° from front.	49°10.7' N 2°06.5' W	F.G.			White column.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
CHANNEL ISLANDS (U.K.)							
8140 A 1598	-Demie de Pas.	49°09.0' N 2°06.2' W	Mo.(D)W.R. period 12s fl. 3s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 5s	36 11	8	Black tower, yellow top.	R. 130°-303°, W.-130°. Horn: 3 bl. ev. 60s (bl. 2s, si. 2s, bl. 2s, si. 2s, bl. 2s, si. 50s).
	-RACON		T(-) period 120s				(3cm).
8144 A 1594	-La Greve d'Azette Range, front.	49°10.1' N 2°05.1' W	Oc.W. period 5s lt. 4s, ec. 1s	75 23	14	White metal framework structure, red rectangular daymark; 66.	Visible 034°-129°.
8148 A 1594.1	-Mont Ube, rear, 1.9 km. 082° from front.	49°10.3' N 2°03.6' W	Oc.R. period 5s lt. 4s, ec. 1s	150 46	12	White metal framework tower; 46.	Visible 250°-095°. Reserve light of low power.
8152 A 1588	-Gorey Range, Dir. Lt.	49°11.8' N 2°01.3' W	Oc.W.R.G. period 5s lt. 4s, ec. 1s	26 8	8	White metal framework tower; 16.	G. 228°-296°30', W.-299°30', R.-008°.
8160 A 1586	-St. Catherine Bay, Verclut, breakwater, head.	49°13.3' N 2°00.6' W	Fl.W. period 1.5s fl. 0.2s, ec. 1.3s	60 18	13	White framework tower; 30.	Unlit rear beacon.
8164 A 1584	-Sorel Point.	49°15.6' N 2°09.5' W	L.Fl.W.R. period 7.5s fl. 2s, ec. 5.5s	163 50	15	White round concrete tower; 10.	W. 095°-112°, R.-173°, W.-230°, R.-269°, W.-273°.
8168 A 1585	-Bonne Nuit Bay, Range, front.	49°15.1' N 2°07.0' W	F.G.	23 7	6	White column.	
8172 A 1585.1	--Rear, 170 meters 223° from front.	49°15.1' N 2°07.2' W	F.G.	112 34	6	Red daymark.	
8176 A 1622	-Grosnez Point.	49°15.5' N 2°14.8' W	Fl.(2)W.R. period 15s fl. 0.7s, ec. 1.5s fl. 0.8s, ec. 12s	164 50	W. 19 R. 17	White concrete hut.	W. 081°-188°, R.-241°.
GUERNSEY:							
8180 A 1580	-Les Hanois.	49°26.1' N 2°42.2' W	Fl.(2)W. period 13s fl. 0.1s, ec. 3.1s fl. 0.1s, ec. 9.7s	108 33	20	Gray round granite tower, black lantern; 108. Helicopter platform.	Visible 294°-237°. 4 F.R. on masts 1.27 miles E. Horn: 2 bl. ev. 60s (bl. 3s, si. 2s, bl. 3s, si. 52s).
8184 A 1548	-Platte Fougere.	49°30.8' N 2°29.1' W	Fl.W.R. period 10s fl. 1.3s, ec. 8.7s	50 15	16	White octagonal tower, black band; 82.	W. 155°-085°, R.-155°. Horn: 1 bl. ev. 45s (bl. 3s, si. 42s).
	-RACON		P(• - - •)				
8188 A 1548.5	-Tautenay.	49°30.1' N 2°26.8' W	Q.(3)W.R. period 6s	23 7	W. 7 R. 6	Black and white beacon.	W. 050°-215°, R.-050°.
8192 A 1552	-Roustel, S. head.	49°29.2' N 2°28.8' W	Q.W.	26 8	7	White metal framework column; 26.	
8196 A 1550	-Platte.	49°29.1' N 2°29.5' W	Fl.W.R. period 3s fl. 0.3s, ec. 2.7s	21 6	W. 7 R. 5	Green conical stone tower; 30.	R. 024°-219°, W.-024°.
HERM:							
8200 A 1546.4	-Epec E.	49°28.0' N 2°27.9' W	Fl.G. period 3s			Green mast.	
8204 A 1546.6	-Vermerette V.	49°28.3' N 2°27.8' W	Fl.(2)Y. period 5s			Beacon.	
8205 A 1546.7	-Gate Rock.	49°27.9' N 2°27.4' W	Q.(9)W. period 15s			W. CARDINAL YBY, beacon, topmark.	
8208 A 1546	-Alligande A.	49°27.9' N 2°28.8' W	Fl.(3)G. period 5s			Black mast.	Radar reflector.

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CHANNEL ISLANDS (U.K.)							
8212 A 1559	-Brehon.	49°28.3' N 2°29.3' W	Iso.W. period 4s	62 19	9	Beacon, round tower.	
8216 A 1557	-St. Sampson Harbor, N. pier, head.	49°29.0' N 2°30.7' W	F.G.	10 3	5	Post; 7.	Visible 230°-340°.
8220 A 1558	--S. pier Range, front.	49°28.9' N 2°30.8' W	F.R.	10 3	5	Post; 7.	Visible 230°-340°.
8224 A 1558.1	---Rear, 390 meters 286° from front.	49°29.0' N 2°31.0' W	F.G.	42 13		Clock tower; 39.	
8228 A 1554	-St. Sampson Harbor, Crocq Pier, head.	49°29.0' N 2°31.1' W	F.R.	36 11	5	Red column; 20.	Visible 250°-340°. Traffic signals.
	-St. Peter Port:						
8232 A 1560	-- New Harbor Range, front.	49°27.3' N 2°31.4' W	Al.W.R. period 10s W. lt. 7.5s R. lt. 2.5s	46 14	16	Dark round granite tower, white on NE. face; 40.	Visible 187°-007°, unintensified landward. Horn: 1 bl. ev. 15s (bl. 2.5s, si. 12.5s).
8236 A 1560.1	---Belvedere, rear, 990 meters 220° from front.	49°26.9' N 2°32.0' W	Oc.W. period 10s lt. 7.5s, ec. 2.5s	200 61	14	White tower, white square daymark; 13.	Visible 179°-269°. Intensified 217°-223°.
8246 A 1567	---Fish quay, NW. head.	49°27.3' N 2°31.8' W	F.R.	6 2			
8246.5 A 1567.2	---SW. head.	49°27.3' N 2°31.9' W	F.R.	6 2			
8248 A 1569	---Range, front.	49°27.4' N 2°31.9' W	Oc.R. period 5s lt. 4s, ec. 1s	34 10	14	White framework tower, red lantern; 23.	
8248.5 A 1569.1	----Rear, 160 meters 265° from front.	49°27.4' N 2°32.1' W	Iso.R. period 2s	72 22	3	White square building.	Visible 260°-270°.
8249 A 1570	--Queen Elizabeth II Marina.	49°27.8' N 2°31.8' W	Oc.W.R.G. period 3s	16 5	6		G. 258°-268°, W.-272°, R.- 282°.
8252 A 1562	--White Rock Pier, head.	49°27.4' N 2°31.6' W	Oc.G. period 5s lt. 4s, ec. 1s	36 11	14	Round stone tower; 32.	Intensified 174°-354°. Traffic signals.
8256 A 1574	-St. Martins Point.	49°25.3' N 2°31.7' W	Fl.(3)W.R. period 10s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 4s	50 15	14	White concrete building; 16.	R. 185°-191°, W.-011°, R.- 061°30'. Horn: 3 bl. ev. 30s (bl. 1s, si. 2.5s, bl. 1s, si. 2.5s, bl. 1s, si. 22s).
	SARK:						
8260 A 1544	- Point Robert.	49°26.2' N 2°20.7' W	Fl.W. period 15s fl. 1s, ec. 14s	213 65	18	White octagonal tower.	Visible 138°-353°. Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
8261 A 1545	-Corbet du Nez.	49°27.1' N 2°22.2' W	Fl.(4)W.R. period 15s	46 14	8	White wooden structure, rock; 3.	W. 057°-230° R.-057°. Wind generator close by.
8262 A 1545.5	Big Russel, Noire Pute.	49°28.2' N 2°25.0' W	Fl.(2)W.R. period 15s	26 8	6	Rock.	W. 220°-040°, R.-220°.
8264 A 1532	Casquets.	49°43.3' N 2°22.6' W	Fl.(5)W. period 30s fl. 0.1s, ec. 3.6s fl. 0.1s, ec. 3.6s fl. 0.1s, ec. 3.6s fl. 0.1s, ec. 3.6s fl. 0.1s, ec. 15.1s	120 37	18	White tower, two red bands; 75.	Shown 24 hours. AIS (MMSI No 992351120).
	RACON		T(-)		25		(3 & 10cm).
8268 A 1520	CHANNEL LIGHTSHIP, W. end of Casquets traffic separation scheme.	49°54.4' N 2°53.7' W	Fl.W. period 15s fl. 0.3s, ec. 14.7s		15	Red hull, light tower amidships; 39.	AIS (MMSI No 992351028). Horn: 1 bl. ev. 20s (bl. 2s, si. 18s).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
CHANNEL ISLANDS (U.K.)							
ALDERNEY:							
8288 A 1538	-Braye Harbor Range, front.	49°43.4' N 2°11.9' W	Q.W.	25 8	9	Orange triangular daymark point up; 7.	Visible 210°-220°.
8292 A 1538.1	--Rear, 335 meters 215° from front.	49°43.2' N 2°12.0' W	Q.W.	55 17	12	Orange triangular daymark point up; 16.	Visible 210°-220°. Synchronized with front.
8292.5 A 1538.5	--Breakwater, head.	49°43.8' N 2°11.5' W	L.Fl.W. period 10s fl. 2s, ec. 8s	23 7	5		
8293 A 1539	--Quay, head.	49°43.6' N 2°11.9' W	2 F.R. (vert.)	26 8	5		
8296 A 1537	-Chateau a l'Etoc Point.	49°43.9' N 2°10.6' W	Iso.W.R. period 4s	65 20	W. 10 R. 7	Building; 66.	R. 071°06'-111°06', W.-151°06'.
8300 A 1536	-Alderney.	49°43.7' N 2°09.8' W	Fl.(4)W. period 15s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 2.2s fl. 0.1s, ec. 8s	121 37	12	White round tower, black band; 105.	Visible 085°-027°. Shown 24 hours.
FRANCE-NORTH COAST							
8304 A 1512	Cap de la Hague.	49°43.3' N 1°57.3' W	Fl.W. period 5s fl. 0.1s, ec. 4.9s	157 48	23	Gray tower, white top; 167.	Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
8308 A 1508	Omonville-La Rogue.	49°42.2' N 1°50.1' W	Iso.W.R.G. period 4s	42 13	W. 10 R. 7 G. 7	White pylon, red top.	G. 180°-252°, W.-262°, R.-287°.
8312 A 1514	La Plate (Ronde), about 3 km. 057° from Cap de la Hague Light.	49°44.0' N 1°55.7' W	Fl.(2+1)W.R. period 10s fl. 0.6s, ec. 0.6s fl. 0.6s, ec. 1.8s fl. 0.6s, ec. 5.8s	36 11	W. 9 R. 6	Octagonal tower, two triangular topmarks points up; 62.	W. 115°-272°, R.-115°.
CHERBOURG:							
-Passe Ouest:							
8320 A 1482	--Digue Ouest (Querqueville).	49°40.3' N 1°39.8' W	Fl.(2)G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	26 8	4	White structure, green top; 23.	
8324 A 1484	-- Fort Du Homet Range, front, SW. limit, 320°18', 1835 meters from common rear.	49°39.5' N 1°38.0' W	Q.W.	17 5	17	White triangular daymark point up; 13.	Intensified 137°18'-143°18'. Storm signals on Fort du Homet.
8328 A 1484.1	---Gare Maritime.	49°38.8' N 1°37.0' W	Q.W.	114 35	17	Gray pylon, white triangular daymark point up; 115.	Intensified 138°48'-141°48'. Synchronized with front.
8332 A 1480	-- Fort de l'Ouest.	49°40.5' N 1°38.9' W	Fl.(3)W.R. period 15s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 8.8s	62 19	W. 24 R. 20	Gray tower, red top; 30.	W. 122°-355°, R.-122°.
8336 A 1478	--Fort Central.	49°40.4' N 1°37.0' W	V.Q.(6)+L.Fl.W. period 10s	16 5	4	S. CARDINAL YB, column, topmark; 10.	Visible 322°-032°.
-Cherbourg (Digue Centrale):							
8340 A 1476	--Fort de l'Est.	49°40.3' N 1°35.9' W	Iso.G. period 4s	43 13	9	White pylon, green top; 30.	

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FRANCE-NORTH COAST							
8344 A 1470	--Ile Pelee.	49°40.2' N 1°35.1' W	Oc.(2)W.R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	62 19	W. 10 R. 7	Red and white structure; 26.	W. 055°-120°, R.-055°.
8348 A 1472	-S. side of Passe Collignon.	49°39.6' N 1°34.2' W	Fl.(2)R. period 6s	15 5	4	White metal post, red top; 13.	
8352 A 1486	-Jetee du Homet Range, front, 1397 meters 304°18' from common rear.	49°39.5' N 1°37.0' W	Q.G.	32 10	6	White structure, green top; 30.	Forms range 124°18' with common rear.
8356 A 1471.51	--Common rear, Terre-plein du Mielles.	49°39.1' N 1°36.0' W	Iso.G. period 4s Q.W.	53 16 52 16	10 13	Black column, white bands, white top.	Intensified 114°30'-134°30'. Emergency light. Visible 179°18'-199°18'. Obscured when ships present.
8356.1 A 1471.5	-Jetee des Flamands E., front, 520 meters 189° 18' from common rear.	49°39.3' N 1°35.9' W	Q.W.	30 9	13	White metal pylon, white hut; 26.	Visible 179°18'-199°18'.
8364 A 1488	-Anchorage Range, front.	49°39.5' N 1°38.5' W	Q.G.	36 11	10	White pylon.	Intensified 190°-194°.
8368 A 1488.1	--Rear, 652 meters 192°42' from front.	49°39.2' N 1°38.6' W	Q.G.	84 26	12	Green structure; 56.	Intensified 189°-195°. Synchronized with front.
8372 A 1495	--E. mole, head.	49°39.1' N 1°36.8' W	Oc.R. period 4s lt. 3s, ec. 1s	30 9	4	White structure, red top; 10.	
8376 A 1498	--Gare Maritime, NE. corner.	49°38.9' N 1°37.0' W	Fl.G. period 4s fl. 1s, ec. 3s	7 2	6	Green structure; 3.	
8380 A 1496	---NW. corner.	49°38.9' N 1°37.1' W	Fl.(3)R. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	20 6	5	White column, red lantern; 20.	
8384 A 1498.5	---W. side.	49°38.8' N 1°37.1' W	Fl.(4)R. period 15s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 7s	10 3	3	Red structure; 3.	Visible 006°-186°.
8386 A 1499.5	-Inner jetty.	49°38.7' N 1°37.2' W	Fl.(4)G. period 15s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 7s	13 4	2	White pile, green top; 10.	
8388 A 1499	-Marina, pier, head.	49°38.9' N 1°37.2' W	Fl.(3)G. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	23 7	6	Green pylon; 20.	
8392 A 1491	-Avant Port Range, front, S. side of entrance, 644 meters 087°48' from common rear.	49°39.2' N 1°37.9' W	Q.R.	36 11	6	White pylon, red top; 26.	S. limit of the cruise ship turning area.
8396 A 1492	--Common rear, Bassin Napoleon.	49°39.1' N 1°38.4' W	Q.W.	52 16	11	Gray pylon, white top; 46.	Visible 250°-280°. In line with N.(8400) and S.(8392). Synchronized with front.
8398 A 1493	-Inner Range, front.	49°39.1' N 1°38.4' W	V.Q.W.			Lantern, orange triangular daymark point up, black band; 13.	Visible 253°-262°.
8398.1 A 1493.1	--Rear, 257 meters 257°12' from front.	49°39.1' N 1°38.6' W	V.Q.W.			Orange triangular daymark point up, black band; 30.	Visible 253°-262°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
8400 A 1490	-N. side of entrance, front, 644 meters 081°18' from common rear.	49°39.2' N 1°37.9' W	Q.G.	36 11	6	White pylon, green top; 26.	N. limit of the cruise ship turning area.
8404 A 1466	Le Becquet Range, front.	49°39.2' N 1°32.8' W	Oc.(3)W. period 12s lt. 4.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s	26 8	10	White octagonal beacon tower; 20.	Intensified 183°-190°.
8408 A 1466.1	-Rear, 49 meters 186°18' from front.	49°39.2' N 1°32.8' W	Oc.(3)R. period 12s lt. 4.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s	43 13	7	Square tower, red octagonal top; 33.	Intensified 183°-190°. Synchronized with front.
8412 A 1463	Port de Levi.	49°41.2' N 1°28.3' W	Oc.(2)W.R.G. period 6s lt. 3s, ec. 1s lt. 1s, ec. 1s	23 7	7	White and gray structure, white lantern; 20.	G. 055°-083°, W.-105°, R.-163°.
8416 A 1462	Cap Levi.	49°41.8' N 1°28.4' W	Fl.R. period 5s fl. 1s, ec. 4s	118 36	17	Gray square tower, white top; 92.	
8420 A 1458	Anse de Vicq, entrance range, front.	49°42.2' N 1°23.9' W	Iso.R. period 4s	26 8	6	White pylon, red top, red and white triangular daymark point up; 16.	
8424 A 1458.1	-Rear, 403 meters 158° from front.	49°42.0' N 1°23.8' W	Iso.R. period 4s	46 14	6	White pylon, red top, red and white triangular daymark point up; 26.	Synchronized with front.
8428 A 1454	Pointe de Barfleur.	49°41.8' N 1°15.9' W	Fl.(2)W. period 10s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 7.3s	236 72	25	Gray tower, black top; 246.	
BARFLEUR:							
8432 A 1444	-Entrance Range, front.	49°40.2' N 1°15.6' W	Oc.(3)W. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	23 7	10	White square tower; 23.	
8436 A 1444.1	--Rear, 288 meters 219°30' from front.	49°40.1' N 1°15.7' W	Oc.(3)W. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	43 13	10	Gray and white tower, green top; 43.	Visible 085°-355°. Synchronized with front.
8440 A 1448	-Jetee Est, head.	49°40.4' N 1°15.4' W	Oc.R. period 4s lt. 3s, ec. 1s	16 5	6	White hut, red top; 13.	
8444 A 1450	-Jetee Ouest, head.	49°40.4' N 1°15.5' W	Fl.G. period 4s fl. 1s, ec. 3s	26 8	6	White pylon, green top; 23.	
8448 A 1442	Pointe de Saire, on redoubt.	49°36.4' N 1°13.8' W	Oc.(2+1)W. period 10s lt. 0.6s, ec. 0.6s lt. 3.8s, ec. 0.6s lt. 3.8s, ec. 0.6s	36 11	10	White square tower, green top; 33.	
ST. VAAST LA HOUGUE:							
8452 A 1436	-N. breakwater, head.	49°35.2' N 1°15.6' W	Iso.G. period 4s	20 6	5	White metal tank, green top; 20.	
8456 A 1438	-N. Groin, SW. side of entrance.	49°35.2' N 1°15.6' W	Oc.(4)R. period 12s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 5s, ec. 1s	20 6	6	White hut, red top; 20.	Visible 018°-278°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
8460 A 1434	-Jetty, head.	49°35.2' N 1°15.4' W	Oc.(2)W.R.G. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	39 12	W. 10 R. 7 G. 7	White octagonal metal tower, red top; 36.	R. 219°-237°, G.-310°, W.-350°, R.-040°, W.-219°.
8464 A 1428	La Hougue Range, front.	49°34.2' N 1°16.3' W	Oc.W. period 4s lt. 3s, ec. 1s	30 9		White pylon, green top; 23.	
8468 A 1428.1	-Rear, 3.3 km 267°12' from front.	49°34.2' N 1°19.0' W	Oc.(4)W.R.G. period 12s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 5s, ec. 1s	295 90	W. 11 R. 8 G. 8	White octagonal tower, green top; 43.	W. 171°-316°, G.-321°, R.-342°, W.-355°.
ILES ST. MARCOUF:							
8472 A 1424	-Ile du Large, on fort.	49°29.9' N 1°08.8' W	V.Q.(3)W. period 5s	59 18		Gray square tower, green top; 56.	
8484 A 1412	Isigny.	49°19.5' N 1°06.8' W	Dir.Q.W.R.G.	23 7		White post; 23.	G. 170°30'-171°30', W.-173°, R.-174°.
8492 A 1410	La Maresquerie.	49°23.1' N 1°02.8' W	Oc.W. period 4s lt. 3s, ec. 1s	92 28		White post; 39.	Visible 090°-270°.
8496 A 1411	-Entrance Range, front.	49°23.4' N 1°02.8' W	Q.W.	30 9	15	White metal post, red top, platform; 23.	Visible 144°30'-147°30'.
8500 A 1411.1	--Rear, 102 meters 146° from front.	49°23.4' N 1°02.8' W	Q.W.	39 12	15	White mast, red top, red daymark; 36.	Visible 144°30'-147°30'.
8504 A 1408	Grandcamp-les-Bains, E. jetty, head.	49°23.5' N 1°03.0' W	Oc.(2)R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	30 9		White column, red top; 26.	
8508 A 1409	-W. jetty, head.	49°23.5' N 1°03.0' W	Fl.G. period 4s fl. 1s, ec. 3s	30 9		White column, green top; 46.	
8512 A 1406	-Perre.	49°23.3' N 1°02.5' W	Oc.W. period 4s lt. 3s, ec. 1s	26 8		Green pylon, white hut; 23.	Visible 083°-263°. In line with Aid No. 8492.
8516 A 1400	Port en Bessin Range, front.	49°21.0' N 0°45.5' W	Oc.(3)W. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	82 25		White pylon, green top; 26.	Visible 069°-339°.
8520 A 1400.1	-Rear, 93 meters 204° from front.	49°20.9' N 0°45.6' W	Oc.(3)W. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	139 42		Gray and white house; 39.	Visible 114°-294°. Synchronized with front.
PORT-EN-BESSIN:							
8524 A 1403	-Jeteo Est.	49°21.1' N 0°45.4' W	Oc.R. period 4s lt. 3s, ec. 1s	46 14		Red pylon; 33.	
8528 A 1404	-Jeteo Ouest.	49°21.2' N 0°45.4' W	Fl.W.G. period 4s fl. 1s, ec. 3s	46 14	W. 10 G. 7	Green pylon; 30.	G. 065°-114°30', W.-065°.
8532 A 1396	Pointe de Ver.	49°20.4' N 0°31.1' W	Fl.(3)W. period 15s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 8.8s	138 42		White tower, gray top; 52.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
8540 A 1390	-Jetee Est, head.	49°20.3' N 0°27.4' W	Oc.(2)R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	29 9	7	Brown pylon, red top; 39.	
8544 A 1391	-Jetee Ouest, submerged.	49°20.4' N 0°27.4' W	Iso.W.G. period 4s	23 7	W. 9 G. 6	Brown pylon, dolphin, green top; 46.	W. 135°-235°, G.-135°.
8552 A 1377	Oouistreham , main.	49°16.8' N 0°14.9' W	Oc.W.R. period 4s lt. 3s, ec. 1s	121 37	W. 17 R. 13	White round tower, red top; 125.	R. 115°-151°, W.-115°. Storm signal lights are shown from tower.
8556 A 1378	-Saint Medard.	49°18.0' N 0°14.6' W	Q.R.	23 7	5	White pylon, red top; 56.	Q.R. shown 175 meters W. Fl.R. 4s 9m 3M and Fl.G. 4s 9m 3M mark channel 550 meters S.
8560 A 1379	-Jetee Ouest, head.	49°17.6' N 0°14.8' W	Fl.(2)G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	36 11	3	White pipe, green top, platform; 52.	Radar reflector.
8568 A 1381	-E. jetty, head, range, front.	49°17.1' N 0°14.8' W	Oc.(3+1)R. period 12s lt. 3s, ec. 1s lt. 3s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s	36 11	17	White metal post, red top; 36.	Intensified 183°30'-186°30'. Q.R. 30 meters W. Shown 24 hours. Radar reflector.
8572 A 1381.1	--Rear, 610 meters 184°30' from front.	49°16.8' N 0°14.8' W	Oc.(3+1)R. period 12s lt. 3s, ec. 1s lt. 3s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s	98 30	17	Tripod; 82.	Intensified 183°30'-186°30'. Synchronized with front. Shown 24 hours.
TROUVILLE:							
8584 A 1284	-Jetee Ouest, head.	49°22.0' N 0°04.4' E	Q.G.	36 11	9	White metal tower, green top; 33.	
8588 A 1282.2	-Jetee Est, submerged, head.	49°22.2' N 0°04.3' E	Fl.(4)W.R. period 12s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 5s	26 8	W. 7 R. 4	White pylon, red top; 49.	W. 131°-175°, R.-131°.
8592 A 1282	-Jetee Ouest.	49°22.4' N 0°04.1' E	Fl.W.G. period 4s fl. 1s, ec. 3s	33 10	W. 9 G. 6	Black pylon, green top; 52.	W. 005°-176°, G.-005°.
8596 A 1285	-Nouveau mole, 0.3 meters SE. of jetty, W. head.	49°22.1' N 0°04.3' E	Iso.G. period 4s	29 9	5	Green mast; 23.	
8600 A 1283	-Entrance Range, front.	49°22.0' N 0°04.5' E	Oc.R. period 4s lt. 3s, ec. 1s	36 11	12	White metal tower; red top; 36.	Visible 330°-150°.
8604 A 1283.1	--Rear, 217 meters 148° from front, La Cahotte.	49°21.9' N 0°04.6' E	Oc.R. period 4s	56 17	10	White pylon, red top; 49.	Visible 120°-170°. Synchronized with front.
SEINE ESTUARY:							
8608	-LHA.	49°31.4' N 0°09.9' W	Mo.(A)W. period 12s	20 6	6	SAFE WATER RW, superbuoy, topmark; 23.	AIS (MMSI No 992271201).
	-RACON		(••••••••)		8		(3 & 10cm). RACON signal appears as a series of 8 dots or 8 groups of dots.
8612 A 1286	--Dique de Ratier A, W. extremity of new dike.	49°25.9' N 0°06.6' E	V.Q.W.	33 10	4	Metal column, shelter, black platform, two triangular topmarks points up; 33.	Radar reflector.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
-Honfleur:							
8616 A 1290	--Falaise des Fonds.	49°25.5' N 0°12.9' E	Fl.(3)W.R.G. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	49 15	W. 17 R. 13 G. 13	White tower, green top; 59.	G. 040°-080°, R.-084°, G.-100°, W.-109°, R.-162°, G.-260°.
8618 A 1289	-Digue de Ratier.	49°25.7' N 0°12.7' E	V.Q.(9)W. period 10s	26 8	5	Pylon, two triangular topmarks points together.	
8620 A 1296	--Digue Ouest, head.	49°25.7' N 0°13.8' E	Q.G.	32 10	6	Green pylon; 26.	
8628 A 1256	-Cap de la Heve.	49°30.7' N 0°04.2' E	Fl.W. period 5s fl. 0.1s, ec. 4.9s	404 123	24	White octagonal tower, red top; 105.	Visible 225°-196°.
LE HAVRE:							
8632 A 1260	-Munier Quai d'Escale Range, front.	49°28.9' N 0°06.5' E	F.W.	118 36	25	Gray tower, green top; 115.	Intensified 106°-108°.
8636 A 1260.1	--Rear, 1370 meters 106°48' from front.	49°28.7' N 0°07.6' E	F.W.	256 78	25	Gray tower, green top; 253.	Intensified 106°-108°. Radar reflector.
8648 A 1262	-Digue Nord, outer head.	49°29.2' N 0°05.4' E	Fl.R. period 5s fl. 0.1s, ec. 4.9s	49 15	21	White tower, red top; 49.	Horn: 1 bl. ev. 15s (bl. 3s, si. 12s).
8652 A 1266	-Yacht basin.	49°29.3' N 0°05.6' E	Fl.(2)G. period 6s	16 5	2	White post, green top; 10.	
8656 A 1264	-Digue Sud, outer head.	49°29.1' N 0°05.4' E	V.Q.(3)G. period 2s	49 15	11	White tower, green top; 46.	
8660 A 1274	--N. mole, SW. spur, Bassin Ducrocq.	49°28.8' N 0°06.3' E	Oc.(2)R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	23 7	6	White structure, red top; 16.	Radar reflector.
8664 A 1274.4	--S. mole.	49°28.8' N 0°06.2' E	Oc.(2)G. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	23 7	6	White structure, green top; 16.	Radar reflector.
8668 A 1276	--Oil Basin No 1 Range, front.	49°28.4' N 0°06.8' E	F.G.				Visible 145°6'-161°6'.
8672 A 1276.1	--Rear, 140 meters 153°06' from front.	49°28.3' N 0°06.9' E	F.G.				Visible 145°6'-161°6'.
8676 A 1277	--Oil Basin No 2 Range, front.	49°28.3' N 0°07.1' E	F.G.				Visible 146°-162°.
8680 A 1277.1	---Rear, 60 meters 153°42' from front.	49°28.2' N 0°07.2' E	F.G.				Visible 146°-162°.
8684 A 1278	--S. side of basin, Range, front.	49°28.2' N 0°07.2' E	F.R.	23 7			Visible 160°48'-176°48'.
8688 A 1278.1	---Rear, about 60 meters 168°48' from front.	49°28.2' N 0°07.2' E	F.R.	26 8			Visible 160°48'-176°48'.
8692 A 1279	--Oil Basin No 3 Range, front.	49°28.2' N 0°07.5' E	F.G.	26 8	23.		Visible 132°48'-148°48'.
8696 A 1279.1	---Rear, 46 meters 140°48' from front.	49°28.2' N 0°07.6' E	F.G.	35 11	30.		Visible 132°48'-148°48'.
8700 A 1274.6	--Dir. Lt.	49°28.4' N 0°06.9' E	Dir.W.R.G. period 4s fl. 3s, ec. 1s	49 15	W. 11 R. 10 G. 10	White support, green top; 43.	Oc.G. 183°-190°, Oc.W.-194°, Oc.R.-201°. Shown 24 hours.
8702 A 1280.7	--Digue Charles Laroch.	49°28.1' N 0°08.3' E	Dir.W.R.G. period 4s fl. 3s, ec. 1s	26 8	W. 12 R. 11 G. 11	White pyramidal tower, green top; 20.	Oc.G. 118°-119°, Oc.W.-120°, Oc.R.-121°. Shown 24 hours.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
ANTIFER TERMINAL:							
8704 A 1250.8	-Harbor Approach.	49°39.5' N 0°09.2' E	Dir.Oc.W.R.G. period 4s lt. 3s, ec. 1s	79 24	W. 15 R. 13 G. 13	White pylon, black top; 66.	G. 068°18'-078°18', W.- 088°18', R.-098°18'.
8708 A 1251.84	-Maurice Thieullent Digue (main breakwater), head.	49°39.7' N 0°07.1' E	Q.R.	65 20	7	White structure, red bands; 56.	
8712 A 1251.62	--NW. angle.	49°40.2' N 0°07.4' E	F.Vi.	49 15	5	White pylon, purple top; 26.	
8716 A 1251.6	--NE. angle.	49°40.2' N 0°08.2' E	F.Vi.	49 15	5	White pylon, purple top; 26.	
8720 A 1251.7	--Berth 2.	49°40.2' N 0°08.1' E	Oc.(2)W.R.G. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	79 24	W. 15 R. 13 G. 13	White pylon, red top; 56.	G. 334°30'-346°30', W.- 358°30', R.-004°30'.
8724 A 1251.8	--Berth 3.	49°40.2' N 0°07.7' E	Oc.W.R.G. period 4s lt. 3s, ec. 1s	69 21	W. 15 R. 13 G. 13	White pylon, red top; 56.	R. 352°30'-358°30', W.- 010°30', G.-022°30'.
8727 A 1250.2	Antifer approach range, front.	49°38.3' N 0°09.1' E	Oc.W. period 4s lt. 3s, ec. 1s	371 113	26	White pylon, green top; 23.	Visible 126°30'-128°30'. Synchronized with 8727.1.
8727.1 A 1250.21	-Rear, 430 meters 127°30' from front.	49°38.2' N 0°09.4' E	Oc.W. period 4s	443 135	26	White pylon, green top; 43.	Visible 126°30'-128°30'. Range 6M by day. Synchronized with 8727.
CHENAL D'ANTIFER:							
8728 A 1251	-Bassin de Caux, Mole Ouest, head.	49°39.0' N 0°08.8' E	Fl.R. period 4s fl. 1s, ec. 3s	42 13	5	White mast, red top; 26.	
8732 A 1251.4	--Jeteo Est, head.	49°39.0' N 0°08.9' E	Fl.G. period 4s fl. 1s, ec. 3s	42 13	5	White mast, green top; 26.	
8736 A 1251.2	--Leading, 018°30'.	49°39.2' N 0°09.0' E	Oc.W.R.G. period 4s lt. 3s, ec. 1s	36 11	W. 15 R. 11 G. 11	Pylon; 16.	G. 006°30'-017°30', W.- 019°30', R.-036°30'.
8740 A 1250	Cap d'Antifer.	49°41.0' N 0°09.9' E	Fl.W. period 20s fl. 0.5s, ec. 19.5s	420 128	29	Gray octagonal tower, green top; 125.	Visible 021°-222°.
8744 A 1248	Yport Range, front.	49°44.4' N 0°18.5' E	Oc.W. period 4s lt. 3s, ec. 1s	36 11		White post, green top; 23.	
8748 A 1248.1	-Rear, 30 meters 166° from front.	49°44.4' N 0°18.6' E	Oc.W. period 4s lt. 3s, ec. 1s	46 14		White pylon, green top; 20.	
8750 A 1247	Measuring mast.	49°50.8' N 0°13.1' E	Mo.(U)W. period 15s	43 13	10	Gray pylon on yellow platform; 197.	AIS (MMSI No 992271122).
	AVIATION LIGHT.		F.R.	118 36			
	AVIATION LIGHT.		U.Q.R.	197 60			U.Q.W. shown by day.
8752 A 1244	Fecamp.	49°45.9' N 0°21.8' E	Fl.(2)W. period 10s fl. 0.3s, ec. 2.2s fl. 0.3s, ec. 7.2s	49 15	16	Gray tower, red top; 46.	
8755 A 1245	Pilot Range, front.	49°46.0' N 0°21.7' E	Q.R.	33 10	4	White metal post, red top, round daymark; 23.	
8756 A 1246	-Rear, about 235 meters 082° from front.	49°45.9' N 0°21.9' E	Q.G.	46 14	9	Gray tower, green top, 33.	Visible 242°-217°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
8760 A 1238	St. Valery en Caux.	49°52.4' N 0°42.5' E	Fl.(2)G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	43 13	11	Green truncated conical tower; 39.	
8764 A 1239	-Jeteo Est, head.	49°52.4' N 0°42.7' E	Fl.(2)R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	26 8	4	White mast, red top; 20.	
8768 A 1234	Pointe d'Ailly.	49°55.0' N 0°57.5' E	Fl.(3)W. period 20s fl. 0.1s, ec. 3.9s fl. 0.1s, ec. 3.9s fl. 0.1s, ec. 11.9s	312 95	31	White square tower, green top; 79.	
DIEPPE:							
8776 A 1230	-Jeteo Ouest.	49°56.3' N 1°05.0' E	Iso.G. period 4s	36 11	8	White tower, green top; 23.	
8782 A 1233	-La Morgue.	49°55.9' N 1°05.2' E	Q.R.	39 12	3	Red column; 26.	
8784 A 1232.1	-Falaise du Pollet.	49°55.9' N 1°05.3' E	Q.W.	115 35	11	Red and white structure; 13.	Visible 105°30'-170°30'.
8788 A 1228	-Jeteo Est, head.	49°56.2' N 1°05.1' E	Iso.R. period 4s	39 12	8	White metal tower, red top; 33.	
LE TREPORT:							
8792 A 1222	-Jeteo Ouest.	50°03.9' N 1°22.1' E	Fl.(2)G. period 10s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 7.1s	49 15	20	White tower, green top; 46.	
8796 A 1224	-Jeteo Est, head.	50°03.9' N 1°22.2' E	Oc.R. period 4s lt. 3s, ec. 1s	26 8	6	White column, red top; 23.	
8797 A 1226	-Jetty, W. head.	49°58.8' N 1°12.2' E	Fl.(4)Y. period 15s				
8800 A 1220	Ault.	50°06.3' N 1°27.2' E	Oc.(4)W.R. period 12s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 1s, ec. 1s lt. 5s, ec. 1s	312 95	W. 15 R. 11	White truncated conical tower, red top; 92.	W. 040°-175°, R.-220°.
BAIE DE SOMME:							
8804 A 1208	-Cayeux-sur-Mer.	50°11.6' N 1°30.7' E	Fl.R. period 5s fl. 0.3s, ec. 4.7s	105 32	22	White tower, red top; 105.	
8808 A 1210	-Le Hourdel, S. side of entrance.	50°12.9' N 1°34.0' E	Oc.(3)W.G. period 12s lt. 1.5s, ec. 1.5s lt. 1.5s, ec. 1.5s lt. 4.5s, ec. 1.5s	62 19	W. 12 G. 9	White tower, green top; 59.	W. 053°-248°, G.-323°. Horn: 3 bl. ev. 30s (bl. 2s, si. 3s, bl. 2s, si. 3s, bl. 2s, si. 18s).
8812 A 1211	-Le Crotoy, N. side of entrance.	50°12.9' N 1°37.4' E	Oc.(2)R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	62 19	8	White pyramidal pylon; 36.	Visible 285°-135°.
8816 A 1215	-St. Valery sur Somme, extremity of seawall.	50°12.3' N 1°35.9' E	Fl.G. period 2.5s	7 2	1	STARBOARD (A) G, pylon, topmark; 20.	Radar reflector.
8820 A 1214	--S. side of entrance.	50°11.5' N 1°37.6' E	Iso.G. period 4s	29 9	9	White pylon, green top; 23.	Visible 347°-222°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH COAST							
8824 A 1216	--Seaward dike, head.	50°11.2' N 1°38.6' E	Fl.R. period 4s fl. 1s, ec. 3s	30 9	9	White pylon, red top; 21.	Visible 000°-250°.
8828 A 1202	Berck Plage.	50°23.9' N 1°33.6' E	Fl.W. period 5s fl. 0.4s, ec. 4.6s	144 44	23	White tower, red bands, green top; 148.	
8832 A 1196	Le Touquet.	50°31.4' N 1°35.5' E	Fl.(2)W. period 10s fl. 0.5s, ec. 2s fl. 0.5s, ec. 7s	177 54	25	Orange octagonal tower, brown band, white and green top; 184.	
8840 A 1194	Camiers.	50°32.9' N 1°36.4' E	Oc.(2)W.R.G. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	56 17	W. 10 R. 7 G. 7	Red pylon; 36.	G. 015°-090°, W.-105°, R.-141°.
8844 A 1190	Cap d'Alprech.	50°41.9' N 1°33.8' E	Fl.(3)W. period 15s fl. 0.1s, ec. 2.9s fl. 0.1s, ec. 2.9s fl. 0.1s, ec. 8.9s	203 62	23	White tower, black top; 56.	
BOULOGNE:							
8856 A 1168	-Digue Nord, head.	50°44.7' N 1°34.2' E	Fl.(2)R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	33 10	7	Red metal tower; 13.	
8860 A 1170	-Digue Sud Carnot.	50°44.4' N 1°34.1' E	Fl.(2+1)W. period 15s fl. 0.1s, ec. 2.5s fl. 0.1s, ec. 6.1s fl. 0.1s, ec. 6.1s	82 25	19	White tower, green top; 72.	Reserve light.
8864 A 1172	-Ro Ro Berths Range, front.	50°43.6' N 1°34.0' E	F.G.	53 16	8	Dolphin; 20.	Visible 107°-287°.
8868 A 1172.1	--Rear, 488 meters 197° from front.	50°43.3' N 1°33.9' E	F.R.	75 23	13	Red post, white band; 49.	Intensified 188°-206°.

