Salmon WCP

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DISTANCES BETWEEN PORTS

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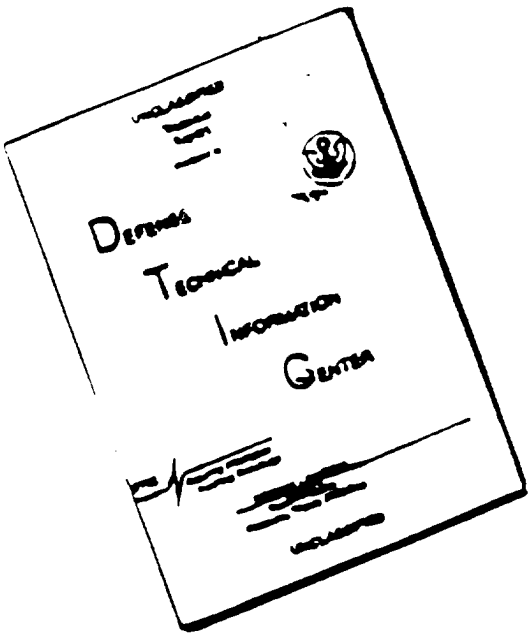
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PREFACE

This is the 1965 edition of H.O. Pub. No. 151, Distances Between Ports; it supersedes the 1964 edition. Distances in these tables are in nautical miles based on the International Nautical Mile of approximately 6,076.1 feet. Nautical miles may be converted to Statute miles of 5,280 feet by multiplying by 1.15. (See conversion table at back of book.) The positions listed for ports are central positions that most represent each port. The distances are between positions shown for each port and are generally over routes that afford the quickest passage. Most of the distances represent the shortest navigable routes, but in some cases longer routes that take advantage of favorable currents or avoid unfavorable currents and thus gain a quicker passage have been used. In other cases, increased distances result from routes selected to avoid ice or other dangers to navigation or to take advantage of aids to navigation or prominent landmarks. In addition, many of the distances between North Atlantic ports reflect increased mileages due to the use of the North Atlantic Lane Routes which have been established to avoid ice and to promote the safety of life at sea in that area of congested traffic. Distances over routes of a navigator's own selection may differ from those given.

DESCRIPTION OF THE TABLES.—Except for Great Lakes ports and distances, which are given on a single-page table, departure ports are listed alphabetically with distances to arrival ports listed below them; distances to appropriate junction points are also listed.

JUNCTION POINTS.—It is impractical to give all distances for every possible combination of ports in this volume; however, the use of Junction Points greatly increases the number of distances that may be included by affording a means of connecting routes in adjacent areas. In this book a Junction Point is a position where many routes converge and through which ships pass when sailing from one major area into another. For example, the Junction Point for routes from the Atlantic into the Mediterranean is the Strait of Gibraltar. Junction Points used in this publication are shown on the accompanying Route Chart and are specifically designated.

HOW TO USE THE TABLES.—The table for distances in the Great Lakes is self-explanatory. To obtain distances in other areas, find the departure port in the alphabetical listing and select the desired arrival port and distance listed below. In most cases, the distances from one port to another and return are reciprocal, but in some cases, the distances differ because different routes were used which take advantage of favorable currents or weather on one or both of the routes. Therefore, to obtain the correct distance, it is important to enter the alphabetical listing with the port from which you are to depart.

To obtain a distance over a route that passes through a Junction Point, it is necessary to find and add distances for the two or more sections into which the route is divided.

For example:

To find the distance from New York to Colombo, Ceylon, extract and add distances as follows:

New York to Strait of Gibraltar (Track C)	3,180
Strait of Gibraltar to Port Said	1,943
Port Said to Colombo (May to September)	3,494
Total nautical miles	8,617

ROUTES.—The chart in the front of the book gives a graphic presentation of Junction Points and a number of representative Tracks. When this chart is used with the Sailing Directions and the seasonal Pilot Charts, it will be found useful in selecting any particular desired route. The explanatory remarks on the chart should be read.

A selection of recommended routes, together with articles on currents and meteorology for

specific ocean areas, is presented in nearly all volumes of Sailing Directions. A list of Sailing Directions published by the Oceanographic Office is given in the back of the book.

A limited number of routes and distances is shown on Oceanographic Office Chart No. 1262, Track Chart of the World.

MILEAGES

OCEAN PORTS

TRANSIT TIMES

end

CORRECTIVE INFORMATION.—Mariners are requested, in the interest of navigation, to notify the U.S. Naval Oceanographic Office directly, or through one of its branch offices or collection representatives, of any error discovered in this book.

NORTH ATLANTIC LANE ROUTES

In compliance with Article 39 of the International Convention for the Safety of Life at Sea, revised by the North Atlantic Track Agreement, January 1950, vessels should follow, as far as circumstances will permit, the North Atlantic lane routes, which are as follows:

UNITED STATES—TRACK "A" (extra southern) will only be brought into operation when necessity arises.

Eastbound.—From the position in latitude 40°10′ N., longitude 70°00′ W., or from Boston Light Vessel, steer by rhumb line to cross the meridian of 47°00′ W., in latitude 39°30′ N., and from this latter position nothing north of the great circle to Fastnet or Bishop Rock.

Westbound.—From Fastnet or Bishop Rock, steer by great circle, but nothing south, to cross the meridian of 47°00′ W., in latitude 40°30′ N., thence by rhumb line to a position south of Nantucket Light Vessel or to Boston Light Vessel when bound for that port.

TRACK "B" (southern) will be used from April 11 to June 30, both days inclusive, except when ice conditions necessitate the use of Track "A."

Eastbound.—From the position in latitude 40°10′ N., longitude 70°00′ W., or from Boston Light Vessel, steer by rhumb line to cross the meridian of 47°00′ W., in latitude 40°30′ N., and from this latter position nothing north of the great circle to Fastnet or Bishop Rock.

Westbound.—From Fastnet or Bishop Rock, steer by great circle, but nothing south, to cross the meridian of 47°00′ W., in latitude 41°30′ N., thence by rhumb line to a position south of Nantucket Light Vessel or to Boston Light Vessel when bound for that port.

TRACK "C" (northern) will be used from July 1 to April 10, both days inclusive, except when ice conditions necessitate the use of Track "B."

Eastbound.—From the position in latitude 40°10′ N., longitude 70°00′ W., or from Boston Light Vessel, steer by rhumb line to cross the meridian of 50°00′ W., in latitude 42°00′ N., and from this latter position nothing north of the great circle to Fastnet or Bishop Rock.

Westbound.—From Fastnet or Bishop Rock, steer by great circle, but nothing south, to cross the meridian of 50°00′ W., in latitude 43°00′ N., thence by rhumb line to a position south of Nantucket Light Vessel or to Boston Light Vessel when bound for that port.

GENERAL INSTRUCTIONS.—Vessels bound to or from United States ports calling at Halifax or St. John, N.B., have the option of following either the Canadian or United States Seasonal Tracks to or from those ports, passing 40 miles south of Sable Island westbound, and 60 miles south of Sable Island eastbound, when proceeding on United States Tracks and Canadian Track "D." When proceeding on Canadian Tracks "E" or "F" via Halifax, ships pass north of Sable Island both eastbound and westbound.

Note.—See General Instructions regarding Canadian Tracks for vessels bound to or from the north of Ireland.

Vessels bound direct to Portland, Maine, may follow the Canadian Seasonal Tracks.

When courses are changed from great circle to rhumb line or vice versa any time before or after noon, commanders must note in their logs both distances to and from that point of alteration, and not the distance from the position at noon of the day before to the position at noon the day after that meridian is crossed.

The date on which Tracks change is to apply to the meridian of Fastnet for westbound vessels and to the meridian of 70°00′ W. for eastbound vessels. Ships passing these positions before the applicable date of changing Tracks will not alter Tracks, except when changes are made from a northern to a southern Track owing to the presence of ice, in which case the change should be made forthwith having due regard to the crossing situation.

Communications on general Track matters between the British Lines will pass through Cunard White Star, Ltd. The Holland-Amer-

ica Line will communicate with the Continental Lines, excepting that, during the ice season, the Cunard White Star, Ltd., will communicate direct with all lines.

With regard to proposals for any changes in Tracks, owing to the prevalence of ice, the Cunard White Star, Ltd., in Liverpool will communicate with the lines by telegraph as to the dates on which changes are to become operative. Lines undertake to give immediate instructions to their steamers in accordance with such advises.

Note.—When these Tracks are in operation the directions given under their respective heads should be followed. The Tracks and their effective dates will be found on the April Pilot Chart of the North Atlantic Ocean, and any changes other than those scheduled are given publicity by Hydrolants, the Daily Memorandum, and Notice to Mariners, issued by the United States Naval Oceanographic Office.

CANADA—TRACK "D" will be used from February 15 to April 10, both days inclusive.

Eastbound.—From Halifax or other port, steer to pass 60 miles south of Sable Island, cross the meridian of 50°00′ W., in latitude 42°00′ N., thence by great circle to Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer by great circle to cross the meridian of 50°00′ W., in latitude 43°00′ N., thence to Halifax or other port, passing not less than 40 miles south of Sable Island.

TRACK "E" will be used from April 11 to May 15 or until the Cape Race route is clear of ice, and from December 1 to February 14.

Eastbound.—From Halifax or the Gulf of St. Lawrence, steer to cross the meridian of 50°00′ W., in latitude 45°25′ N., thence by great circle to Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer by great circle to cross the meridian of 50°00′ W., in latitude 45°55′ N., thence to Halifax or the Gulf of St. Lawrence when open to navigation.

Note.—The Donaldson Line reserves the right to cross longitude 45° W. in latitude 45° N. on this Track.

TRACK "F" will be used from May 16 to the opening of the Belle Isle Route, and to November 30 when not using the Belle Isle Route.

Eastbound.—From Halifax or the Gulf of St. Lawrence, steer to a position in latitude 46°12′ N., longitude 53°05′ W., thence on a course 10 miles south of the great circle until approaching Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer on a course 10 miles north of the great circle until approaching Cape Race, then steer a course to position latitude 46°27′ N., in longitude 53°05′ W., thence to Halifax or the Gulf of St. Lawrence.

TRACK "G" will be used from the opening of the Straits of Belle Isle to November 14.

Eastbound.—From Belle Isle, steer on a course 10 miles south of the great circle until approaching Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer on a course 10 miles north of the great circle until approaching Belle Isle.

GENERAL INSTRUCTIONS.—Vessels bound to or from United States ports from or to the north of Ireland have the option of following either the United States or Canadian Seasonal Tracks "D," "E," and "F," remaining on Track "F," during the operative dates of Track "G."

On Tracks "E" and "F," vessels pass 40 miles south of Sable Island westbound, thence to a position south of Nantucket Light Vessel, and eastbound from position 40°10′ N., in 70°00′ W. to position 60 miles south of Sable Island.

On Track "D," westbound proceed by rhumb line from position 43°00′ N., in 50°00′ W. to position south of Nantucket Light Vessel, and eastbound from position 40°10′ N., in 70°00′ W. to position 42°00′ N., in 50°00′ W.

Commanders, on encountering ice, have permission to deviate from these Tracks and, after the end of October, leave the Belle Isle for the more southerly route at their discretion, according to weather conditions.

Should vessels on Track "C" bound to or from the United States be deviated to Track "B" on account of ice, Canadian vessels will remain on Track "D" for the period prescribed, but will have the option of deviating as necessary in the vicinity of ice areas.

The lines have the option of continuing the use of the Belle Isle Route after November 14 should they wish to do so.

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DISTANCES BETWEEN PORTS ON THE GREAT LAKES

	Montreal	Ogdensburg	Kingston	Toronto	Oswego	Rochester	Port Colborne	Buffalo	Erie	Cleveland	Toledo	Detroit	Port Huron	Collingwood	Bay City	Alpena	Muskegon	Chicago	Milwaukee	Green Bay	Escanaba	Sault Ste. Marie	Marquette	Houghton	Ashland	Duluth	Port Arthur
Port Arthur	1,053	951	899	785	883	839	737	751	691	618	572	525	471	461	439	356	510	596	540	487	428	237	149	101	143	169	
Duluth	1,159	1,057	1,005	891	989	945	843	857	797	724	679	631	577	567	545	462	616	702	646	593	534	342	227	156	81		195
Ashland	1,119	1,017	965	851	949	905	803	818	757	685	638	591	537	528	505	422	576	663	607	554	494	303	185	114		93	164
Houghton	1,008	905	853	740	838	793	692	706	646	573	527	480	426	417	394	311	465	552	495	442	382	192	73		131	179	116
Marquette	955	852	800	686	785	740	639	653	593	520	474	427	373	363	340	258	412	498	441	388	328	138		84	213	261	171
Sault Ste. Marie	816	713	661	547	646	601	500	514	454	381	335	288	234	225	202	119	273	360	303	250	190		159	221	349	394	273
Escanaba	909	806	754	640	739	694	593	607	547	474	428	381	327	327	295	212	157	238	175	88		219	378	440	568	614	492
Green Bay	969	866	814	700	799	754	653	667	607	534	487	441	387	386	354	272	149	222	156		101	288	447	509	637	682	560
Milwaukee	1,022	919	867	753	852	807	706	720	660	587	541	494	440	439	407	325	70	74		180	201	349	508	570	698	743	621
Chicago	1,078	976	924	810	908	864	762	776	716	643	598	550	496	495	464	381	99		85	255	274	414	573	635	763	808	686
Muskegon	992	889	837	723	821	777	675	690	629	556	510	463	409	409	377	295		114	80	171	181	314	474	535	663	709	587
Alpena	719	616	564	450	548	504	402	416	356	283	237	190	136	161	101		339	439	374	313	244	137	297	358	486	532	410
Bay City	723	620	568	454	553	508	407	421	361	288	242	195	141	223		116	434	534	468	407	339	232	391	453	581	627	505
Collingwood	806	704	652	538	636	592	490	504	444	371	325	278	224		257	185	471	570	505	444	376	259	418	480	608	653	531
Port Huron	582	480	428	314	412	368	266	280	220	148	101	54		258	162	157	471	571	506	445	376	269	429	490	618	664	542
Detroit	528	426	374	260	358	314	212	227	166	94	47		62	320	224	219	533	633	568	507	438	331	491	552	680	726	604
Toledo	522	420	368	254	352	308	206	221	161	83		54	116	374	278	273	587	688	622	561	492	385	545	606	734	781	658
Cleveland	455	353	301	187	285	241	139	153	89		96	108	170	427	331	326	640	740	675	614	545	438	598	659	788	833	711
Erie	373	270	218	104	202	158	56	68		102	185	191	253	511	415	410	724	824	759	698	629	522	682	743	871	917	795
Buffalo	335	233	181	67	165	121	19		78	176	254	261	322	580	484	479	794	893	828	767	699	592	751	813	941	986	864
Port Colborne	316	214	162	48	146	102		22	65	160	237	244	306	564	468	463	777	877	812	751	682	575	735	796	924	970	848
Rochester	231	128	77	83	51		117	139	182	277	354	361	423	681	585	580	894	994	929	868	799	692	852	913	1,041	1,087	965
Oswego	197	94	48	126		59	168	190	233	328	405	412	474	732	636	631	945	1,045	980	919	850	743	903	964	1,092	1,138	1,016
Toronto	294	190	140		145	95	55	77	120	215	292	299	361	619	523	518	882	932	867	806	737	630	790	851	979	1,025	903
Kingston	158	55		161	55	89	186	208	251	346	423	430	492	750	654	649	963	1,063	998	937	868	761	921	982	1,110	1,156	1,034
Ogdensburg	104		63	219	108	147	246	268	311	406	483	490	552	810	714	709	1,023	1,123	1,058	997	928	821	981	1,042	1,170	1,216	1,094
Montreal		120	182	338	227	266	364	386	429	524	601	608	670	928	832	827	1,141	1,241	1,176	1,115	1,046	939	1,099	1,160	1,288	1,334	1,212

Distances in Dark Type are in Nautical Miles.
Distances in Light Type are in Statute Miles.
The Great Lakes area is connected with the Atlantic Ocean area by the Junction Point Montreal.

AABENRA, DENMARK. See Abenra.

AALBORG, DENMARK
(57°03'30'' N., 9°56'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 207
Skagens Odde, Denmark, 87

Ports
Gdynia, Poland (via Store Baelt), 476
Gdynia, Poland (via The Sound), 389
Kobenhavn, Denmark, 138
Lubeck, Germany (via Store Baelt), 248

AARHUS, DENMARK
(56°09'30'' N., 10°13'30'' E.) to:

Junction Points*
Skagens Odde, Denmark, 127
Kiel Canal (east end), Germany, 131

Ports
Abenra, Denmark, 103
Kobenhavn, Denmark, 108
Oslo, Norway, 255
Szczecin, Poland, 268

ABADAN, IRAN
(30°19'48'' N., 48°16'30'' E.)

Substract 30 miles from Al Basrah distances.

ABENRA, DENMARK
(55°01'36'' N., 9°25'50'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 66
Skagens Odde, Denmark, 229

Ports
Aarhus, Denmark, 103
Kobenhavn, Denmark, 204
Lubeck, Germany, 131

ABERDEEN, SCOTLAND
(57°08'30'' N., 2°04'30'' W.) to:

Junction Points*
Skagens Odde, Denmark, 416
Ushant, France, 715

Ports
Amsterdam, Netherlands, 380
Antwerpen, Belgium, 450
Bergen, Norway, 309
Bremerhaven, Germany, 425
Dunkerque, France, 418
Egersund, Norway, 273
Emden, Germany, 394
Esbjerg, Denmark, 373
Hamburg, Germany, 473
Kristiansand, Norway, 338
Le Havre, France, 522
London, England, 429
Oostende, Belgium, 406
Oslo, Norway, 490
Plymouth, England, 638
Portland, England, 564
Portsmouth, England, 514
Rotterdam, Netherlands, 391
Southampton, England, 532
Stavanger, Norway, 278
Torshavn, Faeroe Islands, 365
Wilhelmshaven, Germany, 419
Zeebrugge, Belgium, 402

ABIDJAN, IVORY COAST
(5°19'00'' N., 4°01'50'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,712
Strait of Gibraltar, 2,656

Ports
Cape Town, Republic of South Africa, 2,679
Dakar, Senegal, 1,166

ABIDJEAN, IVORY COAST. See Abidjan.

ABO, FINLAND. See Turku.

ABRAHAM BAY, MAYAGUANA ISLAND, BAHAMAS
(22°19'00'' N., 73°03'20'' W.) to:

Junction Points*
Panama, Panama, 922
Straits of Florida, 593

Ports
New York, New York, U.S.A., 1,115
Nuevitas, Cuba, 243
San Juan, Puerto Rico, 476

ACAJUTLA, EL SALVADOR
(13°35'00'' N., 89°51'00'' W.) to:

Junction Points*
Panama, Panama, 833

Ports
La Libertad, Mexico, 1,739
San Francisco, California, U.S.A., 2,446

ACAPULCO, MEXICO
(16°50'30'' N., 99°55'30'' W.) to:

Junction Points*
Panama, Panama, 1,426
Punta Arenas, Chile, 4,582

Ports
Amapala, Honduras, 763
Antofagasta, Chile, 2,984
Apia, Samoa, 4,638
Arica, Chile, 2,768
Bahia Magdalena, Mexico, 853
Callao, Peru, 2,198
Champerico, Guatemala, 494
Coquimbo, Chile, 3,259
Corinto, Nicaragua, 792
Ensenada, Mexico, 1,369
Esmeraldas, Ecuador, 1,527
Golfito, Costa Rica, 1,123
Guayaquil, Ecuador, 1,708
Guaymas, Mexico, 958
Honolulu, Hawaii, U.S.A., 3,289
Iquique, Chile, 2,834
La Libertad, Mexico, 1,122
La Palma, Panama, 1,466
Los Angeles, California, U.S.A., 1,501
Lota, Chile, 3,573
Manzanillo, Mexico, 295
Mazatlan, Mexico, 595
Mollendo, Peru, 2,643
Monterey, California, U.S.A., 1,753
Pago Pago, American Samoa, 4,595
Papeete, Society Islands, 3,595
Pedregal, Panama, 1,184
Pisco, Peru, 2,309
Puerto Masachapa, Nicaragua, 850
Puerto Somoza, Nicaragua, 825
Puntarenas, Costa Rica, 1,011
Quepos, Costa Rica, 1,043
Salina Cruz, Mexico, 314
San Blas, Mexico, 502
San Diego, California, U.S.A., 1,431
San Jose, Guatemala, 574
San Lorenzo, Honduras, 791
Santa Barbara, California, U.S.A., 1,568
Santa Rosalia, Mexico, 976
Sasebo, Japan, 6,918
Talara, Peru, 1,696
Talcahuano, Chile, 3,558
Valparaiso, Chile, 3,406

ACCRA, GHANA
(5°31'00'' N., 0°12'00'' W.) to:

Junction Points*
Straits of Florida (via Northwest Providence Channel), 5,016

Ports
Freetown, Sierra Leone, 955

*JUNCTION POINT.—See Preface for use of junction points.

Grand Bassam, Ivory Coast, 230
Lagos, Nigeria, 229
Lobito, Angola, 1,356
Marshall, Liberia, 671
Pointe Noire, Gabon, 952
Porto Grande, Cape Verde Islands, 1,760
Sassandra, Ivory Coast, 362

ADALIA, TURKEY. See Antalya.