Section 8

North Sea-France, Belgium and The Netherlands Including Westerschelde

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH SEA							
BOULOGNE:							
8872 A 1174	-Darse Sarraz-Bourmet.	50°43.6' N 1°34.7' E	Oc.(2)R. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	26 8	6	White pylon, red top; 23.	
8876 A 1175	--W. side of entrance.	50°43.7' N 1°34.5' E	Iso.G. period 4s	26 8	5	White pylon, green top; 23.	
8880 A 1182	-Gare Maritime Range, front.	50°43.7' N 1°35.7' E	F.G.	13 4	5	Gray octagonal pylon, green top, lighted triangular daymark point down; 30.	Visible 033°-213°.
8884 A 1182.1	--Rear, center of Quai Gambetta, 560 meters 122°24' from front.	50°43.5' N 1°36.1' E	F.R.	144 44	11	Gray building, red top; 141.	Intensified 113°-133°.
8888 A 1180	-Jetee SW. head.	50°43.9' N 1°35.1' E	Q.G.	56 17	5	White column, green top; 43.	
8892 A 1178	-Jetee NE. head.	50°43.9' N 1°35.2' E	Q.R.	36 11	7	Red metal tower; 33.	
8896 A 1166	Cap Gris Nez.	50°52.1' N 1°35.0' E	Fl.W. period 5s fl. 0.4s, ec. 4.6s	236 72	29	White tower, black top; 102.	Visible 005°-232°.
8900 A 1160	Sangatte.	50°57.2' N 1°46.5' E	Oc.W.G. period 4s lt. 3s, ec. 1s	43 13	W. 8 G. 5	White pylon, green top; 26.	G. 065°-089°, W.-152°, G.- 245°.
CALAIS:							
8904 A 1144	-Calais.	50°57.7' N 1°51.2' E	Fl.(4)W. period 15s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 2.1s fl. 0.4s, ec. 7.1s	194 59	22	White octagonal tower, black top; 167.	Visible 073°-260°.
8908 A 1146	-Jetee Est.	50°58.4' N 1°50.5' E	Fl.(2)R. period 6s fl. 0.1s, ec. 1.4s fl. 0.1s, ec. 4.4s	39 12	17	Gray tower, red top; 33.	2 Fl.(2)W. 6s (vert.) shown in fog by request. Horn: 2 bl. ev. 40s (bl. 2s, si. 3s, bl. 2s, si. 33s). Radar reflector.
8912 A 1148	-Jetee Ouest, head.	50°58.2' N 1°50.4' E	Iso.G. period 3s	39 12	9	Metal tower, green top; 39.	Fl.W. 5s shown in fog by request. Bell: 1 str. ev. 5s.
8913 A 1157	-Quai de Maree.	50°58.1' N 1°50.9' E	L.Fl.(4)W. period 30s			Gray post; 26.	Horn: 4 bl. ev. 30s (bl. 3s, si. 3s, bl. 3s, si. 3s, bl. 3s, si. 3s, bl. 3s, si. 9s).
GRAVELINES:							
8924 A 1132.2	-Jetee Est, head.	51°00.9' N 2°05.6' E	Fl.(3)R. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	30 9	4	Gray and yellow tower, red top; 16.	V.Q.W. 6m 2M marks head of submerged jetty close NNW.
8928 A 1132	-Jetee Ouest, head.	51°00.9' N 2°05.5' E	Fl.(2)W.G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	30 9	4	Yellow and gray tower, green top; 49.	W. 085°-224°, G.-085°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH SEA							
LE SANDETTIE:							
8932 A 0994	-SANDETTIE LIGHTSHIP.	51°09.4' N 1°47.1' E	Fl.W. period 5s fl. 0.5s, ec. 4.5s		15	Red hull, light tower amidships; 39.	Shown 24 hours. AIS (MMSI No 992351029). Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
	-RACON		T(-)		10		(3 & 10cm).
NOUVEAU PORT OUEST DE DUNKERQUE:							
8948 A 1126	-Avant-port Range, front.	51°01.7' N 2°11.9' E	Fl.W. period 4s	49 15	20	White column, green top; 29.	Visible 116°-124°. Radar reflector.
8952 A 1126.1	--Rear, 600 meters 120° from front.	51°01.5' N 2°12.4' E	Fl.W. period 4s	95 29	20	White column, green top; 66.	Visible 116°-124°.
8956 A 1127	-Jetee du Dyck, head.	51°02.3' N 2°09.8' E	Fl.(4)G. period 15s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 2s fl. 0.5s, ec. 7s	79 24	10	White column, green top; 75.	Various lights are shown in the inside of the port.
8960 A 1127.4	-Jetee du Clipon.	51°02.6' N 2°09.8' E	Fl.(4)R. period 15s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6.5s	82 25	10	White cylindrical column, red top; 75.	Visible 278°-243°.
	-Auxiliary.		Fl.(4)W. period 15s	75 23	20		Shown in fog.
8961 A 1129	-Atlantic Basin, E. jetty.	51°01.4' N 2°10.5' E	Iso.R. period 4s	49 15	6	Metal post, hut; 13.	
8962 A 1129.2	--W. jetty.	51°01.3' N 2°10.2' E	Iso.G. period 4s	49 15	6	Metal post, hut; 13.	
8963 A 1127.6	-167°.	51°00.0' N 2°10.8' E	Dir.W.R.G. period 4s	42 13	W. 14 R. 11 G. 11	Metal post, hut; 16.	Iso.G. 162°-166°, Iso.W.- 168°, Iso.R.-172°.
DUNKERQUE:							
8964 A 1114	-Dunkerque.	51°02.9' N 2°21.9' E	Fl.(2)W. period 10s fl. 0.1s, ec. 2.4s fl. 0.1s, ec. 7.4s	194 59	26	White tower, black top; 184.	
8968 A 1114.9	-Range, front, 640 meters 05° from rear.	51°03.1' N 2°21.1' E	F.Vi.	33 10	3	White column, red top; 20.	Intensified 183°-187°.
8972 A 1115	--Common rear.	51°02.8' N 2°21.1' E	F.Vi.	79 24	4	Gray pylon; 98.	Intensified 183°42'-186°12' and 178°12'-180°42'.
8976 A 1115.1	-Range, front, 660 meters 359°30' from rear.	51°03.1' N 2°21.1' E	F.Vi.	33 10	3	White column, green top; 20.	Intensified 177°30'-181°30'.
8979 A 1120	-Chenal de Trystam Range, front.	51°03.0' N 2°22.0' E	Q.W.	23 7	11	White column, red top; 16.	Visible 122°-152°.
8979.5 A 1120.1	--Rear, 114 meters 137°30' from front.	51°02.9' N 2°22.1' E	Q.W.	33 10	11	White column, red top; 26.	Visible 122°-152°. Synchronized with front.
8980 A 1122	-Jetee Watier, head.	51°03.2' N 2°21.2' E	Fl.(3)G. period 12s fl. 1s, ec. 1.5s fl. 1s, ec. 1.5s fl. 1s, ec. 6s	36 11	6	Green pylon; 52.	
	-Auxilliary.		Q.W.	59 18			

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
FRANCE-NORTH SEA							
8984 A 1123	-Jetee Charles de Gaulle.	51°03.3' N 2°20.8' E	Fl.G. period 4s fl. 1s, ec. 3s	33 10	6	White tower, green top; 23.	
	-Auxiliary		Q.W.	30 9			Visible 200°-080°. On request.
8988 A 1121	-Ancienne Jetty, W.	51°03.3' N 2°21.4' E	Q.W.	36 11	7	N. CARDINAL BY, pylon on hut, topmark; 46.	
8992 A 1118	-Jetee Ouest, head.	51°03.6' N 2°21.0' E	Fl.(2)G. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	115 35	10	Brick tower, brown top; 118.	Synchronized with 8996.
8996 A 1116	-Musoir, Jette Est, head.	51°03.6' N 2°21.2' E	Fl.(2)R. period 6s fl. 1s, ec. 1s fl. 1s, ec. 3s	39 12	10	White pylon, red top; 26.	Synchronized with 8992.
BELGIUM-NORTH SEA							
WEST HINDER-A1 ROUTE:							
9000 B 0145	-Westhinder.	51°23.3' N 2°26.3' E	Fl.(4)W. period 30s fl. 0.5s, ec. 0.5s fl. 0.5s, ec. 0.5s fl. 0.5s, ec. 0.5s fl. 0.5s, ec. 26.5s	75 23	12	Red post, hut.	Horn: Mo.(U) ev. 30s.
	-RACON		W(• - -)		10		(3 & 10cm).
9002 B 0147	-Oost dyck, Heli-tower.	51°16.5' N 2°26.8' E	Mo.(U)W. period 15s	43 13	12	Red tower, three white bands.	Light on each of four corners. Horn: Mo(U) ev. 30s.
	-RACON		O(- - -)		10		(3 & 10cm).
9004	-KB.	51°20.9' N 2°42.9' E	Q.W.			N. CARDINAL BY, pillar.	
	RACON		K(- • -)				
NIEUWPOORT:							
9008 B 0074	-E. jetty, near root.	51°09.3' N 2°43.8' E	Fl.(2)R. period 14s fl. 0.4s, ec. 2.6s fl. 0.4s, ec. 10.6s	85 26	16	Red cylindrical tower, white bands.	
9012 B 0076	-W. mole, head.	51°09.4' N 2°43.0' E	F.G.	33 10	9	White round tower.	Visible 025°-250° and 284°-324°.
9016 B 0075	-E. mole, head.	51°09.4' N 2°43.1' E	F.R.	33 10	10	White round tower.	Visible 025°-250° and 307°-347°.
OOSTENDE:							
9020 B 0092	-Oostende.	51°14.2' N 2°55.8' E	Fl.(3)W. period 10s fl. 0.2s, ec. 1.4s fl. 0.2s, ec. 1.4s fl. 0.2s, ec. 6.6s	207 63	27	Gray concrete tower, two blue diagonal stripes; 190.	Visible 071°-069°30'.
9022 B 0094	-W. pier, head.	51°14.3' N 2°55.0' E	F.G.	39 12	10	White round tower.	Visible 057°-327°.
9028 B 0098	-E. pier.	51°14.2' N 2°55.5' E	Q.Y.			Signal mast.	Shown whenever channel is closed. Signal station. Storm signal. Tide signal.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
BELGIUM-NORTH SEA							
9037 B 0107	-Entrance channel Range, front.	51°13.8' N 2°55.9' E	Iso.W. period 4s	118 36	4	Red metal mast, white bands, "X" topmark.	Visible 068°-218°. Radar reflector.
9037.1 B 0107.1	--Rear, 391 meters 143° from front.	51°13.6' N 2°56.1' E	Iso.W. period 4s	151 46	4	Red metal mast, white bands, "X" topmark.	Visible 068°-218°. Radar reflector.
BLANKENBERGE:							
9044 B 0112	-Comte Jean.	51°18.8' N 3°06.9' E	Fl.(2)W. period 8s fl. 1.3s, ec. 1.3s fl. 1.3s, ec. 4.1s	99 30	20	White concrete tower, black top.	Visible 065°-245°. Storm signals.
9048 B 0114	-E. breakwater, head.	51°18.9' N 3°06.6' E	F.R.	41 12	11	White round tower.	Visible 290°-245°.
9052 B 0113.4	-W. breakwater, head.	51°18.9' N 3°06.5' E	F.G.	45 14	11	White round tower; 26.	Intensified 065°-290°, unintensified-335°.
9056 B 0113	-Entrance Range, front, W. pier.	51°18.7' N 3°06.9' E	F.R.	16 5	3	Metal mast, red "X" topmark; 16.	
9060 B 0113.1	--Rear, 81 meters 134° from front.	51°18.7' N 3°06.9' E	F.R.	30 9	10	Metal mast, red "X" topmark; 26.	
9067 B 0119	MOW 0.	51°23.7' N 3°02.8' E	Fl.(5)W. period 20s	72 22		Yellow pile; 56.	Tide gauge.
RACON							
9067.3 B 0119.5	MOW 1.	51°21.6' N 3°07.1' E	Fl.(5)Y. period 20s	72 22		Yellow pile.	Tide gauge.
9067.5 B 0119.8	MOW 3.	51°23.4' N 3°11.9' E	Fl.(5)Y. period 20s	72 22		Yellow pile; 56.	Tide gauge.
RACON							
9067.6 B 0120	MOW 4.	51°25.1' N 3°17.9' E	Fl.(4)Y. period 20s	72 22		Yellow pile; 49.	Tide gauge.
ZEEBRUGGE:							
9068 B 0124	-Range, front, mole.	51°20.7' N 3°13.1' E	Oc.W. period 5s lt. 4s, ec. 1s	72 22	8	White metal post, red bands.	Shown 24 hours.
9072 B 0124.1	--Rear, 890 meters 136° from front.	51°20.4' N 3°13.7' E	Oc.W. period 5s lt. 4s, ec. 1s	148 45	8	White metal post, red bands.	Synchronized with front.
9073 B 0123.2	-W. breakwater, head.	51°21.7' N 3°11.2' E	Oc.G. period 7s	102 31	7	Round concrete tower.	Visible 057°-267°, unintensified (in harbor)-057°. Green strip lights on seaward side. Harbor signals 1150 meters S. Horn: 3 bl. ev. 30s (bl. 3s, si. 5s, bl. 3s, si. 5s, bl. 3s, si. 11s).
9074 B 0123	-E. breakwater, head.	51°21.8' N 3°11.9' E	Oc.R. period 7s	102 31	7	Round concrete tower.	Visible 087°-281°, unintensified (in harbor)-087°. Red strip lights on seaward side. Bell: 3 str. ev. 25s.
9075 B 0124.16	-Wielingen Dock Range, front.	51°21.5' N 3°10.7' E	F.W.	39 12		Metal mast.	
9075.1 B 0124.17	--Rear, 273° from front.	51°21.5' N 3°10.7' E	F.W.	46 14		Metal mast.	
9075.2 B 0124.2	--S. corner.	51°21.4' N 3°11.0' E	F.R.			Pole.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
BELGIUM-NORTH SEA							
9075.5 <i>B 0124.18</i>	--Jetty Range, front.	51°21.3' N 3°10.7' E	F.W.		39 12	Metal mast.	
9075.51 <i>B 0124.19</i>	--Rear, 420 meters 228° from front.	51°21.2' N 3°10.4' E	F.W.		66 20	White metal mast, red bands.	
9075.7 <i>B 0124.5</i>	--Range, front.	51°20.6' N 3°10.7' E	F.Bu.		59 18	White metal mast, red bands.	2 neon strip lights.
9075.72 <i>B 0124.51</i>	---Rear, 155 meters 231° from front.	51°20.5' N 3°10.5' E	F.Bu.		85 26	White metal mast, red bands.	2 neon strip lights.
9076 <i>B 0122</i>	-Leopold II Dam , mole, head.	51°20.8' N 3°12.2' E	Oc.W.R. period 15s lt. 12s, ec. 3s		72 22	W. 20 R. 18 Gray round tower.	W. 068°-145°, R.-212°, W.-296°. Traffic signals.
9082 <i>B 0126</i>	-Brittanniadok, outer range, front.	51°20.4' N 3°13.1' E	F.Bu.		16 5	Metal mast.	
9082.1 <i>B 0126.1</i>	--Rear, 240 meters 127° from front.	51°20.3' N 3°13.4' E	F.Bu.		52 16	Metal mast.	
9088 <i>B 0128</i>	-Harbor Range, front.	51°20.4' N 3°11.7' E	2 F.W. (vert.)		98 30	White concrete column, black bands.	Neon. 8 meters apart.
9092 <i>B 0128.1</i>	--Rear, 200 meters 220° from front.	51°20.3' N 3°11.6' E	F.W. (neon)		95 29	White concrete column, black bands.	
9093 <i>B 0131.5</i>	-Westhoofd, off NE. corner.	51°20.4' N 3°11.7' E	F.R.R.G. (vert.)			1 Metal post.	Radar reflector.
9096 <i>B 0125</i>	-Outer Harbor Range, front.	51°20.3' N 3°12.9' E	Oc.W.R. period 6s lt. 4s, ec. 2s		65 20	3 White metal pylon, red bands; 36.	W. 135°-160°, R.-169°.
9100 <i>B 0125.1</i>	--Rear, 520 meters 153° from front.	51°20.1' N 3°13.1' E	Oc.W. period 6s		118 36	3 White building, red bands.	Visible 150°-162°. Synchronized with front. Shown 24 hours.