AD DAMMAN, SAUDI ARABIA
(26°31'00'' N., 50°12'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,960
Port Said, U.A.R., 3,142
Singapore, 3,681

Ports
Al Basrah, Iraq, 304
Bombay, India, 1,373

ADELAIDE, AUSTRALIA
(34°50'30'' S., 138°30'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,165
Cape of Good Hope, Republic of South Africa, 5,754
Sunda Strait, Indonesia, 2,980
Wilson Promontory, Australia, 537

Ports
Albany, Australia, 1,024
Bunbury, Australia, 1,260
Durban, Republic of South Africa, 5,160
Melbourne, Australia, 512
Port Louis, Mauritius, 4,368
Port Pirie, Australia, 246
Portland, Australia, 321
Strahan, Australia, 593
Whyalla, Australia, 245

ADEN, ADEN PROTECTORATE
(12°47'40'' N., 44°59'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia (north of Chagos Archipelago), 4,958
Cape Leeuwin, Australia (south of Chagos Archipelago), 4,973
Cape of Good Hope, Republic of South Africa, 3,954
Cape of Good Hope, Republic of South Africa (low power, May–September), 4,175
Port Said, U.A.R., 1,400
Singapore (October–April), 3,631
Singapore (May–September), 3,646
Sunda Strait, Indonesia (via Eight Degree Channel, May–September), 3,842
Sunda Strait, Indonesia (via One and Half Degree Channel, October–April), 3,838
Torres Strait, Australia (via One and Half Degree Channel, October–April), 6,022
Torres Strait, Australia (via Eight Degree Channel, May–September), 6,034

Ports
Al Aqabah, Jordan, 1,251
Al Basrah, Iraq, 1,979
Al Gurdagah, U.A.R., 1,135
Al Hudaydah, Yemen, 230
Al Mukha, Yemen, 137
Albany, Australia (north of Chagos Archipelago), 5,127
Albany, Australia (south of Chagos Archipelago), 5,132
Assab, Ethiopia, 150
Bandar Abbas, Iran, 1,453
Beira, Mozambique, 2,610
Belawan, Indonesia, 3,299
Bhavnagar, India, 1,707
Bombay, India (October–April), 1,657
Bombay, India (May–September), 1,678
Bur Safajah, U.A.R., 1,109
Calcutta, India (south of Socotra, October–April), 3,308
Calcutta, India (north of Socotra, May–September), 3,323
Colombo, Ceylon (October–April), 2,094
Colombo, Ceylon (May–September), 2,105
Dar es Salaam, Tanganyika, 1,752
Darwin, Australia (via One and Half Degree Channel, October–April), 5,361
Darwin, Australia (via Eight Degree Channel, May–September), 5,374
Diego Garcia, Chagos Archipelago, 2,116
Djibouti, French Somaliland, 133
Eilat, Israel, 1,247
Fremantle, Australia (north of Chagos Archipelago), 4,921
Hobart, Tasmania, 6,598
Jazireh-ye Khark, Iran, 1,811
Juddah, Saudi Arabia, 707
Karachi, Pakistan, 1,472
Khawr al Ama, Neutral Zone, Persian Gulf, 1,873
Lourenco Marques, Mozambique, 2,973
Madras, India (south of Socotra, October–April), 2,661
Madras, India (north of Socotra, May–September), 2,676
Malacca, Malaysia, 3,517
Masqat, Mascat and Oman, 1,211
Massaua, Ethiopia, 400
Mina Abd Allah, Kuwait, 1,894
Mina Su'ud, Neutral Zone, Persian Gulf, 1,875
Mogadiscio, Somali Republic, 1,106
Mombasa, Kenya, 1,619
Penang, Malaysia (south of Socotra), 3,344
Port Louis, Mauritius, 2,341
Port Sudan, Sudan, 668
Rangoon, Burma (south of Socotra, October–April), 3,318
Rangoon, Burma (north of Socotra, May–September), 3,333
Ra's al Khafji, Neutral Zone, Persian Gulf, 1,871
Ra's as Sidr, U.A.R., 1,282
Ra's Gharib, U.A.R., 1,207
Sabang, Indonesia, 3,033
Suakin, Sudan, 631
Tanga, Tanganyika, 1,681
Victoria, Seychelles, 1,416
Wellington, New Zealand (south of Chagos Archipelago and Tasmania), 7,814
Zanzibar, Zanzibar, 1,731

AGADIR, MOROCCO
(30°25'30'' N., 9°37'35'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,719
Ushant, France, 1,136

Ports
Casablanca, Morocco, 257
Dakar, Senegal, 1,109

AHMADI, MINA AL, KUWAIT. See Mina Al Ahmadi.

AJACCIO, CORSICA
(41°55'40'' N., 8°45'07'' E.) to:

Junction Points*
Port Said, U.A.R., 1,355
Strait of Gibraltar, 778

Ports
Bayrut, Lebanon, 1,437
Catania Sicily, 464
Civitavecchia, Italy, 180
Genova, Italy, 170
Marseille, France, 188

*JUNCTION POINT.—See Preface for use of junction points.

Nice, France, 138
Toulon, France, 155
Venezia, Italy, 1,507
Villefranche, France, 138
Volos, Greece (Corinth Canal), 1,014
Volos, Greece (south of Greece), 1,056

AKITA, JAPAN
(39°45′30″ N., 140°02′00″ E.) to:

Ports
Aomori, Japan, 158
Esutoru, U.S.S.R., 596
Hakodate, Japan, 150
Honto, U.S.S.R., 450
Maizuru, Japan, 352
Shimonoseki, Japan, 586

AKKRA, GHANA. See Accra.

AKUREYRI, ICELAND
(65°41′00″ N., 18°04′00″ W.) to:

Junction Points*
Pentland Firth, Scotland, 702
Strait of Gibraltar, 2,102

Ports
Bergen, Norway, 803
Murmansk, U.S.S.R., 1,256
St. John's, Canada, 1,616

AKYAB, BURMA
(20°08′30″ N., 92°54′30″ E.) to:

Junction Points*
Port Said, U.A.R., 4,672
Singapore, 1,365

Ports
Calcutta, India, 402
Colombo, Ceylon, 1,225
Penang, Malaysia, 1,215

AL AQABAH, JORDAN
(29°31′15″ N., 34°59′55″ E.) to:

Junction Points*
Port Said, U.A.R., 380

Ports
Aden, Aden Protectorate, 1,251
Juddah, Saudi Arabia, 573
Massaua, Ethiopia, 897

AL BAHRAYN, BAHRAIN
(26°17′00″ N., 50°32′30″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,957
Port Said, U.A.R., 3,132
Singapore, 3,652

Ports
Bandar-E Shapur, Iran, 288
Belawan, Indonesia, 3,316
Calcutta, India, 3,355
Darwin, Australia, 5,390
Fremantle, Australia, 5,203
Malacca, Malaysia, 3,534
Penang, Malaysia, 3,361
Rangoon, Burma, 3,329
Sabang, Indonesia, 3,050

AL BASRAH, IRAQ
(30°31′30″ N., 47°50′30″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,211
Port Said, U.A.R., 3,371
Singapore, 3,916

Ports
Ad Damman, Saudi Arabia, 304
Aden, Aden Protectorate, 1,979
Bandar Abbas, Iran, 572
Bandar-E Shapur, Iran, 154
Belawan, Indonesia, 3,553
Bombay, India, 1,594
Calcutta, India, 3,593
Colombo, Ceylon, 2,359
Darwin, Australia, 5,650
Dumai, Indonesia, 3,824
Fremantle, Australia, 5,440
Karachi, Pakistan, 1,177
Malacca, Malaysia, 3,771
Masqat, Mascat and Oman, 773
Massaua, Ethiopia, 2,372
Mina al Ahmadi, Kuwait, 140
Penang, Malaysia, 3,598
Rangoon, Burma, 3,603
Ra's at Tannurah, Saudi Arabia, 295
Sabang, Indonesia, 3,287
Umm Said, Qatar, 444

AL FAW, IRAQ
(29°58′45″ N., 48°28′36″ E.)

Subtract 56 miles from Al Basrah distances.

AL GURDAGAH, UNITED ARAB REPUBLIC
(27°13′25″ N., 33°50′50″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,041
Port Said, U.A.R., 278
Singapore, 4,754

Ports
Aden, Aden Protectorate, 1,135

AL HAMMAMAT, TUNISIA
(36°23′00″ N., 10°37′00″ E.) to:

Junction Points*
Port Said, U.A.R., 1,138
Strait of Gibraltar, 888

Ports
Annaba, Algeria, 234
Tarabulus, Libya, 246
Valletta, Malta, 198

AL HOCEIMA, MOROCCO. See Villa Sanjurjo.

AL HUDAYDAH, YEMEN
(14°47′00″ N., 42°53′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,137
Port Said, U.A.R., 1,162
Singapore, 3,864

Ports
Aden, Aden Protectorate, 230

AL KHUMS, LIBYA
(32°39′30″ N., 14°16′45″ E.) to:

Junction Points*
Port Said, U.A.R., 941
Strait of Gibraltar, 1,130

Ports
Banghazi, Libya, 296
Messina, Sicily, 342
Tunis, Tunisia, 359

AL KUWAYT, KUWAIT
(29°24′00″ N., 47°58′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,141
Singapore, 3,836

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Belawan, Indonesia, 3,500
Calcutta, India, 3,504
Darwin, Australia, 5,597
Fremantle, Australia, 5,387
Malacca, Malaysia, 3,718
Penang, Malaysia, 3,545
Rangoon, Burma, 3,513
Sabang, Indonesia, 3,234

AL LADHIQIYAH, SYRIA
(35°31′40″ N., 35°45′35″ E.) to:

Junction Points*
Port Said, U.A.R., 310
Strait of Gibraltar, 2,029

Ports
Alexandria, U.A.R., 402
Iraklion, Crete, 527
Larnaca, Cyprus, 114
Mersin, Turkey, 94
Napoli, Italy, 1,191
Trieste, Free Territory (via Corinth Canal), 1,337
Trieste, Free Territory (south of Greece), 1,370
Tunis, Tunisia, 1,258
Valencia, Spain, 1,765

AL MANAMAH, BAHRAIN ISLAND. See Al Bahrayn.

AL MINA AL BAYDAH, SYRIA. See Al Mina Al Bayda.

AL MUKHA, YEMEN
(13°19′45″ N., 43°12′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,043
Port Said, U.A.R., 263
Singapore, 3,756

Ports
Aden, Aden Protectorate, 137
Port Sudan, Sudan, 524

ALBANY, AUSTRALIA
(35°02′40″ S., 117°54′00″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 168
Cape of Good Hope, Republic of South Africa, 4,740
Singapore, 2,525

Ports
Adelaide, Australia, 1,024
Aden, Aden Protectorate, 5,127
Darwin, Australia, 2,152
Durban, Republic of South Africa, 4,275
Fremantle, Australia, 349
Geraldton, Australia, 525
Hobart, Tasmania, 1,494
Malacca, Malaysia, 2,602
Melbourne, Australia, 1,363
Port Lincoln, Australia, 953
Port Louis, Mauritius, 3,340
Rapid Bay, Australia, 990
Stenhouse Bay, Australia, 936
Strahan, Australia, 1,356
Wellington, New Zealand (south of Tasmania), 2,729

ALBANY, NEW YORK, U.S.A.
(42°37′54″ N., 73°45′18″ W.)

Add 126 miles to New York distances.

ALCUDIA, BALEARIC ISLANDS
(39°49′00″ N., 3°09′00″ E.) to:

Junction Points*
Port Said, U.A.R., 1,536
Strait of Gibraltar, 526

Ports
Barcelona, Spain, 114
Marseille, France, 235
Oran, Algeria, 281

ALEKSANDROVSK, SAKHALIN
(50°54′00″ N., 142°07′00″ E.) to:

Junction Points*
Singapore, 3,608
Sunda Strait, Indonesia, 3,961

Ports
Bukhta Broutona, Kuril Islands, 747
Ching-tao, China, 1,602
Chin-huang-tao, China (via Maenggol Sudo), 1,755
Chinnampo, Korea, 1,601
Darwin, Australia, 4,041
Djakarta, Indonesia, 3,942
Hakodate, Japan, 631
Hong Kong, B.C.C., 2,250
Honolulu, Hawaii, U.S.A., 3,589
Hisa-men, China, 1,991
Inchon, Korea (via Maenggol Sudo), 1,507
Kasatka, Japan, 595
Kobe, Japan, 1,384
Krung Thep, Thailand (outer bar), 3,639
Lo-hsing-ta Mao-ti, China, 1,868
Los Angeles, California, 4,687
Lu-shun, China, 1,654
Manila, Philippines, 2,507
Matsugahama, Japan, 589
Mokpo, Korea, 1,330
Moskalvo, U.S.S.R., 230
Nagasaki, Japan, 1,253
Nikolayevsk, U.S.S.R., 162
Osaka, Japan, 1,394
Pago Pago, American Samoa, 4,765
Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 1,158
Pusan, Korea, 1,118
Sai Gon, Vietnam, 3,105
San Diego, California, 4,779
San Francisco, California, 4,373
Seattle, Washington (via La Perouse Strait and Proliv Kruzenshterna), 4,108
Shang-hai, China, 1,597
Shan-tou, China, 2,100
Shelekhovo, Kuril Islands, 934
Slavnoye, U.S.S.R., 592
Ta-ku, China, 1,807
Ta-lien, China (via Maenggol Sudo), 1,648
Tomari, Japan, 542
Vladivostok, U.S.S.R., 713
Wei-hai-wei, China (via Maenggol Sudo), 1,579
Wonsan, Korea, 972
Yen-tai, China (via Maenggol Sudo), 1,613
Yokohama, Japan, 1,143

ALESUND, NORWAY
(62°28′06″ N., 6°09′27″ E.) to:

Junction Points*
Skagens Odde, Denmark, 450

Ports
Bergen, Norway, 167
London, England, 733
Reykjavik, Iceland, 848

ALEXANDRETTA, TURKEY. See Iskenderun.

ALEXANDRIA, UNITED ARAB REPUBLIC
(31°10′41″ N., 29°51′28″ E.) to:

Junction Points*
Port Said, U.A.R., 164
Strait of Gibraltar, 1,822

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Al Ladhiqiyah, Syria, 402
Al Mina Al Bayda, Syria, 405
Alger, Algeria, 1,393
Alicante, Spain, 1,560
Ancona, Italy, 1,096
Annaba, Algeria, 1,169
Antalya, Turkey, 349
Ashod Yam, Israel, 266
Augusta, Sicily, 819
Banghazi, Libya, 541
Barcelona, Spain, 1,482
Bari, Italy, 890
Bayrut, Lebanon, 341
Bizerte, Tunisia, 1,064
Brindisi, Italy, 831
Cagliari, Sardinia, 1,136
Cartagena, Spain, 1,585
Castellamare di Stabia, Italy, 1,003
Catania, Sicily, 828
Ceuta, Morocco, 1,802
Famagusta, Cyprus, 340
Genova, Italy, 1,316
Gibraltar, 1,805
Haifa, Israel, 295
Iraklion, Crete, 372
Istanbul, Turkey, 742
Izmir, Turkey, 547
La Spezia, Italy, 1,280
Limassol, Cyprus, 272
Livorno, Italy, 1,244
Malaga, Spain, 1,752
Marseille, France, 1,407
Messina, Sicily, 834
Napoli, Italy, 1,005
Odessa, U.S.S.R., 1090
Oran, Algeria, 1,590
Palermo, Sicily, 950
Palma, Balearic Islands, 1,435
Paphos, Cyprus, 256
Piraievs, Greece, 515
Rijeka, Yugoslavia, 1,166
Savona, Italy, 1,326
Sibenik, Yugoslavia, 1,039
Siracusa, Sicily, 809
Split, Yugoslavia, 1,024
Soudha, Crete, 425
Sur, Lebanon, 309
Tarabulus, Libya, 866
Taranto, Italy, 844
Thessaloniki, Greece, 678
Toulon, France, 1,376
Trieste, Free Territory, 1,200
Tubruq, Libya, 308
Tunis, Tunisia, 1,051
Valencia, Spain, 1,559
Valletta, Malta, 823
Venezia, Italy, 1,208
Volos, Greece, 620

ALEXANDROUPOLIS, GREECE
(40°50′00″ N., 25°53′00″ E.) to:

Junction Points*
Port Said, U.A.R., 699
Strait of Gibraltar, 1,716

Ports
Istanbul, Turkey, 200
Thessaloniki, Greece, 191
Volos, Greece, 205

ALEXANDROVSKI, SAKHALIN
See Aleksandrovsk.

ALGECIRAS, SPAIN
(36°07′30″ N., 5°26′30″ W.) to:

Junction Points*
Port Said, U.A.R., 1,927
Strait of Gibraltar, 25

Ports
Cartagena, Spain, 238
Oran, Algeria, 229
Palermo, Sicily, 924

ALGER, ALGERIA
(36°46′50″ N., 3°04′11″ E.) to:

Junction Points*
Port Said, U.A.R., 1,514
Strait of Gibraltar, 437

Ports
Alexandria, U.A.R., 1,393
Alicante, Spain, 198
Ancona, Italy, 1,153
Annaba, Algeria, 246
Arzew, Algeria, 186
Banghazi, Libya, 927
Barcelona, Spain, 282
Bari, Italy, 946
Batumi, U.S.S.R. (via Corinth Canal), 1,963
Batumi, U.S.S.R. (south of Greece), 1,980
Bayrut, Lebanon, 1,605
Bizerte, Tunisia, 340
Brindisi, Italy, 888
Cagliari, Sardinia, 332
Cannes, France, 446
Cartagena, Spain, 208
Ceuta, Morocco, 417
Genova, Italy, 531
Ghazaouet, Algeria, 278
Gibraltar, 420
Haifa, Israel, 1,602
Iraklion, Crete, 1,087
Istanbul, Turkey (via Corinth Canal), 1,376
Istanbul, Turkey (south of Greece), 1,393
Izmir, Turkey (via Corinth Canal), 1,221
Izmir, Turkey (south of Greece), 1,238
Kavala, Greece (via Corinth Canal), 1,260
Kavala, Greece (south of Greece), 1,277
La Spezia, Italy, 540
Livorno, Italy, 528
Mahon, Balearic Islands, 200
Malaga, Spain, 368
Marseille, France, 410
Messina, Sicily, 621
Mostaganem, Algeria, 172
Napoli, Italy, 582
Odessa, U.S.S.R. (via Corinth Canal), 1,724
Odessa, U.S.S.R. (south of Greece), 1,741
Oran, Algeria, 205
Palermo, Sicily, 513
Piraievs, Greece (via Corinth Canal), 1,022
Piraievs, Greece (south of Greece), 1,079
Rijeka, Yugoslavia, 1,220
Savona, Italy, 518
Sibenik, Yugoslavia, 1,094
Siracusa, Sicily, 626
Skikda, Algeria, 200
Split, Yugoslavia, 1,079
Tarabulus, Libya, 665
Taranto, Italy, 841
Thessaloniki, Greece (via Corinth Canal), 1,270
Thessaloniki, Greece (south of Greece), 1,287
Toulon, France, 406
Trieste, Free Territory, 1,254
Tunis, Tunisia, 392
Valencia, Spain, 230
Valletta, Malta, 576
Venezia, Italy, 1,264
Volos, Greece (via Corinth Canal), 1,211
Volos, Greece (south of Greece), 1,228

ALGIERS, ALGERIA. See Alger.

ALICANTE, SPAIN
(38°20′00″ N., 0°29′01″ W.) to:

Junction Points*
Port Said, U.A.R., 1,680
Strait of Gibraltar, 317

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Alexandria, U.A.R., 1,560
Alger, Algeria, 198
Almeria, Spain, 155
Ancona, Italy, 1,308
Annaba, Algeria, 419
Arzew, Algeria, 152
Banghazi, Libya, 1,094
Barcelona, Spain, 228
Bari, Italy, 1,100
Bayrut, Lebanon, 1,772
Bizerte, Tunisia, 507
Brindisi, Italy, 1,042
Cagliari, Sardinia, 473
Ceuta, Morocco, 299
Civitavecchia, Italy, 616
Genova, Italy, 564
Ghazaouet, Algeria, 209
Gibraltar, 300
Haifa, Israel, 1,769
Iraklion, Crete, 1,254
Istanbul, Turkey (via Corinth Canal), 1,540
Istanbul, Turkey (south of Greece), 1,560
Izmir, Turkey (via Corinth Canal), 1,386
Izmir, Turkey (south of Greece), 1,405
La Spezia, Italy, 588
Livorno, Italy, 585
Malaga, Spain, 248
Marseille, France, 406
Melilla, Morocco, 224
Mers el Kebir, Algeria, 160
Messina, Sicily, 776
Mostaganem, Algeria, 148
Napoli, Italy, 723
Odessa, U.S.S.R. (via Corinth Canal), 1,888
Odessa, U.S.S.R. (south of Greece), 1,908
Oran, Algeria, 159
Palermo, Sicily, 667
Palma, Balearic Islands, 173
Piraievs, Greece (via Corinth Canal), 1,186
Piraievs, Greece (south of Greece), 1,246
Rijeka, Yugoslavia, 1,375
Savona, Italy, 549
Sibenik, Yugoslavia, 1,249
Siracusa, Sicily, 792
Split, Yugoslavia, 1,234
Tarabulus, Libya, 832
Taranto, Italy, 995
Thessaloniki, Greece (via Corinth Canal), 1,435
Thessaloniki, Greece (south of Greece), 1,454
Toulon, France, 418
Trieste, Free Territory, 1,409
Tunis, Tunisia, 558
Valencia, Spain, 98
Valletta, Malta, 743
Venezia, Italy, 1,418
Villa Sanjurjo, Morocco, 260
Volos, Greece (via Corinth Canal), 1,376
Volos, Greece (south of Greece), 1,395

ALIWAL, REPUBLIC OF SOUTH AFRICA. See Mosselbaai.