THE NETHERLANDS-NORTH HINDER TO GOEREE

9104	<i>Noord Hinder Buoy.</i>	52°00.1' N 2°51.2' E	Fl.(2)W. period 10s			SAFE WATER RW, spherical.	
	RACON		T(-)		12		(3 & 10cm).
9106	<i>Noord Hinder Buoy NHR-SE.</i>	51°45.5' N 2°40.0' E	Fl.G. period 5s			Green conical.	
	RACON		N(- •) period 120s		10		
9110 <i>B 0157</i>	Appelzak.	51°22.8' N 3°22.7' E	Fl.(5)Y. period 20s			Yellow post.	Tide gauge.
9118 <i>B 0166.1</i>	-Wielingen.	51°24.4' N 3°31.3' E	Oc.W. period 10s		92 28	14 Tower; 72.	Private light.
9124 <i>B 0208</i>	Breskens Veerhaven, W. mole.	51°24.4' N 3°33.1' E	F.G.		33 10	4 Black and white post; 36.	Visible 180°-245°. F.W. shown in fog towards port. F.Y. shown in fog towards river. Fog detector light. Radar reflector.
9128 <i>B 0209</i>	-E. mole.	51°24.3' N 3°33.2' E	F.R.		33 10	5 Black and white post; 33.	F.Y. shown in fog. Radar reflector.
9132 <i>B 0212</i>	Breskens, W. mole.	51°24.0' N 3°34.1' E	F.G.		23 7	White post, green bands, platform; 20.	F.Y. shown in fog towards river.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-ENTRANCE TO WESTERSCHELDE							
BRESKENS:							
9136 B 0214	-E. mole.	51°24.0' N 3°34.1' E	F.R.	23 7		Red mast, white bands; 16.	Radar reflector.
9137	<i>Schouwenbank Buoy.</i>	51°45.0' N 3°14.4' E	Mo.(A)W. period 8s			SAFE WATER RW, spherical.	
	RACON		O(---) period 120s		10		(3 & 10cm).
WALCHEREN:							
-Westkapelle:							
9140 B 0173.9	--Noorderhoofd Range, front.	51°32.4' N 3°26.2' E	Oc.W.R.G. period 10s	66 20	W. 13 R. 10 G. 10	Red tower, white band; 52.	R. 353°-008°, G.-029°, W.-169°.
9144 B 0174	---Westkapelle rear, about 1.3 km. 149°30' from front.	51°31.8' N 3°26.8' E	Fl.W. period 3s fl. 0.1s, ec. 2.9s	164 50	28	Square tower, red superstructure; 171.	Obscured by shore on certain bearings.
9148 B 0176	--Molenhoofd.	51°31.6' N 3°26.0' E	Oc.W.R.G. period 6s lt. 4s, ec. 2s	36 11	6	Red mast, white bands; 23.	R. 311°30'-330°30', W.-348°30', R.-008°30', G.-034°30', W.-036°30', G.-147°30', W.-168°30', R.-198°.
9152 B 0174.1	-Zoutelande.	51°30.3' N 3°28.4' E	F.W.	72 22	12	Red brick tower; 43.	Visible 322°-327°30'.
9156 B 0184	-Kaapduinen Range, front.	51°28.5' N 3°31.0' E	Oc.W. period 5s lt. 4s, ec. 1s	82 25	13	Red tower, yellow bands; 46.	Visible 115°-145°.
9160 B 0184.1	--Rear, 220 meters 130° from front.	51°28.4' N 3°31.1' E	Oc.W. period 5s lt. 4s, ec. 1s	118 36	13	Red tower, green bands; 43.	Visible 107°30'-152°30'. Synchronized with front.
9164 B 0188	-Fort de Nolle.	51°26.9' N 3°33.1' E	Oc.W.R.G. period 9s	33 10	W. 6 R. 4 G. 4	Structure, white bands; 20.	R. 293°-309°, W.-324°30', G.-336°30', R.-014°, G.-064°, R.-099°30', W.-110°30', G.-117°, R.-130°.
-Vlissingen (Flushing):							
9168 B 0200	--Commercial Harbor.	51°26.4' N 3°34.5' E	Iso.W.R.G. period 3s	56 17	8	Red metal framework tower; 36.	R. 253°-277°, W.-283°, R.-296°, W.-306°30', G.-013°, W.-024°, G.-033°, W.-035°, G.-039°, W.-055°, G.-084°30', R.-092°, G.-111°, W.-114°.
9172 B 0192	--Leugenaarshoofd Range, front.	51°26.4' N 3°34.1' E	Oc.R. period 5s lt. 3s, ec. 2s	23 7	7	Red post, white band; 23.	
9176 B 0192.1	---Rear, 550 meters 117° from front.	51°26.3' N 3°34.6' E	Oc.W.R. period 5s lt. 3s, ec. 2s	33 10	W. 5 R. 5	Red mast, white bands, triangular daymark point down; 23.	R. 245°-273°, W.-123°30', R.-147°.
9180 B 0202	--Buitenhaven, W. mole, head.	51°26.4' N 3°36.1' E	F.R.	39 12	5	Red post, white bands; 23.	Storm signal.
			Iso.W.R.G. period 4s				G. 017°-042°, W.-056°, R.-073°, W.-324°, G.-352°, W.-017°.
9184 B 0202.2	---E. side.	51°26.4' N 3°36.4' E	F.G.		4	Green post, white bands.	F.Y. shown in fog.
9188 B 0203	--Schone Waardin.	51°26.5' N 3°37.9' E	Oc.W.R.G. period 9s lt. 6s, ec. 3s	39 12	W. 13 R. 10 G. 9	Red mast, white bands; 16.	R. 235°-271°, W.-288°, G.-335°, R.-341°, G.-026°, W.-079°, R.-091°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-WESTERSCHELDE							
WALCHEREN:							
-Sloehaven (Flushing East):							
9192 <i>B 0204</i>	--W. mole.	51°26.9' N 3°40.1' E	F.R.	33 10	5	White concrete column; 16.	F.Y. shown in fog. 2 F.R. (vert.) shown when unsafe to approach.
9196 <i>B 0205</i>	--E. mole.	51°26.8' N 3°40.5' E	F.G.	33 10	4	White concrete column; 16.	
9200 <i>B 0206</i>	--Range, front.	51°27.9' N 3°41.0' E	Oc.R. period 8s lt. 6s, ec. 2s	108 33	10	92.	Visible 018°-028° by day.
9204 <i>B 0206.1</i>	--Rear, 100 meters 023° from front.	51°27.9' N 3°41.0' E	Oc.R. period 8s	131 40	10	115.	Visible 018°-028° by day. Synchronized with front.
9212 <i>B 0206.21</i>	--Quarleshaven, 059°.	51°28.4' N 3°43.4' E	Dir.W.R.G.		3	Gray mast; 82.	F.G. 057°30'-058°24', Al.W.G.-059°06', F.W.- 059°30', Al.W.R.-060°12', F.R.-061°.
9214 <i>B 0206.5</i>	--Van Cittershaven.	51°26.7' N 3°43.3' E	Dir.W.R.G.				F.G. 123°48'-124°42', F.W.- 125°, F.R.-125°48'.
9215 <i>B 0206.7</i>	--Dir. Lt.	51°27.9' N 3°40.5' E	Dir.W.R.G.				F.R. 303°36'-304°54', F.W.- 305°06', F.G.-306°24'.
BRAAKMANHAVEN:							
9232 <i>B 0233</i>	-First entrance Range, front.	51°20.3' N 3°45.7' E	Iso.W. period 4s	39 12		White post, black bands; 20.	
9236 <i>B 0233.1</i>	--Rear, 60 meters 191° from front.	51°20.2' N 3°45.7' E	Iso.W. period 4s	52 16		White post, black bands; 46.	Synchronized with front.
9240 <i>B 0233.4</i>	-Entrance Dir Lt.	51°20.4' N 3°45.4' E	Dir.W.R.G.			Steel mast; 98.	F.G. 201°30'-206°30', Al.W.G.-210°30', F.W.- 212°30', Al.W.R.-216°30', F.R.-221°30'.
9242 <i>B 0234</i>	--W. side.	51°21.1' N 3°45.8' E	F.G.	33 10	3	Green post, white bands.	Traffic signal. F.W. shown in fog. Q.R. 5m shown when harbor obstructed. Radar reflector.
9242.5 <i>B 0234.2</i>	--E. side.	51°21.1' N 3°46.1' E	F.R.	30 9		Red post, white bands; 23.	Traffic signal. Radar reflector.
9248 <i>B 0236</i>	-Outer Dyke Range, front.	51°21.0' N 3°47.2' E	Oc.W. period 5s	26 8	13	White mast, green bands, white rectangular daymark; 13.	Intensified 117°-133°.
9252 <i>B 0236.1</i>	--Rear, 365 meters 125° from front.	51°20.9' N 3°47.5' E	Oc.W. period 5s	59 18	13	Green framework tower, white bands; 49.	Intensified 117°-133°.
TERNEUZEN SEA HARBOR:							
9256 <i>B 0250</i>	-Entrance Range, front.	51°20.1' N 3°48.5' E	Iso.W. period 4s	39 12	8	White mast; 29.	
9260 <i>B 0250.1</i>	--Rear, 88 meters 192°30' from front.	51°20.1' N 3°48.5' E	Iso.W. period 4s	49 15	8	White mast; 29.	Synchronized with front.
9264 <i>B 0251</i>	-W. mole.	51°20.6' N 3°49.0' E	F.G.		4	White mast, green bands; 23.	Traffic signals. F.Y. shown in fog towards river.
9268 <i>B 0252</i>	-E. mole.	51°20.5' N 3°49.2' E	F.R.		5	Red mast, white bands; 23.	2 F.R. (vert.) shown when unsafe to approach.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-WESTERSCHELDE							
TERNEUZEN WEST HARBOR:							
9272 B 0245	-W. mole, near head.	51°20.6' N 3°49.6' E	F.G.			White mast, green bands; 23.	F.Y. shown in fog towards river.
9276 B 0246	-E. mole, near head.	51°20.5' N 3°49.7' E	F.R.			Red mast, white bands; 23.	2 F.R. (vert.) shown when unsafe to approach.
9280 B 0244	-W. jetty, about 101 meters from head.	51°20.5' N 3°49.6' E	Oc.W.R.G. period 5s lt. 3s, ec. 2s	52 16	W. 9 R. 7 G. 6	White post, black band; 33.	R. 090°-115°, W.-120°, G.-130°, W.-245°, G.-249°, W.-279°, R.-004°.
9284 B 0256	-Othenepolder, W. mole near root.	51°20.1' N 3°51.5' E	Iso.W.R.G. period 8s	43 13	W. 12 R. 9 G. 9	Green iron structure, white stripe; 13.	R. 083°-113°, G.-146°30', W.-149°30', G.-194°30', W.-197°30', G.-218°30', R.-234°.
9288 B 0258	-Margarethapolder, tide gauge.	51°21.0' N 3°53.1' E	Oc.W.R.G. period 9s lt. 6s, ec. 3s	33 10	W. 6 R. 4 G. 4	Green structure, white stripe; 39.	R. 060°-075°30', W.-079°, G.-103°30', W.-179°, G.-217°, W.-233°, R.-239°, W.-060°.
9292 B 0262	-Eendragt polder Range, front, on embankment.	51°21.4' N 3°54.3' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s	33 10	W. 8 R. 6 G. 5	Green and white mast; 16.	R. 045°-064°30', W.-077°, G.-221°, W.-228°, R.-250°, W.-045°.
9296 B 0262.1	--Rear, 283 meters 074°30' from front.	51°21.4' N 3°54.5' E	Oc.W. period 5s lt. 4s, ec. 1s	66 20		Green post, white bands; 59.	Synchronized with front.
9300 B 0268	-Hoedekenskerke.	51°25.1' N 3°55.0' E	Oc.W.R.G. period 9s	23 7		Red steel beacon, white band; 16.	W. 007°-018°30', R.-030°, W.-190°, R.-205°30', W.-210°, G.-230°30', W.-326°, G.-007°.
9320 B 0282	-Schore Range, front.	51°27.2' N 3°59.4' E	Oc.W.R.G. period 4s lt. 3s, ec. 1s	36 11		White structure, red band; 13.	R. 300°-331°, W.-358°30', G.-020°, W.-023°, R.-046°, G.-076°30', W.-092°30', R.-112°.
9324 B 0282.1	--Rear, 480 meters 021°30' from front.	51°27.5' N 3°59.6' E	Oc.W. period 4s	66 20		Red mast, white bands; 66.	Synchronized with front.
-Hansweert:							
9328 B 0286	--Entrance canal, W. side.	51°26.4' N 4°00.5' E	Oc.W.R.G. period 10s lt. 7s, ec. 3s	36 11		Red tower, white bands; 26. Secondary structure: 33.	R. 288°-311°, G.-320°, W.-332°30', G.-348°30', W.-042°30', R.-061°30', W.-078°, G.-099°, W.-114°30', R.-127°30', W.-288°. F.Y. shown in fog.
			F.R.	43 13			
9329 B 0288	--E. side of entrance canal.	51°26.4' N 4°00.8' E	F.G.	26 8		Gray post; 16.	
WALSOORDEN:							
9348 B 0296	-Oude Hoofd.	51°23.6' N 4°01.9' E	Iso.W.R.G. period 2s	36 11	W. 8 R. 6 G. 5	Green and white beacon, dolphin; 39.	R. 132°-175°30', W.-271°, G.-323°30', W.-336°30', R.-012°.
9352 B 0298	-Nieuwe haven, N. jetty.	51°22.9' N 4°02.1' E	F.G.	23 7		Gray post, red and white square daymark; 13.	F.Y. shown in fog.
9356 B 0299	--S. jetty.	51°22.9' N 4°02.1' E	F.R.	23 7		Gray post; 13.	
9360 B 0300	-Entrance Range, front.	51°22.8' N 4°02.0' E	Oc.W. period 3s lt. 2s, ec. 1s	36 11		Gray post, white rectangular daymark; 26.	Visible 200°-240°.

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THE NETHERLANDS-WESTERSCHELDE							
9364 B 0300.1	--Rear, 60 meters 220° from front.	51°22.8' N 4°02.0' E	Oc.W. period 3s lt. 2s, ec. 1s	46 14		Gray mast, red triangular daymark point down.	Visible 200°-240°. Synchronized with front.
BATH:							
9388 B 0318	-Westketel.	51°23.6' N 4°10.2' E	Oc.W.R.G. period 10s lt. 7s, ec. 3s	33 10	W. 8 R. 5 G. 5	Red post; 36.	W. 016°-037°, R.-090°, W.-200°, R.-246°30', W.-256°30', G.-301°30', W.-353°, G.-016°.
9392 B 0319.9	-Middenketel Range, front.	51°24.0' N 4°11.2' E	Iso.W.R. period 3s	33 10	6	Red post, white band; 33.	R. 248°-279°, W.-248°.
9396 B 0320	--Noordketel, common rear, 683 meters 044° from front.	51°24.2' N 4°11.5' E	Oc.W. period 3s lt. 2s, ec. 1s	46 14	6	Red tank, white column; 43.	
9400 B 0320.1	-Oostketel, 344 meters 310° from rear.	51°24.1' N 4°11.8' E	Q.W.R.G.	26 8	W. 6 R. 4 G. 4	Red post, two white bands; 33.	W. 055°-065°30', R.-090°, W.-270°, R.-301°30', W.-325°, G.-055°.
ZUID BEVELAND:							
9404 B 0330	-Reigersbergsche Polder, angle of sea dyke.	51°24.0' N 4°12.4' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s		W. 6 R. 5 G. 4	Red iron post, white bands; 16.	W. 074°-087°, R.-112°, W.-280°, R.-342°, W.-349°, G.-074°.
BELGIUM-SCHELDE							
9408 B 0336	Zuid Saaftinge.	51°21.9' N 4°13.1' E	Iso.W.R.G. period 10s	23 7	W. 6 R. 4 G. 4	Green post; 36.	R. 158°-168°30', W.-240°, G.-291°, W.-322°, R.-332°, W.-158°.
9412 B 0338	Nord Ballastplaat.	51°21.4' N 4°14.8' E	Fl.W.R.G. period 4s fl. 1s, ec. 3s	20 6	W. 9 R. 7 G. 6	Black beacon, red daymark, red lantern.	R. 275°-309°, W.-320°, G.-327°, W.-348°, G.-044°, W.-096°, R.-145°.
9416	Plaat van Doel, W. side of river.	51°21.0' N 4°14.5' E	F.G., 2 F.R.	26 8	4	Tide gauge.	
9420 B 0346	Zandvliet.	51°20.7' N 4°16.3' E	Dir.W.R.G.	72 22	W. 4 R. 3 G. 3		Oc.G. 116°38'-117°10', F.G.-117°35', Al.W.G.-118°08', F.W.-118°38', Al.W.R.-119°11', F.R.-119°35', Oc.R.-120°08'.
9422 B 0346.1	-Front, 200 meters 118°06' from common rear.	51°20.6' N 4°16.3' E	Oc.W. period 5s	33 10	9		
9422.1 B 0346.11	-Front, 200 meters 117°42' from common rear.	51°20.6' N 4°16.3' E	Oc.W. period 5s	33 10	9		
9424 B 0346.12	--Common rear.	51°20.6' N 4°16.5' E	Oc.W. period 5s	69 21	9	Red post, red rectangular daymark, white bands.	Synchronized with fronts.
9426 B 0346.2	Entrance, S. side.	51°20.7' N 4°16.2' E	F.G.			Post.	
DOEL:							
9456 B 0356	-Range, front.	51°18.7' N 4°16.1' E	Fl.W.R. period 3s fl. 1s, ec. 2s	30 9	W. 10 R. 7	Pole, black rectangular daymark, white stripe.	R. 145°-185°, W.-334°, R.-355°. Fl.W. 3s 18M, visible 186°45'-190°15' by day.
			Q.W.		10		Q.W. 18M, visible 326°15'-329°45' by day.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
BELGIUM-SCHELDE							
9460 <i>B 0356.1</i>	--Rear, 312 meters 188°30' from front.	51°18.5' N 4°16.0' E	Fl.W. period 3s fl. 1s, ec. 2s	62 19	10	Yellow post, black bands.	Visible 186°45'-190°15'. Synchronized with front. Range 18M by day.
			F.R.			1	Black daymark point down by day. Red LED triangular daymark point down by night.
9461.1 <i>B 0372.5</i>	Deurganckdok, W. Range, front.	51°16.8' N 4°14.9' E	Oc.W. period 5s lt. 4s, ec. 1s	69 21	3	Black post, yellow daymark. Secondary structure: Red LED triangular daymark point down.	
			F.R.				
9461.15 <i>B 0372.501</i>	--Rear, 300 meters 212°12' from front.	51°16.7' N 4°14.7' E	Oc.W. period 5s lt. 4s, ec. 1s	79 24	3	Black post, yellow daymark. Secondary structure: Red LED triangular daymark point down.	Synchronized with front.
			F.R.				
9461.2 <i>B 0372.6</i>	-E. Range, front.	51°16.8' N 4°15.0' E	Oc.W. period 5s lt. 4s, ec. 1s	59 18	3	Black post, yellow daymark. Secondary structure: Red LED triangular daymark point down.	
			F.R.				
9461.25 <i>B 0372.601</i>	--Rear, 183 meters 213°18' from front.	51°16.6' N 4°14.9' E	Oc.W. period 5s lt. 4s, ec. 1s	69 21	3	Black post, yellow daymark. Secondary structure: Red LED triangular daymark point down.	Synchronized with front.
			F.R.				
9464 <i>B 0364</i>	Lillo, jetty, head.	51°18.2' N 4°17.2' E	Oc.W.R.G. period 10s lt. 7s, ec. 3s	16 5	W. 9 R. 7 G. 6	Black beacon, red rectangular daymark, red lantern.	R. 260°-303°06', W.-307°24', G.-116°30', W.-148°, R.-180°.
9472 <i>B 0368</i>	Liefkenshoek Range, front.	51°17.8' N 4°17.1' E	Oc.W.R.G. period 3s lt. 2s, ec. 1s	13 4	W. 8 R. 6 G. 5	Black tower, white diagonal stripe, concrete base.	R. 075°-125°24', W.-151°36', G.-264°54', W.-288°24', R.-307°. Tide gauge. Oc.W. 3s visible 280°15'-283°45' by day.
9476 <i>B 0368.1</i>	--Rear, 60 meters 282° from front.	51°17.8' N 4°17.1' E	Oc.W. period 3s lt. 2s, ec. 1s	30 9	9	Black and white mast, lantern.	Synchronized with front. Visible 280°15'-283°45' by day.
ANTWERPEN:							
9484 <i>B 0372</i>	-Kruisschans Range, front.	51°17.3' N 4°19.4' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s	16 5	W. 9 R. 7 G. 6		R. 320°-358°24', W.-014°36', G.-105°30', W.-121°, R.-150°. Tide gauge. F.W. visible 110°15'-113°45' by day.
9488 <i>B 0372.1</i>	--Rear, 195 meters 112° from front.	51°17.3' N 4°19.5' E	Oc.W. period 5s lt. 4s, ec. 1s	39 12	7	Red post, daymark, red and yellow diagonal stripes, red lantern. Secondary structure: Red LED triangular daymark point down.	F.W. visible 110°15'-113°45' by day.
			F.R.				
9492 <i>B 0376</i>	-Meestooft.	51°16.6' N 4°19.3' E	Fl.W.R.G. period 4s fl. 1s, ec. 3s	16 5	W. 9 R. 7 G. 6	Black beacon, red rectangular daymark, white stripes. Secondary structure: Neon triangular daymark point down.	W. 019°-039°, R.-052°54', W.-116°54', G.-172°12', W.-192°42', R.-234°.
			F.R.				

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BELGIUM-SCHELDE							
9496 <i>B 0378</i>	-Fort de Parel Range, front.	51° 15.8' N 4° 17.7' E	Oc.W.R.G. period 4s lt. 3s, ec. 1s	42 13	W. 9 R. 7 G. 6	Black beacon, yellow rectangular daymark.	R. 174°-24'-222°, W.-232°30', G.-319°12', W.-339°, R.-025°. Oc.W. 4s, visible 225°15'-228°45' by day.
9500 <i>B 0378.1</i>	--Rear, 187 meters 227° from front.	51° 15.8' N 4° 17.6' E	Oc.W. period 4s	66 20	9	Yellow post, black "X" topmark, red lantern.	Visible 225°15'-228°45' by day. Synchronized with front.
9504 <i>B 0380</i>	-Krankeloon Range, front, near fort.	51° 15.3' N 4° 18.0' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s	16 5	W. 9 R. 7 G. 6	White column, black stripes.	R. 142°-164°, W.-200°, G.-274°, W.-283°30', R.-316°. Oc.W. 5s, visible 278°15'-281°45' by day.
9508 <i>B 0380.1</i>	--Rear, 280 meters 280° from front.	51° 15.3' N 4° 17.7' E	Oc.W. period 5s lt. 4s, ec. 1s	49 15	7	Yellow metal framework tower, black rectangular daymark, white band.	Visible 278°15'-281°45' by day. Synchronized with front.
9512 <i>B 0382</i>	-Fort Filip, SW. side.	51° 15.5' N 4° 18.4' E	L.FI.W.R.G. period 6s fl. 2s, ec. 4s	16 5	W. 7 R. 5 G. 4	Black beacon, red rectangular daymark.	R. 268°-294°, W.-306°, G.-358°, W.-104°, G.-127°, R.-153°.
9516 <i>B 0384</i>	-Boerenschans Range, front.	51° 15.1' N 4° 19.9' E	FI.W.R.G. period 4s fl. 1s, ec. 3s	16 5	W. 9 R. 7 G. 6	Black beacon, red rectangular daymark. Secondary structure: LED triangular daymark point up.	R. 254°-317°30', W.-336°, G.-080°, W.-102°, R.-115°. Tide gauge. Fl.W. 4s 2M, visible 093°15'-096°45' by day.
F.R.							
9520 <i>B 0384.1</i>	--Rear, 400 meters 095° from front.	51° 15.1' N 4° 20.2' E	Q.W.	36 11	5	Red post, white bands, red triangular daymark point down with "X". Secondary structure: LED triangular daymark point down.	Visible 093°15'-096°45'.
F.R.							
9528 <i>B 0387.9</i>	-Draaiende Sluis, rear, 240 meters 140°48' from common front.	51° 14.2' N 4° 21.0' E	Q.W.	36 11	6	Yellow mast, red lantern, black "X" topmark.	Visible 113°-194°.
9532 <i>B 0388</i>	--Pijp Tabak Range, common front.	51° 14.3' N 4° 20.8' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s	13 4	W. 7 R. 5 G. 4	Concrete post, black and white checkered rectangular daymark.	R. 126°-135°, W.-147°, G.-263°, W.-274°, R.-308°.
9536 <i>B 0388.1</i>	-Rear, 270 meters 270° from front.	51° 14.3' N 4° 20.6' E	Q.W.	36 11	6	Black column, red lantern, yellow "X" topmark.	
9540 <i>B 0392</i>	--Range, front.	51° 14.3' N 4° 23.9' E	F.R. (neon)	16 5	4	Post, red rectangular daymark.	
9544 <i>B 0392.1</i>	--Rear, 170 meters 091° from front.	51° 14.3' N 4° 24.0' E	F.R.	26 8	4	Mast, red neon triangular daymark point down.	