ALMERIA, SPAIN
(36°49'30'' N., 2°27'48'' W.) to:

Junction Points*
Port Said, U.A.R., 1,780
Strait of Gibraltar, 171

Ports
Alicante, Spain, 155
Barcelona, Spain, 371
Catania, Sicily, 919
Istanbul, Turkey (via Corinth Canal), 1,642
Istanbul, Turkey (south of Greece), 1,659
Kerch, U.S.S.R. (via Corinth Canal), 2,077
Kerch, U.S.S.R. (south of Greece), 2,094
Nice, France, 627
Palma, Balearic Islands, 308
Sfax, Tunisia, 881

AL MINA AL BAYDA, SYRIA
(35°36'00'' N., 35°45'00'' E.) to:

Junction Points*
Port Said, U.A.R., 314
Strait of Gibraltar, 2,028

Ports
Alexandria, U.A.R., 405
Izmir, Turkey, 626
Haifa, Israel, 175

ALMIRANTE, PANAMA
(9°17'12'' N., 82°23'32'' W.) to:

Junction Points*
Panama, Panama, 198
Yucatan Channel, 814

Ports
Barranquilla, Colombia, 477
Cienfuegos, Cuba, 788
Kingston, Jamaica, 657

ALTAGRACIA, VENEZUELA
(10°42'30'' N., 71°32'00'' W.)

Subtract 6 miles from Maracaibo distances.

ALVARO OBREGON, MEXICO
(18°35'30'' N., 92°39'30'' W.) to:

Junction Points*
Panama, Panama, 1,361
Straits of Florida, 678
Yucatan Channel, 548

Ports
Apalachicola, Florida, U.S.A., 792
Belize, British Honduras, 756
Cap Haitien, Haiti, 1,298
Cartagena, Colombia, 1,407
Castries, St. Lucia, 2,000
Charlotte Amalie, Virgin Islands (north of Hispaniola), 1,726
Charlotte Amalie, Virgin Islands (south of Hispaniola), 1,747
Colon, Panama, 1,317
Galveston, Texas, U.S.A., 665
Gulfport, Mississippi, U.S.A., 755
Habana, Cuba, 699
Key West, Florida, U.S.A., 748
Kingston, Jamaica, 1,092
La Guaira, Venezuela, 1,781
Matagorda Bay, Texas, U.S.A., 621
Mobile, Alabama, U.S.A., 778
New Orleans, Louisiana, U.S.A., 755
Pensacola, Florida, U.S.A., 776
Pointe a Pitre, Guadeloupe, 1,957
Port au Prince, Haiti, 1,292
Port of Spain, Trinidad, 2,060
Puerto Cabello, Venezuela, 1,745
San Juan del Norte, Nicaragua, 1,165
Santo Domingo, Dominican Republic, 1,472
Tampico, Mexico, 372
Tuxpan, Mexico, 307
Veracruz, Mexico, 202
Willemstad, Curacao, 1,635

AMAGASAKI, JAPAN
(34°41'00'' N., 135°23'00'' E.)

Add 4 miles to Osaka for ports outside the Inland Sea.

AMAPALA, HONDURAS
(13°18'00'' N., 87°39'30'' W.) to:

Junction Points*
Panama, Panama, 745

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Acapulco, Mexico, 763
Antofagasta, Chile, 2,460
Callao, Peru, 1,665
Corinto, Nicaragua, 72
Golfito, Costa Rica, 432
Guayaquil, Ecuador, 1,167
Iquique, Chile, 2,303
Mazatlan, Mexico, 1,350
Pearl Harbor, Hawaii, U.S.A., 4,045
Puntarenas, Costa Rica, 329
San Diego, California, U.S.A., 2,181
San Francisco, California, U.S.A., 2,586
San Jose, Guatemala, 204
Seattle, Washington, U.S.A., 3,361

AMASRA, TURKEY
(41°45′30″ N., 32°25′00″ E.)

Add 167½ miles to Istanbul distances for ports outside the Black Sea.

AMBARCHIK, U.S.S.R.
(69°38′30″ N., 162°12′00″ E.) to:

Ports
Pevek, U.S.S.R., 201
Provideniya, U.S.S.R., 864
Tiksi, U.S.S.R., 745

AMBOIM, ANGOLA
(10°43′47″ S., 13°45′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,530
Strait of Gibraltar, 4,099
Ushant, France, 4,739

Ports
Boma, Republic of the Congo, 356
Cabinda, Cabinda, 339
Casablanca, Morocco, 3,945

AMBON, INDONESIA
(3°41′30″ S., 128°10′25″ E.) to:

Junction Points*
Lombok Strait, Indonesia, 819
Torres Strait, Australia, 964

Ports
Darwin, Australia, 579
Manila, Philippines, 1,260
Surabaja, Indonesia, 980

AMOY, CHINA. See Hsia-men.

AMSTERDAM, NETHERLANDS
(52°23′00″ N., 4°54′00″ E.) to:

Junction Points*
Bishop Rock, England, 481
Kiel Canal (east end), Germany, 291
Pentland Firth, Scotland, 481
Skagens Odde, Denmark, 422
Ushant, France, 465

Ports
Aberdeen, Scotland, 380
Antwerpen, Belgium, 148
Bergen, Norway, 502
Bremerhaven, Germany, 223
Cherbourg, France, 305
Dover, England, 161
Dundee, Scotland, 374
Dunkerque, France, 135
Egersund, Norway, 380
Esbjerg, Denmark, 255
Hamburg, Germany, 274
Hartlepool, England, 260
Harwich, England, 145
Hull, England, 212
Inverness, Scotland, 482
Kristiansand, Norway, 381
Le Havre, France, 273
Leith, Scotland, 372
London, England, 208
Newcastle, England, 286
Oostende, Belgium, 117
Oslo, Norway, 522
Plymouth, England, 390
Portland, England, 316
Portsmouth, England, 266
Rotterdam, Netherlands, 67
Southampton, England, 284
Stavanger, Norway, 424
Wilhelmshaven, Germany, 210
Zeebrugge, Belgium, 104

AMUAY, VENEZUELA
(11°44′39″ N., 70°13′56″ W.) to:

Junction Points*
Panama, Panama, 678
Yucatan Channel, 1,050

Ports
Barranquilla, Colombia, 325
La Guaira, Venezuela, 276
Santiago de Cuba, Cuba, 600

ANADYR BAY, U.S.S.R. See Anadyrskiy Liman.

ANADYRSKIY LIMAN, U.S.S.R.
(64°45′00″ N., 177°30′00″ E.) to:

Ports
Dutch Harbor, Alaska, U.S.A., 824
Kiska, Alaska, U.S.A., 804
Provideniya, U.S.S.R., 254

ANCHORAGE, ALASKA, U.S.A.
(61°13′00″ N., 149°56′00″ W.) to:

Ports
San Francisco, California, U.S.A., 1,872
Seattle, Washington, U.S.A. (via inside route), 1,639
Seattle, Washington, U.S.A. (via outside route and Juan de Fuca Strait), 1,420

ANCONA, ITALY
(43°37′22″ N., 13°30′18″ E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,196
Port Said, U.A.R. (south of Greece), 1,206
Strait of Gibraltar, 1,580

Ports
Alexandria, U.A.R., 1,096
Alger, Algeria, 1,153
Alicante, Spain, 1,308
Annaba, Algeria, 933
Banghazi, Libya, 800
Barcelona, Spain, 1,212
Bari, Italy, 216
Barletta, Italy, 199
Bayrut, Lebanon (via Corinth Canal), 1,245
Bayrut, Lebanon (south of Greece), 1,276
Bizerte, Tunisia, 842
Brindisi, Italy, 274
Cartagena, Spain, 1,338
Ceuta, Morocco, 1,561
Chioggia, Italy, 111
Genova, Italy, 1,017
Gibraltar, 1,563
Haifa, Israel (via Corinth Canal), 1,248
Haifa, Israel (south of Greece), 1,272
Iraklion, Crete, 762
Istanbul, Turkey (via Corinth Canal), 962
Istanbul, Turkey (south of Greece), 1,058
Izmir, Turkey (via Corinth Canal), 808

*JUNCTION POINT.—See Preface for use of junction points.

Izmir, Turkey (south of Greece), 904
La Spezia, Italy, 979
Livorno, Italy, 946
Malaga, Spain, 1,510
Marseille, France, 1,109
Messina, Sicily, 536
Monopoli, Italy, 239
Napoli, Italy, 707
Odessa, U.S.S.R. (via Corinth Canal), 1,310
Odessa, U.S.S.R. (south of Greece), 1,407
Oran, Algeria, 1,349
Palermo, Sicily, 652
Palma, Balearic Islands, 1,170
Piraievs, Greece (via Corinth Canal), 608
Piraievs, Greece (south of Greece), 745
Ploce, Yugoslavia, 167
Porto di Manfredonia, Italy, 195
Rijeka, Yugoslavia, 112
Savona, Italy, 1,028
Shengjin, Albania, 297
Sibenik, Yugoslavia, 115
Siracusa, Sicily, 557
Split, Yugoslavia, 132
Tarabulus, Libya, 820
Taranto, Italy, 415
Thessaloniki, Greece (via Corinth Canal), 857
Thessaloniki, Greece (south of Greece), 953
Toulon, France, 1,077
Trieste, Free Territory, 130
Tunis, Tunisia, 830
Valencia, Spain, 1,295
Valletta, Malta, 634
Venezia, Italy, 124
Volos, Greece (via Corinth Canal), 798
Volos, Greece (south of Greece), 894
Zadar, Yugoslavia, 87

ANECHO, TOGO
(6°13′15″ N., 1°35′35″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 747
Ushant, France, 3,704

Ports
Douala, Cameroon, 526
Monrovia, Liberia, 850

ANGMAGSSALIK, GREENLAND
(65°37′00″ N., 37°37′00″ W.) to:

Junction Points*
Bishop Rock, England, 1,369
Inishtrahull, Ireland, 1,069
Montreal, Canada (direct), 1,870
Montreal, Canada (via 75 miles off Kap Farvel), 1,904
Pentland Firth, Scotland, 1,039
Strait of Gibraltar, 2,162
Straits of Florida (direct), 3,267
Straits of Florida (via 75 miles off Kap Farvel), 3,281

Ports
Argentia, Canada (direct), 1,365
Argentia, Canada (via 75 miles off Kap Farvel), 1,379
Arkhangelsk, U.S.S.R., 1,998
Boston, Massachusetts, U.S.A. (direct), 2,073
Boston, Massachusetts, U.S.A. (via 75 miles off Kap Farvel), 2,087
Charleston, South Carolina, U.S.A. (direct), 2,752
Charleston, South Carolina, U.S.A. (via 75 miles off Kap Farvel), 2,766
Colon, Panama (direct), 3,879
Colon, Panama (via 75 miles off Kap Farvel), 3,893
Godhavn, Greenland (direct), 1,132
Godhavn, Greenland (via 75 miles off Kap Farvel), 1,257
Guantanamo, Cuba (direct), 3,215
Guantanamo, Cuba (via 75 miles off Kap Farvel), 3,229
Halifax, Canada (direct), 1,722
Halifax, Canada (via 75 miles off Kap Farvel), 1,736
Ivigtut, Greenland (direct), 624
Ivigtut, Greenland (via 75 miles off Kap Farvel), 754
Julianehaab, Greenland (direct), 531
Julianehaab, Greenland (via 75 miles off Kap Farvel), 665
Key West, Florida, U.S.A. (direct) 3,209
Key West, Florida, U.S.A. (via 75 miles off Kap Farvel), 3,223
New York, New York, U.S.A. (direct), 2,275
New York, New York, U.S.A. (via 75 miles off Kap Farvel), 2,290
Norfolk, Virginia, U.S.A. (direct), 2,458
Norfolk, Virginia, U.S.A. (via 75 miles off Kap Farvel), 2,472
Philadelphia, Pennsylvania, U.S.A. (direct), 2,428
Philadelphia, Pennsylvania, U.S.A. (via 75 miles off Kap Farvel), 2,442
Portsmouth, New Hampshire, U.S.A. (direct), 2,052
Portsmouth, New Hampshire, U.S.A. (via 75 miles off Kap Farvel), 2,066
Reykjavik, Iceland, 418
St. John's, Canada (direct), 1,193
St. John's, Canada (via 75 miles off Kap Farvel), 1,208
San Juan, Puerto Rico (direct), 3,061
San Juan, Puerto Rico (via 75 miles off Kap Farvel), 3,075

ANGO ANGO, REPUBLIC OF THE CONGO
(5°50′30″ S., 13°26′00″ E.)

Add 27 miles to Boma distances.

ANGRA DOS REIS, BRAZIL
(23°01′00″ S., 44°18′42″ W.) to :

Junction Points*
Panama, Panama, 4,527
Punta Arenas, Chile, 2,212

Ports
Montevideo, Uruguay, 1,031
Salvador, Brazil, 902

ANNABA, ALGERIA
(36°54′00″ N., 7°46′19″ E.) to:

Junction Points*
Port Said, U.A.R., 1,289
Strait of Gibraltar, 675

Ports
Al Hammamat, Tunisia, 234
Alexandria, U.A.R., 1,169
Alger, Algeria, 246
Alicante, Spain, 419
Ancona, Italy, 933
Banghazi, Libya, 702
Barcelona, Spain, 386
Bari, Italy, 726
Bayrut, Lebanon, 1,381
Bejaia, Algeria, 156
Bizerte, Tunisia, 116
Brindisi, Italy, 668
Cartagena, Spain, 440
Ceuta, Morocco, 656
Genova, Italy, 458
Gibraltar, 658
Golfo di Oristano, Sardinia, 176
Haifa, Israel, 1,378
Hyeres, France, 384
Iraklion, Crete, 863
Istanbul, Turkey (via Corinth Canal), 1,151
Istanbul, Turkey (south of Greece), 1,168
Izmir, Turkey (via Corinth Canal), 997
Izmir, Turkey (south of Greece), 1,014

*JUNCTION POINT.—See Preface for use of junction points.

La Spezia, Italy, 463
Livorno, Italy, 431
Malaga, Spain, 607
Marseille, France, 409
Messina, Sicily, 401
Napoli, Italy, 388
Odessa, U.S.S.R. (via Corinth Canal), 1,499
Odessa, U.S.S.R. (south of Greece), 1,516
Oran, Algeria, 444
Palermo, Sicily, 292
Palma, Balearic Islands, 307
Piraievs, Greece (via Corinth Canal), 797
Piraievs, Greece (south of Greece), 854
Port St. Louis du Rhone, France, 419
Rijeka, Yugoslavia, 1,000
Savona, Italy, 451
Sibenik, Yugoslavia, 874
Siracusa, Sicily, 401
Sousse, Tunisia, 255
Split, Yugoslavia, 859
Tarabulus, Libya, 440
Taranto, Italy, 620
Thessaloniki, Greece (via Corinth Canal), 1,046
Thessaloniki, Greece (south of Greece), 1,063
Toulon, France, 390
Trieste, Free Territory, 1,034
Tunis, Tunisia, 167
Valencia, Spain, 426
Valletta, Malta, 352
Venezia, Italy, 1,044
Volos, Greece (via Corinth Canal), 987
Volos, Greece (south of Greece), 1,004

ANNA MARIA BAY, MARQUESAS. See Taio Hae.

ANNAPOLIS, MARYLAND, U.S.A.
(38°59'00'' N., 76°28'45'' W.)

For ocean distance via the Chesapeake Bay, subtract 20 miles from Baltimore distances. For ocean distances via the C & D Canal, add 20 miles to Baltimore distances.

ANTALYA, TURKEY
(36°52'00'' N., 30°46'00'' E.) to:

Junction Points*
Port Said, U.A.R., 346
Strait of Gibraltar, 1,822

Ports
Alexandria, U.A.R., 349
Bayrut, Lebanon, 322
Piraievs, Greece, 383

ANTIGUA. See St. Johns, Antigua.

ANTILLA, CUBA
(20°49'30'' N., 75°45'00'' W.) to:

Junction Points*
Panama, Panama, 887
Straits of Florida, 491

Ports
Baltimore, Maryland, U.S.A. (via Crooked Island Passage), 1,151
Boston, Massachusetts, U.S.A., 1,408
Charleston, South Carolina, U.S.A., 813
Colon, Panama, 844
Key West, Florida, U.S.A., 434
Matanzas, Cuba, 407
New York, New York, U.S.A., 1,226
Philadelphia, Pennsylvania, U.S.A., 1,197
Port Antonio, Jamaica, 288

ANTOFAGASTA, CHILE
(23°39'00'' S., 70°25'20'' E.) to:

Junction Points*
Panama, Panama, 2,140
Punta Arenas, Chile, 1,996

Ports
Acapulco, Mexico, 2,984
Amapala, Honduras, 2,460
Arica, Chile, 325
Caldera, Chile, 215
Callao, Peru, 813
Chanaral de Las Animas, Chile, 173
Coquimbo, Chile, 396
Corinto, Nicaragua, 2,400
Corral, Chile, 1,000
Esmeraldas, Ecuador, 1,703
Guayaquil, Ecuador, 1,470
Guaymas, Mexico, 3,894
Iquique, Chile, 224
Los Angeles, California, U.S.A., 4,430
Lota, Chile, 828
Matarani, Peru, 423
Mollendo, Peru, 417
Monterey, California, U.S.A., 4,682
Pago Pago, American Samoa, 5,605
Pisco, Peru, 713
Portland, Oregon, U.S.A., 5,383
Puntarenas, Costa Rica, 2,215
Salina Cruz, Mexico, 2,799
San Antonio, Chile, 600
San Blas, Mexico, 3,438
San Diego, California, U.S.A., 4,360
San Francisco, California, U.S.A., 4,762
San Jose, Guatemala, 2,557
San Juan, Peru, 575
Santa Barbara, California, U.S.A., 4,497
Talcahuano, Chile, 802
Valparaiso, Chile, 576

ANTSIRANA, MALAGASY REPUBLIC
(12°16'00'' S., 49°17'40'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,363
Port Said, U.A.R., 3,240
Singapore, 3,554
Sunda Strait, Indonesia, 3,366

Ports
Beira, Mozambique, 1,003
Belawan, Indonesia, 3,221
Bombay, India, 2,338
Darwin, Australia (via north of Scott Reef), 4,769
Djibouti, French Somaliland, 1,969
Durban, Republic of South Africa, 1,592
Fremantle, Australia, 3,826
Lourenco Marques, Mozambique, 1,313
Malacca, Malaysia, 3,439
Mocambique, Mozambique, 570
Penang, Malaysia, 3,266
Sabang, Indonesia, 2,955

AN-TUNG/SINUIJU, KOREA
(40°06'15'' N., 124°23'00'' E.)

Add 22½ miles to Tasa Do distances.

ANTWERP, BELGIUM. See Antwerpen.

ANTWERPEN, BELGIUM
(51°14'00'' N., 4°24'00'' E.) to:

Junction Points*
Bishop Rock, England, 449
Kiel Canal (east end), Germany, 398
Pentland Firth, Scotland, 553
Skagens Odde, Denmark, 528
Ushant, France, 441

Ports
Aberdeen, Scotland, 450
Amsterdam, Netherlands, 148
Belfast, Ireland, 722

*JUNCTION POINT.—See Preface for use of junction points.

Bergen, Norway, 602
Bremerhaven, Germany, 333
Cherbourg, France, 281
Dover, England, 137
Dundee, Scotland, 442
Dunkerque, France, 102
Egersund, Norway, 484
Emden, Germany, 276
Esbjerg, Denmark, 362
Hamburg, Germany, 382
Hartlepool, England, 325
Harwich, England, 97
Hull, England, 265
Inverness, Scotland, 554
Kristiansand, Norway, 488
Le Havre, France, 244
Leith, Scotland, 453
Liverpool, England, 698
London, England, 193
Narvik, Norway, 1,211
Newcastle, England, 351
Oostende, Belgium, 79
Oslo, Norway, 630
Plymouth, England, 366
Portland, England, 292
Portsmouth, England, 242
Rotterdam, Netherlands, 121
Southampton, England, 260
Stavanger, Norway, 525
Wilhelmshaven, Germany, 324
Zeebrugge, Belgium, 64

AOMORI, JAPAN
(40°50'10'' N., 140°44'30'' E.) to:

Ports
Akita, Japan, 158
Bukhta Broutona, Kuril Islands, 664
Kasatka, Japan, 441
Komatsushima, Japan, 813
Matsugahama, Japan, 350
Pago Pago, American Samoa, 4,358
Shelekhovo, Kuril Islands, 899
Shiogama, Japan, 311
Slavnoye, Kuril Islands, 501
Tomari, Japan, 335

AO PHUKET, THAILAND
(7°50'00'' N., 98°26'00'' E.) to:

Junction Points*
Port Said, U.A.R., 4,629
Singapore, 538

Ports
Calcutta, India, 1,124
Colombo, Ceylon, 1,192
Penang, Malaysia, 187

APALACHICOLA, FLORIDA, U.S.A.
(29°37'00'' N., 85°02'00'' W.) to:

Junction Points*
Panama, Panama, 1,330
Yucatan Channel, 474

Ports
Alvaro Obregon, Mexico, 792
Belize, British Honduras, 788
Carmen, Mexico, 756
Cartagena, Colombia, 1,366
Colon, Panama, 1,287
Habana, Cuba, 426
Tampico, Mexico, 825
Tuxpan, Mexico, 843
Veracruz, Mexico, 872

APIA, SAMOA
(13°49'00'' S., 171°45'30'' W.) to:

Junction Points*
Panama, Panama, 5,710
Punta Arenas, Chile, 5,207
Torres Strait, Australia (via Raine Island entrance), 2,763

Ports
Acapulco, Mexico, 4,638
Apra, Guam, 3,080
Auckland, New Zealand, 1,581
Avarua, Cook Islands, 819
Brisbane, Australia, 2,177
Callao, Peru, 5,492
Christmas Island, North Pacific, 1,274
Enderbury Island, Phoenix Islands, 641
Funafuti Island, Ellice Islands, 632
Hakodate, Japan, 4,252
Hobart, Tasmania, 2,776
Hong Kong, B.C.C., 4,869
Honolulu, Hawaii, U.S.A., 2,260
Johnston Island, 1,838
Lele, Caroline Islands, 1,894
Levuka, Fiji Islands, 600
Los Angeles, California, U.S.A., 4,181
Malakal, Palau Islands, 3,446
Melbourne, Australia, 2,834
Midway Island, 2,546
Nagasaki, Japan, 4,414
Nonouti, Gilbert Islands, 1,136
Noumea, New Caledonia, 1,371
Nukualofa, Tonga Islands, 508
Omura, Bonin Islands, 3,641
Pago Pago, American Samoa, 80
Papeete, Society Islands, 1,301
Petropavlovsk, U.S.S.R., 4,292
Ponape, Carolina Islands, 2,189
Rabaul, New Britain, 2,232
Raoul Island, Kermadec Islands, 1,008
Rotoava, Tuamotu Archipelago, 1,520
Salina Cruz, Mexico, 4,886
San Diego, California, U.S.A., 4,195
San Francisco, California, U.S.A., 4,161
Seattle, Washington, U.S.A., 4,613
Selwyn Bay, Solomon Islands, 1,582
Shang-hai, China, 4,715
Suva, Fiji Islands, 647
Sydney, Australia, 2,355
Taio-Hae, Marquesas, 1,886
Talomaco, New Hebrides, 1,255
Vancouver, Canada, 4,675
Valparaiso, Chile, 5,453
Wellington, New Zealand, 1,872
Yap, Caroline Islands, 3,303
Yokohama, Japan, 4,057

APRA, GUAM, MARIANA ISLANDS
(13°27'00'' N., 144°37'00'' E.) to:

Junction Points*
Panama, Panama, 7,988
Punta Arenas, Chile, 8,144
Singapore (via Sulu Sea), 2,585

Ports
Apia, Samoa, 3,080
Auckland, New Zealand, 3,497
Avarua, Cook Islands, 3,889
Baie du Controleur, Marquesas, 4,703
Barbers Point, Hawaii, U.S.A., 3,303
Bikini, Marshalls, 1,263
Brisbane, Australia, 2,659
Callao, Peru, 8,372
Canton, Phoenix Islands, 2,789
Cebu, Philippines, 1,344
Chimbote, Peru, 8,264
Chimu Wan, Ryukyu Islands, 1,228
Ching-tao, China, 1,900
Christmas Island, North Pacific, 3,518
Darwin, Australia (via Selat Sele), 1,925
Djakarta, Indonesia (via Makasser Strait), 2,639
Dutch Harbor, Alaska, U.S.A., 3,403
Enderbury Island, Phoenix Islands, 2,827
Eniwetok, Marshall Islands, 1,066
Funafuti Island, Ellice Islands, 2,455
Guayaquil, Ecuador, 8,147
Hai-kou, Hai-nan Tao, 2,015
Hakodate, Japan, 1,739
Hobart, Tasmania, 3,683
Hong Kong, B.C.C., 1,822
Honolulu, Hawaii, U.S.A., 3,318
Hsia-men, China, 1,669
Iloilo, Philippines, 1,366
Inchon, Korea (via Tokara Kaikyo), 1,837
Iwakuni, Japan, 1,437
Johnston Island, 2,665

*JUNCTION POINT.—See Preface for use of junction points.

Kaneohe Bay, Hawaii, U.S.A., 3,354
Kiska, Alaska, U.S.A., 2,822
Kobe, Japan, 1,386
Kodiak, Alaska, U.S.A., 3,928
Kuang-chou, China, 1,905
Kure, Japan, 1,460
Kwajalein, Marshalls, 1,322
Lae, New Guinea, 1,315
Lele, Caroline Islands, 1,206
Levuka, Fiji Islands, 2,847
Lo-hsing-ta Mao-ti, China, 1,617
Lu-shun, China (via Tokara Kaikyo), 1,976
Malakal, Palau Islands, 706
Manila, Philippines (north of Luzon), 1,742
Manila, Philippines (via San Bernardino Strait), 1,499
Melbourne, Australia, 3,631
Midway Island, 2,301
Nagasaki, Japan, 1,445
Nagoya, Japan, 1,378
Naha, Ryukyu Islands, 1,236
Nakagusuku, Ryukyu Islands, 1,216
Nandi Bay, Fiji Islands, 2,886
Nome, Alaska, U.S.A., 3,686
Nonouti, Gilbert Islands, 1,981
Noumea, New Caledonia, 2,528
Nukualofa, Tonga Islands, 3,202
Olongapo, Philippines (north of Luzon), 1,663
Omura, Bonin Islands, 834
Pago Pago, American Samoa, 3,156
Palmyra Island, 3,194
Papeete, Society Islands, 4,335
Petropavlovsk, U.S.S.R., 2,475
Ponape, Caroline Islands, 906
Prince Rupert, Canada, 4,586
Rabaul, New Britain, 1,187
Raoul Island, Kermadec Islands, 3,369
Rongelap, Marshall Islands, 1,341
Rotoava, Tuamoto Archipelago, 4,513
Sai Gon, Vietnam, 2,304
San Diego, California, U.S.A., 5,379
San Francisco, California, U.S.A., 5,053
Seattle, Washington, U.S.A., 4,948
Selwyn Bay, Solomon Islands, 1,762
Semarang, Indonesia, 2,464
Seward, Alaska, U.S.A., 4,079
Shang-hai, China, 1,687
Shan-tou, China, 1,702
Shimizu, Honshu, Japan, 1,351
Shimonoseki, Japan, 1,451
Sitka, Alaska, U.S.A., 4,407
Sorong, West New Guinea, 1,171
Sukarnopura, West New Guinea, 1,010
Surabaja, Indonesia, 2,334
Suva, Fiji Islands, 2,784
Sydney, Australia, 3,006
Taio Hae, Marquesas, 4,698
Ta-ku, China, 2,133
Ta-lien, China, 1,974
Talomako, New Hebrides, 2,177
Tan-shui, Taiwan, 1,505
Teluk Kau, Halmahera, 1,231
Tinian, Mariana Islands, 127
Tokuyama, Japan, 1,427
Truk, Caroline Islands, 590
Valparaiso, Chile, 8,510
Vinh Cam Ranh, Vietnam, 2,112
Vladivostok, U.S.S.R. (via Shimonoseki Kaikyo), 2,019
Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 2,155
Wake Island, 1,334
Wei-hae-wei, China (via Tokara Kaikyo), 1,901
Wotho, Marshalls, 1,294
Wotje Island, Marshall Islands, 1,547
Yap, Caroline Islands, 458
Yen-tai, China (via Tokara Kaikyo), 1,935
Yokkaichi, Japan, 1,364
Yokohama, Japan, 1,352
Zamboanga, Philippines (south of Mindanao), 1,467
Zamboanga, Philippines (via Surigao Strait), 1,484

AQABA, JORDAN. See Al Aqabah.

ARCHANGEL, U.S.S.R. See Arkhangelsk.

ARCHIPIELAGO DE COLON
(0°53′30″ S., 89°36′30″ W.) to:

Junction Points*
Panama, Panama, 864

Ports
Callao, Peru, 1,004
Guayaquil, Ecuador, 656
Honolulu, Hawaii, U.S.A., 4,216
Isla de Pascua, 1,947
Los Angeles, California, U.S.A., 2,634
San Diego, California, U.S.A., 2,594
San Francisco, California, U.S.A., 2,994
Seattle, Washington, U.S.A., 3,774

ARDROSSAN, SCOTLAND
(55°38′30″ N., 4°49′30″ W.) to:

Junction Points*
Bishop Rock, England, 350
Fastnet, Ireland, 348
Inishtrahull, Ireland, 95
Pentland Firth, Scotland, 282

Ports
Dublin, Ireland, 153
Glasgow, Scotland, 43
Liverpool, England, 180

ARENDAL, NORWAY
(58°27′30″ N., 8°46′30″ E.) to:

Junction Points*
Pentland Firth, Scotland, 452

Ports
Bergen, Norway, 254
London, England, 551
Oslo, Norway, 120

ARGENTIA, CANADA
(47°18′00″ N., 53°59′00″ W.) to:

Junction Points*
Bishop Rock, England, 1,949
Cape of Good Hope, Republic of South Africa, 6,294
Fastnet, Ireland, 1,819
Inishtrahull, Ireland, 1,874
Montreal, Canada, 943
Pentland Firth, Scotland, 2,012
Strait of Gibraltar, 2,302
Straits of Florida, 2,011

Ports
Angmagssalik, Greenland (direct), 1,365
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,379
Arkhangelsk, U.S.S.R., 3,306
Boston, Massachusetts, U.S.A., 801
Charleston, South Carolina, U.S.A., 1,489
Colon, Panama, 2,640
Guantanamo, Cuba, 1,976
Halifax, Canada, 448
Ivigtut, Greenland, 1,023
Key West, Florida, U.S.A., 1,953
Lisboa, Portugal (track F), 2,081
New York, New York, U.S.A., 1,009
Norfolk, Virginia, U.S.A., 1,189
Philadelphia, Pennsylvania, U.S.A., 1,159
Portsmouth, New Hampshire, U.S.A., 779
Reykjavik, Iceland, 1,584
San Juan, Puerto Rico, 1,840

ARHUS, DENMARK. See Aarhus.

ARICA, CHILE
(18°28′00″ S., 70°20′00″ W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Panama, Panama, 1,921
Punta Arenas, Chile, 2,301

Ports
Acapulco, Mexico, 2,768
Antofagasta, Chile, 325
Caldera, Chile, 522
Callao, Peru, 593
Chanaral de Las Animas, Chile, 478
Coquimbo, Chile, 702
Corinto, Nicaragua, 1,711
Corral, Chile, 1,305
Esmeraldes, Ecuador, 1,484
Guayaquil, Ecuador, 1,251
Guaymas, Mexico, 3,681
Iquique, Chile, 110
Los Angeles, California, U.S.A., 4,219
Lota, Chile, 1,134
Mollendo, Peru, 137
Monterey, California, U.S.A., 4,471
Pisco, Peru, 492
Puntarenas, Costa Rica, 1,996
Salina Cruz, Mexico, 2,579
San Blas, Mexico, 3,225
San Diego, California, U.S.A., 4,149
San Francisco, California, U.S.A., 4,551
San Jose, Guatemala, 2,338
Santa Barbara, California, U.S.A., 4,286
Talara, Peru, 1,103
Talcahuano, Chile, 1,108
Valparaiso, Chile, 882

ARKHANGELSK, U.S.S.R.
(64°32′00″ N., 40°31′00″ E.) to:

Junction Points*
Bishop Rock, England, 2,263
Inishtrahull, Ireland, 1,900
Pentland Firth, Scotland, 1,663
Strait of Gibraltar, 3,225
Straits of Florida, 5,208

Ports
Angmagssalik, Greenland, 1,998
Argentia, Canada, 3,306
Berlevag, Norway, 540
Boston, Massachusetts, U.S.A., 4,014
Charleston, South Carolina, U.S.A, 4,692
Colon, Panama, 5,820
Dikson Harbor, U.S.S.R., 1,105
Frederikshavn, Denmark, 1,805
Guantanamo, Cuba, 5,156
Halifax, Canada, 3,663
Hull, England, 1,926
Iokanga, U.S.S.R., 271
Ivigtut, Greenland (direct), 2,573
Ivigtut, Greenland (via 75 miles off Kap Farvel), 2,683
Key West, Florida, U.S.A., 5,150
Liverpool, England, 2,075
London, England, 2,061
Longyearbyen, Svalbard, 1,051
Mys Chelyuskin, U.S.S.R., 1,469
New York, New York, U.S.A., 4,216
New York, New York, U.S.A. (clear of general maximum winter solid pack ice in vicinity of Iceland), 4,320
Norfolk, Virginia, U.S.A., 4,399
Philadelphia, Pennsylvania, U.S.A., 4,369
Portsmouth, New Hampshire, U.S.A., 3,992
Reykjavik, Iceland (direct), 1,874
Reykjavik, Iceland (south of Iceland), 1,901
San Juan, Puerto Rico, 5,001
Sondre Honningsvag, Norway, 612

ARUBA, NETHERLANDS WEST INDIES. See Sint Nicolaas, and Paarden Baai.

ARZEW, ALGERIA
(35°51′30″ N., 0°18′00″ W.) to:

Junction Points*
Port Said, U.A.R., 1,692
Strait of Gibraltar, 275

Ports
Alger, Algeria, 186
Alicante, Spain, 152
Bejaia, Algeria, 294
Melilla, Morocco, 146

ASCENSION ISLAND. See Clarence Bay.

ASHDOD YAM, ISRAEL
(31°51′00″ N., 34°39′00″ E.) to:

Junction Points*
Port Said, U.A.R., 126
Strait of Gibraltar, 2,031

Ports
Alexandria, U.A.R., 266
Bayrut, Lebanon, 136
Famagusta, Cyprus, 203
Fethiye, Turkey, 416
Izmir, Turkey, 668

ASSAB, ETHIOPIA
(13°00′00″ N., 42°45′30″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,056
Port Said, U.A.R., 1,258
Singapore, 3,769

Ports
Aden, Aden Protectorate, 150
Port Sudan, Sudan, 524

ASSENS, DENMARK
(55°16′15″ N., 9°53′07″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 65
Skagens Odde, Denmark, 187

Ports
Goteborg, Sweden, 197
Gdansk, Poland, 370
Lubeck, Germany, 127

AS SUWAYS, UNITED ARAB REPUBLIC. See Bur Ibrahim.

AS SUKHAYRAH, TUNISIA
(34°18′00″ N., 10°09′00″ E.) to:

Junction Points*
Port Said, U.A.R., 1,156
Strait of Gibraltar, 1,072

Ports
Banghazi, Libya, 523
Messina, Sicily, 406
Tunis, Tunisia, 301

ASTORIA, OREGON, U.S.A.
(46°11′40″ N., 123°50′00″ W.)

Subtract 83 miles from Portland distances.

ATHENS, GREECE. See Piraievs.

ATTALAE, TURKEY. See Antalya.

ATTU ISLAND, ALASKA, U.S.A.
(52°55′00″ N., 173°00′00″ E.) to:

Ports
Bukhta Broutona, Kuril Islands, 869
Kasatka, Japan, 1,106
Matsugahama, Japan, 1,179
San Francisco, California, U.S.A. (via Amukta Pass), 2,765

*JUNCTION POINT.—See Preface for use of junction points.

Seattle, Washington, U.S.A. (via Unimak Pass), 2,422
Shelekhovo, Kuril Islands, 675
Slavnoye, Kuril Islands, 1,053
Tomari, Japan, 1,238

AUCKLAND, NEW ZEALAND
(36°50'00'' S., 174°47'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,029
Panama, Panama, 6,516
Punta Arenas, Chile (via Lat. 49° S.), 4,814
Punta Arenas, Chile (via Lat. 30° S.), 6,132
Torres Strait, Australia (via Raine Island entrance), 2,485
Wilson Promontory, Australia, 1,503

Ports
Apia, Samoa, 1,581
Apra, Guam, 3,497
Avarua, Cook Islands, 1,631
Brisbane, Australia, 1,340
Callao, Peru, 5,834
Ching-tao, China, 5,378
Dutch Harbor, Alaska, U.S.A., 5,578
Fanning Island, 2,854
Guayaquil, Ecuador, 6,087
Hakodate, Japan, 5,104
Hobart, Tasmania, 1,521
Hong Kong, B.C.C., 5,060
Honolulu, Hawaii, U.S.A., 3,820
Hsia-men, China, 4,990
Jaluit, Marshall Islands, 2,595
Kobe, Japan, 4,875
Kodiak, Alaska, U.S.A., 5,942
Levuka, Fiji Islands, 1,175
Los Angeles, California, U.S.A., 5,658
Melbourne, Australia, 1,649
Midway Island, 3,937
Nagasaki, Japan (via Tanegashima Kaikyo and Koshiki Kaikyo), 4,930
Nagasaki, Japan (via Tokara Kaikyo), 4,963
Nandi Bay, Fiji Islands, 1,224
Nelson, New Zealand, 633
Nome, Alaska, U.S.A., 6,159
Noumea, New Caledonia, 998
Nukualofa, Tonga Islands, 1,009
Omura, Bonin Islands, 4,366
Pago Pago, American Samoa, 1,565
Palmyra Island, 2,875
Papeete, Society Islands, 2,216
Petropavlovsk, 5,466
Ponape, Caroline Islands, 2,813
Portland, Oregon, U.S.A., 6,075
Prince Rupert, Canada, 6,209
Rabaul, New Britain, 2,345
Raoul Island, Kermadec Islands, 592
San Diego, California, U.S.A., 5,655
San Francisco, California, U.S.A., 5,680
Seattle, Washington, U.S.A., 6,170
Seward, Alaska, U.S.A., 6,093
Shang-hai, China (via Vitiaz Strait), 5,149
Shang-hai, China (west of New Ireland), 5,148
Shimonoseki, Japan, 4,944
Sitka, Alaska, U.S.A., 6,176
Suva, Fiji Islands, 1,149
Sydney, Australia, 1,280
Ta-ku, China, 5,648
Ta-lien, China (west of New Ireland), 5,469
Ta-lien, China (via Vitiaz Strait), 5,489
Talomako, New Hebrides, 1,420
Truk, Caroline Islands, 3,000
Valparaiso, Chile, 5,247
Vancouver, Canada, 6,191
Vladivostok, U.S.S.R., 5,516
Wake Island, 3,409
Wellington, New Zealand, 563
Yin-hsien, China, 5,077
Yokohama, Japan, 4,789

AUGUSTA, SICILY
(37°13'36'' N., 15°12'55'' E.) to:

Junction Points*
Port Said, U.A.R., 932
Strait of Gibraltar, 1,065

Ports
Alexandria, U.A.R., 819
Baniyas, Syria, 1,028
Palermo, Sicily, 187
Sete, France, 703
Taranto, Italy, 243
Valencia, Spain, 801
Valletta, Malta, 98

AUX CAYES, HAITI. See Les Cayes.

AVARUA, COOK ISLANDS
(21°11'30'' S., 159°46'00'' W.) to:

Junction Points*
Panama, Panama, 5,092
Punta Arenas, Chile, 4,429

Ports
Apia, Samoa, 819
Apra, Guam, 3,889
Auckland, New Zealand, 1,631
Brisbane, Australia (via Howe Channel and Main Channel), 2,618
Callao, Peru, 4,733
Hakodate, Japan, 5,022
Hobart, Tasmania, 2,962
Hong Kong B.C.C., 5,674
Honolulu, Hawaii, U.S.A., 2,553
Levuka, Fiji Islands, 1,268
Los Angeles, California, U.S.A., 4,064
Melbourne, Australia (via South Channel), 3,090
Midway Island, 3,140
Nagasaki, Japan, 5,219
Noumea, New Caledonia, 1,887
Omura, Bonin Islands, 4,448
Pago Pago, American Samoa, 750
Papeete, Society Islands, 618
Petropavlovsk, U.S.S.R., 4,951
Ponape, Caroline Islands, 3,001
Rabaul, New Britain, 2,993
San Francisco, California, U.S.A., 4,124
Seattle, Washington, U.S.A., 4,700
Shang-hai, China, 5,533
Suva, Fiji Islands (via Oneata Passage), 1,256
Sydney, Australia, 2,690
Valparaiso, Chile, 4,632
Wellington, New Zealand, 1,804
Yokohama, Japan, 4,849

AVILES, SPAIN
(43°45'00'' N., 5°55'00'' W.) to:

Junction Points*
Strait of Gibraltar, 722
Ushant, France, 307

Ports
Bordeaux, France, 303
El Ferrol del Caudillo, Spain, 133
St. Nazaire, France, 274

AVONMOUTH, ENGLAND
(51°30'30'' N., 2°43'00'' W.) to:

Junction Points*
Bishop Rock, England, 191
Fastnet, Ireland, 202
Pentland Firth, Scotland, 624

Ports
Barrow in Furness, England, 288
Belfast, Ireland, 308
Dublin, Ireland, 220
Fishguard, Wales, 145
Glasgow, Scotland, 390
Holyhead, Wales, 217
Liverpool, England, 282
Londonderry, Ireland, 384

BACHAQUERO, VENEZUELA
(9°56'45'' N., 71°09'00'' W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Add 124 miles to Maracaibo distances.

BAHIA, BRAZIL. See Salvador.