THE NETHERLANDS-NORTH SEA

SCHOUWEN EN DUIVELAND:

9576 <i>B 0500</i>	-West Schouwen.	51° 42.5' N 3° 41.5' E	Fl.(2+1)W. period 15s fl. 0.2s, ec. 2.4s fl. 0.2s, ec. 6s fl. 0.2s, ec. 6s	190 58	30	Stone tower, red and white diagonal band; 164.	
9584 <i>B 0408</i>	-Burghsluis.	51° 40.6' N 3° 45.6' E	F.W.R.G.	36 11	W. 8 R. 5 G. 4	Mast, red column; 23.	R. 230°-245°, W.-253°30', G.-293°, W.-000°, G.-025°30', W.-032°, G.-041°, R.-070°, W.-095°.
9588 <i>B 0506</i>	-Ossehoek, pier, head.	51° 44.6' N 3° 53.7' E	F.G.	26 8	3	White beacon.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
GOEREE EN OVER-FLAKKEE:							
-Ouddorp Haven:							
9592 <i>B 0514</i>	--W. mole, head.	51°47.9' N 3°56.3' E	F.R.	16 5		Mast; 8.	
9596 <i>B 0515</i>	--E. mole, head.	51°47.9' N 3°56.2' E	F.G.	16 5		Mast; 7.	
9600 <i>B 0518</i>	-Westhoofd.	51°48.8' N 3°51.8' E	Fl.(3)W. period 15s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 8.8s	184 56	30	Brown square tower; 170.	
HELLEVOETSLUIS:							
9624 <i>B 0536</i>	-Naval harbor, W. head.	51°49.2' N 4°07.7' E	Iso.W.R.G. period 10s	56 17	W. 11 R. 8 G. 7	White tower, red top; 59.	G. 266°-275°, W.-294°, R.-316°, W.-036°, G.-058°, W.-095°, R.-140°.
9628 <i>B 0540</i>	-W. mole, head.	51°49.2' N 4°07.9' E	F.R.	23 7		Red post, white bands; 13.	
9632 <i>B 0542</i>	-E. mole, head.	51°49.2' N 4°08.0' E	F.G.	23 7		Green post, white bands; 13.	F.Y. shown in fog.
9636 <i>B 0630</i>	Goeree.	51°55.5' N 3°40.1' E	Fl.(4)W. period 20s fl. 0.1s, ec. 3.2s fl. 0.1s, ec. 3.2s fl. 0.1s, ec. 3.2s fl. 0.1s, ec. 10s	105 32	28	Red and white checkered light tower; 79. Helicopter platform.	Horn: 4 bl. ev. 30s (bl. 2s, si. 3s, bl. 2s, si. 3s, bl. 2s, si. 3s, bl. 2s, si. 13s).
	RACON		T(-)		12		(3 & 10cm).
HOEK VAN HOLLAND:							
9644 <i>B 0635</i>	-Zuiderdam, head.	51°59.1' N 4°02.5' E	F.G.	82 25	10	Green tower, white bands; 102. Helicopter platform.	Visible 330°-307°.
9648 <i>B 0634</i>	-Noorderdam, new head, N. side of entrance.	51°59.7' N 4°02.8' E	F.R.	84 26	10	Red tower, white bands; 102. Helicopter platform.	Visible 278°-255°.
9656 <i>B 0637</i>	-Maasmond Range, front.	51°58.9' N 4°04.9' E	Iso.W. period 4s	98 30	21	White tower, black bands.	Visible 101°-123°. For use by very deep draft vessels only.
9660 <i>B 0637.1</i>	--Rear, 1135 meters 112° from front.	51°58.6' N 4°05.8' E	Iso.W. period 4s	157 48	21	White tower, black bands.	Visible 101°-123°. Synchronized with front.
9664 <i>B 0638</i>	--Entrance Range, front.	51°58.6' N 4°07.5' E	Iso.R. period 6s	98 30	18	Red tower, white bands.	Visible 099°30'-114°30'.
9668 <i>B 0638.1</i>	---Rear, 450 meters 107° from front.	51°58.5' N 4°07.9' E	Iso.R. period 6s	144 44	18	Red tower, white bands.	Visible 099°30'-114°30'. Synchronized with front.
-Europoort:							
9672 <i>B 0642</i>	--Calandkanaal Range, front.	51°57.6' N 4°08.7' E	Oc.G. period 6s lt. 4s, ec. 2s	98 30	16	Red tower, white bands.	Visible 108°30'-123°30'.
9676 <i>B 0642.1</i>	---Rear, 550 meters 116° from front.	51°57.4' N 4°09.1' E	Oc.G. period 6s	144 44	16	Red tower, white bands.	Visible 108°30'-123°30'. Synchronized with front.
9684 <i>B 0646</i>	---Entrance Range, front.	51°56.4' N 4°04.7' E	Iso.G. period 3s	69 21	11	Red and white checkered post.	Visible 185°-200°. Shown 24 hours. Intensified at night and in reduced visibility.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
9688 B 0646.1	---Rear, 50 meters from front.	192°30' 51°56.3' 4°04.7' E	N Iso.G. period 3s	79 24	11	Red and white checkered post.	Visible 185°-200°. Shown 24 hours. Synchronized with front. Intensified at night and in reduced visibility.
9689 B 0646.41	--Kleine Beerkanaal, NW. end.	51°58.5' 4°04.4' E	N 2 F.R.			Gray post, red and white daymark.	
9689.1 B 0646.45	---Island, N. end.	51°58.4' 4°04.8' E	N 2 F.R.			Gray post, red and white daymark.	
9689.2 B 0646.47	---S. end.	51°58.1' 4°04.9' E	N F.R.			Red and white daymark.	
9689.3 B 0646.5	---SE. end.	51°57.9' 4°04.8' E	N F.R.			Red and white daymark.	
9690 B 0646.7	--Beerkanaal, front.	51°57.5' 4°05.5' E	N Oc.W. period 6s lt. 4s, ec. 2s	52 16		Gray post; 49.	Shown 24 hours.
9690.1 B 0646.75	---Rear, 327 meters from front.	110° 51°57.5' 4°05.8' E	N Oc.W. period 6s lt. 4s, ec. 2s	69 21		Gray post; 66.	Shown 24 hours. Synchronized with front.
9692 B 0647	-Petroleum Port, No 6.	51°56.8' 4°05.1' E	N F.G.			White platform.	
9696 B 0648	-Mississippihaven, E. side.	51°56.6' 4°05.0' E	N Iso.W.R.G. period 3s	66 20	W. 13 R. 10 G. 10	Red and white checkered post.	G. 066°30'-068°, W.-071°, R.-072°30'. Shown 24 hours.
9701 B 0648.31	--W. side.	51°55.9' 4°02.2' E	N Iso.W.R.G. period 3s	79 24	W. 13 R. 10 G. 10	Red and white checkered post.	G. 247°30'-248°30', W.-250°30', R.-251°30'.
9702 B 0647.7	--Einde Amazonehaven, front.	51°56.7' 4°02.3' E	N Iso.W. period 6s				
9703 B 0647.701	---Rear, 258°.	51°56.7' 4°02.2' E	N Iso.W. period 6s				Synchronized with front.
9703.1 B 0633.7	-Europahavn, EON 1.	51°57.7' 4°01.8' E	N Fl.(5)Y. period 20s				
9703.2 B 0633.71	--EON 2.	51°57.7' 4°01.8' E	N Fl.(5)Y. period 10s				
ROTTERDAMSCH E WATERWEG:							
9704 B 0662	-Poortershaven Range, No 8, front.	51°56.1' 4°13.1' E	N L.Fl.R. period 8s fl. 3s, ec. 5s	16 5	8	Dolphin, red daymark; 10.	Intensified 322°-329°.
9708 B 0662.1	--Rear, 325 meters from front.	325°30' 51°56.2' 4°12.9' E	N F.R.		10	Mast.	Visible 322°-329°.
9716 B 0670.2	-Maassluis, E. mole, head.	51°55.0' 4°14.9' E	N F.G.	23 7		Post; 16.	
9720 B 0670	--W. mole, head.	51°55.0' 4°14.8' E	N F.R.	23 7		Post; 16.	
9724 B 0673	-Blankenburg Range, front.	51°54.0' 4°16.3' E	N Iso.W. period 4s	33 10	12	White tower, black bands; 13.	Visible 274°30'-289°30'. Shown 24 hours.
9728 B 0673.1	--Rear, 260 meters from front.	282° 51°54.0' 4°16.1' E	N Iso.W. period 4s	59 18	12	White tower, black bands; 39.	Visible 274°30'-289°30'. Shown 24 hours. Synchronized with front.
9732 B 0711.4	-Oude Maas.	51°53.5' 4°19.6' E	N Iso.W. period 2s			Red and green beacon, red triangular daymark point down, above green triangular daymark point up.	
9736 B 0712	--Range, front.	51°52.8' 4°19.7' E	N Iso.W. period 8s	43 13	15	Post.	Visible 150°-165°. Shown 24 hours.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
9740 B 0712.1	--Rear, 115 meters from front.	51°52.8' N 4°19.8' E	Iso.W. period 8s	49 15	15	Post.	Visible 150°-165°. Shown 24 hours. Synchronized with front.
SCHEVENINGEN:							
9748 B 0750	Scheveningen.	52°06.2' N 4°16.1' E	Fl.(2)W. period 10s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 7.3s	161 49	29	Brown tower; 98.	
9752 B 0751	-Approach Range, front.	52°06.0' N 4°15.4' E	Iso.W. period 4s	52 16	14	White mast.	Visible 148°30'-163°30'.
9756 B 0751.1	--Rear, 258 meters from front.	52°05.9' N 4°15.5' E	Iso.W. period 4s	79 24	14	White mast.	Visible 148°30'-163°30'. Synchronized with front.
9757 B 0753.4	-N. side, outer head.	52°06.0' N 4°15.6' E	Iso.R. period 8s			Post.	
9757.1 B 0753.45	--Inner head.	52°06.0' N 4°15.7' E	Iso.R. period 8s				
9758 B 0753.2	-S. side, outer head.	52°05.9' N 4°15.6' E	Iso.G. period 8s			Post.	
9758.1 B 0753.25	--Inner head.	52°05.9' N 4°15.6' E	Iso.G. period 8s				
9759 B 0754.8	-2nd Haven, N. side.	52°05.9' N 4°16.2' E	F.R.				Traffic signal.
9759.1	--S. side.	52°05.9' N 4°16.2' E	F.G.				
9760 B 0753.1	-Harbor Range, front.	52°05.8' N 4°15.9' E	Iso.G. period 4s			11 White post.	Shown 24 hours.
9764 B 0753.11	--Rear, 50 meters from front.	52°05.8' N 4°15.9' E	Iso.G. period 4s			11 White post.	Shown 24 hours. Synchronized with front. Intensified in reduced visibility.
9765 B 0754.05	-1st Haven, S. side.	52°05.9' N 4°15.8' E	Oc.G. period 6s lt. 4s, ec. 2s				
9766 B 0754	--N. side.	52°05.9' N 4°15.8' E	Oc.R. period 6s lt. 4s, ec. 2s				
9767	-3rd Haven, W. side.	52°05.8' N 4°15.6' E	F.R.				
9768 B 0751.6	-Noorderhoofd, head.	52°06.2' N 4°15.4' E	F.R.	39 12	9	Red tower, white bands; 30.	
9772 B 0751.4	-Zuiderhoofd, head.	52°06.2' N 4°15.2' E	F.G.	39 12	9	Green tower, white bands; 30.	
9776 B 0752	-Zuiderbinnenhoofd.	52°06.0' N 4°15.4' E	Iso.G. period 4s	33 10	5	Post; 13.	
9780 B 0753	-Noorderbinnenhoofd, head.	52°06.1' N 4°15.5' E	Iso.R. period 4s	33 10	5	Post; 13.	
9782 B 0755	-Promenade Pier, head.	52°07.1' N 4°16.8' E	Iso.W. period 5s	146 44	5	Concrete tower; 108.	Visible 013°-253°.
9784 B 0760	Noordwijkaan Zee.	52°14.9' N 4°26.0' E	Oc.(3)W. period 20s	108 33	18	White tower; 85.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
HAVEN VAN IJMUIDEN:							
9792 B 0766	-Entrance Range, front.	52°27.7' N 4°34.5' E	F.W.R.	102	W. 16 R. 13	Brown round tower; 79.	W. 050°-122°, R.-145°, W.-160°. Traffic signal. F.W. 5M, visible 090°30'-110°30' by day. Tide signal.
9796 B 0766.1	--Rear, 570 meters 100°30' from front.	52°27.7' N 4°35.0' E	Fl.W. period 5s fl. 0.3s, ec. 4.7s	174 53	29	Brown round tower; 141.	Visible 019°-199°. F.W. 5M, visible 090°30'-110°30' by day.
9800 B 0768	-N. breakwater, outer head.	52°28.1' N 4°32.6' E	F.R.	50 15	10	Red square tower, white bands.	
9804 B 0769	--Inner head.	52°28.0' N 4°33.2' E	Iso.R. period 8s	40 12	9	Red beacon, white bands.	
9808 B 0767	-S. breakwater, outer head.	52°27.8' N 4°31.9' E	F.G.	50 15	10	Green square tower, white bands.	Fl.W. 3s shown in fog.
9812 B 0770	--Inner head.	52°27.7' N 4°33.3' E	Iso.G. period 8s	40 12	9	Green beacon, white band.	
9832 B 0783	-Fish Harbor, W. side of entrance.	52°27.8' N 4°34.7' E	F.G.	26 8		Post; 20.	Visible 085°-308°. Fog light. Iso.R. 3s warning light.
9836 B 0784	--E. side of entrance.	52°27.8' N 4°35.0' E	F.R.	26 8		Post; 16.	Visible 284°-181°. 2 F.Y. shown in fog.
9839 B 0786	--W. side Fort Island.	52°27.8' N 4°34.4' E	Iso.R. period 6s				
9840 B 0785	--S. side entrance.	52°27.8' N 4°33.8' E	Iso.G. period 6s				
9841 B 0786.9	-Midden Sluiseiland.	52°28.0' N 4°35.5' E	Iso.W. period 2s				
-Noorder Buitenkanal:							
9844 B 0789	-Entrance Range, front.	52°28.2' N 4°35.6' E	Iso.W. period 3s	26 8		Green post.	Visible 031°-121°.
9848 B 0789.1	--Rear, 530 meters 077° from front.	52°28.3' N 4°36.1' E	Iso.W. period 3s	56 17		Green mast, white daymark.	Visible 031°-121°. Synchronized with front.
9854	-Ijmuiden Approach Buoy.	52°28.7' N 4°23.9' E	Mo.(A)W. period 8s			SAFE WATER RW, spherical.	
	-RACON		Y(- • - -) period 60s		10		(3 & 10cm).
9856 B 0800	-Foundry Basin Range, front.	52°28.4' N 4°36.1' E	Iso.G. period 2s	39 12		Post; 15.	
9860 B 0800.1	--Rear, 150 meters 065° from front.	52°28.5' N 4°36.2' E	Iso.G. period 2s	56 17		Post; 27.	Synchronized with front.
9864 B 0842	Egmond aan Zee.	52°37.1' N 4°37.3' E	Iso.W.R. period 10s	121 37	W. 18 R. 14	White tower; 92.	W. 010°-175°, R.-188°.
9868	Platform Helm A, RACON.	52°52.4' N 4°08.6' E	T(-)		12		(3 & 10cm).
9870	Logger L-16 Platform, RACON.	53°00.9' N 4°13.0' E	X(- • • -)		12		Azimuth coverage 060°-270°. (3 & 10cm).
9876 B 0849	-Zanddijk.	52°52.8' N 4°42.9' E	Oc.W.R.G. period 10s	105 32	8	Brown tower; 56.	G. 041°-088°, W.-094°, R.-120°.
9878	<i>Schulpengat Fairway Buoy SG.</i>	52°52.9' N 4°38.0' E	Mo.(A)W. period 8s			SAFE WATER RW, pillar, topmark.	
	RACON		Z(- - • •)				(3 & 10cm).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
9880 B 0856	-Huisduinen.	52°57.1' N 4°43.3' E	F.W.R.	92 28	W. 14 R. 11	Square brick tower; 59.	W. 070°-113°, R.-158°, W.-208°.
9884 B 0858	-Kijkduin, rear.	52°57.3' N 4°43.6' E	Fl.(4)W. period 20s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 9.9s	187 57	30	Brown tower; 184.	In line 253°30' with 9912.
ZEEGAT VAN TEXEL:							
9900 B 0864	-Den Helder Range, front.	52°57.4' N 4°47.1' E	Oc.G. period 5s lt. 4s, ec. 1s	56 17	3	Building, black triangular daymark point up.	Visible 183°30'-198°30'.
9904 B 0864.1	--Rear, 275 meters 191° from front.	52°57.2' N 4°47.0' E	Oc.G. period 5s lt. 4s, ec. 1s	85 26	3	Gray post.	Visible 183°30'-198°30'. Synchronized with front.
9912 B 0865	--Nieuwediep, front, W. breakwater, head.	52°58.0' N 4°47.1' E	Q.G.	43 13	8	Mast; 23.	In line 253°30' with rear 9884. Horn: 1 bl. ev. 20s (bl. 3s, si. 17s).
9924 B 0867	---W. side.	52°57.8' N 4°47.1' E	Fl.G. period 5s	33 10	4	Square post; 30.	Traffic signal WNW.
9928 B 0867.5	-Nieuwe Haven.	52°57.8' N 4°47.4' E	Q.R.	33 10	4	Square post; 16.	
9936 B 0870	-E. harbor, head.	52°57.6' N 4°46.7' E	Oc.R. period 5s lt. 3s, ec. 2s	33 10	4	Mast, red lantern; 16.	
9948 B 0852.1	-Den Hoorn.	53°01.6' N 4°45.1' E	Dir.W.R.G.	62 19	W. 22 R. 18 G. 18	Church tower.	F.G. 025°06'-025°36', Al.W.G.-026°18', F.W.- 026°42', Al.W.R.-027°24', F.R.-027°54'. Shown 24 hours.
9949 B 0877	-Mok Range, front.	53°00.4' N 4°45.2' E	Iso.W. period 8s	23 7	6	Gray post.	W. 224°30'-344°30'.
9949.1 B 0877.1	--Rear, 245 meters 284°30' from front.	53°00.4' N 4°44.9' E	Iso.W. period 8s	33 10	6	Gray post.	W. 224°30'-344°30'. Synchronized with front.
9949.2 B 0876.6	-Kolk, KM/RA2.	52°59.6' N 4°46.3' E	Fl.(5)Y. period 20s				
9949.3 B 0876.22	-MK2.	53°00.1' N 4°46.9' E	Fl.(3)Y. period 10s			Yellow post.	
-Texel:							
9950 B 0876	--Veerhaven, W. mole, head.	53°00.1' N 4°47.0' E	F.R.	30 9	5	Red and white post; 10.	
9950.1 B 0876.5	---Range, front.	53°00.2' N 4°46.9' E	Q.Bu.	52 16			Not visible when ferry is in port.
9950.2 B 0876.501	----Rear, 75 meters 322° from front.	53°00.2' N 4°46.8' E	F.Bu.	56 17			
9951 B 0876.2	---E. mole, head.	53°00.1' N 4°47.1' E	F.G.	30 9	4	Green and white post; 10.	F.Y. shown in fog.
9951.1 B 0875	---Range, front.	53°00.2' N 4°47.0' E	Iso.W. period 5s	36 11	3	Gray round pedestal; 16.	Visible 20° each side of bearing. Synchronized with 9951.2.
9951.2 B 0875.1	----Rear, 87 meters 359°30' from front.	53°00.3' N 4°47.0' E	Iso.W. period 5s	59 18	3	Gray round pedestal; 33.	Visible 20° each side of bearing. Synchronized with front.
9951.3 B 0876.55	--MK 3.	53°00.0' N 4°47.2' E	Iso.G. period 4s				

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
9951.4 <i>B 0877.4</i>	--Nioz Haven, range, front.	53°00.4' N 4°47.6' E	Oc.G. period 5s	13 4	6	On bridge.	G. 231°30' - 291°30'.
9951.5 <i>B 0877.41</i>	---Rear, 46 meters 268° from front.	53°00.4' N 4°47.5' E	Oc.G. period 5s	20 6	6	Gray post.	G. 231°30' - 291°30'.
9951.6 <i>B 0877.5</i>	---S. mole, head.	53°00.3' N 4°47.8' E	F.R.	16 5	4	Gray post.	
9951.7 <i>B 0877.6</i>	---N. mole, head.	53°00.4' N 4°47.9' E	F.G.	16 5	3	Gray post.	
9952 <i>B 0859</i>	--Schilbolsnol.	53°00.5' N 4°45.7' E	F.W.R.G.	92 28	W. 8 R. 8 G. 5	Green post; 69.	W. 333°-026°, G.-033°, W.-038°, R.-070°.
	-Oudeschild:						
9956 <i>B 0881</i>	--S. mole, head.	53°02.3' N 4°51.2' E	F.R.	26 8		Red post, white bands; 23.	Fog light. F.R. traffic light.
9960 <i>B 0886</i>	-Eirland.	53°10.9' N 4°51.3' E	Fl.(2)W. period 10s fl. 0.2s, ec. 2.3s fl. 0.2s, ec. 7.3s	174 53	29	Red tower; 115.	
	VLIELAND:						
9968 <i>B 0894</i>	Vuurduin.	53°17.7' N 5°03.5' E	Iso.W. period 4s	177 54	20	Red tower; 55.	Unintensified 313°-043°.
9972 <i>B 0896</i>	-E. mole, head.	53°17.8' N 5°05.6' E	F.G.			Post.	
9976 <i>B 0898</i>	-W. mole, head.	53°17.7' N 5°05.6' E	F.R.			Post.	F.R. traffic light.
9977 <i>B 0890</i>	-VL-CENTER LANBY.	53°27.0' N 4°40.0' E	Fl.W. period 5s		12	SAFE WATER RW.	
	-RACON		C(- • - •)		12		(3 & 10cm).
9979 <i>A 7581.85</i>	-Wintershall L8-G Platform.	53°34.9' N 4°36.3' E	Mo.(U)W. period 15s				Horn: Mo.(U) ev. 30s.
			2 F.R.				
	-RACON		G(- - •) period 1s		12		Azimuth coverage 180°-340°. (3 & 10cm).
9979.5	-Platform L2-FA-1, RACON.	53°57.7' N 4°29.9' E	9(- - - - •)		12		(3 & 10cm).
	ZEEGAT VAN TERSCHELLING:						
9980 <i>B 0904</i>	-Terschelling (Brandaris).	53°21.6' N 5°12.9' E	Fl.W. period 5s fl. 0.3s, ec. 4.7s	180 55	29	Yellow tower; 172.	Obscured by dunes on Vlieland and Terschelling. Storm signals. Coast Guard station.
9982 <i>B 0904.5</i>	-N. Terschelling, metering station.	53°25.8' N 5°20.1' E	Fl.(5)Y. period 20s				Tide gauge.
	-West Terschelling:						
9984 <i>B 0908</i>	--W. mole, head.	53°21.3' N 5°13.1' E	F.R.	20 6	5	Red post, white bands.	Horn: 1 bl. ev. 15s (bl. 3s, si. 12s).
9992 <i>B 0912</i>	--E. mole, head.	53°21.3' N 5°13.2' E	F.G.	16 5	4	Green post, white bands; 16.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
THE NETHERLANDS-NORTH SEA							
AMELANDER GAT:							
9996 <i>B 0920</i>	-Ameland.	53°26.9' N 5°37.5' E	Fl.(3)W. period 15s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 8.8s	190 58	30	Brown tower, white bands; 181.	
10000 <i>B 0924</i>	-Nes, mole, head.	53°26.0' N 5°46.5' E	Iso.W. period 6s	13 4	8	House.	
10004 <i>B 0926</i>	-Holwerd, pier, head.	53°23.8' N 5°52.8' E	Oc.W. period 6s lt. 4s, ec. 2s	23 7	10	Gray post.	
FRIESCHE GAT:							
10008 <i>B 0938</i>	-Schiermonnikoog.	53°29.2' N 6°08.8' E	Fl.(4)W. period 20s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 3.1s fl. 0.2s, ec. 9.9s	144 44	28	Brown tower; 118.	
			F.W.R.	98 30	W. 15 R. 12		W. 210°-221°, R.-230°.
10009	<i>Buoy BR/S.</i>	52°55.0' N 3°18.0' E	Mo.(A)W. period 8s			SAFE WATER RW, spherical.	
	RACON		G(- - •)				(3 & 10cm).
10010	NAM K14-FA1 Platform, RACON.	53°16.2' N 3°37.7' E	7(- - • • •)		12		(3 & 10cm).
10011	Placid K9C-PA Platform, RACON.	53°39.2' N 3°52.5' E	8(- - - • •)		12		(3 & 10cm).
10013 <i>A 7682</i>	Elf Petroland Platform, F15-A, RACON.	54°13.0' N 4°49.7' E	U(• • -)				(3 & 10cm).
10013.1 <i>A 7682.5</i>	NAM F3-OLT Platform, RACON.	54°51.3' N 4°43.6' E	D(- • •)				(3 & 10cm).
10013.3	<i>Buoy EF.</i>	54°03.5' N 4°59.8' E	L.Fl.W. period 10s			SAFE WATER RW, spherical.	
	RACON		T(-)				(3 & 10cm).
10013.5	<i>Buoy EF/B.</i>	54°06.7' N 5°40.0' E	Fl.(4)Y. period 10s			SPECIAL Y, spherical.	
	RACON		M(- -)				(3 & 10cm).
10014 <i>B 1051</i>	GW/EMS LIGHTFLOAT.	54°10.0' N 6°20.8' E	Iso.W. period 8s	56 17	17	GW/EMS on red hull.	Horn: Mo.(R) ev. 30s.
	RACON		T(-) period 55s		6		(3 & 10cm).