BAHIA BLANCA, ARGENTINA
(38°47'45'' S., 62°16'00'' W.) to:

Junction Points*
Panama, Panama, 5,776
Punta Arenas, Chile, 1,004

Ports
Baltimore, Maryland, U.S.A., 6,228
Boston, Massachusetts, U.S.A., 6,125
Buenos Aires, Argentina, 564
Montevideo, Uruguay, 466
New York, New York, U.S.A., 6,154
Philadelphia, Pennsylvania, U.S.A., 6,201
Santos, Brazil, 1,292

BAHIA DE SAMANA, DOMINICAN REPUBLIC
(19°10'00'' N., 69°13'00'' W.) to:

Junction Points*
Panama, Panama, 1,015
Straits of Florida, 864

Ports
New York, New York, U.S.A., 1,328
Nuevitas, Cuba, 510
San Juan, Puerto Rico, 185

BAHIA HONDA, CUBA
(22°57'20'' N., 83°10'30'' W.) to:

Ports
Guantanamo, Cuba (via Old Bahama Channel and Windward Passage), 643
Guantanamo, Cuba (via west end of Cuba), 723
New York, New York, U.S.A. (via outside route), 1,226

BAHIA MAGDALENA, MEXICO
(24°38'00'' N., 112°08'00'' W.) to:

Junction Points*
Panama, Panama, 2,265

Ports
Acapulco, Mexico, 853
Callao, Peru, 3,008
Honolulu, Hawaii, U.S.A., 2,543
San Diego, California, U.S.A., 600
San Francisco, California, U.S.A., 1,002

BAHIA NIPE, CUBA. See Antilla.

BAHREIN, BAHRAIN. See Al Bahrayn.

BAIE DE CAM RANH, VIETNAM. See Vinh Cam Ranh.

BAIE DU CONTROLEUR, MARQUESAS
(8°54'00'' S., 140°02'00'' W.) to:

Junction Points*
Panama, Panama, 3,823

Ports
Apra, Guam, 4,703
Guayaquil, Ecuador, 3,656
Honolulu, Hawaii, U.S.A., 2,111
Midway Island, 3,124
Pago Pago, American Samoa, 1,835
Palmyra Island, 1,608
Papeete, Society Islands, 765
San Diego, California, U.S.A., 2,828
San Francisco, California, U.S.A., 2,986
Seattle, Washington, U.S.A., 3,666
Suva, Fiji Islands, 2,496
Truk, Caroline Islands, 4,199
Valparaiso, Chile, 4,029
Wake Island, 3,589

BAJO GRANDE, VENEZUELA
(10°30'30'' N., 71°36'00'' W.)

Add 8 miles to Maracaibo distances.

BAKER ISLAND, NORTH PACIFIC
(0°13'30'' N., 176°28'00'' W.) to:

Ports
Howland Island, 37
Noumea, New Caledonia, 1,707
Suva, Fiji Islands, 1,202
Sydney, Australia, 2,752

BAKLAI HARBOR CHINA. See Chang-Kan.

BAKLI BAY, CHINA. See Chang-Kan.

BALBOA, CANAL ZONE
(8°57'30'' N., 79°34'15'' W.)

See Panama, Panama, to which add 5 miles for Pacific Ocean distances, and from which subtract 5 miles for Atlantic Ocean distances.

BALIKPAPAN, BORNEO
(1°16'00'' S., 116°48'30'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 472
Singapore (via Selat Riouw), 1,053
Sunda Strait, Indonesia, 837
Wetar Passage, Indonesia, 870

Ports
Belawan, Indonesia, 1,422
Manila, Philippines, 1,057
Mokpo, Korea, 2,308

BALTIMORE, MARYLAND, U.S.A
(39°16'00'' N., 76°34'30'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,324
Bishop Rock, England (track B), 3,290
Bishop Rock, England (track C), 3,230
Cape of Good Hope, Republic of South Africa, 6,924
Fastnet, Ireland (track A), 3,230
Fastnet, Ireland (track B), 3,193
Fastnet, Ireland (track C), 3,123
Inishtrahull, Ireland (track A), 3,356
Inishtrahull, Ireland (track B), 3,312
Inishtrahull, Ireland (track C), 3,221
Montreal, Canada (via Strait of Canso), 1,769
Panama, Panama, 1,944
Pentland Firth, Scotland (track A), 3,570
Pentland Firth, Scotland (track B), 3,516
Pentland Firth, Scotland (track C), 3,401
Punta Arenas, Chile, 7,021
Strait of Gibraltar (track A), 3,478
Strait of Gibraltar (track B), 3,470
Strait of Gibraltar (track C), 3,466
Straits of Florida, 1,102

Ports
Antilla, Cuba, 1,151
Bahia Blanca, Argentina, 6,228
Banes, Cuba, 1,140
Baracoa, Cuba, 1,153
Belem, Brazil, 2,953
Belize, British Honduras (via Straits of Florida), 1,625
Bluefields, Nicaragua, 1,928
Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 1,975

*JUNCTION POINT.—See Preface for use of junction points.

Bordeaux, France (track A), 3,616
Bordeaux, France (track B), 3,587
Bordeaux, France (track C), 3,544
Brest, France (track A), 3,406
Brest, France (track B), 3,375
Brest, France (track C), 3,321
Bridgetown, Barbados, 1,853
Buenos Aires, Argentina, 5,945
Cadiz, Spain (track C), 3,434
Cap Haitien, Haiti, 1,227
Cape Town, Republic of South Africa, 6,912
Castries, St. Lucia, 1,741
Cayenne, French Guiana, 2,468
Charlotte Amalie, Virgin Islands, 1,417
Charlottetown, Canada, 1,134
Cienfuegos, Cuba (via Windward Passage), 1,589
Colon, Panama (via Crooked Island Passage and Windward Passage), 1,901
Fort de France, Martinique, 1,718
Frederikshaab, Greenland, 2,261
Funchal, Madeira Island, 3,028
Georgetown, British Guiana, 2,211
Halifax, Canada, 911
Hamilton, Bermuda, 794
Horta, Fayal, Azores, 2,409
Jacmel, Haiti, 1,416
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,401
La Guaira, Venezuela, 1,813
Lagos, Nigeria, 5,063
Las Palmas de Gran Canaria, Canary Islands, 3,251
Les Cayes, Haiti, 1,374
Limon, Costa Rica, 1,974
Luderitz Bay, Southwest Africa, 6,538
Maracaibo, Venezuela (via Windward Passage), 1,804
Montecristi, Dominican Republic, 1,213
Montevideo, Uruguay, 5,831
Nassau, Bahamas (via Northeast Providence Channel), 880
Nuevitas, Cuba, 1,198
Paramaribo, Surinam, 2,321
Pointe a Pitre, Guadeloupe, 1,653
Ponce, Puerto Rico, 1,427
Ponta Delgada, Azores, 2,529
Port Antonio, Jamaica, 1,350
Port au Prince, Haiti, 1,301
Port of Spain, Trinidad, 1,918
Port Plata, Dominican Republic, 1,215
Porto Grande, Cape Verde Islands, 3,095
Progreso, Mexico, 1,530
Puerto Barrios, Guatemala (via Straits of Florida), 1,725
Puerto Cabello, Venezuela, 1,818
Puerto Cortes, Honduras, 1,690
Recife, Brazil, 3,772
Rio de Janeiro, Brazil, 4,844
St. Georges, Grenada, 1,843
St. John, Canada (via Nantucket Light Vessel), 860
St. John's, Canada, 1,400
Salvador, Brazil, 4,163
San Juan, Puerto Rico, 1,374
San Juan del Norte, Nicaragua (via Straits of Florida), 1,968
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,710
Santiago de Cuba, Cuba, 1,289
Santo Domingo, Dominican Republic, 1,451
Santos, Brazil, 5,031
Sao Luiz, Brazil, 3,117
Vitoria, Brazil, 4,581
Walvisbaai, Southwest Africa, 6,385
Willemstad, Curacao, 1,733

BALTIYSK, U.S.S.R.
(54°38'20'' N., 19°54'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 353
Skagens Odde, Denmark (via Store Baelt), 544
Skagens Odde, Denmark (via The Sound), 429

Ports
Oslo, Norway (via Store Baelt), 668
Oslo, Norway (via The Sound), 551

BAN SATTAHIP, THAILAND
(12°39'00'' N., 100°53'24'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,620
Singapore, 414

Ports
Makasar, Celebes, 1,753
Sai Gon, Vietnam, 598

BANDAR ABBAS, IRAN
(27°08'00'' N., 56°19'00'' E.) to:

Junction Points*
Port Said, U.A.R., 2,842
Singapore, 3,381

Ports
Aden, Aden Protectorate, 1,453
Al Basrah, Iraq, 572
Karachi, Pakistan, 643

BANDAR-E MA'SHUR, IRAN
(30°27'40'' N., 49°10'30'' E.)

Add 6 miles to Bandar-e Shahpur distances.

BANDAR-E SHAPUR, IRAN
(30°26'30'' N., 49°05'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,169
Port Said, U.A.R., 3,322
Singapore, 3,872

Ports
Al Bahrayn, Bahrain, 288
Al Basrah, Iraq, 154
Bushehr, Iran, 158

BANDJERMASIN, BORNEO, INDONESIA
(3°20'00'' S., 114°33'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 357
Singapore, 830
Sunda Strait, Indonesia, 775
Torres Strait, Australia, 1,785

Ports
Makasar, Celebes, 399

BANES, CUBA
(20°55'20'' N., 75°42'20'' W.) to:

Junction Points*
Straits of Florida, 483

Ports
Baltimore, Maryland, U.S.A., 1,140
Boston, Massachusetts, U.S.A. (via Crooked Island Passage), 1,398
Charleston, South Carolina, U.S.A. (via Crooked Island Passage), 802
New York, New York, U.S.A., 1,216
Norfolk, Virginia, U.S.A. (via Crooked Island Passage), 1,018
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage), 1,188
Savannah, Georgia, U.S.A. (via Crooked Island Passage), 801

BANGHAZI, LIBYA
(32°06'53'' N., 20°03'06'' E.) to:

Junction Points*
Port Said, U.A.R., 673
Strait of Gibraltar, 1,356

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Al Khums, Libya, 296
Alexandria, U.A.R., 541
Alger, Algeria, 927
Alicante, Spain, 1,094
Ancona, Italy, 800
Annaba, Algeria, 702
As Sukhayrah, Tunisia, 523
Baniyas, Syria, 834
Barcelona, Spain, 1,025
Bari, Italy, 593
Bayrut, Lebanon, 806
Bizerte, Tunisia, 597
Brindisi, Italy, 535
Cartagena, Spain, 1,119
Catania, Sicily, 406
Ceuta, Morocco, 1,336
Derince, Turkey, 750
Famagusta, Cyprus, 768
Fethiye, Turkey, 548
Genova, Italy, 912
Gibraltar, 1,338
Haifa, Israel, 783
Iraklion, Crete, 370
Istanbul, Turkey, 716
Izmir, Turkey, 561
Kalamai, Greece, 313
La Spezia, Italy, 876
Livorno, Italy, 841
Malaga, Spain, 1,286
Marseille, France, 1,004
Matruh, Egypt, 267
Messina, Sicily, 430
Napoli, Italy, 602
Odessa, U.S.S.R., 1,064
Oran, Algeria, 1,124
Palermo, Sicily, 547
Palma, Balearic Islands, 970
Piraievs, Greece, 404
Porto di Reggio Calabria, Sicily, 425
Rijeka, Yugoslavia, 868
Savona, Italy, 922
Sibenik, Yugoslavia, 741
Siracusa, Sicily, 381
Split, Yugoslavia, 726
Tarabulus, Libya, 354
Taranto, Italy, 523
Thessaloniki, Greece, 611
Toulon, France, 972
Trieste, Free Territory, 901
Tubruq, Libya, 248
Tunis, Tunisia, 585
Valencia, Spain, 1,094
Valletta, Malta, 359
Venezia, Italy, 911
Volos, Greece, 552

BANGKOK, THAILAND. See Krung Thep.

BANIAS, SYRIA. See Baniyas.

BANIYAS, SYRIA
(35°11′00″ N., 35°57′00″ E.) to:

Junction Points*
Port Said, U.A.R., 299
Strait of Gibraltar, 2,045

Ports
Augusta, Sicily, 1,028
Banghazi, Libya, 834
Haifa, Israel, 153
Marseille, France, 1,610
Thessaloniki, Greece, 792
Tunis, Tunisia, 1,275

BARACOA, CUBA
(20°21′30″ N., 74°30′15″ W.) to:

Junction Points*
Straits of Florida, 540

Ports
Baltimore, Maryland, U.S.A., 1,153
Key West, Florida, U.S.A., 490
Kingston, Jamaica, 265
New York, New York, U.S.A., 1,226
Philadelphia, Pennsylvania, U.S.A., 1,198

BARAHONA, DOMINICAN REPUBLIC
(18°12′30″ N., 71°03′30″ W.) to:

Junction Points*
Panama, Panama, 796

Ports
Barranquilla, Colombia, 497
Kingston, Jamaica, 364
San Juan, Puerto Rico, 294
Willemstad, Curacao, 395

BARBADOS. See Bridgetown, Barbados.

BARBERS POINT, HAWAII, U.S.A.
(21°16′51″ N., 158°06′00″ W.) to:

Junction Points*
Panama, Panama, 4,694
Singapore (via Sulu Sea), 5,866

Ports
Apra, Guam, 3,303
San Francisco, California, U.S.A., 2,100
Yokohama, Japan (via great circle), 3,382

BARCELONA, SPAIN
(41°22′00″ N., 2°11′00″ E.) to:

Junction Points*
Port Said, U.A.R., 1,600
Strait of Gibraltar, 534

Ports
Alcudia, Balearic Islands, 114
Alexandria, U.A.R., 1,482
Alger, Algeria, 282
Alicante, Spain, 228
Almeria, Spain, 371
Ancona, Italy, 1,212
Annaba, Algeria, 386
Banghazi, Libya, 1,025
Bari, Italy, 1,005
Batumi, U.S.S.R. (via Corinth Canal), 2,032
Batumi, U.S.S.R. (south of Greece), 2,073
Bayrut, Lebanon, 1,703
Beaulieu, France, 280
Bizerte, Tunisia, 442
Brindisi, Italy, 947
Cagliari, Sardinia, 379
Cartagena, Spain, 282
Ceuta, Morocco, 515
Genova, Italy, 356
Gibraltar, 516
Golfe-Juan, France, 268
Haifa, Israel, 1,699
Hyeres, France, 218
Iraklion, Crete, 1,186
Istanbul, Turkey (via Corinth Canal), 1,445
Istanbul, Turkey (south of Greece), 1,486
Izmir, Turkey (via Corinth Canal), 1,290
Izmir, Turkey (south of Greece), 1,332
La Spezia, Italy, 383
Livorno, Italy, 386
Mahon, Balearic Islands, 144
Malaga, Spain, 464
Marseille, France, 189
Mentone, France, 285
Messina, Sicily, 681
Monaco, Monaco, 280
Napoli, Italy, 559
Odessa, U.S.S.R (via Corinth Canal), 1,793
Odessa, U.S.S.R (south of Greece), 1,834
Oran, Algeria, 365
Palermo, Sicily, 574
Palma, Balearic Islands, 140
Piraievs, Greece (via Corinth Canal), 1,091
Piraievs, Greece (south of Greece), 1,172

*JUNCTION POINT.—See Preface for use of junction points.

Pollenza, Balearic Islands, 113
Port St. Louis du Rhone, France, 178
Port Vendres, France, 108
Rijeka, Yugoslavia, 1,279
St. Raphael, France, 251
Savona, Italy, 341
Sibenik, Yugoslavia, 1,153
Siracusa, Sicily, 752
Skikda, Algeria, 354
Split, Yugoslavia, 1,138
Tarabulus, Libya, 762
Taranto, Italy, 900
Thessaloniki, Greece (via Corinth Canal), 1,339
Thessaloniki, Greece (south of Greece), 1,380
Toulon, France, 205
Trieste, Free Territory, 1,313
Tunis, Tunisia, 492
Valencia, Spain, 165
Valletta, Malta, 671
Venezia, Italy, 1,323
Villefranche, France, 277
Volos, Greece (via Corinth Canal), 1,280
Volos, Greece (south of Greece), 1,322

BARCELONA, VENEZUELA
(10°10′00″ N., 64°44′00″ W.) to:

Junction Points*
Panama, Panama, 1,014
Yucatan Channel, 1,378

Ports
Barranquilla, Colombia, 661
Port of Spain, Trinidad, 218
Santiago de Cuba, Cuba, 936

BARI, ITALY
(41°08′22″ N., 16°51′34″ E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 989
Port Said, U.A.R. (south of Greece), 999
Strait of Gibraltar, 1,374

Ports
Alexandria, U.A.R., 890
Alger, Algeria, 946
Alicante, Spain, 1,100
Ancona, Italy, 216
Annaba, Algeria, 726
Banghazi, Libya, 593
Barcelona, Spain, 1,005
Bayrut, Lebanon (via Corinth Canal), 1,038
Bayrut, Lebanon (south of Greece), 1,069
Bizerte, Tunisia, 635
Cagliari, Sardinia, 652
Cartagena, Spain, 1,131
Ceuta, Morocco, 1,354
Dubrovnik, Yugoslavia, 108
Genova, Italy, 810
Gibraltar, 1,356
Haifa, Israel (via Corinth Canal), 1,041
Haifa, Israel (south of Greece), 1,065
Iraklion, Crete, 554
Istanbul, Turkey (via Corinth Canal), 755
Istanbul, Turkey (south of Greece), 851
Izmir, Turkey (via Corinth Canal), 601
Izmir, Turkey (south of Greece), 697
La Spezia, Italy, 775
Livorno, Italy, 739
Malaga, Spain, 1,303
Marseille, France, 902
Messina, Sicily, 329
Napoli, Italy, 500
Odessa, U.S.S.R. (via Corinth Canal), 1,103
Odessa, U.S.S.R. (south of Greece), 1,200
Oran, Algeria, 1,142
Palermo, Sicily, 445
Palma, Balearic Islands, 963
Piraievs, Greece (via Corinth Canal), 402
Piraievs, Greece (south of Greece), 538
Rijeka, Yugoslavia, 288
Savona, Italy, 820
Sibenik, Yugoslavia, 167
Siracusa, Sicily, 350
Split, Yugoslavia, 155
Tarabulus, Libya, 613
Taranto, Italy, 208
Thessaloniki, Greece (via Corinth Canal), 650
Thessaloniki, Greece (south of Greece), 746
Toulon, France, 870
Trieste, Free Territory, 321
Tunis, Tunisia, 622
Valencia, Spain, 1,088
Valletta, Malta, 427
Venezia, Italy, 329
Volos, Greece (via Corinth Canal), 591
Volos, Greece (south of Greece), 687

BARLETTA, ITALY
(41°20′00″ N., 16°17′30″ E.) to:

Junction Points*
Port Said, U.A.R., 1,023
Strait of Gibraltar, 1,398

Ports
Ancona, Italy, 199
Dubrovnik, Yugoslavia, 113
Taranto, Italy, 232

BARRIOS, GUATEMALA. See Puerto Barrios.

BARRANQUILLA, COLOMBIA
(10°58′00″ N., 74°45′30″ W.) to:

Junction Points*
Yucatan Channel, 881

Ports
Almirante, Panama, 477
Amuay, Venezuela, 325
Barahona, Dominican Republic, 497
Barcelona, Venezuela, 661
Caldera Bay, Dominican Republic, 508
Carupano, Venezuela, 734
Casilda, Cuba, 732
Catia la Mar, Venezuela, 524
Charleston, South Carolinia, U.S.A., 1,391
Cienfuegos, Cuba, 755
Colon, Panama, 336
Fortaleza, Brazil, 685
Galveston, Texas, U.S.A., 1,577
Guantanamo, Cuba, 534
Haina, Dominican Republic, 536
Hamilton, Bermuda, 1,465
Kingston, Jamaica, 442
La Guaira, Venezuela, 531
La Romana, Dominican Republic, 569
New Orleans, Louisiana, U.S.A., 1,458
New York, New York, U.S.A., 1,801
Oranjestad, Aruba, 506
Pointe a Pitre, Guadeloupe, 857
Port au Prince, Haiti, 592
Puerto Cortes, Honduras, 873
Puerto Cumarebo, Venezuela, 386
Puerto de Hierro, Venezuela, 838
St. Louis, Marie Galante, 857
San Juan, Puerto Rico, 705
Santa Maria, Cuba, 753
Santiago de Cuba, Cuba, 549
Santo Domingo, Dominican Republic, 538
Surgidero de Batabano, Cuba, 944
Turiamo, Venezuela, 504
Veracruz, Mexico, 1,525
Willemstad, Curacao, 389

BARROW, ALASKA, U.S.A.
(71°20′00″ N., 156°35′00″ W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Panama, Panama, 6,383

Ports
Kiska, Alaska, U.S.A., 1,427
Nome, Alaska, U.S.A., 566
Seattle, Washington, U.S.A., 2,799
Whittier, Alaska, U.S.A., 1,897

BARROW IN FURNESS, ENGLAND
(54°05'30'' N., 3°13'30'' W.) to:

Junction Points*
Bishop Rock, England, 303
Fastnet, Ireland, 302
Inishtrahull, Ireland, 186
Pentland Firth, Scotland, 427

Ports
Avonmouth, England, 288
Belfast, Ireland, 116
Brest, France, 416
Cardiff, Wales, 273
Cherbourg, France, 448
Cobh, Ireland, 252
Dublin, Ireland, 122
Fishguard, Wales, 157
Glasgow, Scotland, 172
London, England, 665
Southampton, England, 485
Swansea, Wales, 242

BARRY, WALES
(51°23'40'' N., 3°15'30'' W.)

Subtract 6 miles from Cardiff distances.

BASRA, IRAQ. See Al Basrah.

BASSEIN, BURMA
(16°47'00'' N., 94°44'00'' E.) to:

Junction Points*
Port Said, U.A.R., 4,638
Singapore, 1,137

Ports
Calcutta, India, 643
Colombo, Ceylon, 1,194
Penang, Malaysia, 786

BASSE-TERRE, GUADELOUPE
(15°59'45'' N., 61°44'15'' W.) to:

Junction Points*
Straits of Florida, 1,317

Ports
New York, New York, U.S.A. (via Anegada Channel), 1,624
Pointe a Pitre, Guadeloupe, 31
Roseau, Dominica, 48
San Juan, Puerto Rico, 314

BASSENS, FRANCE
(44°54'00'' N., 0°32'15'' W.)