Section 9

North Sea-Germany and Denmark

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10016	<i>Borkumriff Buoy.</i>	53°47.5' N 6°22.1' E	Oc.W. period 4s			SAFE WATER RW, pillar, topmark.	
	RACON		T(-) period 48s				
10024	<i>Westerems Buoy.</i>	53°37.2' N 6°19.5' E	Iso.W. period 4s			SAFE WATER RW, pillar, topmark.	
	RACON		T(-)		8		
10028	<i>Osterems Buoy.</i>	53°42.0' N 6°36.0' E	Iso.W. period 4s			SAFE WATER RW, pillar, topmark.	
10032 <i>B 0970</i>	Borkum Grosser.	53°35.3' N 6°39.7' E	Fl.(2)W. period 12s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 8.8s	207 63	24	Brown tower; 197.	
			F.W.R.G.	151 46	W. 19 R. 15 G. 15		G. 107°24'-109°, W.-111°12', R.-112°36'.
10035 <i>B 0972.5</i>	-Tide gauge.	53°34.6' N 6°39.7' E	Fl.Y. period 4s	33 10	5	Yellow pile.	
	WESTEREMS:						
10040 <i>B 0976</i>	-Fischer Balje.	53°33.2' N 6°42.9' E	Oc.(2)W. period 16s lt. 3s, ec. 1s lt. 11s, ec. 1s	49 15	4	Red tower, white band; 52. Floodlit.	Visible 260°-123°.
10040.5 <i>B 0981</i>	-Die Ems.	53°28.5' N 6°49.3' E	Fl.(5)Y. period 20s				
10041	-Doekegat beacon 1.	53°27.3' N 6°51.2' E	Q.W.			N. CARDINAL BY, beacon, topmark.	
10041.5	-Doekegat beacon 2.	53°27.0' N 6°52.0' E	Q.W.			N. CARDINAL BY, beacon, topmark.	
10042 <i>B 0987.2</i>	-Werkhaven, N. mole, head.	53°26.7' N 6°52.9' E	Fl.(3)Y. period 12s				
10043 <i>B 0987</i>	--S. mole, head.	53°26.5' N 6°53.1' E	Fl.(3)Y. period 12s				
10044 <i>B 0987.4</i>	--Pier, head.	53°26.6' N 6°53.1' E	Q.W.			N. CARDINAL BY, beacon, topmark.	
10045 <i>B 0989</i>	--Tide gauge.	53°26.0' N 6°55.6' E	Fl.Y. period 4s fl. 1s, ec. 3s	36 11	7	Yellow pile.	
10048 <i>B 0983</i>	Campen.	53°24.3' N 7°00.9' E	Fl.W. period 5s fl. 0.7s, ec. 4.3s	203 62	29	Red and white tower, two galleries, white central column, green cupola; 213.	Visible 126°18'-126°48'.
			F.W.		30		Visible 126°48'-127°06'.
			Fl.(4)W. period 15s fl. 0.7s, ec. 2.3s fl. 0.7s, ec. 2.3s fl. 0.7s, ec. 2.3s fl. 0.7s, ec. 5.3s		29		Visible 127°06'-127°36'.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10052 B 1010	-Knock.	53°20.3' N 7°01.4' E	F.W.R.G.	92 28	W. 12 R. 9 G. 8	Gray tower, white spherical radome; 180.	W. 270°-299°, R.-008°18', G.-023°, W.-026°48', R.-039°, W.-073°, R.-119°, W.-154°.
10053 B 1044	Memmert.	53°37.5' N 6°54.6' E	Fl.Y. period 4s	16 5		Yellow pillar.	
10054 B 1046	Leysiel.	53°32.2' N 7°02.4' E	F.W.R.G.	33 10	W. 8 R. 6 G. 5	Pile.	G. 156°-164°, W.-166°, R.-174°.
10055	Emder Fahrwasser.	53°19.5' N 7°05.0' E	Fl.Y. period 4s				
10056 B 1012	Wybelsum.	53°20.2' N 7°06.5' E	F.W.R.	52 16	W. 6 R. 4	White tower, red bands, lantern, radome; 59.	W. 295°-320°, R.-024°, W.-049°.
10060 B 1052	GERMAN BIGHT LIGHTFLOAT.	54°10.7' N 7°26.1' E	Iso.W. period 8s		17	Red hull; 39. Floodlit.	Horn: Mo.(R) ev. 30s.
NORDERNEY:							
10072 B 1054	-Near center of island.	53°42.6' N 7°13.8' E	Fl.(3)W. period 12s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 2.8s fl. 0.2s, ec. 5.8s	194 59	23	Red tower; 177.	Unintensified 067°-077° and 270°-280°.
10092 B 1074	-Fish Harbor, W. mole, head.	53°41.9' N 7°09.9' E	Oc.(2)R. period 9s	43 13	4	Red tower, white bands; 36.	
NORDEICH:							
10100 B 1078	-W. wall, N. head.	53°38.7' N 7°09.0' E	F.G.	26 8	4	Green framework tower; 30.	Visible 021°-327°.
10104 B 1080	-E. wall, N. head.	53°38.8' N 7°09.0' E	F.R.	27 8	4	Red framework tower; 26.	Visible 327°-237°. F.W. 115°-270° shown in fog.
10108 B 1082	-Range, front.	53°38.4' N 7°09.4' E	Iso.W.R. period 6s	20 6	W. 6 R. 4	Gray pile, platform; 23.	R. 078°-122°, W.-150°.
10112 B 1082.1	--Rear, 133 meters 144° from front.	53°38.3' N 7°09.5' E	Iso.W. period 6s	30 9	6	Gray pile, platform; 33.	Synchronized with front.
10116 B 1084	-1,463 meters from N. end of E. wall Range, front.	53°38.5' N 7°09.2' E	Iso.W.R. period 3s	16 5	W. 6 R. 4	Gray pile, platform; 23.	W. 340°-022°30', R.-098°.
10120 B 1084.1	--Rear, 110 meters 350° from front.	53°38.5' N 7°09.2' E	Iso.W. period 3s	26 8	6	Gray pile, platform; 33.	Synchronized with front.
10124 B 1092	-Langeoog, W. mole, head.	53°43.5' N 7°30.1' E	Oc.W.R.G. period 6s lt. 5s, ec. 1s	26 8	W. 7 R. 5 G. 4	Red mast, lantern; 13.	G. 064°-070°, W.-074°, R.-326°, W.-330°, G.-335°, R.-064°. Horn: 1 bl. ev. 30s (bl. 9s, si. 21s).
10128 B 1096.5	-Spiekeroog.	53°45.0' N 7°41.3' E	F.R.	19 6	4	Red post, platform; 23.	Visible 197°-114°.
10136 B 1312	-Helgoland.	54°10.9' N 7°52.9' E	Fl.W. period 5s fl. 0.1s, ec. 4.9s	270 82	28	Brown square tower, white cupola, antenna; 111.	F.R. on radio masts 0.1 mile SSE. and 0.4 mile NNW.
10140	-Approach Whistle Buoy.	54°09.0' N 7°54.0' E	Q.(3)W. period 10s			E. CARDINAL BYB, pillar, topmark.	
10148 B 1326	-Dune entrance Range, front.	54°10.9' N 7°54.8' E	Iso.W. period 4s	36 11	8	Red mast, white bands, platform, triangular daymark point up; 46.	
10152 B 1326.1	--Rear, 120 meters 020° from front.	54°10.9' N 7°54.8' E	Iso.W.R.G. period 4s	56 17	W. 11 R. 10 G. 10	Red tower, white band; 49.	G. 106°-125°, W.-130°, R.-144°, G. 010°-018°30', W.-021°, R.-030°. Synchronized with front.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
-Vorhafen:							
10156 B 1318	--E. mole, S. elbow.	54°10.4' N 7°54.0' E	Oc.W.G. period 6s lt. 5s, ec. 1s	16 5	W. 6 G. 3	Gray mast; 7.	W. 203°-250°, G.-109°.
10160 B 1318.2	---Head.	54°10.4' N 7°53.9' E	F.G.	23 7		3 Gray mast; 7.	Visible 289°-180°.
10164 B 1320	--S. mole, head.	54°10.3' N 7°54.0' E	Oc.(2)R. period 12s lt. 3s, ec. 1s lt. 7s, ec. 1s	23 7		4 Red mast; 7.	Visible 101°-334°.
F.R.							
-Binnenhafen:							
10168 B 1324	--Entrance Range, front.	54°10.8' N 7°53.4' E	Oc.R. period 6s lt. 5s, ec. 1s	26 8		6 Red mast, white band, red triangular daymark point up; 23.	
10172 B 1324.1	---Rear, 50 meters 302°12' from front.	54°10.8' N 7°53.4' E	Oc.R. period 6s lt. 5s, ec. 1s	33 10		6 Red mast, white band, red triangular daymark point down; 20.	Synchronized with front.
10176 B 1325	--S. side of entrance.	54°10.7' N 7°53.5' E	F.W.R.	16 5	W. 6 R. 4	Red mast; 10.	R. 040°-238°, W.-270°.
10180 B 1325.2	--N. side of entrance.	54°10.8' N 7°53.5' E	F.W.G.	16 5	W. 6 G. 3	Green mast; 7.	W. 248°-254°, G.-102°.
10184 B 1328	-Dunenhafen, W. mole, head.	54°11.0' N 7°54.3' E	F.R.	16 5		4 Red mast; 7.	Visible 294°-172°.
10188	-Sellebrunn Buoy.	54°14.0' N 7°50.0' E	Q.(9)W. period 15s			W. CARDINAL YBY, pillar, topmark.	Whistle.
10192 B 1112	Wangerooge.	53°47.4' N 7°51.4' E	Fl.R. period 5s fl. 0.1s, ec. 4.9s	210 64		23 Red round tower, white bands; 210.	
			F.W.R.	79 24	W. 15 R. 11		W. 055°-060°, R.-065°30', W.-071°.
			F.W.R.G.	79 24	W. 22 R. 17 G. 18		G. 119°24'-138°48', W.-152°12', R.-159°54'.
10193 B 1113	-W. embankment, head.	53°46.3' N 7°51.9' E	F.R.	10 3		4 Red pile; 10.	
10194 B 1113.2	-E. embankment, head.	53°46.5' N 7°52.1' E	F.G.	10 3		3 Green pile; 10.	
10212 B 1138	-Voslapp Range, front.	53°37.2' N 8°06.8' E	Iso.W. period 6s	49 15		24 Red round tower, white bands; 56.	
10216 B 1138.1	--Rear, 4.3 km. 164°30' from front.	53°34.9' N 8°07.9' E	Iso.W. period 6s	198 60		27 White round concrete tower, red bands; 201.	Synchronized with front.
10220 B 1139	-Niedersachsenbrücke Range, front.	53°34.9' N 8°09.4' E	F.W.	33 10		4 Black framework tower, white and red triangular daymark point up; 36.	
10224 B 1139.1	--Rear, 15 meters 298° from front.	53°34.9' N 8°09.4' E	F.W.	42 13		4 Black framework tower, white and red triangular daymark point down; 46.	Range lit for arrival and departure maneuvers only.
10248 B 1134	-Tossens Range, front.	53°34.5' N 8°12.3' E	Oc.W. period 6s lt. 4.5s, ec. 0.5s	49 15		20 White tower, red band; 59.	
10248.1 B 1134.1	--Rear, about 3850 meters 146° from front.	53°32.8' N 8°14.3' E	Oc.W. period 6s	167 51		20 Red tower, white bands, three galleries; 174.	
10264 B 1156	-Vorhafen, Entrance Range, front.	53°31.8' N 8°09.6' E	Iso.W. period 4s	57 17		11 Gray mast; 33.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10268 <i>B 1156.1</i>	--Rear, 180 meters from front.	53°31.7' N 8°09.5' E	Iso.W. period 4s	76 23	11	Pile.	
10272 <i>B 1158</i>	-W. mole, head.	53°32.5' N 8°10.1' E	Oc.G. period 6s lt. 4.5s, ec. 1.5s	49 15	4	Green mast; 39.	
10276 <i>B 1159</i>	-E. mole, head.	53°32.4' N 8°10.3' E	Oc.R. period 6s lt. 4.5s, ec. 1.5s	49 15	5	Red mast; 43. Floodlit.	
10284 <i>B 1163</i>	-N. mole, head.	53°30.9' N 8°09.3' E	F.W.G.	29 9	W. 6 G. 3	Green pile.	W. 216°-280°, G.-010°, W.-020°, G.-130°.
10288 <i>B 1164</i>	-Mole, head.	53°30.8' N 8°09.2' E	F.R.	20 6	5	Red pile.	
10292 <i>B 1166</i>	-N. mole, angle.	53°30.8' N 8°08.8' E	F.G.	20 6	3	Green pile; 20.	
10296 <i>B 1168</i>	-S. mole, head.	53°30.8' N 8°08.7' E	F.R.	15 5	4	Red pile; 16.	
10300 <i>B 1152</i>	-Arrngast Sand.	53°28.9' N 8°10.9' E	F.W.R.G.	99 30	W. 21 R. 16 G. 17	Red round tower, two galleries, white band; 118.	W. 135°-142°, G.-150°, W.-152°, G.-174°36', R. 180°30'-191°, W.-213°, R.-225°, W. 286°-303°, G.-314°.
			Fl.W.G. period 3s fl. 0.8s, ec. 2.2s				G. 174°36'-175°30', W.-176°24'.
			Fl.(2)W. period 9s fl. 0.8s, ec. 2.2s fl. 0.8s, ec. 5.2s				Visible 177°24'-180°30'.
			Oc.W. period 6s lt. 5s, ec. 1s		20		Visible 176°24'-177°24'.
10302	<i>-Jade-Weser Buoy.</i>	53°58.3' N 7°38.8' E	Oc.W. period 4s			SAFE WATER RW, pillar, topmark.	
	-RACON		T(-)		8		(3 & 10cm).
	WESER RIVER:						
10304	<i>-Jade 2 Buoy.</i>	53°52.1' N 7°47.3' E	Fl.(2+1)G. period 15s			PREFERRED CHANNEL (A) GRG, pillar, topmark.	
	-RACON		T(-)		7		
10308 <i>B 1188</i>	-Alte Weser.	53°51.8' N 8°07.7' E	F.W.R.G.	108 33	W. 23 R. 19 G. 18	Red tower, black base, red and white gallery, green lantern, radar antenna; 125.	W. 288°-352°, R.-003°, W.-017°(leading sector), G.-045°, W.-074°, G.-118°, W.-123° (leading sector), R.-140°, G.-175°, W.-183°, R.-196°, W.-238°. Horn: 1 bl. ev. 60s (bl. 17s, si. 43s).

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10375 B 1241	-Wremer Tief.	53°37.8' N 8°28.3' E	F.I.Y. period 4s				Tide gauge.
10376 B 1240	-Hofe Range, front.	53°37.0' N 8°29.7' E	Oc.W. period 6s lt. 5s, ec. 1s	52 16	15	Red pile, white bands, red spherical lantern; 75.	
10380 B 1240.1	--Rear, 1.3 km. 330°48' from front.	53°37.6' N 8°29.1' E	Oc.W. period 6s lt. 5s, ec. 1s	118 36	18	Red pile, white band, two red spherical galleries; 141.	Synchronized with front.
10381 B 1230	-Imsum Range, front.	53°36.5' N 8°30.2' E	Iso.W. period 4s	69 21	13	Red pile, white bands, red triangular daymark point up; 85.	
10382 B 1230.1	--Rear, 897 meters 125°12' from front.	53°36.2' N 8°30.9' E	Iso.W. period 4s	128 39	15	Red pile, white bands, red triangular daymark point down; 148.	Synchronized with front.
BREMERHAVEN:							
10388 B 1257	-Fischeriehafen Range, common front.	53°31.9' N 8°34.5' E	Oc.W. period 6s lt. 5s, ec. 1s	55 17	19 12	Red and white column, red conical lantern; 36.	
10388.1 B 1256.9	--Rear, 1272 meters 150°48' from front.	53°31.3' N 8°35.1' E	Oc.W. period 6s lt. 5s, ec. 1s	148 45	19	Red and white column, two red conical galleries; 144.	Synchronized with front.
10389.1 B 1257.1	--Rear, 344 meters 053°54' from front.	53°32.0' N 8°34.8' E	Oc.W. period 6s lt. 5s, ec. 1s	92 28	13	Red and white column, red conical lantern; 82.	Synchronized with front.
10390 B 1256.5	-Blexen-Reede.	53°31.6' N 8°34.3' E	F.Y.			Pile.	
10392 B 1258	-N. Lock.	53°33.9' N 8°32.9' E	F.R.	43 13	7	Red mast; 43.	Horn: 1 bl. ev. 60s (bl. 13s, si. 47s).
10396 B 1260	--On quay.	53°33.8' N 8°33.0' E	F.G.	49 15	4	Green mast; 39.	
-Kaiserhafen:							
10400 B 1262	--On mole, W. side of entrance to locks.	53°33.3' N 8°33.5' E	F.R.	49 15	6	Red mast; 36.	
10404 B 1264	--E. side of entrance to Kaiserhafen.	53°33.1' N 8°33.6' E	F.G.	52 16	6	Mast.	Horn: 1 bl. ev. 60s (bl. 11s, si. 49s).
10406 B 1264.6	--SE. side of entrance.	53°33.1' N 8°33.6' E	F.Y.	23 7			
10408 B 1268	--Bremerhaven Range, front, S. mole.	53°32.7' N 8°34.2' E	Iso.W. period 4s	69 21	8	Red conical tower, white bands, gallery; 85.	
-Neuer Hafen:							
10412 B 1268.1	--Rear, NE. side of entrance, 208 meters 006° from front.	53°32.8' N 8°34.2' E	Iso.W. period 4s	115 35	8	Brown square brick tower, green roof; 121.	Synchronized with front.
10416 B 1274	-Old Harbor entrance, Geeste N. mole.	53°32.2' N 8°34.5' E	F.W.R.	49 15	6	Brown square tower, gallery; 46.	R. 245°-166°.
10420 B 1275	-Harbor entrance, S. mole, head.	53°32.1' N 8°34.5' E	F.G.	49 15	5	Green framework tower; 46.	Visible 355°-265°.
BREMEN							
10422 B 1297.17	-Klippkanne, N.	53°21.5' N 8°29.8' E	F.W.R.G.	20 6	3	Black post; 10.	R. 175°54'-205°54', W.-220°54', G.-310°54'.
10422.1 B 1297.18	--S.	53°21.2' N 8°29.9' E	F.W.R.G.	20 6	3	Black post; 10.	G. 215°54'-305°54', W.-325°54', R.-355°54'.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10423 <i>B 1298</i>	-Brake.	53° 19.8' N 8° 29.2' E	Iso.W.R.G. period 4s	49 15	W. 9 R. 7 G. 6	Red column, white band; 43.	R. 351°30'-352°30', W.-356°, G.-358°.
ELBE RIVER ENTRANCE:							
10424	- <i>Elbe Buoy.</i>	54° 00.0' N 8° 06.5' E	Iso.W. period 10s			SAFE WATER RW, pillar, topmark.	Horn: Mo.(R) ev. 30s.
	-RACON		T(-)		8		(3 & 10cm).
10436 <i>B 1344</i>	-Neuwerk.	53° 54.9' N 8° 29.7' E	F.W.	124 38	3	Red square tower, black roof; 128.	Private light.
10439 <i>B 1348.49</i>	- Gelbsand Range, front.	53° 58.3' N 8° 37.5' E	Iso.W. period 4s	82 25	17	White round tower, black bands.	
10439.1 <i>B 1348.5</i>	--Rear, 1600 meters 331°12' from front.	53° 59.1' N 8° 36.8' E	Iso.W. period 4s	164 50	20	White round tower, black bands.	
10442.1 <i>B 1349.8</i>	-Cuxhaven, NW, G(23).	53° 54.8' N 8° 40.1' E	F.W.			Green and white post; 75.	Radar reflector.
10442.2 <i>B 1349.9</i>	--V(23).	53° 55.2' N 8° 41.2' E	F.W.			Red and white post; 75.	Radar reflector.
CUXHAVEN:							
10445 <i>B 1361.1</i>	- Altenbruch Range, common front.	53° 50.0' N 8° 47.7' E	Iso.W. period 8s	62 19	19	White round tower, black bands.	
			Iso.W.R.G. period 8s		W. 8 R. 9 G. 8		G. 117°30'-124°, W.-135°, R.- 140°.
10445.1 <i>B 1361</i>	--Rear, 2490 meters 261° from common front.	53° 49.8' N 8° 45.5' E	Iso.W. period 8s	167 51	22	Black round tower, white bands, red top, black triangular daymark point down; 194.	Synchronized with 10445.
10446 <i>B 1361.2</i>	--Wehldorf rear, 595 meters 130°48' from common front.	53° 49.8' N 8° 48.1' E	Iso.W. period 8s	102 31	11	Black round tower, white bands, black top; 95.	Synchronized with 10445.
10448 <i>B 1363</i>	-Neuer Fahrhafen, W. mole, head.	53° 52.7' N 8° 42.2' E	F.W.G.	23 7	W. 6 G. 3	Green pile, platform.	G. 125°-349°, W.-125°.
10452 <i>B 1363.2</i>	-Ferry pier, head.	53° 52.6' N 8° 42.3' E	F.W.R.	23 7	W. 6 R. 4	Red platform with platform.	R. 117°-336°, W.-117°.
-Cuxhaven (Fischeriehafen):							
10460 <i>B 1368</i>	--W. mole, head.	53° 52.3' N 8° 42.8' E	F.W.G.	21 6	W. 4 G. 2	Green framework tower, platform. Floodlit.	G. 125°-344°, W.-125°.
10464 <i>B 1370</i>	--E. mole, head.	53° 52.2' N 8° 42.8' E	F.W.R.	23 7	W. 6 R. 4	Red framework tower, platform. Floodlit.	R. 124°-008°, W.-124°.
-Amerikahafen:							
10468 <i>B 1374</i>	--Steubenhof.	53° 52.0' N 8° 43.1' E	Oc.W.G. period 4s lt. 3s, ec. 1s	39 12	W. 5 G. 3	Green round tower, platform; 33.	G. 122°-338°, W.-122°.
10502 <i>B 1396</i>	Otterdorf/Belum Range, common front.	53° 50.1' N 8° 56.1' E	Iso.W. period 4s	75 23	18	White round tower, red bands, red conical top; 82.	
10502.1 <i>B 1395.9</i>	-Belum, rear, 1340 meters 092°48' from common front.	53° 50.1' N 8° 57.3' E	Iso.W. period 4s	148 45	18	White round tower, red bands, red conical top; 144.	
10502.2 <i>B 1396.1</i>	-Otterdorf, rear, 2512 meters 245°30' from common front.	53° 49.6' N 8° 54.1' E	Iso.W. period 4s	171 52	21	White round tower, red bands, red conical top; 171.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10503 <i>B 1396.2</i>	--NW.	53°50.1' N 8°52.2' E	Fl.(5)Y. period 20s			Yellow post.	Tide gauge.
10519 <i>B 1411</i>	Osteriff.	53°51.4' N 9°01.9' E	Fl.(5)Y. period 20s			Yellow post.	Tide gauge.
10520 <i>B 1412</i>	Balje Range, front.	53°51.3' N 9°02.6' E	Iso.W. period 8s	79 24	17	White round tower, red bands.	
10524 <i>B 1412.1</i>	--Rear, about 2460 meters 081° from front.	53°51.5' N 9°04.8' E	Iso.W. period 8s	177 54	21	White round tower, red bands.	Visible either side of range line (sector unspecified).
10525 <i>B 1414</i>	Brunsbüttel.	53°52.5' N 9°07.4' E	Fl.(5)Y. period 20s				Tide gauge.
10528 <i>B 1416</i>	Schleuseninsel Range, front.	53°53.3' N 9°08.5' E	Iso.W. period 3s	79 24	16	White tower, red bands; 75.	
10532 <i>B 1416.1</i>	Industriegebiet, rear, about 1.63 km. 065°30' from front.	53°53.7' N 9°09.8' E	Iso.W. period 3s	151 46	21	White tower, red bands; 161.	Synchronized with front.
BRUNSBUTTEL:							
--Nord-Ostsee-Kanal:							
10552 <i>B 1438</i>	--New entrance, N. mole, head.	53°53.3' N 9°07.5' E	F.W.R.	43 13	W. 10 R. 8	White tower, red band; 43.	R. 275°30'-079°, W.-081°30'.
10556 <i>B 1431</i>	--Elbehafen, W. Range, front.	53°53.4' N 9°10.0' E	L.Fl.W. period 8s fl. 2s, ec. 6s	33 10	10	Gray mast, red and white diamond daymark.	
10560 <i>B 1431.1</i>	--Rear, 50 meters 360° from front.	53°53.4' N 9°10.0' E	L.Fl.W. period 8s fl. 2s, ec. 6s	42 13	10	Gray mast, red and white diamond daymark.	Synchronized with front.
10564 <i>B 1436</i>	---S. mole, head.	53°53.3' N 9°08.1' E	Iso.Y. period 2s	43 13			
10568 <i>B 1442</i>	--Old entrance, N. mole, head.	53°53.2' N 9°08.2' E	F.R.	47 14	10	Red tower, white roof; 43. Floodlit.	Visible 278°-084°. Horn: 1 bl. ev. 10s (bl. 3s, si. 7s).
10569 <i>B 1444</i>	---S. mole, head.	53°53.3' N 9°08.6' E	F.W.G.	46 14	W. 10 G. 6	White tower, black bands, white roof, black gallery. Floodlit.	W. 266°18'-273°54', G.- 088°48'. F.W. shown in fog.
10572 <i>B 1425</i>	Hochdonn Ferry Bridge.	54°01.0' N 9°17.8' E	4 F.W. (horiz.)			Bridge.	4 F.W. (horiz.) marks center. Vertical clearance 40 meters.
10573 <i>B 1428</i>	Beldorf Bridge.	54°07.5' N 9°19.8' E	4 F.W. (horiz.)			Bridge.	4 F.W. (horiz.) marks center. Vertical clearance 40 meters.
ELBE RIVER ENTRANCE:							
10574 <i>B 1454</i>	-St. Margarethen/ Scheelenkuhlen , range, common front.	53°52.9' N 9°15.7' E	Iso.W. period 8s	66 20	18	Red cylindrical tower, white bands; 75.	Intensified 089°12' and 311°48'.
10574.1 <i>B 1453.9</i>	-St. Margarethen , rear, 0.58M 311°48' from front.	53°53.2' N 9°14.9' E	Iso.W. period 8s	118 36	19	Red cylindrical tower, white bands; 121.	Synchronized with 10574.
10574.2 <i>B 1454.1</i>	-Scheelenkuhlen , rear, 1M 089°12' from front.	53°52.9' N 9°17.3' E	Iso.W. period 8s	144 44	22	Red cylindrical tower, white bands; 154.	Synchronized with 10574.
10575 <i>B 1474</i>	-Ruthensand Range, front.	53°43.2' N 9°25.4' E	Dir.W.R.G. period 6s fl. 4.5s, ec. 1.5s	49 15	W. 15 R. 12 G. 11	Red tower, white bands, lantern; 49.	Oc.G.170°-174°48', Oc.W.- 176°06', Oc.R.-182°.
			Iso.W. period 4s		9		
10575.1 <i>B 1474.1</i>	--Rear, 1005 meters 161°36' from front.	53°43.2' N 9°25.4' E	Iso.W. period 4s	98 30	11	Red tower, white bands, lantern; 98.	Synchronized with front.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10575.2 <i>B 1499</i>	-Grauerort.	53°40.7' N 9°29.7' E	Fl.(5)Y. period 20s			Dolphin.	Tide gauge.
10576 <i>B 1352</i>	Friedrichskoog Harbor.	53°59.5' N 8°50.7' E	F.W.	23 7	6	Black framework tower, platform; 23.	
10578 <i>B 1578.6</i>	Kohlfleethafen, rear, 099°42' from front.	53°32.3' N 9°53.1' E	Iso.W.R. period 4s	26 8	W. 5 R. 3	Red pile, red and white triangular daymark point down.	R. 086°42'-099°42', W.- 110°42'. Unlit front daymark 20 meters from rear.
10579 <i>B 1574.35</i>	-Berth 7B.	53°32.7' N 9°50.4' E	Iso.W. period 8s	26 8	3	Dolphin.	
10579.1 <i>B 1595.6</i>	-Moorburger Weide.	53°29.6' N 9°57.3' E	Dir.Iso.W.R.G. period 6s	115 35	W. 7 R. 5 G. 4	White tower, black bands.	G. 136°12'-138°12', W.- 140°12', R.-142°12'.
BUSUM:							
10580 <i>B 1606</i>	-Fishing harbor, W. side.	57°07.7' N 8°51.6' E	Iso.W.R. period 6s	72 22	W. 19 R. 12	Red tower, white bands; 72.	W. 248°-317°, R.-024°, W.- 148°.
10584 <i>B 1609</i>	-W. pier, head.	54°07.2' N 8°51.6' E	Oc.(3)R. period 12s lt. 2s, ec. 1s lt. 2s, ec. 1s lt. 5s, ec. 1s	33 10	4	Red tower; 20.	Visible 186°-120°. F.W. visible 315°-116° shown in fog.
10592 <i>B 1610</i>	--Starboard side.	54°07.2' N 8°51.7' E	Oc.(3)G. period 12s lt. 2s, ec. 1s lt. 2s, ec. 1s lt. 5s, ec. 1s	33 10	4	Green tower; 30.	Visible 260°-168°.
10596 <i>B 1624</i>	Saint Peter.	54°17.2' N 8°39.1' E	L.Fl.(2)W.R. period 15s fl. 2s, ec. 3s fl. 2s, ec. 8s	77 23	W. 16 R. 13	Brown tower, black lantern; 59.	R. 271°-280°30', W.-035°, R.- 055°, W.-068°, R.-091°, W.-120°.
10600 <i>B 1652</i>	Westerheversand.	54°22.4' N 8°38.4' E	Oc.(3)W.R.G. period 15s lt. 2s, ec. 1s lt. 2s, ec. 1s lt. 8s, ec. 1s	135 41	W. 21 R. 17 G. 16	Red tower, white bands; 131.	W. 012°12'-069°, G.-085°, W.- 086°, R.-107°, W.-150°, R.-207°, W.-233°, R.- 248°.
10604 <i>B 1672</i>	Suderoogsand.	54°25.5' N 8°28.7' E	Iso.W.R. period 6s	59 18	W. 16 R. 13	Gray square tower; 62.	R. 012°-043°, W.-068°, R.- 097°, W.-142°, W.-271°- 338°, R.-347°, W.-012°.
10612 <i>B 1676.1</i>	Pellworm Island.	54°29.8' N 8°40.0' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s	125 38	W. 20 R. 16 G. 15	Red tower, white band; 135.	G. 037°30'-040°, W.-042°30', R.-045°.
			Oc.W.R. period 5s lt. 4s, ec. 1s		W. 15 R. 11		R. 122°36'-140°, W.-210°12'.
			Oc.W. period 5s lt. 4s, ec. 1s		15		Visible 255°-307°.
AMRUM:							
10620 <i>B 1686</i>	-Amrum.	54°37.9' N 8°21.4' E	Fl.W. period 7.5s fl. 1s, ec. 6.5s	207 63	23	Red tower, white bands; 134.	
10628 <i>B 1688</i>	-Wriakhorn.	54°37.6' N 8°21.2' E	L.Fl.(2)W.R. period 15s fl. 2s, ec. 3s fl. 2s, ec. 8s	85 26	W. 12 R. 9	Gray framework tower, platform; 56.	W. 297°30'-319°30', R.-330°, W.-005°30', R.-034°.
10636 <i>B 1728</i>	-Norddorf.	54°40.2' N 8°18.5' E	Oc.W.R.G. period 6s lt. 4.5s, ec. 1.5s	72 22	W. 15 R. 12 G. 11	White tower, red bands, red roof; 26.	W. 031°-097°, R.-176°30', W.-178°30', G.-188°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
GERMANY-NORTH SEA							
10640 B 1700	Nordmarsch.	54°37.6' N 8°31.8' E	L.Fl.(3)W.R. period 20s fl. 2s, ec. 3s fl. 2s, ec. 3s fl. 2s, ec. 8s	43 13	W. 14 R. 11	Brown tower; 36.	W. 268°-279°, R.-306°, W.- 045°, R.-070°, W.-218°.
FOHR:							
10644 B 1704	-Oldenhorn.	54°40.9' N 8°34.1' E	Oc.(4)W.R. period 15s lt. 2s, ec. 1s lt. 2s, ec. 1s lt. 2s, ec. 1s lt. 5s, ec. 1s	34 10	W. 13 R. 10	Red tower, platform, green lantern; 26.	W. 208°-237°30', R.-298°, W.-353°, R.-080°.
10648 B 1706	--Wyk, pier, head.	54°41.6' N 8°34.7' E	F.R.	30 9	4	Red pile.	
10652 B 1714	Oland, NW. side, on Hallig wharf.	54°40.5' N 8°41.3' E	F.W.R.G.	22 7	W. 13 R. 10 G. 9	Red tower; 23.	G. 086°-093°, W.-160°, R.- 172°.
SYLT:							
10676 B 1735	-Hornum.	54°45.3' N 8°17.5' E	Fl.(2)W. period 9s fl. 0.4s, ec. 2.6s fl. 0.4s, ec. 5.6s	157 48	20	Red tower, white band; 112.	
10688	-Hornum Odde, cross.	54°44.4' N 8°17.7' E	Oc.(2)W.R.G. period 12s lt. 3s, ec. 1s lt. 7s, ec. 1s	56 17	W. 6 R. 4 G. 3	Gray mast; 13.	R. 180°-204°, W.-270°, G.- 290°, W.-313°, R.-328°, W.-023°, R.-045°.
10692 B 1738	-N. mole.	54°45.6' N 8°17.9' E	F.G.	20 6	4	Green pile; 10.	Visible 024°-260°.
10696 B 1738.6	--Outer S. mole, head.	54°45.6' N 8°18.0' E	F.R.	23 7	4	Dolphins, platform, red lantern.	
10700 B 1740	-Kampen.	54°56.8' N 8°20.4' E	L.Fl.W.R. period 10s fl. 3s, ec. 7s	203 62	W. 20 R. 16	White tower, black band; 131.	W. 193°-165°, R.-193°.
10704 B 1746	-List, W.	55°03.2' N 8°24.1' E	Oc.W.R.G. period 6s lt. 4.5s, ec. 1.5s	62 19	W. 14 R. 11 G. 10	White tower, red lantern; 36.	W. 040°-069°, R.-133°, W.- 227°, R.-266°24', W.- 268°, G.-285°, W.-040°.
10708 B 1748	--E.	55°03.0' N 8°26.6' E	Iso.W.R.G. period 6s	73 22	W. 14 R. 11 G. 10	White tower, red bands, red lantern; 43.	W. 010°30'-262°, R.-278°, W.-296°, R.-323°18', W.- 324°30', G.-350°, W.- 010°30'.
10712 B 1749	--Land.	55°01.1' N 8°26.5' E	Oc.W.R.G. period 3s lt. 2s, ec. 1s	46 14	W. 13 R. 10 G. 9	White mast, red band; 33.	W. 170°-203°, G.-212°, W.- 215°30', R.-232°30', W.- 234°, G.-243°, W.-050°. F.G. and F.R. mark naval boat harbor entrance.
DENMARK-NORTH SEA							
10716 B 1848	Blavandshuk.	55°33.5' N 8°05.0' E	L.Fl.(3)W. period 20s fl. 2s, ec. 2s fl. 2s, ec. 2s fl. 2s, ec. 10s	180 55	22	White square tower; 128.	DGPS Station.
10716.1 B 1848.7	-Munk S. Wind Farm.	55°30.5' N 7°52.5' E	Mo.(U)W. period 15s fl. 0.7s, ec. 0.7s fl. 0.7s, ec. 0.7s fl. 2.1s, ec. 10.1s	49 15	5	Transformer platform.	
10716.17	Horns Rev Offshore Wind Farm, Platform C.	55°41.4' N 7°41.2' E	2 Mo.(U)W. period 15s	98 30	10	Transformer platform.	