Subtract 3½ miles from Bordeaux distances.

BASSETERRE, ST. CHRISTOPHER
(17°17'30'' N., 62°43'00'' W.) to:

Ports
Hamilton, Bermuda, 941
New York, New York, U.S.A. (via Anegada Channel), 1,531
Port au Prince, Haiti, 419
San Juan, Puerto Rico, 214

BASTIA, CORSICA
(42°41'45'' N., 9°27'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,337
Strait of Gibraltar, 868

Ports
Bizerte, Tunisia, 333
Genova, Italy, 108
Napoli, Italy, 258

BATA, SPANISH GUINEA
(1°52'27'' N., 9°45'35'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,291
Ushant, France, 4,173

Ports
Douala, Cameroon, 141
Matadi, Republic of the Congo, 663

BATANGAS, LUZON, PHILIPPINES
(13°45'20'' N., 121°02'00'' E.) to:

Ports
Cebu, Philippines, 309
Iloilo, Philippines, 270
Jolo, Philippines, 480
Tacloban, Philippines, 293
Zamboanga, Philippines, 436

BATAVIA, INDONESIA. See Djakarta.

BATH, MAINE, U.S.A.
(43°54'00'' N., 69°48'30'' W.) to:

Junction Points*
Bishop Rock, England (track A), 2,877
Bishop Rock, England (track B), 2,817
Bishop Rock, England (track C), 2,738

Ports
St. John, Canada, 206

BATHURST, GAMBIA
(13°27'00'' N., 16°34'00'' W.) to:

Junction Points*
Strait of Gibraltar, 1,575

Ports
Cadiz, Spain, 1,587
Freetown, Sierra Leone, 450
Funchal, Madeira Island, 1,182
Lisboa, Portugal, 1,632
Marshall, Liberia, 681
Pointe Noire, Gabon, 2,175
Ponta Delgada, Azores, 1,551
Porto Grande, Cape Verde Islands, 553
Vigo, Spain, 1,832

BATON ROUGE, LOUISIANA, U.S.A.
(30°27'00'' N., 91°06'00'' W.)

Add 115 miles to New Orleans distances.

BATUM, U.S.S.R. See Batumi.

BATUMI, U.S.S.R.
(41°38'46'' N., 41°38'51'' E.) to:

Junction Points*
Port Said, U.A.R., 1,391
Strait of Gibraltar (via Corinth Canal), 2,392
Strait of Gibraltar (south of Greece), 2,408

Ports
Alger, Algeria (via Corinth Canal), 1,963
Alger, Algeria (south of Greece), 1,980
Barcelona, Spain (via Corinth Canal), 2,032
Barcelona, Spain (south of Greece), 2,073
Iraklion, Crete, 1,032
Istanbul, Turkey, 591
Izmir, Turkey, 880
Marseille, France (via Corinth Canal), 1,929
Marseille, France (south of Greece), 1,970

*JUNCTION POINT.—See Preface for use of junction points.

Novarossiysk, U.S.S.R., 255
Odessa, U.S.S.R., 569
Tarabulus, Libya, 1,540
Thessaloniki, Greece, 926
Trieste, Free Territory (via Corinth Canal), 1,650
Trieste, Free Territory (south of Greece), 1,749

BATUMSKAYA, U.S.S.R. See Batumi.

BAYONNE, FRANCE
(43°29'40'' N., 1°28'30'' W.) to:

Junction Points*
Strait of Gibraltar, 912
Ushant, France, 345

Ports
Bordeaux, France, 172
El Ferrol del Caudillo, Spain, 322
Horta, Azores, 1,277

BAYONNE, NEW JERSEY, U.S.A.
(40°41'00'' N., 74°01'00'' W.)

For ocean distance, subtract 2½ miles from New York distances.

BAYRUT, LEBANON
(33°54'12'' N., 35°30'46'' E.) to:

Junction Points*
Port Said, U.A.R., 230
Strait of Gibraltar, 2,034

Ports
Ajaccio, Corsica, 1,437
Alexandria, U.A.R., 341
Alger, Algeria, 1,605
Alicante, Spain, 1,772
Ancona, Italy (via Corinth Canal), 1,245
Ancona, Italy (south of Greece), 1,276
Annaba, Algeria, 1,381
Antalya, Turkey, 322
Ashdod Yam, Israel, 136
Banghazi, Libya, 806
Barcelona, Spain, 1,703
Bari, Italy (via Corinth Canal), 1,038
Bari, Italy (south of Greece), 1,069
Bizerte, Tunisia, 1,276
Brindisi, Italy (via Corinth Canal), 980
Brindisi, Italy (south of Greece), 1,011
Cartagena, Spain, 1,797
Ceuta, Morocco, 2,014
Dubrovnik, Yugoslavia (via Corinth Canal), 1,074
Dubrovnik, Yugoslavia (south of Greece), 1,107
Genova, Italy, 1,508
Gibraltar, 2,017
Haifa, Israel, 76
Iraklion, Crete, 526
Iskenderun, Turkey, 180
Istanbul, Turkey, 896
Izmir, Turkey, 651
Kavala, Greece, 756
La Spezia, Italy, 1,473
Larnaca, Cyprus, 112
Livorno, Italy, 1,437
Malaga, Spain, 1,964
Marseille, France, 1,600
Mersin, Turkey, 179
Messina, Sicily, 1,027
Napoli, Italy, 1,198
Odessa, U.S.S.R., 1,194
Oran, Algeria, 1,803
Palermo, Sicily, 1,143
Palma, Balearic Islands, 1,648
Piraievs, Greece, 647
Rijeka, Yugoslavia (via Corinth Canal), 1,312
Rijeka, Yugoslavia (south of Greece), 1,345
Rodhos, Rodhos, 393
Savona, Italy, 1,519
Sibenik, Yugoslavia (via Corinth Canal), 1,184
Sibenik, Yugoslavia (south of Greece), 1,218
Siracusa, Sicily, 1,013
Split, Yugoslavia (via Corinth Canal), 1,169
Split, Yugoslavia (south of Greece), 1,203
Tarabulus, Libya, 1,129
Taranto, Italy (via Corinth Canal), 1,000
Taranto, Italy (south of Greece), 1,023
Tarragona, Spain, 1,738
Thessaloniki, Greece, 783
Toulon, France, 1,568
Trieste, Free Territory (via Corinth Canal), 1,346
Trieste, Free Territory (south of Greece), 1,379
Tubruq, Libya, 595
Tunis, Tunisia, 1,263
Valencia, Spain, 1,770
Valletta, Malta, 1,049
Venezia, Italy (via Corinth Canal), 1,356
Venezia, Italy (south of Greece), 1,387
Volos, Greece, 725

BEAR ISLAND, SVALBARD. See Bjornoya.

BEAULIEU, FRANCE
(43°42'30'' N., 7°20'12'' E.) to:

Junction Points*
Port Said, U.A.R., 1,453
Strait of Gibraltar, 792

Ports
Barcelona, Spain, 280
Genova, Italy, 316
Livorno, Italy, 130

BEAUMONT, TEXAS, U.S.A.
(30°04'40'' N., 94°05'10'' W.)

Add 24 miles to Port Arthur distances.

BEIRA, MOZAMBIQUE
(19°49'30'' S., 34°49'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,454
Port Said, U.A.R., 3,990
Singapore, 4,520

Ports
Aden, Aden Protectorate, 2,610
Antsirana, Malagasy Republic, 1,003
Belawan, Indonesia, 4,187
Darwin, Australia, 5,553
Fremantle, Australia, 4,351
Inhambane, Mozambique, 259
Lindi, Tanganyika, 832
Lourenco Marques, Mozambique, 476
Majunga, Malagasy Republic, 732
Malacca, Malaysia, 4,405
Manakara, Malagasy Republic, 974
Mocambique, Mozambique, 476
Mombasa, Kenya, 1,146
Penang, Malaysia (north of Madagascar), 4,232
Port Louis, Mauritius, 1,448
Quelimane, Mozambique, 123
Sabang, Indonesia, 3,921
St. Denis, Reunion Island, 1,325
Tamatave, Malagasy Republic, 1,239
Tulear, Malagasy Republic, 539

BEIRUT, LEBANON. See Bayrut.

BEJAIA, ALGERIA
(36°45'00'' N., 5°05'30'' E.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Port Said, U.A.R., 1,423
Strait of Gibraltar, 545

Ports
Annaba, Algeria, 156
Arzew, Algeria, 294
Palma, Balearic Islands, 212

BELAWAN, INDONESIA
(3°47'00'' N., 98°40'40'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,246
Lombok Strait, Indonesia, 1,342
Port Said, U.A.R., 4,688
Singapore, 368
Sunda Strait, Indonesia, 870
Torres Strait, Australia (via Selat Riouw and Selat Karimata), 2,839

Ports
Aden, Aden Protectorate, 3,299
Al Bahrayn, Bahrain, 3,316
Al Basrah, Iraq, 3,553
Al Kuwayt, Kuwait, 3,500
Antsirana, Malagasy Republic, 3,221
Balikpapan, Borneo, 1,422
Beira, Mozambique, 4,187
Berbera, Somali Republic, 3,313
Bombay, India, 2,109
Bushehr, Iran, 3,372
Calcutta, India, 1,326
Calicut, India, 1,609
Cocanada, India, 1,261
Colombo, Ceylon, 1,240
Dar es Salaam, Tanganyika, 3,709
Diego García, Chagos Archipelago, 1,860
Djakarta, Indonesia, 864
East London, Republic of South Africa, 4,749
Fort Dauphin, Malagasy Republic, 3,642
Karachi, Pakistan, 2,550
Lourenco Marques, Mozambique, 4,436
Madras, India, 1,252
Majunga, Malagasy Republic, 3,512
Malacca, Malaysia, 253
Masqat, Mascat and Oman, 2,799
Mocambique, Mozambique, 3,747
Mombasa, Kenya, 3,654
Mosselbaai, Republic of South Africa, 5,051
Port Elizabeth, Republic of South Africa, 4,376
Port Louis, Mauritius, 2,997
Rangoon, Burma, 802
Sabang, Indonesia, 268
St. Denis, Reunion Island, 3,112
Surabaja, Indonesia, 1,132
Tamatave, Malagasy Republic, 3,342
Tanga, Tanganyika, 3,704
Victoria, Seychelles, 2,734
Zamboanga, Philippines, 1,570
Zanzibar, Zanzibar, 3,727

BELEM, BRAZIL
(1°27'00'' S., 48°30'20'' W.) to:

Junction Points*
Bishop Rock, England, 3,760
Cape of Good Hope, Republic of South Africa, 4,368
Fastnet, Ireland, 3,741
Inishtrahull, Ireland, 3,972
Montreal, Canada (via Strait of Canso), 3,709
Montreal, Canada (via Cabot Strait), 3,680
Pentland Firth, Scotland, 4,219
Punta Arenas, Chile, 4,363
Strait of Gibraltar, 3,285
Straits of Florida, 2,653
Ushant, France, 3,748
Yucatan Channel, 2,671

Ports
Baltimore, Maryland, U.S.A., 2,953
Bordeaux, France, 3,868
Boston, Massachusetts, U.S.A., 2,970
Bridgetown, Barbados, 1,154
Buenos Aires, Argentina, 3,274
Cabedelo, Brazil, 1,021
Cadiz, Spain, 3,286
Castries, St. Lucia, 1,265
Cayenne, French Guiana, 516
Charleston, South Carolina, U.S.A., 2,773
Charlotte Amalie, Virgin Islands, 1,598
Cienfuegos, Cuba, 2,460
Colon, Panama, 2,320
Dakar, Senegal, 2,104
Georgetown, British Guiana, 896
Guantanamo, Cuba, 2,148
Guiria, Venezuela, 1,226
Habana, Cuba, 2,613
Halifax, Canada, 2,904
Hamilton, Bermuda, 2,274
Jacksonville, Florida, U.S.A., 2,773
Key West, Florida, U.S.A., 2,603
Kingston, Jamaica, 2,159
Lisboa, Portugal, 3,251
Luderitz Bay, Southwest Africa, 4,076
Maceio, Brazil, 1,211
Natal, Brazil, 954
New Amsterdam, British Guiana, 859
New York, New York, U.S.A., 2,975
Norfolk, Virginia, U.S.A., 2,832
Paramaribo, Surinam, 747
Pedernales, Venezuela, 1,191
Philadelphia, Pennsylvania, U.S.A., 2,950
Ponta Delgada, Azores, 2,678
Port au Prince, Haiti, 2,192
Port of Spain, Trinidad, 1,212
Portsmouth, New Hampshire, U.S.A., 2,959
Puerto de Hierro, Venezuela, 1,215
Recife, Brazil, 1,084
Rio de Janeiro, Brazil, 2,174
St. Helena Island, 4,329
St. John, Canada, 2,998
St. Johns, Antigua, 1,433
St. John's, Canada, 2,968
San Felix, Venezuela, 1,222
San Fernando, Trinidad, 1,215
San Juan, Puerto Rico, 1,668
Santa Cruz de Tenerife, Canary Islands, 2,599
Santo Domingo, Dominican Republic, 1,819
Sao Luiz, Brazil, 372
Vigo, Spain, 3,398

BELFAST, IRELAND
(54°37'00'' N., 5°54'00'' W.) to:

Junction Points*
Bishop Rock, England, 320
Fastnet, Ireland, 311
Inishtrahull, Ireland, 97
Pentland Firth, Scotland, 341

Ports
Antwerpen, Belgium, 722
Avonmouth, England, 308
Barrow in Furness, England, 116
Cardiff, Wales, 293
Cobh, Ireland, 264
Fishguard, Wales, 182
Le Harve, France, 542
Limerick, Ireland (north of Ireland), 376
Loch Ewe, Scotland, 228
Londonderry, Ireland (via Rathlin Sound), 102
Milford Haven, Wales, 222
Stornoway, Scotland, 234
Workington, England, 87

BELIZE, BRITISH HONDURAS
(17°28'00'' N., 88°11'00'' W.) to:

Junction Points*
Montreal (via Strait of Canso), 2,985
Panama, Panama, 859
Yucatan Channel, 337

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Alvaro Obregon, Mexico, 756
Apalachicola, Florida, U.S.A., 788
Baltimore, Maryland, U.S.A. (via Straits of Florida), 1,625
Boston, Massachussets, U.S.A. (via Straits of Florida and Yucatan Channel), 1,934
Brunswick, Georgia, U.S.A. (via Straits of Florida), 1,072
Campeche, Mexico (west of Banco Chinchorro and Isla de Cozumel), 609
Cap Haitien, Haiti, 950
Carmen, Mexico (west of Banco Chinchorro and Isla de Cozumel), 688
Cartagena, Colombia, 904
Castries, St. Lucia, 1,609
Charlotte Amalie, Virgin Islands, 1,368
Cienfuegos, Cuba, 545
Colon, Panama, 816
Galveston, Texas, U.S.A., 935
Gulfport, Mississippi, U.S.A., 838
Habana, Cuba, 528
Jacksonville, Florida, U.S.A., 1,047
Key West, Florida, U.S.A., 590
Kingston, Jamaica, 685
La Guaira, Venezuela, 1,328
Matagorda Bay, Texas, U.S.A. (west of Banco Chinchorro and Isla de Cozumel), 957
Mathew Town, Great Inagua Island, 902
Miami, Florida, U.S.A., 734
Mobile, Alabama, U.S.A., 846
New Orleans, Louisiana, U.S.A. (via South Pass), 850
Norfolk, Virginia, U.S.A., 1,503
Pensacola, Florida, U.S.A., 826
Pointe a Pitre, Guadeloupe, 1,578
Port au Prince, Haiti (south of Jamaica), 953
Port au Prince, Haiti (north of Jamaica), 933
Port of Spain, Trinidad, 1,637
Portland, Maine, U.S.A., 1,967
Puerto Cabello, Venezuela, 1,289
San Juan del Norte, Nicaragua, 619
Santo Domingo, Dominican Republic, 1,088
Tampico, Mexico, 927
Tuxpan, Mexico, 897
Veracruz, Mexico, 862
Willemstad, Curacao, 1,178

BELL BAY, TASMANIA. See Launceston.

BELLINGHAM, WASHINGTON, U.S.A.
(48°45′00″ N., 122°30′00″ W.) to:

Ports
Nanaimo, Canada, 76
Vancouver, Canada, 70
Victoria, Canada, 52
Yokohama, Japan, 4,245

BELOMORSK, U.S.S.R.
(64°32′00″ N., 34°48′00″ E.)

Add 67 miles to Arkhangelsk distances.

BENGASI, LIBYA. See Banghazi.

BENGHAZI, LIBYA. See Banghazi.

BENGUELA, ANGOLA
(12°34′00″ S., 13°23′00″ E.) to:

Ports
Lagos, Nigeria, 1,289
Marshall, Liberia, 1,811
Pointe Noire, Gabon, 480
Porto Grande, Cape Verde Islands, 2,101

BERBERA, SOMALI REPUBLIC
(10°26′30″ N., 45°01′00″ E.) to:

Junction Points*
Singapore, 3,646

Ports
Belawan, Indonesia, 3,313
Darwin, Australia (south of Socotra, via Eight Degree Channel, and south of Java), 5,384
Fremantle, Australia, 4,933
Malacca, Malaysia, 3,531
Penang, Malaysia, 3,358
Sabang, Indonesia, 3,047

BERGEN, NORWAY
(60°24′00″ N., 5°19′00″ E.) to:

Junction Points*
Bishop Rock, England, 911
Pentland Firth, Scotland, 296
Skagens Odde, Denmark, 305
Ushant, France, 894

Ports
Aberdeen, Scotland, 309
Akureyri, Iceland, 803
Alesund, Norway, 167
Amsterdam, Netherlands, 502
Antwerpen, Belgium, 602
Arendal, Norway, 254
Blyth, England, 400
Bodo, Norway, 521
Bremerhaven, Germany, 447
Calais, France, 588
Cherbourg, France, 734
Dover, England, 590
Dunkerque, France, 585
Emden, Germany, 457
Esbjerg, Denmark, 361
Farsund, Norway, 182
Flekkefjord, Norway, 170
Fredrikstad, Norway, 335
Goteborg, Sweden, 356
Grimstad, Norway, 250
Hafnarfjordhur, Iceland, 884
Hamburg, Germany, 486
Hammerfest, Norway, 817
Harstad, Norway, 673
Hirtshals, Denmark, 280
Hull, England, 474
Hvalfjordhur, Ireland, 887
Keflavik, Iceland, 875
Kragero, Norway, 289
Kristiansand, Norway, 226
Kristiansund, Norway, 232
Larvik, Norway, 317
Le Havre, France, 702
Leith, Scotland, 386
Lillesand, Norway, 241
London, England, 613
Longyearbyen, Svalbard, 1,124
Mandal, Norway, 201
Molde, Norway, 201
Mosjoen, Norway, 473
Murmansk, U.S.S.R., 1,105
Namsos, Norway, 384
Narvik, Norway, 624
Newcastle, England, 403
Oostende, Belgium, 563
Oslo, Norway, 378
Plymouth, England, 819
Portland, England, 745
Portsmouth, England, 695
Reykjavik, Iceland, 872
Risor, Norway, 279
Rotterdam, Netherlands, 533
Sandefjord, Norway, 317
Seydhisfjordhur, Iceland, 634
Skien, Norway, 317
Sogndal, Norway, 152
Southampton, England, 713
Stavanger, Norway (via outer lead), 115
Stavanger, Norway (via inner lead), 111
Tonsberg, Norway, 329
Torshavn, Faeroe Islands, 372
Tromso, Norway, 705

*JUNCTION POINT.—See Preface for use of junction points.

Trondheim, Norway, 321
Tvedestrand, Norway, 272
Wilhelmshaven, Germany, 441
Zeebrugge, Belgium, 558

BERLEVAG, NORWAY
(70°51'30'' N., 29°05'45'' E.) to:

Junction Points*
Pentland Firth, Scotland, 1,150
Skagens Odde, Denmark, 1,243

Ports
Arkhangelsk, U.S.S.R., 540
Dikson Harbor, U.S.S.R., 1,069
Reykjavik, Iceland, 1,200

BERMUDA. See Hamilton, Bermuda.

BEYROUTH, LEBANON. See Bayrut.

BHAUNAGAR, INDIA. See Bhavnagar.