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DENMARK-NORTH SEA							
10716.3	<i>Regnar Field TANKER Superbuoy.</i>	55°23.2' N 5°13.9' E	Mo.(U)W. period 15s		10		Horn.
	RACON		U(• • -) period 30s				
10716.5	Dan Field, Platform FC, RACON.	55°28.0' N 5°08.0' E	U(• • -) period 90s				(3cm). Aero Radiobeacon.
10717	Kraka Field, Platform A, RACON.	55°24.0' N 5°05.1' E	U(• • -)				(3 & 10cm).
10717.1	GNSC-B-11 Platform, RACON. <i>A 7784</i>	55°27.8' N 4°33.0' E	D(- • •)				(3 & 10cm).
10717.2	Rolf Field, Platform A, RACON.	55°36.4' N 4°29.6' E	U(• • -)				
10717.3	Valdemar Field, Platform A, RACON.	55°50.2' N 4°33.5' E	U(• • -)				(3 & 10cm).
10717.5	Dagmar Field, Platform A, RACON.	55°34.6' N 4°37.2' E	U(• • -)				(3 & 10cm). AIS (MMSI No 992191500).
10718	Gorm Field, Platform C, RACON.	55°34.9' N 4°45.6' E	U(• • -) period 72s				(3cm).
10718.2	Tyra East Field, Platform A, RACON.	55°43.3' N 4°48.2' E	U(• • -) period 90s				(3cm).
10718.4	Tyra West Field, Platform A, RACON.	55°43.0' N 4°45.1' E	U(• • -) period 90s				(3cm).
10719	<i>Gradyb Anduvning Buoy.</i>	55°24.7' N 8°11.7' E	L.FI.W. period 10s		10	SAFE WATER RW, pillar, topmark.	
	RACON		G(- - •)				(3 & 10cm).
10719.3	Harald Field, Platform B, RACON.	56°20.7' N 4°16.3' E	U(• • -)				(3 & 10cm).
10719.5	-Romo Channel, outer. <i>B 1757</i>	55°03.5' N 8°31.1' E	Fl.(2)R. period 10s fl. 1.5s, ec. 1.5s fl. 1.5s, ec. 5.5s	16 5	3	Red pole; 10.	
10719.6	--Middle. <i>B 1758</i>	55°04.0' N 8°32.7' E	Fl.R. period 3s fl. 0.5s, ec. 2.5s	20 6	3	Red post.	
10719.7	--Inner. <i>B 1759</i>	55°04.8' N 8°34.2' E	Fl.R. period 5s fl. 0.5s, ec. 4.5s	16 5	3	Red pole; 10.	
ESBJERG APPROACH:							
10720	-Saedenstrand Range, front. <i>B 1772</i>	55°29.7' N 8°23.9' E	Iso.W. period 2s	46 14	19	Gray tower, copper roof; 10.	Visible 052°18'-055°18'. Shown 24 hours.
10724	--Middle, 740 meters 053°48' from front. <i>B 1772.1</i>	55°29.9' N 8°24.4' E	Iso.W. period 4s	89 27	19	Red metal tower, white bands; 46.	Visible 052°18'-055°18'. Shown 24 hours.
10728	--Rear, about 1.4 km. 053°48' from middle. <i>B 1772.2</i>	55°30.2' N 8°24.9' E	F.W.	121 37	20	Red framework tower; 72.	Visible 052°18'-155°18'. Shown 24 hours.
10730	-Tide Gauge. <i>B 1774</i>	55°26.1' N 8°15.9' E	Fl.(5)Y. period 20s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 1.2s fl. 0.8s, ec. 11.2s	33 10	4	Yellow mast, platform.	
10732	-Fano Sandende, Jerg. <i>B 1780</i>	55°28.9' N 8°22.0' E	Fl.G. period 3s fl. 0.7s, ec. 2.3s	23 7	6	Green tower.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
DENMARK-NORTH SEA							
10736 B 1780.4	-Fovrfelt.	55°29.0' N 8°23.7' E	Fl.(2)R. period 10s fl. 1.5s, ec. 1.5s fl. 1.5s, ec. 5.5s	30 9	6	Red tower.	
10740 B 1780.2	--N.	55°29.3' N 8°23.8' E	Oc.(2)W.R.G. period 6s lt. 1s, ec. 1s lt. 3s, ec. 1s	23 7	W. 7 R. 5 G. 5	Yellow tower.	G. 327°-331°, W.-333°30', R.-342°, G. 066°30'-073°, W.-077°, R.-085°30'.
10744 B 1778	- Saedenstrand , S. Range, front.	55°28.7' N 8°24.6' E	F.G.	36 11	18	White framework tower; 23.	Visible 065°30'-068°30'. Shown 24 hours.
10748 B 1778.1	--Rear, about 1.2 km. 067° from front.	55°29.0' N 8°26.0' E	F.G.	82 25	19	Gray tower; 56.	Visible 065°30'-068°30'. Shown 24 hours.
10752 B 1779	--N. Range, front.	55°29.9' N 8°23.7' E	F.R.	57 17	17	White framework tower; 20.	Visible 047°30'-050°30'. Shown 24 hours.
10756 B 1779.1	--Rear, 550 meters 049° from front.	55°30.1' N 8°24.0' E	F.R.	93 28	18	Gray concrete tower; 36.	Visible 047°30'-050°30'. Shown 24 hours.
10760 B 1782	-Strandby.	55°28.8' N 8°24.6' E	Oc.W.R.G. period 5s lt. 4s, ec. 1s	20 6	W. 11 R. 8 G. 8	White building, red band.	G. 101°12'-105°54', W.-109°42', R.-111°54'.
10768 B 1784	-Commercial Fishing harbor, W. mole.	55°28.6' N 8°24.9' E	Fl.R. period 5s fl. 1s, ec. 4s	23 7	4	Red post; 10. Floodlit.	
10772 B 1784.4	--E. mole.	55°28.5' N 8°25.0' E	Fl.G. period 5s fl. 1s, ec. 4s	23 7	4	Green conical structure; 10. Floodlit.	
10776 B 1786	-Konsumfiskerihaven, W. mole.	55°28.3' N 8°25.3' E	Fl.R. period 3s fl. 0.7s, ec. 2.3s	20 6		Red framework structure; 10.	Visible 203°-119°.
10780 B 1788	--E. mole.	55°28.3' N 8°25.4' E	Fl.G. period 3s fl. 0.7s, ec. 2.3s	20 6		Green framework structure; 10.	Visible 023°-256°.
10788 B 1794	-Commercial Harbor, N. mole, head.	55°28.1' N 8°25.5' E	F.R.	26 8	5	Red conical structure; 16.	Visible 232°-135°. Shown in reduced visibility.
10792 B 1796	--S. mole, head.	55°28.1' N 8°25.5' E	F.G.	26 8	5	Green conical structure; 16.	Visible 045°-276°.
ESBJERG HARBOR:							
10796 B 1804	-Commercial Harbor, W. mole, head.	55°27.5' N 8°26.1' E	F.R.	29 9	4	Red post, concrete base; 16.	
10800 B 1805	--E. mole, head.	55°27.4' N 8°26.3' E	F.G.	29 9	4	Green metal post, concrete base; 16.	
10802 B 1818.5	-Western Excavation Limit Range, front.	55°27.6' N 8°25.9' E	F.R.	33 10	3	Framework mast; 13.	Visible 047°-077°.
10802.1 B 1818.51	--Rear, 140 meters 062° from front.	55°27.6' N 8°26.0' E	F.R.	43 13	3	Framework mast; 20.	Visible 047°-077°.
10806 B 1817.4	-Kremer Sand Range, front.	55°27.7' N 8°24.8' E	F.W.	31 9	7	Gray mast, post, white "X" topmark; 33.	Visible 276°54'-306°54'. Shown 24 hours. Range 1M by day.
10806.1 B 1817.41	--Rear, 244 meters 291°54' from front.	55°27.7' N 8°24.6' E	F.W.	41 12	7	Gray mast, post, white "X" topmark; 36.	Visible 276°54'-306°54'. Shown 24 hours. Range 1M by day. Marks southern boundary of dredged area at Australia Quay.
10816 B 1822	-Nordby Range, front.	55°26.9' N 8°24.5' E	F.R.	23 7	4	Wooden pole, white triangular daymark point up.	Visible 123°42'-303°42'.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
DENMARK-NORTH SEA							
10820 <i>B 1822.1</i>	--Rear, 84 meters 214° from front.	55°26.9' N 8°24.4' E	F.R.	31 9	4	Gray framework tower, white triangular daymark point down; 30.	Visible 123°42'-303°42'.
10840 <i>B 1819.6</i>	-Kremer Sand S.	55°27.3' N 8°24.8' E	F.G.	17 5	3	Green dolphin; 13.	
HVIDE SANDE KANAL:							
10852 <i>B 1860</i>	-Breakwater, head.	56°00.0' N 8°06.6' E	Fl.R. period 3s fl. 0.8s, ec. 2.2s	24 7	8	Red hut; 7.	
10856 <i>B 1861</i>	-W. entrance, N. mole, head.	56°00.0' N 8°06.9' E	Fl.R. period 5s fl. 1s, ec. 4s	33 10	7	Red structure; 16. Floodlit.	Shown in reduced visibility.
10860 <i>B 1862</i>	--S. mole, W. head.	56°00.0' N 8°06.9' E	Fl.G. period 5s fl. 1s, ec. 4s	33 10	7	Green structure; 16.	Shown in reduced visibility.
10864 <i>B 1862.4</i>	-Innerhead, S. mole, head.	56°00.1' N 8°07.4' E	F.G.	16 5	2	Gray column.	
10868 <i>B 1862.2</i>	--N. mole, head.	56°00.1' N 8°07.3' E	F.R.	16 5	4	Gray column; 7.	
10872 <i>B 1868</i>	Lyngvig.	56°03.0' N 8°06.3' E	Fl.W. period 5s	174 53	23	White round tower; 125.	
TORSMINDE:							
10880 <i>B 1880</i>	-N. mole, about 25 meters from head.	56°22.4' N 8°06.7' E	Iso.R. period 2s	30 9	5	Red hut; 23.	Shown 24 hours.
10884 <i>B 1881</i>	-S. mole, head.	56°22.3' N 8°07.0' E	Iso.G. period 2s	30 9	5	Green hut; 16.	Shown 24 hours.
10892 <i>B 1885</i>	-E. side of lock.	56°22.4' N 8°07.3' E	Iso.W. period 4s	40 12	4	Gray mast; 40.	Visible 020°-160°.
10896 <i>B 1885.2</i>	-E. side of bridge.	56°22.4' N 8°07.3' E	Iso.W. period 4s	16 5	5		Visible 200°-340°.
10900 <i>B 1884.4</i>	-E. Range, front.	56°22.3' N 8°07.3' E	F.G.	16 5	4	Gray post.	
10904 <i>B 1884.6</i>	--Rear.	56°22.3' N 8°07.3' E	F.G.	16 5	4	Gray post.	
10908 <i>B 1886</i>	Bovbjerg.	56°30.8' N 8°07.2' E	Fl.(2)W. period 15s	203 62	16	Red round tower; 85.	
10910	<i>Thyboron Buoy.</i>	56°42.8' N 8°08.5' E	L.Fl.W. period 10s			SAFE WATER RW, pillar, topmark.	
RACON							
			T(-)				
10912 <i>B 1890</i>	Thyboron.	56°42.5' N 8°12.9' E	Fl.(3)W. period 10s fl. 1s, ec. 1s fl. 1s, ec. 1s fl. 1s, ec. 5s	79 24	12	Framework tower; 56.	Intensified 023°30'-203°30'. Shown in reduced visibility.
10916 <i>B 1894</i>	-Agger-Tange Range, front.	56°43.0' N 8°14.1' E	Iso.W.R.G. period 4s	26 8	W. 10 R. 8 G. 8	Beacon, red triangular daymark point up; 16.	G. 074°30'-079°30', W.- 084°30', R.-089°30'.
10920 <i>B 1894.1</i>	--Rear, 804 meters 082° from front.	56°43.0' N 8°14.9' E	Iso.W. period 4s	56 17	11	Gray framework mast, red triangular daymark point down; 43.	Visible 075°-089°. Synchronized with front.
10924 <i>B 1897</i>	-Svaneholm Range, front.	56°42.5' N 8°14.6' E	Iso.W. period 2s	23 7	10	Red hut, red triangular daymark point up; 7.	Visible 113°-127°.

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
DENMARK-NORTH SEA							
10928 <i>B 1897.1</i>	--Rear, 312 meters 120° from front.	56°42.4' N 8°14.8' E	Iso.W. period 2s	42 13	10	Gray framework tower, red triangular daymark point down; 43.	Visible 113°-127°. Synchronized with front.
10932 <i>B 1900</i>	-Thyboron Tange.	56°42.4' N 8°13.5' E	Oc.(2)W.R.G. period 12s lt. 2s, ec. 2s lt. 6s, ec. 2s	20 6	W. 11 R. 8 G. 8	White tower, red band; 10.	G. 122°30'-146°30', W.-150°, R.-211°18', G.-337°30', W.-340°, R.-344°. Sectors altered and light moved as channel changes.
10936 <i>B 1902</i>	-Canal mole, head.	56°42.1' N 8°13.6' E	Fl.G. period 3s fl. 0.7s, ec. 2.3s	20 6	4	Green hut; 10.	
10940 <i>B 1903</i>	-S. mole, head.	56°42.0' N 8°13.6' E	Fl.R. period 3s fl. 0.7s, ec. 2.3s	20 6	4	Red hut; 10.	
10944 <i>B 2070</i>	Lodbjerg.	56°49.4' N 8°15.8' E	Fl.(2)W. period 20s fl. 1.3s, ec. 4.7s fl. 1.3s, ec. 12.7s	157 48	21	Round granite tower; 115.	
NORRE VORUPOR:							
10948 <i>B 2072</i>	-Range, front.	56°57.5' N 8°22.1' E	Iso.R. period 4s	65 20	9	Red tower, white band; 13.	Visible 22°30' each side of range line. Moved as channel changes.
10952 <i>B 2072.1</i>	--Rear, 80 meters from front.	56°57.5' N 8°22.3' E	Iso.R. period 4s	98 30	9	Red tower, white band; 30.	Visible 22°30' each side of range line. Synchronized with front. Moved as channel changes.
10956 <i>B 2074</i>	-Mole, head.	56°57.7' N 8°21.6' E	Fl.G. period 5s fl. 1s, ec. 4s	19 6	5	Framework tower; 10.	
10960 <i>B 2080</i>	Klitmoller Range, front.	57°02.7' N 8°29.2' E	F.R.	26 8	4	Mast; 16.	Visible 097°-210°. Moved as channel changes. Fishing light.
10964 <i>B 2080.1</i>	-Rear, 50 meters 146° from front.	57°02.7' N 8°29.2' E	F.R.	43 13	4	Mast; 26.	Visible 090°-202°. Fishing light.
HANSTHOLM:							
10968 <i>B 2084</i>	-Hansthalm.	57°06.8' N 8°35.9' E	Fl.(3)W. period 20s fl. 0.4s, ec. 3.3s fl. 0.4s, ec. 3.3s fl. 0.4s, ec. 12.2s	213 65	24	White octagonal tower; 75.	Shown in reduced visibility.
10972 <i>B 2087</i>	-Entrance Range, front.	57°07.1' N 8°36.3' E	Iso.W. period 2s	121 37	13	Mast, red triangular daymark point up; 13.	Visible 127°36'-157°36'.
10976 <i>B 2087.1</i>	--Rear, 170 meters 142°36' from front.	57°07.1' N 8°36.3' E	Iso.W. period 2s	147 45	13	Mast, red triangular daymark point down; 13.	Visible 127°36'-157°36'. Synchronized with front.
10980 <i>B 2086</i>	-Outer mole, E. section, head.	57°07.6' N 8°35.7' E	Fl.R. period 3s fl. 0.7s, ec. 2.3s	36 11	9	Red pillar; 16. Floodlit.	
10988 <i>B 2088</i>	-Transverse mole, W. section, head.	57°07.5' N 8°35.7' E	F.G.	20 6	7	Green framework tower; 10. Floodlit.	Shown 24 hours.
10992 <i>B 2089</i>	--E. section, head.	57°07.4' N 8°35.7' E	F.R.	20 6	6	Red framework tower; 10. Floodlit.	Shown 24 hours.
10996 <i>B 2090</i>	-Roshage, mole, head.	57°07.8' N 8°37.2' E	Fl.W. period 5s fl. 1s, ec. 4s	23 7	5	Framework tower; 16.	

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
DENMARK-NORTH SEA							
11000 <i>B 2098</i>	Lidstrand Ranges.	57°09.2' N 8°57.9' E	3 F.W.	71 22 40 12 40 12	8 7 7	Unpainted wooden masts.	Visible 127°-149°. Range lights. Moved as channel changes. Occasional.
11004 <i>B 2102</i>	Lokken.	57°22.4' N 9°42.1' E	Fl.W. period 5s fl. 1s, ec. 4s	16 5	6	Framework tower.	
11008 <i>B 2106</i>	Hirtshals.	57°35.1' N 9°56.5' E	F.Fl.W. period 30s fl. 0.3s, ec. 29.7s	187 57	F. 18 Fl 25	White round tower; 115.	
11012 <i>B 2107</i>	-Range, front on transverse mole.	57°35.7' N 9°57.7' E	Iso.R. period 2s	33 10	11	Framework tower, red triangular daymark point up; 30.	Visible 156°-176°.
11016 <i>B 2107.1</i>	--Rear, 330 meters 166° from front.	57°35.6' N 9°57.8' E	Iso.R. period 4s	59 18	11	Framework tower, red triangular daymark point down; 39.	Visible 156°-176°.
11020 <i>B 2108</i>	-Breakwater, head.	57°36.0' N 9°57.5' E	Fl.G. period 3s fl. 0.7s, ec. 2.3s	46 14	6	Green mast; 33.	Horn: 1 bl. ev. 15s (bl. 5s, si. 10s).
11024 <i>B 2110</i>	-Hirtshals outer harbor, W. mole, head.	57°35.8' N 9°57.6' E	Fl.G. period 5s fl. 1s, ec. 4s	30 9	5	Green mast; 33.	
11028 <i>B 2112</i>	--E. mole, head.	57°35.9' N 9°57.7' E	Fl.R. period 5s fl. 1s, ec. 4s	30 9	6	Red mast; 23.	
11032 <i>B 2113</i>	-Inner harbor, transverse mole, E. head.	57°35.7' N 9°57.9' E	F.G.	20 6	4	Green mast; 13.	
11035 <i>A 7880</i>	Svend Oilfield , Platform A.	56°10.7' N 4°10.8' E	Mo.(U)W. period 15s		15	Platform.	Reserve light range 10M. AIS (MMSI No 992191521). Horn: Mo(U) ev. 30s (bl. 0.7s, si. 1s, bl. 0.7s, si. 1s, bl. 2.5s, si. 24.1s).
			Mo.(U)R. period 15s		2		Light on each of four corners.
	RACON		U(••-)				(3 & 10cm).
11038	Eldfisk Oilfield, platform, RACON.	56°22.5' N 3°16.0' E	O(- - -)		16		
11040	Tor Oilfield, platform, RACON.	56°38.5' N 3°19.8' E	N(- •)		16		
11042	Skjold Oilfield, Platform C, RACON.	55°31.9' N 4°54.5' E	U(••-)				(3 & 10cm).

Section 10

Radiobeacons

(1) No.	(2) Name	(3) Position	(4) Characteristic	(5) Range	(6) Sequence	(7) Frequency	(8) Remarks
UNITED KINGDOM							
10	Brighton Marina	50°48.7' N 0°06.0' W	BM (-••• - -).			10 294.5 A1A.	
110	Cloch Point Light, Calibration Radiobeacon	55°57.0' N 4°53.0' W	CL (-• - • • - ••).			8 300 A1A.	Transmits upon request to Estuary Control on VHF Ch 16 or 12 or by telephone Greenock (0475) 26221. Six hours prior notice is required.
CHANNEL ISLANDS							
270	Castle Breakwater Light	49°27.4' N 2°31.4' W	GY (- - • • - - - -).			10 304.5 A1A.	Synchronized with horn for distance finding.
GERMANY							
510	Wilhelmshaven Calibration Radiobeacon	53°31.0' N 8°08.8' E	VB (• - - - - - •••).			312.6, 2168 A2A.	Transmits on request to Wasser and Schiffsamt Wilhelmshaven through Jade Revier on VHF Ch 16 or 20.
520	Bremerhaven Calibration Radiobeacon	53°32.4' N 8°34.9' E	GB (- - • • - •••).			312.6, 2168 A2A.	Transmits on request to Wasser and Schiffsamt Bremerhaven through Bremerhaven Weser Revier on VHF Ch 5 or 7.
530	Hollerwetterm Calibration Radiobeacon	53°50.4' N 9°21.2' E	HB (•••• - •••).			313.5, 2168 A2A.	Transmits on request to Revierzentrale Brunsbittel to all district radio channels of the Wasser and Schiffsamt Hamburg or by telephone (04852) 8011-16 ext 393 or (04852) 8400.
540	Krautsand Calibration Radiobeacon	53°45.6' N 9°22.6' E	KB (- • - - - •••).			312.6, 2168 A1A.	Transmits on request to Revierzentrale Brunsbittel to all district radio channels of the Wasser and Schiffsamt Hamburg or by telephone (04852) 8011-16 ext. 393 or (04852) 8400.
DENMARK							
570	Platform FC, Dan Oil Field	55°28.0' N 5°08.0' E	DNF (-••• - • •• - •).			25 349 A2A.	AERO.

Section 11

Differential GPS Stations

(1) No.	(2) Name	(3) Position	(4) Station ID	(5) Range	(6) Frequency	(7) Transfer Rate	(8) Remarks
DENMARK							
10	Blavands Huk	55°33.5' N 8°05.1' E	T 452	120	296.5	100	
UNITED KINGDOM							
20	St. Catherine's Point Light	50°34.5' N 1°17.8' W	T 440 R 680 R 690	100	307.5	100	Message Types: 3,7,9,16.
25	Wormleighton DGPS Station	52°11.8' N 1°21.9' W	T 439 R 691	172	291	100	Message Types: 3,6,7,9,16.
30	Lizard Point Light	49°57.6' N 5°12.1' W	T 441 R 681 R 691	100	306	100	Message Types: 3,7,9,16.
40	Nash Point Light	51°24.0' N 3°33.1' W	T 449 R 689 R 699	100	309.5	100	Message Types: 3,7,9,16.
50	Point Lynas Light	53°25.0' N 4°17.3' W	T 442 R 682 R 692	100	297.5	100	Message Types: 3,7,9,16.
60	Butt Of Lewis Light	58°30.9' N 6°15.7' W	T 444 R 684 R 694	200	295.5	100	Message Types: 3,7,9,16.
70	Sumburgh Head Light Shetland Islands.	59°51.3' N 1°16.4' W	T 445 R 685 R 695	200	291.5	100	Message Types: 3,7,9,16.
80	Girdle Ness Light	57°08.3' N 2°02.8' W	T 446 R 686 R 696	150	297	100	Message Types: 3,7,9,16.
90	Flamborough Head Light	54°07.0' N 0°04.9' W	T 447 R 687 R 697	100	290.5	100	Message Types: 3,7,9,16.
100	North Foreland	51°22.5' N 1°26.9' E	T 448 R 688 R 698	100	299.5	100	Message Types: 3,7,9,16.
REPUBLIC OF IRELAND							
110	Mizen Head.	51°27.0' N 9°48.8' W	T 430 R 660 R 661	150	284	100	Message Types: 3,7,9,16.
120	Tory Island Light.	55°16.4' N 8°14.9' W	T 435 R 670 R 671	200	288.5	100	Message Types: 3,7,9,16.
130	Loop Head Light	52°33.6' N 9°55.9' W	T 432 R 665 R 666	150	293	100	Message Types: 3,7,9,16.

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Skerry of Ness	3204	STORNOWAY	3828		
Skerryvore	3996	Strandby	10760	U	
Skervuile	4172	Straw Island	7480	Uig	3968
Skokholm	5604	Stream Rock	7316	Uiginish Point	3972
Skroo	3316	STROMA	3036	Ullapool Point	3620
SKYE	3720	Stromness	3208	Ungam Island	3516
S-lich Hohe-Schaar-Hafen	10579.1	Strone	4448	Ushenish	3900
SLIGO HARBOR	7360	Strumble Head	5592	USK RIVER	5904
Sloehaven (Flushing East)	9192	Suderoogsand	10604	Uyea Sound	3528
Slyne Head	7444	Sula Sgeir	3572		
Smelting House Point	6520	Sule Skerry	3568	V	
Snowhill	6496	Sumburgh Head	3320	VALENTIA HARBOUR	7612
Solthorn	10368	SUNDERLAND	2080	Vallaquie Island	3897
Sorel Point	8164	Suther Ness	3416	Vance	7112
SOUND OF JURA	4152	Svaneholm	10924	VARNE LIGHTSHIP	1224
SOUND OF MULL	4028	Swanage	548	Vatsetter	3520
South Arklow Buoy	6556	SWANSEA BAY	5756	Ve Skerries	3556
South Bishop	5596	Swilkie Point	3032	Vermerette	8204
South Gare	2020	Swona	3076	Victoria Harbor	4572
SOUTH KILLINGHOLME	1909	SYLT	10676	VL-CENTER	9977
South Parade	952	Symbister Ness	3412	VLIELAND	9968
SOUTH SOUND OF ARAN ISLAND	7300			Vlissingen (Flushing)	9168
SOUTHAMPTON	768	T		Vorhafen	10156
SOUTHAMPTON WATER	664	Tab's Head	1740	Voslapp	10212
Southport	5200	Tarbat Ness	2984	Vuurduin	9968
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West Terschelling	9984
West Twin Island	6908
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Willsboro	7160
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ZEEGAT VAN TEXEL	9900
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ZUID BEVELAND	9404
Zuiderbinnenhoofd	9776
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C		K		W	
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Butt Of Lewis Light. 60	Mizen Head 110	Sumburgh Head Light 70
F	N	T
Flamborough Head Light 90	Nash Point Light 40	Tory Island Light 120
G	North Foreland. 100	W
Girdle Ness Light 80	P	Wormleighton DGPS Station. 25
L	Point Lynas Light 50	
Lizard Point Light 30		

CROSS REFERENCE - INTERNATIONAL vs. U.S. LIGHT NUMBER

Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A0002	.....	4	A0168.2	.....	253	A0348	.....	532	A0632.3	.....	874
A0006	.....	8	A0170	.....	256	A0348.1	.....	536	A0633	.....	884
A0018	.....	16	A0172	.....	260	A0354	.....	528	A0637	.....	888
A0020	.....	20	A0173	.....	264	A0496	.....	544	A0637.1	.....	892
A0028	.....	24	A0174	.....	268	A0498	.....	548	A0640	.....	896
A0030	.....	28	A0176	.....	272	A0500	.....	560	A0645	.....	912
A0032	.....	32	A0178	.....	274	A0506	.....	572	A0646	.....	916
A0038	.....	40	A0182	.....	276	A0520.6	.....	573	A0652	.....	936
A0040	.....	44	A0184	.....	280	A0520.61	.....	574	A0654	.....	924
A0045	.....	46	A0185	.....	282	A0521	.....	576	A0664	.....	942
A0046	.....	48	A0186	.....	284	A0522	.....	580	A0665.8	.....	942.1
A0048	.....	52	A0186.2	.....	286	A0528	.....	584	A0684	.....	1024
A0051	.....	56	A0192	.....	292	A0534	.....	588	A0686	.....	952
A0056	.....	60	A0193	.....	294	A0538.1	.....	596	A0688	.....	948
A0060	.....	64	A0204	.....	300	A0541	.....	606	A0691	.....	956
A0062	.....	68	A0220	.....	308	A0542	.....	600	A0692.5	.....	960
A0064	.....	72	A0222	.....	312	A0542.1	.....	604	A0692.8	.....	998
A0065	.....	80	A0222.1	.....	316	A0543	.....	608	A0696	.....	964
A0066	.....	84	A0224	.....	320	A0544	.....	607	A0698	.....	968
A0068	.....	88	A0228	.....	324	A0552	.....	612	A0700	.....	972
A0069	.....	92	A0236	.....	328	A0553.2	.....	616	A0701	.....	974
A0070	.....	96	A0237	.....	336	A0555	.....	624	A0704	.....	980
A0078	.....	100	A0238	.....	340	A0558	.....	636	A0705	.....	984
A0080	.....	102	A0242	.....	332	A0560	.....	640	A0707.4	.....	988
A0080.2	.....	102.5	A0244	.....	344	A0560.5	.....	641	A0720	.....	992
A0082	.....	104	A0246	.....	348	A0562	.....	628	A0722.2	.....	996
A0084	.....	108	A0247.4	.....	357	A0562.1	.....	632	A0726	.....	1000
A0086	.....	112	A0247.6	.....	358	A0577	.....	664	A0730	.....	1004
A0090	.....	118	A0248	.....	360	A0580.6	.....	666	A0734	.....	1020
A0092	.....	120	A0249	.....	364	A0581.9	.....	744	A0750	.....	1028
A0093	.....	124	A0249.2	.....	368	A0582	.....	748	A0760	.....	944
A0094	.....	128	A0249.5	.....	372	A0582.1	.....	752	A0762	.....	943
A0098	.....	132	A0250	.....	376	A0586	.....	740	A0768	.....	1052
A0111.2	.....	140	A0252	.....	388	A0587	.....	740.5	A0770	.....	1056
A0112	.....	144	A0254	.....	380	A0587.1	.....	740.7	A0774	.....	1064
A0114	.....	148	A0256	.....	384	A0588	.....	741	A0780	.....	1048
A0114.5	.....	150	A0262	.....	392	A0590.14	.....	688	A0782	.....	1036
A0115.5	.....	153	A0262.1	.....	396	A0590.16	.....	692	A0782.08	.....	1037
A0117	.....	160	A0263	.....	400	A0590.22	.....	698	A0783.4	.....	1044
A0119	.....	164	A0263.5	.....	402	A0594	.....	728	A0783.5	.....	1046
A0119.1	.....	168	A0274	.....	408	A0596	.....	732	A0790	.....	1066
A0122	.....	172	A0278	.....	418	A0599	.....	756	A0794	.....	1072
A0124	.....	176	A0280	.....	420	A0601	.....	760	A0800	.....	1076
A0126	.....	202.5	A0284	.....	424	A0602	.....	768	A0800.5	.....	1078
A0131	.....	182	A0284.1	.....	428	A0604	.....	772	A0801	.....	1080
A0132	.....	184	A0288	.....	432	A0605	.....	780	A0801.1	.....	1084
A0134	.....	180	A0293	.....	449	A0605.5	.....	776	A0804	.....	1088
A0134.1	.....	180.5	A0294	.....	448	A0612	.....	784	A0808	.....	1092
A0136	.....	192	A0302	.....	452	A0612.2	.....	788	A0808.2	.....	1096
A0137	.....	188	A0310	.....	456	A0612.4	.....	792	A0809	.....	1098
A0138	.....	196	A0314	.....	464	A0614	.....	800	A0810	.....	1100
A0141	.....	201	A0320	.....	468	A0618	.....	804	A0812	.....	1108
A0141.1	.....	202	A0322	.....	472	A0618.2	.....	808	A0813	.....	1104
A0147	.....	208	A0324	.....	517	A0618.4	.....	812	A0814	.....	1112
A0148	.....	209	A0324.1	.....	517.1	A0620.5	.....	816	A0814.1	.....	1116
A0148.5	.....	210	A0326.2	.....	508	A0620.7	.....	820	A0822	.....	1120
A0157	.....	224	A0326.5	.....	512	A0621	.....	828	A0825	.....	1122
A0161	.....	254	A0327	.....	492	A0621.2	.....	832	A0825.2	.....	1123
A0162	.....	255	A0327.5	.....	496	A0626	.....	844	A0826	.....	1121
A0164	.....	240	A0327.6	.....	500	A0626.1	.....	848	A0830	.....	1136
A0166	.....	244	A0330	.....	488	A0628.6	.....	854	A0832	.....	1132
A0166.2	.....	245	A0332	.....	484	A0630	.....	864	A0839	.....	1128
A0166.4	.....	246	A0334	.....	480	A0630.1	.....	868	A0840	.....	1140
A0167	.....	248	A0339	.....	520	A0632	.....	872	A0843	.....	1144
A0168	.....	252	A0346	.....	540	A0632.2	.....	873	A0846	.....	1148

CROSS REFERENCE - INTERNATIONAL vs. U.S. LIGHT NUMBER

Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A0848		1150	A1146		8908	A1277		8676	A1488		8364
A0848.1		1153	A1148		8912	A1277.1		8680	A1488.1		8368
A0848.2		1154	A1157		8913	A1278		8684	A1490		8400
A0848.5		1152	A1160		8900	A1278.1		8688	A1491		8392
A0854		1176	A1166		8896	A1279		8692	A1492		8396
A0856		1172	A1168		8856	A1279.1		8696	A1493		8398
A0858		1164	A1170		8860	A1280.7		8702	A1493.1		8398.1
A0858.1		1168	A1172		8864	A1282		8592	A1495		8372
A0864		1216	A1172.1		8868	A1282.2		8588	A1496		8380
A0864.5		1212	A1174		8872	A1283		8600	A1498		8376
A0866		1192	A1175		8876	A1283.1		8604	A1498.5		8384
A0866.3		1200	A1178		8892	A1284		8584	A1499		8388
A0866.5		1204	A1180		8888	A1285		8596	A1499.5		8386
A0866.7		1208	A1182		8880	A1286		8612	A1508		8308
A0867		1196	A1182.1		8884	A1289		8618	A1512		8304
A0876		1220	A1190		8844	A1290		8616	A1513		8095
A0892		1228	A1194		8840	A1296		8620	A1514		8312
A0896		1232	A1196		8832	A1377		8552	A1520		8268
A0897.5		1224	A1202		8828	A1378		8556	A1532		8264
A0898		1234	A1208		8804	A1379		8560	A1536		8300
A0898.2		1234.1	A1210		8808	A1381		8568	A1537		8296
A0900		1236	A1211		8812	A1381.1		8572	A1538		8288
A0902		1268	A1214		8820	A1390		8540	A1538.1		8292
A0906		1256	A1215		8816	A1391		8544	A1538.5		8292.5
A0912		1248	A1216		8824	A1396		8532	A1539		8293
A0914		1252	A1220		8800	A1400		8516	A1544		8260
A0915		1260	A1222		8792	A1400.1		8520	A1545		8261
A0924		1272	A1224		8796	A1403		8524	A1545.5		8262
A0926		1276	A1226		8797	A1404		8528	A1546		8208
A0928		1304	A1228		8788	A1406		8512	A1546.4		8200
A0929		1305	A1230		8776	A1408		8504	A1546.6		8204
A0935		1284	A1232.1		8784	A1409		8508	A1546.7		8205
A0936		1288	A1233		8782	A1410		8492	A1548		8184
A0950		1312	A1234		8768	A1411		8496	A1548.5		8188
A0957.1		1348	A1238		8760	A1411.1		8500	A1550		8196
A0958		1352	A1239		8764	A1412		8484	A1552		8192
A0958.1		1356	A1244		8752	A1424		8472	A1554		8228
A0959		1349	A1245		8755	A1428		8464	A1557		8216
A0959.5		1350	A1246		8756	A1428.1		8468	A1558		8220
A0964		1360	A1247		8750	A1434		8460	A1558.1		8224
A0966		1364	A1248		8744	A1436		8452	A1559		8212
A0984		1324	A1248.1		8748	A1438		8456	A1560		8232
A0992		1336	A1250		8740	A1442		8448	A1560.1		8236
A0994		8932	A1250.2		8727	A1444		8432	A1562		8252
A1114		8964	A1250.21		8727.1	A1444.1		8436	A1567		8246
A1114.9		8968	A1250.8		8704	A1448		8440	A1567.2		8246.5
A1115		8972	A1251		8728	A1450		8444	A1569		8248
A1115.1		8976	A1251.2		8736	A1454		8428	A1569.1		8248.5
A1116		8996	A1251.4		8732	A1458		8420	A1570		8249
A1118		8992	A1251.6		8716	A1458.1		8424	A1574		8256
A1120		8979	A1251.62		8712	A1462		8416	A1580		8180
A1120.1		8979.5	A1251.7		8720	A1463		8412	A1584		8164
A1121		8988	A1251.8		8724	A1466		8404	A1585		8168
A1122		8980	A1251.84		8708	A1466.1		8408	A1585.1		8172
A1123		8984	A1256		8628	A1470		8344	A1586		8160
A1126		8948	A1260		8632	A1471.5		8356.1	A1588		8152
A1126.1		8952	A1260.1		8636	A1471.51		8356	A1594		8144
A1127		8956	A1262		8648	A1472		8348	A1594.1		8148
A1127.4		8960	A1264		8656	A1476		8340	A1598		8140
A1127.6		8963	A1266		8652	A1478		8336	A1604		8120
A1129		8961	A1274		8660	A1480		8332	A1604.1		8124
A1129.2		8962	A1274.4		8664	A1482		8320	A1606		8128
A1132		8928	A1274.6		8700	A1484		8324	A1609		8132
A1132.2		8924	A1276		8668	A1484.1		8328	A1609.1		8136
A1144		8904	A1276.1		8672	A1486		8352	A1614		8112

CROSS REFERENCE - INTERNATIONAL vs. U.S. LIGHT NUMBER

Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A1614.2		8116	A1748.1		7880	A2213.35		1512.6	A2491.5		1901
A1616		8108	A1752		7892	A2213.5		1513	A2491.6		1904
A1620		8100	A1752.1		7896	A2214		1536	A2496		1909
A1621		8104	A1758		7900	A2217.4		1470	A2496.4		1909.5
A1622		8176	A1760		7832	A2217.42		1471	A2496.6		1910
A1632		8092	A1762		7836	A2222		1516	A2496.8		1910.5
A1638		8080	A1762.1		7840	A2222.5		1520	A2498		1920
A1640		8084	A1768		7824	A2222.6		1524	A2499.6		1924
A1641		8088	A1770		7820	A2223		1532	A2506		1928
A1644		8068	A1774		7808	A2265		1568	A2508		1932
A1644.1		8072	A1774.1		7812	A2265.2		1572	A2515		1946
A1646		8076	A1780		7816	A2265.3		1573	A2515.1		1946.1
A1648		8064	A1782		7804	A2265.35		1573.1	A2518		1952
A1649		8054	A1784		7800	A2272		1588	A2518.5		1953
A1650		8056	A1786		7796	A2273		1576	A2520		1954
A1651		8060	A1790		7792	A2273.3		1580	A2520.1		1954.1
A1654		8020	A1791		7790	A2274		1584	A2530.2		1957
A1655		8024	A1792		7780	A2280		1620	A2578		1768
A1656		8028	A1794		7784	A2284		1604	A2580		1960
A1660		8036	A1794.1		7788	A2286		1600	A2582		1964
A1662		8044	A1796		7772	A2288		1612	A2586		1968
A1664		8048	A1796.1		7776	A2290		1608	A2588		1980
A1666		8040	A1799.9		7768	A2290.8		1614	A2590		1972
A1668		8052	A1800		7764	A2292		1616	A2592		1976
A1670		8012	A1800.1		7760	A2304		1624	A2596		1992
A1672		8016	A1804		7758	A2308		1628	A2598		1988
A1673		8006	A1805		7756	A2318.2		1652	A2599		1984
A1673.1		8006.1	A1808		7740	A2320		1640	A2616		2000
A1674		7976	A1810		7744	A2324		1648	A2616.1		2004
A1675		7988	A1812		7748	A2325		1650	A2620		2008
A1676		7980	A1812.1		7752	A2336		1668	A2620.1		2012
A1676.1		7984	A1816		7732	A2342		1676	A2626		2020
A1680		7972	A1818		7724	A2344		1680	A2627		2024
A1682		8008	A1818.1		7728	A2346		1688	A2627.1		2028
A1686		8000	A1820		7720	A2351.5		1767	A2634		2029
A1686.1		8004	A1822		7716	A2352		1765	A2636		2030
A1695		7996	A1826		7704	A2379		1720	A2636.2		2031
A1697		7964	A1826.1		7708	A2390		1732	A2644		2032
A1698		7960	A1831		7712	A2391		1736	A2657		2044
A1701		7954	A1836		7692	A2392		1724	A2663		2056
A1702		7956	A1838		7700	A2394		1728	A2664		2052
A1703		7952	A1956		1424	A2397		1744	A2664.85		2055
A1704		7948	A1971		1368	A2398		1740	A2666		2057
A1708		7940	A1972		1372	A2400		1748	A2667		2058
A1710		7936	A1976		1376	A2400.1		1752	A2667.2		2059
A1712		7928	A1977		1378	A2421		1766	A2667.4		2062
A1713		7932	A1979		1384	A2425		1788	A2667.6		2060
A1713.55		7926	A1996		1404	A2426		1780	A2667.8		2061
A1714		7924	A2009.7		1400	A2427.2		1784	A2669		2064
A1716		7920	A2170		1420	A2450		1824	A2674		2072
A1720		7916	A2172		1421	A2452		1828	A2675		2068
A1722		7904	A2184		1432	A2454		1832	A2676		2076
A1724		7908	A2184.1		1436	A2456		1836	A2681		2084
A1724.1		7912	A2187		1440	A2460		1840	A2682		2080
A1726		7856	A2192		1444	A2472		1844	A2684		2094
A1730		7852	A2194		1448	A2474		1848	A2686		2092
A1734		7848	A2196.1		1451	A2479		1856	A2690		2095
A1738		7844	A2203.2		1468	A2481		1864	A2692		2096
A1740		7860	A2204		1484	A2483		1868	A2700		2104
A1742		7864	A2204.15		1488	A2484		1872	A2702		2108
A1744		7868	A2204.2		1492	A2484.2		1876	A2702.5		2112
A1745		7884	A2204.62		1500	A2484.4		1880	A2708		2116
A1745.4		7888	A2206		1504	A2484.6		1882	A2724		2140
A1746		7872	A2208		1508	A2487		1888	A2726		2148
A1748		7876	A2213.3		1512.5	A2489		1892	A2728		2156

CROSS REFERENCE - INTERNATIONAL vs. U.S. LIGHT NUMBER

Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A2744		2160	A2918.4		2494.1	A3222		2640	A3492		2944
A2744.1		2164	A2918.5		2494.2	A3222.1		2644	A3493		2952
A2754		2180	A2918.6		2494.3	A3223		2648	A3493.2		2956
A2760		2184	A2918.7		2493.2	A3223.1		2652	A3493.3		2960
A2762		2188	A2918.8		2493.1	A3226		2656	A3498.2		2968
A2763		2192	A2918.9		2493	A3226.1		2660	A3498.4		2972
A2764		2196	A2919		2396	A3228		2664	A3499		2976
A2766		2172	A2923		2416.1	A3228.1		2668	A3499.2		2980
A2766.1		2176	A2925		2416	A3229		2672	A3503		2982
A2770		2200	A2925.9		2412	A3230		2676	A3506		2984
A2770.1		2204	A2929		2418	A3238		2684	A3508		2985
A2775		2208	A2934		2420	A3240		2688	A3521		2992
A2775.2		2212	A2935		2424.1	A3240.1		2692	A3522		2988
A2775.5		2216	A2936		2424	A3246		2696	A3527		3002
A2776		2224	A2937.4		2423	A3250		2704	A3528		3000
A2778		2226	A2937.8		2422	A3252		2700	A3534		3004
A2780		2228	A2938.3		2421	A3253		2708	A3534.1		3008
A2784		2232	A2940		2432	A3254		2712	A3544		3012
A2785		2236	A2942		2428	A3256		2716	A3558		3016
A2802		2248	A2945		2444	A3258		2720	A3562		3020
A2804		2244	A2947		2448	A3258.1		2724	A3568		3032
A2810		2252	A2949		2452	A3264		2728	A3570		3036
A2812		2256	A2949.1		2456	A3274		2736	A3574		3040
A2814		2260	A2951		2460	A3280		2740	A3580		3052
A2816		2262	A2951.5		2464	A3282		2752	A3582		3056
A2816.5		2263	A2954		2466	A3282.1		2756	A3582.1		3060
A2818		2264	A2956		2468	A3284		2744	A3583		3068
A2819		2268	A2960		2472	A3286		2748	A3583.5		3066
A2820		2272	A2962		2480	A3304		2776	A3584		3064
A2822		2284	A2964		2488	A3308		2784	A3586		3072
A2822.1		2288	A2978		2492	A3312		2788	A3600		3084
A2823		2280	A3026		2508	A3312.2		2792	A3602		3088
A2824		2276	A3028		2496	A3314		2796	A3604		3092
A2834		2292	A3030		2504	A3316		2800	A3606		3096
A2834.1		2296	A3032		2500	A3316.1		2804	A3607		3080
A2840		2300	A3036		2512	A3332		2808	A3607.5		3076
A2840.1		2304	A3050		2532	A3348		2812	A3608		3024
A2841		2308	A3052		2536	A3350		2816	A3608.5		3028
A2846		2312	A3054		2540	A3350.1		2820	A3610		3100
A2846.1		2316	A3060		2552	A3364		2824	A3610.2		3104
A2850		2320	A3064		2556	A3368		2828	A3610.4		3108
A2852		2324	A3066		2560	A3368.1		2832	A3610.6		3112
A2856		2336	A3068		2564	A3391		2836	A3610.8		3116
A2856.1		2340	A3070		2568	A3392		2848	A3610.9		3120
A2860		2332	A3070.1		2572	A3394		2840	A3610.92		3124
A2864		2344	A3073		2576	A3396.1		2844	A3610.94		3128
A2866		2348	A3073.2		2580	A3408		2856	A3610.96		3132
A2868		2352	A3078		2588	A3416		2864	A3611		3136
A2872		2356	A3080		2584	A3418		2868	A3611.2		3140
A2874		2360	A3082		2592	A3418.1		2872	A3612		3144
A2878		2364	A3082.1		2596	A3424		2876	A3612.5		3146
A2884		2368	A3090		2600	A3426		2880	A3614		3160
A2887		2374	A3100		2604	A3428		2884	A3615		3148
A2904		2380	A3100.1		2608	A3434		2896	A3616		3152
A2912		2388	A3102		2612	A3436		2892	A3616.1		3156
A2915		2390	A3104.5		2614	A3440		2900	A3626		3164
A2915.1		2390.1	A3107		2617	A3442		2908	A3632		3168
A2915.4		2393	A3108		2616	A3444		2912	A3635		3172
A2915.41		2394	A3129		2624	A3446		2916	A3636		3176
A2916		2392	A3129.5		2628	A3447.7		2922	A3640		3180
A2916.5		2408	A3142		2620	A3448		2920	A3640.1		3184
A2916.9		2409.1	A3212		2633	A3449		2924	A3641		3188
A2917		2409.2	A3212.1		2634	A3454		2928	A3642		3192
A2917.1		2409	A3216		2632	A3457		2932	A3644		3196
A2918.2		2494	A3220		2636	A3460		2936	A3644.1		3200

CROSS REFERENCE - INTERNATIONAL vs. U.S. LIGHT NUMBER

Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A3650		3204	A3804		3416	A3880		3576	A3978		3832
A3654		3220	A3804.2		3417	A3880.6		3584	A3979		3840
A3656		3212	A3805		3418	A3881		3585	A3980		3844
A3656.1		3216	A3807		3420	A3881.3		3588	A3981		3848
A3662		3208	A3810		3424	A3881.4		3592	A3984		3860
A3676		3228	A3811		3426	A3881.5		3596	A3986		3864
A3680		3232	A3812		3428	A3881.7		3598	A3990		3868
A3684		3236	A3812.5		3429	A3882		3600	A3992		3872
A3685		3240	A3812.8		3429.5	A3882.7		3602	A3993		3876
A3688		3244	A3813.1		3430	A3883		3604	A3994.25		3881
A3688.5		3246	A3813.5		3431	A3883.2		3606	A3995		3882
A3693		3248	A3814		3432	A3883.7		3608	A3995.6		3884
A3694		3252	A3815		3436	A3885		3616	A3995.8		3885
A3700		3224	A3815.3		3437	A3885.5		3620	A3996		3888
A3706		3268	A3815.6		3438	A3886		3612	A3996.4		3892
A3708		3264	A3816		3440	A3886.2		3612.5	A3996.6		3894
A3715		3270	A3817		3444	A3887		3624	A3997		3896
A3716		3272	A3817.5		3448	A3887.5		3626	A3998		3897
A3718		3276	A3818		3452	A3888		3628	A3999.2		3898
A3722		3280	A3819		3456	A3888.2		3632	A3999.21		3898.1
A3724		3284	A3820		3460	A3888.3		3636	A3999.5		3899
A3728		3288	A3820.5		3464	A3900		3640	A4000		3904
A3729		3254	A3821		3468	A3902		3644	A4000.1		3908
A3734		3290	A3822		3476	A3903		3648	A4004		3900
A3736		3292	A3822.1		3480	A3904		3660	A4008		3924
A3737.2		3296	A3822.29		3488	A3905		3668	A4009.5		3932
A3737.4		3300	A3822.3		3484	A3905.3		3664	A4010.1		3928
A3738		3304	A3822.31		3492	A3905.35		3678	A4011.5		3933
A3740		3308	A3822.5		3472	A3905.4		3672	A4011.51		3934
A3750		3312	A3822.6		3504	A3905.6		3676	A4011.7		3935
A3753		3314	A3822.61		3505	A3905.8		3680	A4012		3936
A3756		3316	A3822.8		3512	A3906		3684	A4012.5		3937
A3766		3320	A3823.1		3496	A3906.2		3688	A4019		3944
A3767		3322	A3823.3		3497	A3906.4		3692	A4019.1		3948
A3772		3324	A3823.32		3498	A3906.6		3696	A4020		3952
A3774		3326	A3823.34		3499	A3907		3700	A4020.3		3954
A3776		3340	A3823.6		3516	A3908		3720	A4020.5		3955
A3776.5		3342	A3823.64		3501	A3909.2		3712	A4028		3912
A3778		3344	A3823.7		3502	A3909.6		3708	A4030		3914
A3779		3348	A3823.8		3503	A3910		3724	A4032		3916
A3780		3352	A3824		3520	A3910.2		3725	A4036		3920
A3781		3360	A3828		3524	A3916		3704	A4047		3958
A3782		3356	A3829		3526	A3920		3735	A4047.1		3959
A3783		3364	A3830		3528	A3925		3744	A4050		3960
A3783.4		3368	A3830.4		3530.3	A3926		3748	A4052		3968
A3784		3372	A3830.5		3530.5	A3927		3772	A4056		3964
A3786		3376	A3830.85		3530	A3927.5		3774	A4058		3972
A3787		3377	A3832		3540	A3928		3756	A4060		3976
A3787.1		3378	A3834		3542	A3928.2		3760	A4064		3980
A3787.2		3380	A3838		3544	A3928.4		3762	A4068		3984
A3787.4		3384	A3840		3548	A3930		3764	A4069		3986
A3787.6		3394	A3844		3552	A3930.2		3768	A4074		3988
A3787.7		3388	A3844.5		3553	A3934		3816	A4076		3992
A3787.8		3402	A3844.9		3554.5	A3938		3812	A4080		4012
A3788		3392	A3845		3554	A3940		3808	A4082		4016
A3790		3396	A3845.5		3555	A3942		3804	A4084		4020
A3793.5		3403	A3847		3556	A3944		3800	A4087		4024
A3794		3404	A3850		3560	A3948		3792	A4092		4004
A3795		3405	A3854.7		3561	A3952		3788	A4093		4005
A3795.5		3406	A3858		3564	A3956		3790	A4093.1		4005.5
A3795.6		3406.5	A3860		3562	A3960		3780	A4096		3996
A3795.7		3407	A3868		3568	A3968		3820	A4098		4000
A3796		3408	A3869		3574	A3972		3824	A4102		4008
A3802		3412	A3870		3572	A3976		3828	A4107		4028
A3803.8		3413	A3874		3580	A3977		3836	A4109		4030