BHAVNAGAR, INDIA
(21°48'15'' N., 72°09'00'' E.) to:

Ports
Aden, Aden Protectorate, 1,707
Bombay, India, 204
Colombo, Ceylon, 1,073
Karachi, Pakistan, 481

BIKINI, MARSHALL ISLANDS
(11°31'30'' N., 165°33'00'' E.) to:

Junction Points*
Panama, Panama, 4,915
Singapore, 3,591

Ports
Apra, Guam, 1,263
Honolulu, Hawaii, U.S.A., 1,710

BILBAO, SPAIN
(43°20'30'' N., 3°02'00'' W.) to:

Junction Points*
Strait of Gibraltar, 854
Ushant, France, 346

Ports
Boston, Massachusetts, U.S.A., 2,987
Huelva, Spain, 804
La Pallice, France, 214
Lorient, France, 274
Marin, Spain, 387
New York, New York, U.S.A., (track B), 3,177
Quiberon, France, 249
Setubal, Portugal, 612
Villagarcia, Spain, 357

BISHOP ROCK, ENGLAND*
(49°45'00'' N., 6°35'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,790
Fastnet, Ireland, 149
Inishtrahull, Ireland, 395
Kiel Canal (east end), Germany, 727
Montreal, Canada (track D, via Cabot Strait), 2,989
Montreal, Canada, (track E, via Cabot Strait), 2,836
Montreal, Canada (track F, via Cabot Strait), 2,808
Montreal, Canada (track G, via Strait of Belle Isle), 2,681
Panama, Panama (via Mona Passage), 4,388
Pentland Firth, Scotland (via Irish Sea), 636
Punta Arenas, Chile, 7,019
Skagens Odde, Denmark, 851
Strait of Gibraltar, 969
Straits of Florida (track A), 3,876
Straits of Florida (track B), 3,872
Straits of Florida (track C), 3,859
Yucatan Channel (track A), 4,193
Yucatan Channel (track B), 4,189
Yucatan Channel (track C), 4,176

Ports
Amsterdam, Netherlands, 481
Angmagssalik, Greenland, 1,369
Antwerpen, Belgium, 449
Ardrossan, Scotland, 350
Argentia, Canada, 1,949
Arkhangelsk, U.S.S.R., 2,263
Avonmouth, England, 191
Baltimore, Maryland, U.S.A. (track A), 3,290
Baltimore, Maryland, U.S.A. (track B), 3,260
Baltimore, Maryland, U.S.A. (track C), 3,208
Barrow in Furness, England, 303
Bath, Maine, U.S.A. (track A), 2,817
Bath, Maine, U.S.A. (track B), 2,776
Bath, Maine, U.S.A. (track C), 2,696
Belem, Brazil, 3,760
Belfast, Ireland, 320
Bergen, Norway, 911
Blyth, England, 610
Bodo, Norway, 1,405
Bordeaux, France, 397
Boston, Massachusetts, U.S.A. (track A), 2,860
Boston, Massachusetts, U.S.A. (track B), 2,816
Boston, Massachusetts, U.S.A. (track C), 2,744
Boulogne, France, 322
Bremerhaven, Germany, 657
Buenos Aires, Argentina, 5,947
Cadiz, Spain, 930
Caen, France, 264
Cairn Ryan, Scotland, 330
Calais, France, 333
Cap Haitian, Haiti, 3,565
Cape Town, Republic of South Africa, 5,772
Cardiff, Wales, 176
Cartagena, Colombia, 4,138
Cartagena, Colombia (low power, May–September), 4,199
Cartagena, Colombia (low power, October–April), 4,214
Castries, St. Lucia, 3,405
Charleston, South Carolina, U.S.A. (track A), 3,422
Charleston, South Carolina, U.S.A. (track B), 3,398
Charleston, South Carolina, U.S.A. (track C), 3,358
Charlotte Amalie, Virgin Islands, 3,369
Cherbourg, France, 197
Christiansted, Virgin Islands, 3,370
Cienfuegos, Cuba (track A), 4,056
Cobh, Ireland, 143
Colon, Panama (via Mona Passage), 4,344
Colon, Panama (low power, May–September), 4,408
Colon, Panama (low power, October–April), 4,424
Dakar, Senegal, 2,195
Dartmouth, England, 122
Den Helder, Netherlands, 509
Dieppe, France, 297
Douglas, Isle of Man, 276
Dover, England, 323
Dublin, Ireland, 232
Dundee, Scotland, 713
Dunkerque, France, 355
Egersund, Norway, 797
El Ferrol del Caudillo, Spain, 394
Emden, Germany, 606
Esbjerg, Denmark, 688
Fishguard, Wales, 161
Fleetwood, England, 307
Freetown, Sierra Leone, 2,673
Funchal, Madeira Island, 1,136
Georgetown, British Guiana, 3,643
Glasgow, Scotland, 402

*JUNCTION POINT.—See Preface for use of junction points.

Granville, France, 267
Guantanamo, Cuba (track A), 3,698
Habana, Cuba (track A), 3,880
Habana, Cuba (track B), 3,876
Habana, Cuba (track C), 3,863
Halifax, Canada (track A), 2,556
Halifax, Canada (track B), 2,507
Halifax, Canada (tracks C and D), 2,432
Halifax, Canada (track E), 2,325
Halifax, Canada (track F), 2,305
Hamburg, Germany, 717
Hamilton, Bermuda (track A), 2,769
Hamilton, Bermuda (track B), 2,764
Hartlepool, England, 594
Holyhead, Wales, 232
Horta, Fayal, Azores, 1,158
Hull, England, 531
Ivigtut, Greenland (direct), 1,608
Ivigtut, Greenland (via 75 miles off Kap Farvel), 1,652
Jacksonville, Florida, U.S.A. (tracks C and D), 3,525
Key West, Florida, U.S.A. (track A), 3,818
Key West, Florida, U.S.A. (track B), 3,814
Key West, Florida, U.S.A. (track C), 3,800
Kingston, Jamaica (track A), 3,854
Kristiansand, Norway, 809
La Guaira, Venezuela, 3,777
Las Palmas de Gran Canaria, Canary Islands, 1,360
Le Havre, France, 263
Leith, Scotland, 708
Lisboa, Portugal, 710
Liverpool, England, 297
London, England, 413
Londonderry, Ireland, 396
Lorient, France, 202
Methil, Scotland, 698
Miami, Florida, U.S.A. (track A), 3,686
Miami, Florida, U.S.A. (track B), 3,682
Miami, Florida, U.S.A. (track C), 3,669
Middlesbrough, England, 591
Milford Haven, Wales, 129
Montevideo, Uruguay, 5,834
Narvik, Norway, 1,505
New London, Connecticut, U.S.A. (track A), 2,931
New London, Connecticut, U.S.A. (track B), 2,897
New London, Connecticut, U.S.A. (track C), 2,834
New York, New York, U.S.A. (track A), 3,019
New York, New York, U.S.A. (track B), 2,986
New York, New York, U.S.A. (track C), 2,922
Newcastle, England, 616
Newport, Wales, 177
Nieuwpoort, Belgium, 375
Norfolk, Virginia, U.S.A. (track A), 3,168
Norfolk, Virginia, U.S.A. (track B), 3,137
Norfolk, Virginia, U.S.A (track C), 3,085
Oostende, Belgium, 400
Oslo, Norway, 947
Paramaribo, Surinam, 3,602
Philadelphia, Pennsylvania, U.S.A. (track A), 3,159
Philadelphia, Pennsylvania, U.S.A. (track B), 3,124
Philadelphia, Pennsylvania, U.S.A. (track C), 3,066
Plymouth, England, 106
Ponta Delgada, Azores, 1,103
Port au Prince, Haiti (track A), 3,725
Port of Spain, Trinidad, 3,603
Port Talbot, Wales, 149
Portland, England, 181
Porto Grande, Cape Verde Islands, 2,165
Portsmouth, England (via Needles Channel), 225
Praia, Bahia Praia, Terceira, Azores, 1,128
Providence, Rhode Island, U.S.A. (track A), 2,925
Providence, Rhode Island, U.S.A. (track B), 2,891
Providence, Rhode Island, U.S.A. (track C), 2,828
Quiberon, France, 253
Recife, Brazil, 3,775
Rio de Janeiro, Brazil, 4,846
Rotterdam, Netherlands, 454
St. John's, Canada, 1,804
St. Malo, France, 90
San Juan, Puerto Rico, 3,390
Santa Cruz de Tenerife, Canary Islands, 1,356
Santo Domingo, Dominican Republic, 3,585
Seaham Harbor, England, 625
Shoreham By Sea, England, 249
Southampton, England, 232
Stavanger, Norway, 836
Sunderland, England, 605
Swansea, Wales, 155
Tromso, Norway, 1,597
Trondheim, Norway, 1,202
Vigo, Spain, 484
Villa do Porto, Santa Maria, Azores, 1,128
Washington, D.C., U.S.A., (track A), 3,304
Washington, D.C., U.S.A., (track B), 3,260
Washington, D.C., U.S.A., (track C), 3,221
Waterford, Ireland, 137
Wilhelmshaven, Germany, 651
Willemstad, Curacao, 3,797
Wilmington, North Carolina, U.S.A., (track A), 3,352
Wilmington, North Carolina, U.S.A., (track B), 3,329
Wilmington, North Carolina, U.S.A., (track C), 3,289
Workington, England, 308
Zeebrugge, Belgium, 393

BISSAO, PORTUGUESE GUINEA. See Bissau.

BISSAU, PORTUGUESE GUINEA (11°51'00'' N., 15°38'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 3,518
Ushant, France, 2,401

Ports
Natal, Brazil, 1,604
Porto Grande, Cape Verde Islands, 651

BIZERTA, TUNISIA. See Bizerte.

BIZERTE, TUNISIA (37°14'13'' N., 9°51'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,184
Strait of Gibraltar, 769

Ports
Alexandria, U.A.R., 1,064
Alger, Algeria, 340
Alicante, Spain, 507
Ancona, Italy, 842
Annaba, Algeria, 116
Banghazi, Libya, 597
Barcelona, Spain, 442
Bari, Italy, 635
Bastia, Corsica, 333
Bayrut, Lebanon, 1,276
Brindisi, Italy, 577
Cagliari, Sardinia, 126
Cartagena, Spain, 532
Cuta, Morocco, 750
Genova, Italy, 437
Haifa, Israel, 1,273

*JUNCTION POINT.—See Preface for use of junction points.

Iraklion, Crete, 758
Istanbul, Turkey (via Corinth Canal), 1,046
Istanbul, Turkey (south of Greece), 1,063
Izmir, Turkey (via Corinth Canal), 892
Izmir, Turkey, (south of Greece), 909
La Spezia, Italy, 414
Livorno, Italy, 382
Malaga, Spain, 699
Marseille, France, 428
Messina, Sicily, 364
Napoli, Italy, 300
Odessa, U.S.S.R. (via Corinth Canal), 1,394
Odessa, U.S.S.R., (south of Greece), 1,411
Olbia, Sardinia, 236
Oran, Algeria, 538
Palermo, Sicily, 192
Palma, Balearic Islands, 384
Piraievs, Greece (via Corinth Canal), 692
Piraievs, Greece (south of Greece), 749
Rijeka, Yugoslavia, 910
Sant Antioco Ponti, Sardinia, 132
Savona, Italy, 440
Sibenik, Yugoslavia, 783
Siracusa, Sicily, 296
Split, Yugoslavia, 768
Tarabulus, Libya, 335
Taranto, Italy, 530
Thessaloniki, Greece (via Corinth Canal), 941
Thessaloniki, Greece (south of Greece), 958
Toulon, France, 405
Trieste, Free Territory, 943
Valencia, Spain, 506
Valletta, Malta, 247
Venezia, Italy, 953
Volos, Greece (via Corinth Canal), 882
Volos, Greece (south of Greece), 899

BJORNEBORG, FINLAND. See Pori.

BJORNOYA, SVALBARD
(74°29'45'' N., 19°12'30'' E.) to:

Ports
Jan Mayen, 544
Reykjavik, Iceland (north of Iceland), 1,152
Reykjavik Iceland (south of Iceland), 1,234
Tromso, Norway, 306
Vadso, Norway, 373
Vardo, Norway, 328

BLANCHE BAY, NEW BRITAIN. See Rabaul.

BLAYE, FRANCE
(45°07'30'' N., 0°40'15'' W.)

For ocean distances subtract 13 miles from Bordeaux distances.

BLUEFIELDS, NICARAGUA
(12°00'00'' N., 83°42'00'' W.) to:

Junction Points*
Panama, Panama, 319
Yucatan Channel, 629

Ports
Baltimore, Maryland, U.S.A., 1,928
Boston, Massachusetts, U.S.A., 2,184
Cartagena, Colombia, 497
Colon, Panama, 276
Galveston, Texas, U.S.A., 1,290
Guantanamo, Cuba, 710
Habana, Cuba (via inside route), 816
New Orleans, Louisiana, U.S.A. (via South Pass and inside route), 1,201
New York, New York, U.S.A. (via Yucatan Channel), 1,995
New York, New York, U.S.A. (via Windward Passage), 2,001
Philadelphia, Pennsylvania, U.S.A., 1,973
Puerto Cortes, Honduras, 519
Veracruz, Mexico, 1,237

BLUFF HARBOR, NEW ZEALAND
(46°35'50'' S., 168°20'30'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,484
Torres Strait, Australia, 2,797
Wilson Promontory, Australia, 1,133

Ports
Melbourne, Australia, 1,211
Wellington, New Zealand, 455

BLYTH, ENGLAND
(55°07'45'' N., 1°30'00'' W.) to:

Junction Points*
Bishop Rock, England, 610
Pentland Firth, Scotland, 290

Ports
Bergen, Norway, 400
Leith, Scotland, 96
London, England, 318

BOCAS DEL TORO, PANAMA
(9°20'00'' N., 82°14'00'' W.) to:

Junction Points*
Panama, Panama, 187

Ports
Baltimore, Maryland, U.S.A., 1,975
Boston, Massachusetts, U.S.A., 2,231
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,638
Colon, Panama, 144
Habana, Cuba, 981
Halifax, Canada, 2,369
Kingston, Jamaica, 604
Mobile, Alabama, U.S.A., 1,340
New Orleans, Louisana, U.S.A. (via South Pass and inside route), 1,353
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2048
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,853
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,020
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,637

BODO, NORWAY
(67°17'00'' N., 14°22' 30'' E.) to:

Junction Points*
Bishop Rock, England, 1,405

Ports
Bergen, Norway, 521
Kristiansand, Norway, 733
Oslo, Norway, 885

BOLAMA, PORTUGUESE GUINEA
(11°34'45'' N., 15°31'30'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 3,403
Ushant, France, 2,422

Ports
Dakar, Senegal, 272
Takoradi, Ghana, 1,100

BOMA, REPUBLIC OF THE CONGO
(5°51'30'' S., 13°03'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,829

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Amboim, Angola, 356
Bridgetown, Barbados, 4,478
Cabinda, Cabinda, 89
Cape Town, Republic of South Africa, 1,760
Douala, Cameroon, 742
Lagos, Nigeria, 977
Luanda, Angola, 190
New York, New York, U.S.A., 5,591
Pointe Noire, Gabon, 140
Port Gentil, Gabon, 470
St. Helena Island, 1,232
Santa Isabel, Fernando Poo, 689
Sao Tome, Sao Tome, 563

BOMBAY, INDIA
(18°56'00'' N., 72°51'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 4,059
Cape of Good Hope, Republic of South Africa (east of Madagascar), 4,652
Cape of Good Hope, Republic of South Africa (west of Madagascar), 4,597
Cape of Good Hope, Republic of South Africa (low power, southwest monsoon, June–August), 4,679
Port Said, U.A.R. (October–April), 3,049
Port Said, U.A.R. (May–September), 3,068
Port Said, U.A.R. (low power, southwest monsoon, June–August), 3,743
Singapore, 2,441
Sunda Strait, Indonesia, 2,664
Torres Strait, Australia (via south of Java and Timor), 4,849

Ports
Ad Dammam, Saudi Arabia, 1,373
Aden, Aden Protectorate (October–April), 1,657
Aden, Aden Protectorate (low power, northwest monsoon, June–August), 2,356
Al Basrah, Iraq, 1,594
Antsirana, Malagasy Republic, 2,338
Belawan, Indonesia, 2,109
Bhavnagar, India, 204
Calcutta, India, 2,128
Cochin, India, 592
Colombo, Ceylon, 895
Darwin, Australia, 4,193
Durban, Republic of South Africa, 3,826
Fremantle, Australia, 3,984
Galle, Ceylon, 944
Jazireh-ye Khark, Iran, 1,431
Karachi, Pakistan, 504
Khawr al Ama, Neutral Zone, Persian Gulf, 1,493
Madras, India, 1,482
Malacca, Malaysia, 2,327
Masqat, Mascat and Oman, 852
Massaua, Ethiopia, 2,050
Mina Abd Allah, Kuwait, 1,514
Mina al Ahmadi, Kuwait, 1,517
Mina Su'ud, Neutral Zone, Persian Gulf, 1,495
Mombasa, Kenya, 2,400
Mombasa, Kenya (low power, southwest monsoon, June–August), 2,596
Mormugao, India, 235
Okha, India, 341
Penang, Malaysia, 2,154
Port Louis, Mauritius, 2,517
Rangoon, Burma, 2,139
Ra's al Khafji, Neutral Zone, Persian Gulf, 1,491
Saban, Indonesia, 1,843
Tamatave, Malagasy Republic, 2,621
Trincomalee, Ceylon, 1,218
Victoria, Seychelles, 1,749
Zanzibar, Zanzibar (northeast monsoon), 2,549
Zanzibar, Zanzibar (southwest monsoon), 2,683

BONE, ALGERIA. See Annaba.

BO'NESS, SCOTLAND
(56°01'12'' N., 3°36'18'' W.)

Add 5 miles to Rosyth distances.

BONIFACIO, CORSICA
(41°23'00'' N., 9°09'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,307
Strait of Gibraltar, 779

Ports
Civitavecchia, Italy, 131
Genova, Italy, 199
Marseille, France, 213

BONNY, NIGERIA
(4°27'21'' N., 7°10'22'' E.)

Subtract 28 miles from Port Harcourt distances.

BORDEAUX, FRANCE
(44°51'00'' N., 0°34'00'' W.) to:

Junction Points*
Bishop Rock, England, 397
Cape of Good Hope, Republic of South Africa, 5,838
Montreal, Canada (via Strait of Belle Isle), 3,045
Montreal, Canada (tracks C and D, via Cabot Strait), 3,302
Montreal, Canada (track E, via Cabot Strait), 3,167
Montreal, Canada, (track F, via Cabot Strait), 3,146
Panama, Panama (via Mona Passage), 4,641
Punta Arenas, Chile, 7,074
Strait of Gibraltor, 1,010
Straits of Florida (track A), 4,165
Straits of Florida (track B), 4,168
Straits of Florida (tracks C and D), 4,172
Straits of Florida (low power, May–September), 4,289
Straits of Florida (low power, October–April), 4,350
Ushant, France, 321

Ports
Aviles, Spain, 303
Baltimore, Maryland, U.S.A. (track A), 3,590
Baltimore, Maryland, U.S.A. (track B), 3,567
Baltimore, Maryland, U.S.A. (track C), 3,529
Bayonne, France, 172
Belem, Brazil, 3,868
Boston, Massachusetts, U.S.A. (track A), 3,157
Boston, Massachusetts, U.S.A. (track B), 3,120
Boston, Massachusetts, U.S.A. (track C), 3,063
Buenos Aires, Argentina, 6009
Cape Town, Republic of South Africa, 5,820
Cayenne, French Guiana, 3,670
Charleston, South Carolina, U.S.A. (track A), 3,713
Charleston, South Carolina, U.S.A. (track B), 3,696
Charleston, South Carolina, U.S.A. (track C), 3,670
Colon, Panama (via Mona Passage), 4,593
Colon, Panama (via Windward Passage), 4,643
Colon, Panama (low power, May–September), 4,609

*JUNCTION POINT.—See Preface for use of junction points.