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Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A4112		4032	A4279		4256	A4421.2		4472	A4582		4768
A4122		4036	A4279.1		4260	A4422		4475	A4586		4780
A4124		4040	A4282		4268	A4422.1		4476	A4588		4776
A4125		4042	A4284		4264	A4422.5		4508	A4588.4		4778
A4125.3		4043	A4290		4272	A4423		4492	A4592		4784
A4126		4044	A4291		4273	A4423.5		4490	A4594		4786
A4127		4048	A4296		4276	A4425		4518	A4604		4796
A4127.1		4052	A4297		4280	A4425.5		4504	A4607		4804
A4132		4080	A4297.5		4282	A4426		4519	A4607.1		4808
A4132.4		4082	A4298		4284	A4426.5		4524	A4608		4812
A4133		4084	A4299		4288	A4427.4		4528	A4610		4816
A4140		4092	A4304		4296	A4427.45		4530	A4620		4818
A4150		4093	A4308		4300	A4427.5		4532	A4620.1		4818.1
A4150.2		4094	A4310		4304	A4427.6		4536	A4622		4820
A4151		4095	A4314		4308	A4427.9		4542	A4624		4822
A4160		4076	A4326		4316	A4428.6		4544	A4624.1		4823
A4164		4060	A4330		4320	A4428.8		4549	A4624.2		4823.5
A4165		4064	A4332		4328	A4438		4552	A4630		4824
A4170		4072	A4336		4324	A4440		4556	A4633.99		4827
A4172		4068	A4336.3		4324.5	A4442		4564	A4634		4828
A4174		4056	A4344		4332	A4442.1		4568	A4640		4832
A4174.5		4058	A4346		4336	A4444		4560	A4670		4844
A4175.4		4096	A4346.5		4338	A4458		4572	A4671		4848
A4176		4100	A4348		4340	A4470		4580	A4672		4852
A4178		4104	A4350		4344	A4472		4584	A4672.6		4856
A4179		4105	A4352		4348	A4476		4588	A4676		4860
A4180		4108	A4355		4348.2	A4478		4592	A4677		4861
A4183		4112	A4355.2		4348.4	A4484		4596	A4688		4864
A4186		4120	A4358		4348.6	A4486		4600	A4692		4868
A4190		4128	A4358.2		4348.8	A4488		4604	A4692.1		4872
A4192		4132	A4359		4349	A4490		4608	A4698		4880
A4196		4136	A4359.2		4350	A4494		4612	A4700		4884
A4200		4140	A4360		4352	A4496		4616	A4702		4888
A4202		4144	A4361		4354	A4498		4620	A4710		4892
A4202.1		4148	A4362		4356	A4501		4628	A4720		4896
A4205		4150	A4370		4364	A4504		4636	A4730		4928
A4206		4151	A4374		4372	A4506		4640	A4732		4932
A4208		4152	A4374.2		4376	A4508		4648	A4734		4924
A4212		4156	A4392		4392	A4510		4644	A4740		4936
A4214		4160	A4398		4380	A4511		4652	A4740.1		4940
A4218		4164	A4400.1		4384	A4511.2		4654	A4744		4944
A4226		4168	A4400.2		4388	A4512		4656	A4745		4952
A4230		4172	A4404		4404	A4513		4660	A4748		4956
A4230.6		4176	A4405		4396	A4516		4672	A4752		4960
A4232		4180	A4406		4400	A4519		4680	A4754		4968
A4236		4208	A4408		4403	A4520		4684	A4756		4964
A4237		4212	A4409		4424	A4521		4688	A4760		4972
A4238		4216	A4410.3		4429	A4527		4693	A4760.5		4980
A4240		4220	A4410.32		4430	A4527.2		4694	A4761		4976
A4242		4224	A4411		4428	A4527.4		4695	A4762		4984
A4248		4228	A4411.4		4440	A4527.6		4696	A4764		4988
A4252		4240	A4411.6		4441	A4532		4700	A4770		4992
A4254		4236	A4411.61		4441.1	A4536		4708	A4784		5028
A4256		4232	A4411.8		4442	A4538		4704	A4785		5032
A4259		4182	A4412		4444	A4546		4716	A4786		5036
A4260		4184	A4412.1		4444.1	A4548		4724	A4796		5040
A4262		4188	A4412.7		4436	A4548.1		4728	A4798		5044
A4263		4192	A4412.71		4436.1	A4554		4732	A4799		5048
A4264		4196	A4412.8		4432	A4558		4740	A4820		5052
A4265		4200	A4413.6		4448	A4562		4744	A4821		5054
A4266.4		4204	A4413.7		4452	A4566		4764	A4822		5064
A4268		4206	A4413.72		4456	A4568		4760	A4822.1		5068
A4272		4244	A4414		4416	A4574		4752	A4823		5056
A4274		4248	A4420		4464	A4574.1		4756	A4824		5072
A4276		4252	A4421		4466	A4580		4772	A4824.1		5076

CROSS REFERENCE - INTERNATIONAL vs. U.S. LIGHT NUMBER

Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A4825		5080	A5140		5420	A5311.1		5708	A5474.2		5956
A4825.1		5084	A5146		5428	A5311.2		5696	A5478		5972
A4833.2		5088	A5155		5440	A5311.21		5700	A5480		6156
A4840		5060	A5156.5		5444	A5313.6		5669	A5484		6144
A4847		5112	A5157		5448	A5313.61		5669.1	A5486		6140
A4852		5096	A5157.1	5452,	5456	A5316		5712	A5489		5996
A4852.1		5100	A5160		5464	A5316.1		5716	A5489.1		6000
A4860		5124	A5164.4		5465	A5317		5720	A5490		6010
A4862		5116	A5164.5		5466	A5317.2		5724	A5490.1		6010.1
A4862.1		5120	A5166		5468	A5319.5		5725	A5490.2		6012
A4863		5132	A5168		5472	A5319.6		5726	A5490.4		6016
A4863.3		5136	A5174		5476	A5322		5728	A5490.6		6020
A4864		5128	A5174.5		5478	A5328		5732	A5490.61		6020.1
A4876		5144	A5178		5484	A5336		5736	A5492		6024
A4892		5152	A5181		5492	A5338		5740	A5492.21		6032
A4892.1		5156	A5182		5496	A5342		5744	A5494		6036
A4893		5160	A5184		5500	A5356		5748	A5494.1		6040
A4896		5172	A5186		5504	A5358		5756	A5497		6044
A4900		5168	A5198		5512	A5360		5760	A5500.9		6052
A4902		5164	A5204		5520	A5364		5764	A5501		6056
A4918		5176	A5205		5522	A5367	5768,	5772	A5504		6060
A4920		5180	A5210		5528	A5367.1		5776	A5505		6062
A4922		5184	A5212		5532	A5369		5780	A5505.1		6062.1
A4927.6		5192	A5213		5536	A5370		5769	A5507		6064
A4940		5200	A5214		5540	A5370.2		5770	A5508		6068
A4952		5213	A5220		5544	A5373		5794	A5511		6072
A4952.2		5214	A5234		5548	A5374		5784	A5512		6076
A4952.4		5215	A5238		5552	A5376		5788	A5513		6080
A4952.6		5215.4	A5246		5556	A5377		5792	A5514		6084
A4954		5216	A5254		5560	A5381		5797	A5515		6088
A4956		5220	A5256		5564	A5389		5805	A5516		6092
A4958		5224	A5257		5566	A5390		5806	A5518		6100
A4972		5232	A5257.2		5566.5	A5391		5800	A5519		6108
A4974		5236	A5258		5568	A5391.1		5804	A5520		6104
A4975		5240	A5258.6		5569.1	A5394		5807	A5521		6116
A4977		5244	A5262		5572	A5395		5808	A5522		6112
A4978		5248	A5264		5576	A5395.2		5808.1	A5523		6120
A4978.2		5252	A5266		5580	A5395.3		5808.2	A5525		6128
A4979		5256	A5266.1		5584	A5395.4		5808.3	A5526		6132
A4979.2		5260	A5270		5588	A5395.6		5808.4	A5535		5984
A4980.7		5273	A5274		5592	A5395.8		5808.5	A5536		5988
A4981		5276	A5276		5596	A5402		5812	A5536.1		5992
A4983		5278	A5278		5600	A5406		5816	A5541		5994
A4985		5280	A5282		5604	A5406.6		5820	A5566		6164
A4994		5300	A5284		5608	A5407		5824	A5570		6172
A5020		5324	A5285		5612	A5410		5832	A5572		6176
A5024		5320	A5286		5616	A5411		5856	A5572.1		6180
A5026		5328	A5286.1		5624	A5412		5836	A5573		6188
A5058		5340	A5286.2		5628	A5413		5844	A5582		6168
A5063		5336	A5286.3		5620	A5419		5840	A5584		6196
A5091		5344	A5287		5632	A5426		5860	A5584.2		6200
A5092		5348	A5287.1		5636	A5428		5864	A5586		6204
A5093		5352	A5291		5640	A5430		5900	A5586.4		6204.5
A5102		5356	A5292		5644	A5440		5876	A5590		6208
A5104		5364	A5292.39		5648	A5440.3		5880	A5592		6212
A5115		5380	A5292.4		5652	A5454		5904	A5593		6216
A5116		5384	A5292.41		5656	A5460		5908	A5594		6220
A5116.05		5384.1	A5294.9		5660	A5462		5912	A5596		6224
A5118		5388	A5295		5664	A5467		5920	A5600		6228
A5119		5392	A5295.1		5668	A5467.1		5921	A5610		6232
A5120		5395	A5307		5672	A5470		5928	A5610.1		6236
A5125		5396	A5307.1		5676	A5470.2		5932	A5612		6240
A5127		5400	A5308		5680	A5472.5		5944	A5615		6242
A5132		5408	A5310.2		5692	A5473		5948	A5616		6244
A5138		5416	A5311		5704	A5474		5952	A5618		6248

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Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A5621	6252	A5854	6576	A6006	6840	A6117	7148
A5630	.....	6256	A5856	.....	6580	A6007	.....	6844	A6120	.....	7156
A5631	.....	6268	A5858	.....	6584	A6011	.....	6856	A6122	.....	7160
A5634	.....	6260	A5865	.....	6592	A6014.7	.....	6872	A6124	.....	7152
A5636	.....	6264	A5868	.....	6596	A6015	.....	6874	A6127	.....	7168
A5638	.....	6272	A5872	.....	6600	A6015.1	.....	6876	A6128	.....	7172
A5642	.....	6276	A5874	.....	6604	A6017	.....	6888	A6130	.....	7164
A5644	.....	6280	A5876	.....	6608	A6019	.....	6892	A6130.2	.....	7188
A5655	.....	6284	A5877	.....	6612	A6019.3	.....	6896	A6130.3	.....	7192
A5658.1	.....	6292	A5878	.....	6616	A6019.6	.....	6900	A6130.5	.....	7193
A5658.5	.....	6294	A5882	.....	6620	A6019.8	.....	6904	A6130.6	.....	7193.2
A5665	.....	6296	A5884	.....	6628	A6020	.....	6908	A6130.8	.....	7193.4
A5666	.....	6300	A5886	.....	6632	A6020.6	.....	6916	A6131	.....	7176
A5670	.....	6304	A5886.4	.....	6626	A6021	.....	6920	A6134.5	.....	7180
A5702	.....	6308	A5887.9	.....	6625	A6021.6	.....	6928	A6136	.....	7196
A5703	.....	6312	A5889	.....	6622	A6021.8	.....	6932	A6138	.....	7200
A5704	.....	6316	A5894	.....	6648	A6022	.....	6936	A6140	.....	7208
A5704.1	.....	6320	A5898	.....	6652	A6022.2	.....	6948	A6142	.....	7204
A5705	.....	6324	A590.11	.....	685	A6022.4	.....	6952	A6152	.....	7216
A5707	.....	6328	A5900	.....	6656	A6022.6	.....	6960	A6152.1	.....	7220
A5708	.....	6332	A5900.3	.....	6657	A6023	.....	6956	A6158	.....	7224
A5709	.....	6336	A5900.5	.....	6658	A6024	.....	6964	A6162	.....	7228
A5710	.....	6340	A5903.6	.....	6662	A6025	.....	6968	A6163	.....	7232
A5712	.....	6344	A5904	.....	6664	A6028	.....	6972	A6164	.....	7236
A5718	.....	6356	A5906	.....	6668	A6031	.....	6984	A6168	.....	7240
A5722	.....	6360	A5908	.....	6672	A6033	.....	7000	A6172	.....	7244
A5722.1	.....	6364	A5909	.....	6673	A6033.1	.....	7004	A6174	.....	7248
A5728	.....	6368	A5910.5	.....	6682	A6033.4	.....	6988	A6176	.....	7252
A5728.1	.....	6372	A5912	.....	6692	A6034	.....	6996	A6180	.....	7256
A5732	.....	6376	A5920	.....	6696	A6035	.....	6992	A6186	.....	7260
A5736	.....	6380	A5920.4	.....	6700	A6037	.....	7008	A6190	.....	7264
A5748	.....	6392	A5928	.....	6704	A6037.2	.....	7012	A6196	.....	7268
A5749	.....	6396	A5932	.....	6708	A6042	.....	7016	A6198.5	.....	7272
A5757	.....	6406	A5934	.....	6712	A6043	.....	7017	A6198.51	.....	7276
A5758	.....	6404	A5938	.....	6714	A6043.2	.....	7018	A6200	.....	7280
A5763	.....	6417	A5944	.....	6720	A6044	.....	7020	A6203	.....	7284
A5764	.....	6420	A5946	.....	6724	A6060	.....	7028	A6203.5	.....	7285
A5774	.....	6428	A5946.1	.....	6728	A6062	.....	7032	A6203.51	.....	7285.1
A5776	.....	6432	A5948	.....	6732	A6064	.....	7036	A6204	.....	7288
A5778	.....	6436	A5949	.....	6736	A6065	.....	7038	A6204.2	.....	7288.4
A5782	.....	6440	A5952	.....	6740	A6071	.....	7040	A6204.21	.....	7288.8
A5798	.....	6460	A5953	.....	6752	A6072	.....	7044	A6204.4	.....	7289
A5800	.....	6464	A5958	.....	6756	A6073	.....	7056	A6206	.....	7292
A5801	.....	6468	A5962	.....	6760	A6074	.....	7064	A6208	.....	7296
A5802	.....	6472	A5962.4	.....	6764	A6074.1	.....	7068	A6211.2	.....	7298
A5806	.....	6476	A5963.3	.....	6768	A6075	.....	7072	A6213.6	.....	7300
A5808	.....	6484	A5970	.....	6776	A6076	.....	7060	A6213.8	.....	7304
A5810	.....	6488	A5973	.....	6784	A6076.5	.....	7062	A6214	.....	7308
A5812	.....	6492	A5974	.....	6788	A6084	.....	7076	A6214.2	.....	7312
A5814	.....	6496	A5976	.....	6792	A6088	.....	7080	A6214.4	.....	7316
A5814.1	.....	6500	A5980	.....	6794	A6092	.....	7084	A6214.6	.....	7320
A5818	.....	6504	A5986	.....	6804	A6095	.....	7088	A6214.8	.....	7324
A5820	.....	6508	A5986.4	.....	6808	A6096	.....	7092	A6214.9	.....	7297
A5822	.....	6512	A5987	.....	6800	A6098	.....	7096	A6214.91	.....	7297.1
A5826	.....	6516	A5987.5	.....	6801	A6100	.....	7100	A6214.95	.....	7297.5
A5828	.....	6520	A5988	.....	6796	A6101	.....	7104	A6214.96	.....	7297.51
A5830	.....	6524	A5992	.....	6812	A6104	.....	7108	A6215	.....	7328
A5836	.....	6532	A5993	.....	6816	A6105	.....	7112	A6216	.....	7332
A5837	.....	6536	A5999	.....	6819	A6106	.....	7116	A6222	.....	7336
A5838	.....	6540	A6000	.....	6820	A6107	.....	7120	A6224	.....	7340
A5842	.....	6544	A6001	.....	6822	A6108	.....	7124	A6228	.....	7352
A5847	.....	6560	A6002	.....	6824	A6110	.....	7128	A6232	.....	7360
A5848	.....	6564	A6003	.....	6828	A6112	.....	7132	A6236	.....	7364
A5849	6568	A6004	6832	A6114	7140	A6244	7368
A5850	6572	A6005	6836	A6116	7144	A6244.1	7372

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Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
A6257	7362	A6426	7628	B0157	9110	B0346.2	9426
A6260	.....	7376	A6426.1	.....	7632	B0166.1	.....	9118	B0356	.....	9456
A6265	.....	7378	A6430	.....	7636	B0173.9	.....	9140	B0356.1	.....	9460
A6266	.....	7380	A6432	.....	7680	B0174	.....	9144	B0364	.....	9464
A6268	.....	7384	A6434	.....	7640	B0174.1	.....	9152	B0368	.....	9472
A6270	.....	7388	A6436	.....	7644	B0176	.....	9148	B0368.1	.....	9476
A6272	.....	7392	A6438	.....	7648	B0184	.....	9156	B0372	.....	9484
A6272.5	.....	7396	A6438.5	.....	7650	B0184.1	.....	9160	B0372.1	.....	9488
A6273.3	.....	7400	A6439	.....	7652	B0188	.....	9164	B0372.5	.....	9461.1
A6273.8	.....	7402	A6439.1	.....	7656	B0192	.....	9172	B0372.501	.....	9461.15
A6274	.....	7404	A6440	.....	7658	B0192.1	.....	9176	B0372.6	.....	9461.2
A6275.3	.....	7420	A6441	.....	7659	B0200	.....	9168	B0372.601	.....	9461.25
A6276	.....	7416	A6442	.....	7660	B0202	.....	9180	B0376	.....	9492
A6277.5	.....	7424	A6445	.....	7672	B0202.2	.....	9184	B0378	.....	9496
A6278	.....	7428	A6445.2	.....	7676	B0203	.....	9188	B0378.1	.....	9500
A6279	.....	7408	A6445.7	.....	7678	B0204	.....	9192	B0380	.....	9504
A6279.1	.....	7412	A6448	.....	7684	B0205	.....	9196	B0380.1	.....	9508
A6280	.....	7432	A6450	.....	7688	B0206	.....	9200	B0382	.....	9512
A6282	.....	7436	A7560.1	.....	1764	B0206.1	.....	9204	B0384	.....	9516
A6284	.....	7440	A7562.5	.....	1769	B0206.21	.....	9212	B0384.1	.....	9520
A6288	.....	7444	A7576.97	.....	1771	B0206.5	.....	9214	B0387.9	.....	9528
A6290	.....	7448	A7581.85	.....	9979	B0206.7	.....	9215	B0388	.....	9532
A6292	.....	7452	A7682	.....	10013	B0208	.....	9124	B0388.1	.....	9536
A6296	.....	7472	A7682.5	.....	10013.1	B0209	.....	9128	B0392	.....	9540
A6298	.....	7480	A7784	.....	10717.1	B0212	.....	9132	B0392.1	.....	9544
A6299	.....	7484	A7880	.....	11035	B0214	.....	9136	B0408	.....	9584
A6299.1	.....	7488	A8235	.....	3074	B0233	.....	9232	B0500	.....	9576
A6300	.....	7492	B0074	.....	9008	B0233.1	.....	9236	B0506	.....	9588
A6301	.....	7494	B0075	.....	9016	B0233.4	.....	9240	B0514	.....	9592
A6302	.....	7456	B0076	.....	9012	B0234	.....	9242	B0515	.....	9596
A6304	.....	7460	B0092	.....	9020	B0234.2	.....	9242.5	B0518	.....	9600
A6304.5	.....	7462	B0094	.....	9022	B0236	.....	9248	B0536	.....	9624
A6305	.....	7464	B0098	.....	9028	B0236.1	.....	9252	B0540	.....	9628
A6305.1	.....	7468	B0107	.....	9037	B0244	.....	9280	B0542	.....	9632
A6308	.....	7504	B0107.1	.....	9037.1	B0245	.....	9272	B0630	.....	9636
A6317	.....	7508	B0112	.....	9044	B0246	.....	9276	B0633.7	.....	9703.1
A6318	.....	7512	B0113	.....	9056	B0250	.....	9256	B0633.71	.....	9703.2
A6320	.....	7516	B0113.1	.....	9060	B0250.1	.....	9260	B0634	.....	9648
A6322	.....	7524	B0113.4	.....	9052	B0251	.....	9264	B0635	.....	9644
A6332	.....	7500	B0114	.....	9048	B0252	.....	9268	B0637	.....	9656
A6334	.....	7496	B0119	.....	9067	B0256	.....	9284	B0637.1	.....	9660
A6338	.....	7528	B0119.5	.....	9067.3	B0258	.....	9288	B0638	.....	9664
A6340.5	.....	7533	B0119.8	.....	9067.5	B0262	.....	9292	B0638.1	.....	9668
A6340.51	.....	7534	B0120	.....	9067.6	B0262.1	.....	9296	B0642	.....	9672
A6342	.....	7536	B0122	.....	9076	B0268	.....	9300	B0642.1	.....	9676
A6343	.....	7540	B0123	.....	9074	B0282	.....	9320	B0646	.....	9684
A6344.6	.....	7544	B0123.2	.....	9073	B0282.1	.....	9324	B0646.1	.....	9688
A6344.61	.....	7548	B0124	.....	9068	B0286	.....	9328	B0646.41	.....	9689
A6345	.....	7552	B0124.1	.....	9072	B0288	.....	9329	B0646.45	.....	9689.1
A6346	.....	7556	B0124.16	.....	9075	B0296	.....	9348	B0646.47	.....	9689.2
A6347.15	.....	7560	B0124.17	.....	9075.1	B0298	.....	9352	B0646.5	.....	9689.3
A6347.16	.....	7564	B0124.18	.....	9075.5	B0299	.....	9356	B0646.7	.....	9690
A6347.41	.....	7568	B0124.19	.....	9075.51	B0300	.....	9360	B0646.75	.....	9690.1
A6348	.....	7576	B0124.2	.....	9075.2	B0300.1	.....	9364	B0647	.....	9692
A6350	.....	7580	B0124.5	.....	9075.7	B0318	.....	9388	B0647.7	.....	9702
A6392	.....	7584	B0124.51	.....	9075.72	B0319.9	.....	9392	B0647.701	.....	9703
A6394	.....	7588	B0125	.....	9096	B0320	.....	9396	B0648	.....	9696
A6396	.....	7592	B0125.1	.....	9100	B0320.1	.....	9400	B0648.31	.....	9701
A6406	.....	7596	B0126	.....	9082	B0330	.....	9404	B0662	.....	9704
A6408	.....	7600	B0126.1	.....	9082.1	B0336	.....	9408	B0662.1	.....	9708
A6410	.....	7604	B0128	.....	9088	B0338	.....	9412	B0670	.....	9720
A6416	.....	7612	B0128.1	.....	9092	B0346	.....	9420	B0670.2	.....	9716
A6417	.....	7616	B0131.5	.....	9093	B0346.1	.....	9422	B0673	.....	9724
A6417.5	7622	B0145	9000	B0346.11	9422.1	B0673.1	9728
A6422	7624	B0147	9002	B0346.12	9424	B0711.4	9732

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Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
B0712		9736	B0894		9968	B1225.1		10332	B1431.1		10560
B0712.1		9740	B0896		9972	B1226		10350	B1436		10564
B0750		9748	B0898		9976	B1228		10352	B1438		10552
B0751		9752	B0904		9980	B1228.1		10356	B1442		10568
B0751.1		9756	B0904.5		9982	B1230		10381	B1444		10569
B0751.4		9772	B0908		9984	B1230.1		10382	B1453.9		10574.1
B0751.6		9768	B0912		9992	B1239		10368	B1454		10574
B0752		9776	B0920		9996	B1239.1		10372	B1454.1		10574.2
B0753		9780	B0924		10000	B1240		10376	B1474		10575
B0753.1		9760	B0926		10004	B1240.1		10380	B1474.1		10575.1
B0753.11		9764	B0938		10008	B1241		10375	B1499		10575.2
B0753.2		9758	B0970		10032	B1256.5		10390	B1574.35		10579
B0753.25		9758.1	B0972.5		10035	B1256.9		10388.1	B1578.6		10578
B0753.4		9757	B0976		10040	B1257		10388	B1595.6		10579.1
B0753.45		9757.1	B0981		10040.5	B1257.1		10389.1	B1606		10580
B0754		9766	B0983		10048	B1258		10392	B1609		10584
B0754.05		9765	B0987		10043	B1260		10396	B1610		10592
B0754.8		9759	B0987.2		10042	B1262		10400	B1624		10596
B0755		9782	B0987.4		10044	B1264		10404	B1652		10600
B0760		9784	B0989		10045	B1264.6		10406	B1672		10604
B0766		9792	B1010		10052	B1268		10408	B1676.1		10612
B0766.1		9796	B1012		10056	B1268.1		10412	B1686		10620
B0767		9808	B1044		10053	B1274		10416	B1688		10628
B0768		9800	B1046		10054	B1275		10420	B1700		10640
B0769		9804	B1051		10014	B1297.17		10422	B1704		10644
B0770		9812	B1052		10060	B1297.18		10422.1	B1706		10648
B0783		9832	B1054		10072	B1298		10423	B1714		10652
B0784		9836	B1074		10092	B1312		10136	B1728		10636
B0785		9840	B1078		10100	B1318		10156	B1735		10676
B0786		9839	B1080		10104	B1318.2		10160	B1738		10692
B0786.9		9841	B1082		10108	B1320		10164	B1738.6		10696
B0789		9844	B1082.1		10112	B1324		10168	B1740		10700
B0789.1		9848	B1084		10116	B1324.1		10172	B1746		10704
B0800		9856	B1084.1		10120	B1325		10176	B1748		10708
B0800.1		9860	B1092		10124	B1325.2		10180	B1749		10712
B0842		9864	B1096.5		10128	B1326		10148	B1757		10719.5
B0849		9876	B1112		10192	B1326.1		10152	B1758		10719.6
B0852.1		9948	B1113		10193	B1328		10184	B1759		10719.7
B0856		9880	B1113.2		10194	B1344		10436	B1772		10720
B0858		9884	B1122		10316	B1348.49		10439	B1772.1		10724
B0859		9952	B1134		10248	B1348.5		10439.1	B1772.2		10728
B0864		9900	B1134.1		10248.1	B1349.8		10442.1	B1774		10730
B0864.1		9904	B1138		10212	B1349.9		10442.2	B1778		10744
B0865		9912	B1138.1		10216	B1352		10576	B1778.1		10748
B0867		9924	B1139		10220	B1361		10445.1	B1779		10752
B0867.5		9928	B1139.1		10224	B1361.1		10445	B1779.1		10756
B0870		9936	B1152		10300	B1361.2		10446	B1780		10732
B0875		9951.1	B1156		10264	B1363		10448	B1780.2		10740
B0875.1		9951.2	B1156.1		10268	B1363.2		10452	B1780.4		10736
B0876		9950	B1158		10272	B1368		10460	B1782		10760
B0876.2		9951	B1159		10276	B1370		10464	B1784		10768
B0876.22		9949.3	B1163		10284	B1374		10468	B1784.4		10772
B0876.5		9950.1	B1164		10288	B1395.9		10502.1	B1786		10776
B0876.501		9950.2	B1166		10292	B1396		10502	B1788		10780
B0876.55		9951.3	B1168		10296	B1396.1		10502.2	B1794		10788
B0876.6		9949.2	B1188		10308	B1396.2		10503	B1796		10792
B0877		9949	B1196		10320	B1411		10519	B1804		10796
B0877.1		9949.1	B1198		10324	B1412		10520	B1805		10800
B0877.4		9951.4	B1204		10335	B1412.1		10524	B1817.4		10806
B0877.41		9951.5	B1210		10336	B1414		10525	B1817.41		10806.1
B0877.5		9951.6	B1214		10340	B1416		10528	B1818.5		10802
B0877.6		9951.7	B1214.1		10344	B1416.1		10532	B1818.51		10802.1
B0881		9956	B1224		10360	B1425		10572	B1819.6		10840
B0886		9960	B1224.1		10364	B1428		10573	B1822		10816
B0890		9977	B1225		10328	B1431		10556	B1822.1		10820

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Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.	Inter.	—	U.S.
B1848		10716	B1885		10892	B2072		10948	B2098		11000
B1848.7		10716.1	B1885.2		10896	B2072.1		10952	B2102		11004
B1860		10852	B1886		10908	B2074		10956	B2106		11008
B1861		10856	B1890		10912	B2080		10960	B2107		11012
B1862		10860	B1894		10916	B2080.1		10964	B2107.1		11016
B1862.2		10868	B1894.1		10920	B2084		10968	B2108		11020
B1862.4		10864	B1897		10924	B2086		10980	B2110		11024
B1868		10872	B1897.1		10928	B2087		10972	B2112		11028
B1880		10880	B1900		10932	B2087.1		10976	B2113		11032
B1881		10884	B1902		10936	B2088		10988			
B1884.4		10900	B1903		10940	B2089		10992			
B1884.6		10904	B2070		10944	B2090		10996			