Colon, Panama (low power, October–April), 4,627
Dakar, Senegal, 2,243
Fort de France, Martinique, 3,607
Funchal, Madeira Island, 1,192
Habana, Cuba (via Northeast Providence Channel), 4,188
Habana, Cuba (north of Little Bahama Bank), 4,153
Halifax, Canada (track A), 2,845
Halifax, Canada (track B), 2,803
Halifax, Canada (tracks C and D), 2,745
Halifax, Canada (track E), 2,655
Halifax, Canada (track F), 2,643
Horta, Fayal, Azores, 1,348
La Pallice, France, 111
Lisboa, Portugal, 733
New London, Connecticut, U.S.A. (track A), 3,229
New London, Connecticut, U.S.A. (track B), 3,202
New London, Connecticut, U.S.A. (track C), 3,154
New York, New York, U.S.A. (track A), 3,307
New York, New York, U.S.A. (track B), 3,281
New York, New York, U.S.A. (track C), 3,234
New York, New York, U.S.A. (low power, May–September), 3,668
New York, New York, U.S.A. (low power, October–April), 3,941
Norfolk, Virginia, U.S.A. (track A), 3,466
Norfolk, Virginia, U.S.A. (track B), 3,443
Norfolk, Virginia, U.S.A. (track C), 3,407
Philadelphia, Pennsylvania, U.S.A. (track A), 3,460
Philadelphia, Pennsylvania, U.S.A. (track B), 3,434
Philadelphia, Pennsylvania, U.S.A. (track C), 3,387
Ponta Delgada, Azores, 1,256
Providence, Rhode Island, U.S.A. (track A), 3,218
Providence, Rhode Island, U.S.A. (track B), 3,192
Providence, Rhode Island, U.S.A. (track C), 3,143
Puerto de Pasajes, Spain, 178
Recife, Brazil, 3,823
Rio de Janeiro, Brazil, 4,908
St. Nazaire, France, 184
San Sebastian, Spain, 210
Santa Cruz de Tenerife, Canary Islands, 1,406
Washington, D.C., U.S.A. (track A), 3,604
Washington, D.C., U.S.A. (track B), 3,581
Washington, D.C., U.S.A. (track C), 3,543
Wilmington, North Carolina, U.S.A. (track A), 3,659
Wilmington, North Carolina, U.S.A. (track B), 3,642
Wilmington, North Carolina, U.S.A. (track C), 3,614

BOSTON, MASSACHUSETTS, U.S.A. (42°22′00″ N., 71°03′00″ W.) to:

Junction Points*
Bishop Rock, England (track A), 2,915
Bishop Rock, England (track B), 2,867
Bishop Rock, England (track C), 2,783
Cape of Good Hope, Republic of South Africa, 6,722
Fastnet, Ireland (track A), 2,813
Fastnet, Ireland (track B), 2,763
Fastnet, Ireland (track C), 2,669
Inishtrahull, Ireland (track A), 2,939
Inishtrahull, Ireland (track B), 2,882
Inishtrahull, Ireland (track C), 2,767
Montreal, Canada (via Strait of Canso), 1,248
Montreal, Canada (via Cabot Strait), 1,308
Panama, Panama (via Nantucket Light Vessel, Crooked Island Passage, and Windward Passage), 2,200
Pentland Firth, Scotland (track A), 3,153
Pentland Firth, Scotland (track B), 3,086
Pentland Firth, Scotland (track C), 2,947
Punta Arenas, Chile, 6,918
Strait of Gibraltar (track A), 3,053
Strait of Gibraltar (track B), 3,031
Strait of Gibraltar (tracks C and D), 3,008
Straits of Florida (via Nantucket Light Vessel), 1,408
Yucatan Channel (via outside route, southbound), 1,595

Ports
Angmagssalik, Greenland (direct), 2,073
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,087
Antilla, Cuba, 1,408
Argentia, Canada, 801
Arkhangelsk, U.S.S.R., 4,014
Bahia Blanca, Argentina, 6,125
Banes, Cuba (via Crooked Island Passage), 1,398
Belem, Brazil, 2,970
Belize, British Honduras (via Straits of Florida and Yucatan Channel), 1,934
Bilbao, Spain (track C), 2,987
Bluefields, Nicaragua, 2,184
Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 2,231
Bordeaux, France (track A), 3,201
Bordeaux, France (track B), 3,162
Bordeaux, France (track C), 3,094
Brest, France (track A), 2,997
Brest, France (track B), 2,952
Brest, France (track C), 2,875
Bridgetown, Barbados, 1,899
Buenos Aires, Argentina, 5,842
Cadiz, Spain (track A), 3,021
Cadiz, Spain (track B), 2,998
Cadiz, Spain (tracks C and D), 2,975
Cape Town, Republic of South Africa, 6,707
Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 2,036
Castries, St. Lucia, 1,812
Cayenne, French Guiana, 2,499
Charlotte Amalie, Virgin Islands, 1,513
Charlottetown, Canada (via Strait of Canso), 621
Cienfuegos, Cuba (via Windward Passage), 1,865
Colon, Panama (via Nantucket Light Vessel, Crooked Island Passage, and Windward Passage), 2,157
Dakar, Senegal, 3,221
Fort de France, Martinique, 1,799
Freetown, Sierra Leone, 3,656
Funchal, Madeira Island (track A), 2,612
Funchal, Madeira Island (track B), 2,604
Georgetown, British Guiana, 2,282
Guantanamo, Cuba, 1,495
Habana, Cuba, 1,415
Halifax, Canada, 380
Hamilton, Bermuda, 704
Ivigtut, Greenland, 1,731
Jacmel, Haiti, 1,672
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,657
La Guaira, Venezuela, 1,955
Lagos, Nigeria, 4,774
Las Piedras, Venezuela, 1,907
Les Cayes, Haiti, 1,630
Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 2,230
Lisboa, Portugal (track A), 2,855

*JUNCTION POINT.—See Preface for use of junction points.

Lisboa, Portugal (track B), 2,830
Lisboa, Portugal (tracks C and D), 2,801
Liverpool, Canada, 317
Luderitz Bay, Southwest Africa, 6,302
Maracaibo, Venezuela, 2,001
Montecristi, Dominican Republic, 1,415
Montevideo, Uruguay, 5,728
Murmansk, U.S.S.R., 3,719
Nassau, Bahamas, 1,173
Nuevitas, Cuba, 1,454
Paramaribo, Surinam, 2,380
Parrsboro, Canada, 349
Pointe a Pitre, Guadeloupe, 1,742
Ponce, Puerto Rico, 1,563
Ponta Delgada, Azores (track A), 2,108
Ponta Delgada, Azores (track B), 2,093
Ponta Delgada, Azores (tracks C and D), 2,086
Port Antonio, Jamaica (via Crooked Island Passage, and Windward Passage), 1,606
Port au Prince, Haiti, 1,557
Port of Spain, Trinidad, 2,022
Progreso, Mexico, 1,838
Puerto Cabello, Venezuela (via Mona Passage), 1,976
Recife, Brazil, 3,669
Reykjavik, Iceland (via Cape Race), 2,293
Rio de Janeiro, Brazil, 4,739
St. Georges, Grenada, 1,932
St. John, Canada, 286
St. John's, Canada, 885
Salvador, Brazil, 4,060
San Juan, Puerto Rico, 1,486
Santa Cruz de Tenerife, Canary Islands, 2,777
Santa Marta, Colombia (via Crooked Island Passage, and Windward Passage), 1,966
Santiago de Cuba, Cuba (via Crooked Island Passage, and Windward Passage), 1,545
Santo Domingo, Dominican Republic, 1,599
Santos, Brazil, 4,928
Sint Nicolaas, Aruba, 1,853
Sydney, Canada, 597
Vigo, Spain (track A), 2,832
Vigo, Spain (track B), 2,799
Vigo, Spain (tracks C and D), 2,755
Walvisbaai, Southwest Africa, 6,131
Willemstad, Curacao, 1,881
Yarmouth, Canada, 237

BOUGIE, ALGERIA. See Bejaia.

BOULOGNE, FRANCE
(50°43'30'' N., 1°36'00'' E.) to:

Junction Points*
Bishop Rock, England, 322

Ports
Cardiff, Wales, 431
Glasgow, Scotland, 672
Hull, England, 225
Southampton, England, 120

BOWEN, AUSTRALIA
(20°01'30'' S., 148°15'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,975
Torres Strait, Australia, 760

Ports
Brisbane, Australia, 610
Bunbury, Australia, 3,072
Noumea, New Caledonia, 1,342

BRAKE, GERMANY
(53°19'55'' N., 8°29'30'' E.)

Add 14½ miles to Bremerhaven distances.

BREMEN, GERMANY
(53°06'30'' N., 8°45'00'' E.)

For ocean distances, add 34 miles to Bremerhaven distances.

BREMERHAVEN, GERMANY
(53°33'00''N., 8°33'30'' E.) to:

Junction Points*
Bishop Rock, England, 657
Kiel Canal (east end), Germany, 129
Pentland Firth, Scotland, 507
Skagens Odde, Denmark, 320
Ushant, France, 647

Ports
Aberdeen, Scotland, 425
Amsterdam, Netherlands, 223
Antwerpen, Belgium, 333
Bergen, Norway, 447
Cherbourg, France, 485
Dover, England, 341
Dundee, Scotland, 437
Dunkerque, France, 321
Egersund, Norway, 312
Emden, Germany, 128
Hakonsvern, Norway, 442
Hartlepool, England, 355
Harwich, England, 309
Hull, England, 332
Inverness, Scotland, 514
Kristiansand, Norway, 292
LeHavre, France, 453
Leith, Scotland, 442
London, England, 375
Narvik, Norway, 1,058
Newcastle, England, 374
Nieuwpoort, Belgium, 312
Oostende, Belgium, 299
Oslo, Norway, 427
Plymouth, England, 573
Portland, England, 499
Portsmouth, England, 446
Rotterdam, Netherlands, 256
Sandefjord, Norway, 373
Skien, Norway, 372
Southampton, England, 464
Stavanger, Norway, 366
Zeebrugge, Belguim, 287

BREMERTON, WASHINGTON, U.S.A.
(47°33'30'' N., 122°38'00'' W.)

For distances outside Puget Sound, add 9 miles to Seattle distances.

BRESKENS, NETHERLANDS
(51°24'03'' N., 3°34'27'' E.)

Add 48½ miles to Antwerpen distances.

BREST, FRANCE
(48°22'30'' N., 4°33'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,757
Straits of Florida (track A), 3,961
Straits of Florida (track B), 3,959
Straits of Florida (track C), 3,953
Ushant, France 55

Ports
Baltimore, Maryland, U.S.A. (track A), 3,375
Balitmore, Maryland, U.S.A., (track B), 3,347
Balitmore, Maryland, U.S.A., (track C), 3,302
Barrow in Furness, England, 416
Boston, Massachusetts, U.S.A. (track A), 2,944
Boston, Massachusetts, U.S.A. (track B), 2,903

*JUNCTION POINT.—See Preface for use of junction points.

Boston, Massachusetts, U.S.A. (track C), 2,838
Cardiff, Wales, 277
Charleston, South Carolina, U.S.A. (track A), 3,506
Charleston, South Carolina, U.S.A. (track B), 3,486
Charleston, South Carolina, U.S.A. (track C), 3,453
Colon, Panama (via Mona Passage), 4,420
Fishguard, Wales, 274
Funchal, Madeira Island, 1,110
Guantanamo, Cuba, 3,784
Holyhead, Wales, 345
Liverpool, England, 410
New York, New York, U.S.A. (track A), 3,104
New York, New York, U.S.A. (track B), 3,073
New York, New York, U.S.A. (track C), 3,017
Philadelphia, Pennsylvania, U.S.A. (track A), 3,243
Philadelphia, Pennsylvania, U.S.A. (track B), 3,212
Philadelphia, Pennsylvania, U.S.A. (track C), 3,160
Reykjavik, Iceland, 1,193
Rio de Janeiro, Brazil, 4,841
Rotterdam, Netherlands, 457
St. Malo, France, 152

BRIDGEPORT, CONNECTICUT, U.S.A.
(41°10′18″ N., 73°10′48″ W.) to:

Junction Points*
Panama, Panama, 2,118

Ports
Habana, Cuba, 1,292
Halifax, Canada, 552

BRIDGETOWN, BARBADOS
(13°05′00″ N., 59°37′00″ W.) to:

Junction Points*
Panama, Panama, 1,280
Straits of Florida, 1,511
Yucatan Channel, 1,549

Ports
Baltimore, Maryland, U.S.A., 1,853
Belem, Brazil, 1,154
Boma, Republic of the Congo, 4,478
Boston, Massachusetts, U.S.A., 1,899
Castries, St. Lucia (north of St. Lucia, 110
Castries, St. Lucia (south of St. Lucia), 115
Charleston, South Carolina, U.S.A., 1,628
Charlotte Amalie, Virgin Islands, 442
Colon, Panama, 1,237
Fort de France, Martinique, 130
Georgetown, British Guiana, 389
Halifax, Canada, 1,906
Hamilton, Bermuda, 1,208
Jacksonville, Florida, U.S.A., 1,617
Key West, Florida, U.S.A., 1,459
Kingstown, St. Vincent, 98
Montevideo, Uruguay, 4,096
Nassau, Bahamas, 1,284
New York, New York, U.S.A., 1,829
Paramaribo, Surinam, 496
Philadelphia, Pennsylvania, U.S.A., 1,839
Port au Prince, Haiti, 1,070
Port of Spain, Trinidad (via Boca Grande), 211
Recife, Brazil, 2,054
Rio de Janeiro, Brazil, 3,157
St. Georges, Grenada (north of island), 144
St. Georges, Grenada (south of island), 152
Salvador, Brazil, 2,476
San Juan, Puerto Rico (west of St. Croix Island and Virgin Passage), 517
Santa Barbara de Samana, Dominican Republic, 675
Savannah, Georgia, U.S.A., 1,646

BRINDISI, ITALY
(40°38′30″ N., 17°57′03″ E.) to:

Junction Points*
Port Said, U.A.R., 941
Strait of Gibraltar, 1,315

Ports
Alexandria, U.A.R., 831
Alger, Algeria, 888
Alicante, Spain, 1,042
Ancona, Italy, 274
Annaba, Algeria, 668
Banghazi, Libya, 535
Barcelona, Spain, 947
Bayrut, Lebanon (via Corinth Canal), 980
Bayrut, Lebanon (south of Greece), 1,011
Bizerte, Tunisia, 577
Cartagena, Spain, 1,073
Ceuta, Morocco, 1,296
Chioggia, Italy, 375
Civitavecchia, Italy, 568
Genova, Italy, 752
Gibraltar, 1,298
Haifa, Israel (via Corinth Canal), 983
Haifa, Israel (south of Greece), 1,007
Iraklion, Crete, 496
Istanbul, Turkey (via Corinth Canal), 697
Istanbul, Turkey (south of Greece), 793
Izmir, Turkey (via Corinth Canal), 543
Izmir, Turkey (south of Greece), 639
Kerkira, Greece, 123
La Spezia, Italy, 717
Livorno, Italy, 681
Malaga, Spain, 1,245
Marseille, France, 844
Messina, Sicily, 270
Napoli, Italy, 442
Odessa, U.S.S.R. (via Corinth Canal), 1,045
Odessa, U.S.S.R. (south of Greece), 1,142
Oran, Algeria, 1,084
Palermo, Sicily, 387
Palma, Balearic Islands, 905
Pescara, Italy, 209
Piraievs, Greece (via Corinth Canal), 343
Piraievs, Greece (south of Greece), 480
Rijeka, Yugoslavia, 342
Savona, Italy, 762
Shengjin, Albania, 103
Sibenik, Yugoslavia, 217
Siracusa, Sicily, 292
Split, Yugoslavia, 202
Tarabulus, Libya, 555
Taranto, Italy, 150
Thessaloniki, Greece (via Corinth Canal), 592
Thessaloniki, Greece (south of Greece), 688
Toulon, France, 812
Trieste, Free Territory, 376
Tunis, Tunisia, 564
Valencia, Spain, 1,048
Valletta, Malta, 369
Venezia, Italy, 386
Volos, Greece (via Corinth Canal), 533
Volos, Greece (south of Greece), 629
Zadar, Yugoslavia, 280

BRISBANE, AUSTRALIA
(27°28′00″ S., 153°03′30″ E.) to:

Junction Points*
Panama, Panama, 7,687
Punta Arenas, Chile (via Lat. 49° S.), 6,063
Punta Arenas, Chile (via Lat. 30° S.), 7,369

*JUNCTION POINT.—See Preface for use of junction points.

Torres Strait, Australia (via inner route), 1,348
Wilson Promontory, Australia, 931

Ports
Apia, Samoa, 2,177
Apra, Guam, 2,659
Auckland, New Zealand, 1,340
Avarua, Cook Islands, 2,618
Bowen, Australia, 610
Cairns Harbor, Australia, 827
Catherine Hill Bay, Australia, 462
Christmas Island, North Pacific, 3,379
Dutch Harbor, Alaska, U.S.A., 5,369
Funafuti, Ellice Islands, 1,895
Gladstone Harbor, Australia, 314
Honolulu, Hawaii, U.S.A., 4,117
Jaluit, Marshall Islands, 2,231
Lae, New Guinea, 1,560
Lele, Caroline Islands, 2,097
Levuka, Fiji Islands, 1,569
Los Angeles, California, U.S.A., 6,274
Lucinda, Australia, 804
Mackay, Australia, 512
Malakal, Palau Islands, 2,642
Midway Island, 3,757
Nandi Bay, Fiji Islands, 1,618
Nelson, New Zealand, 1,380
Nonouti, Gilbert Islands, 2,032
Noumea, New Caledonia, 807
Nukualofa, Tonga Islands, 1,819
Omura, Bonin Islands, 3,455
Pago Pago, American Samoa, 2,221
Papeete, Society Islands, 3,234
Ponape, Caroline Islands, 2,108
Portland, Oregon, U.S.A., 6,421
Rabaul, New Britain, 1,434
Raoul Island, Kermadec Islands, 1,566
Rockhampton, Australia, 391
San Diego, California, U.S.A., 6,306
San Francisco, California, U.S.A., 6,193
Seattle, Washington, U.S.A., 6,471
Selwyn Bay, Solomon Islands, 1,193
Shang-hai, China, 4,243
Suva, Fiji Islands, 1,548
Sydney, Australia, 529
Talomako, New Hebrides, 1,132
Townsville, Australia, 677
Urangan, Australia, 282
Wellington, New Zealand, 1,453
Yokohama, Japan, 3,925

BRISTOL, ENGLAND
(51°27′00″ N., 2°37′30″ W.)

For ocean distances, add 6 miles to Avonmouth distances.

BRITO, NICARAGUA
(11°21′00″ N., 85°59′00″ W.) to:

Ports
Champerico, Guatemala, 399
Corinto, Nicaragua, 107
Guayaquil, Ecuador, 985
Honolulu, Hawaii, U.S.A., 4,155
Iquique, Chile, 2,189
Portland, Oregon, U.S.A., 3,333
San Diego, California, U.S.A., 2,307
San Francisco, California, U.S.A., 2,709

BROOKLYN, NEW YORK, U.S.A.
(40°40′00″ N., 74°01′00″ W.)

For ocean distances, subtract 1¼ miles from New York distances.

BROUTONA BUKHTA. See Bukhta Broutona.

BRUGGE, BELGIUM
(51°13′25″ N., 3°13′25″ E.)

Add 8 miles to Zeebrugge distances.

BRUNSWICK, GEORGIA, U.S.A.
(31°08′00″ N., 81°29′40″ W.) to:

Junction Points*
Montreal, Canada, 2,074
Panama, Panama (via Windward Passage and Crooked Island Passage), 1,581
Straits of Florida, 548

Ports
Belize, British Honduras (via Windward Passage), 1,661
Belize, British Honduras (via Straits of Florida), 1,072
Buenos Aires, Argentina, 5,845
Cape Town, Republic of South Africa, 6,857
Cartagena, Colombia, 1,417
Castries, St. Lucia, 1,529
Charlotte Amalie, Virgin Islands, 1,190
Colon, Panama (via Windward Passage, and Crooked Island Passage), 1,538
Halifax, Canada, 1,210
Kingston, Jamaica, 1,038
Las Palmas de Gran Canaria, Canary Islands, 3,442
Limon, Costa Rica, 1,611
Montevideo, Uruguay, 5,731
Port of Spain, Trinidad, 1,694
Recife, Brazil, 3,672
Rio de Janeiro, Brazil, 4,744
Salvador, Brazil, 4,063
San Juan, Puerto Rico, 1,132
Santiago de Cuba, Cuba, 926
Santo Domingo, Dominican Republic, 1,179
Tampico, Mexico, 1,387
Veracruz, Mexico, 1,351

BRUSSELS, BELGUIM
(50°50′00″ N., 4°20′00″ E.)

Add 29 miles to Antwerpen distances.

BRUXELLES, BELGIUM. See Brussels.

BUCKNER BAY, OKINAWA JIMA, RYUKYU ISLANDS. See Nakagusuku Wan.

BUENAVENTURA, COLOMBIA
(3°54′00″ N., 77°04′30″ W.) to:

Junction Points*
Panama, Panama, 352

Ports
Callao, Peru, 1,126
Golfito, Costa Rica, 426
Guayaquil, Ecuador, 578
La Libertad, Ecuador, 445
San Francisco, California, U.S.A., 3,383

BUENOS AIRES, ARGENTINA
(34°35′00″ S., 58°22′00″ W.) to:

Junction Points*
Bishop Rock, England, 5,947
Cape of Good Hope, Republic of South Africa, 3,704
Inishtrahull, Ireland, 6,243
Montreal, Canada, 6,455
Pentland Firth, Scotland, 6,491
Punta Arenas, Chile, 1,394
Strait of Gibraltar, 5,280
Straits of Florida, 5,713
Ushant, France, 5,916
Yucatan Channel, 5,723

Ports
Bahia Blanca, Argentina, 564
Baltimore, Maryland, U.S.A., 5,945
Belem, Brazil, 3,274
Bordeaux, France, 6,009
Boston, Massachusetts, U.S.A., 5,842
Brunswick, Georgia, U.S.A., 5,845
Cadiz, Spain, 5,293
Caleta Olivia, Argentina, 865

*JUNCTION POINT.—See Preface for use of junction points.

Cape Town, Republic of South Africa. 3,720
Cartagena, Colombia, 5,154
Castries, St. Lucia, 4,375
Charleston, South Carolina, U.S.A., 5,822
Charlotte Amalie, Virgin Islands, 4,648
Charlottetown, Canada, 5,831
Cienfuegos, Cuba, 5,526
Colon, Panama, 5,385
Comodoro Rivadavia, Argentina, 927
Dakar, Senegal, 3,864
Freetown, Sierra Leone, 3,712
Funchal, Madeira Island, 4,823
Georgetown, British Guiana, 3,954
Guantanamo, Cuba, 5,213
Habana, Cuba, 5,671
Halifax, Canada, 5,731
Hamilton, Bermuda, 5,211
Horta, Azores, 4,997
Jacksonville, Florida, U.S.A., 5,808
Key West, Florida, U.S.A., 5,661
Kingston, Jamaica, 5,224
Lisboa, Portugal, 5,339
Mar del Plata, Argentina, 276
Natal, Brazil, 2,329
New York, New York, U.S.A., 5,871
Norfolk, Virginia, U.S.A., 5,824
Paramaribo, Surinam, 3,813
Philadelphia, Pennsylvania, U.S.A., 5,918
Ponta Delgada, Azores, 4,975
Port au Prince, Haiti, 5,258
Port Gallegos, Argentina, 1,231
Portland, Maine, U.S.A., 5,873
Puerto Concepcion, Argentina, 806
Puerto Cortes, Honduras, 5,909
Puerto Deseado, Argentina, 965
Puerto Madryn, Argentina, 748
Quequen, Argentina, 350
Recife, Brazil, 2,181
Rio de Janeiro, Brazil, 1,151
Rio Grande, Argentina, 1,306
Rio Grande, Brazil, 440
St. Helena Island, 3,052
St. John, Canada, 5,853
St. John's, Canada, 5,663
Salvador, Brazil, 1,849
San Juan, Puerto Rico, 4,713
Santa Cruz de Tenerife, Canary Island, 4,619
Santo Domingo, Dominican Republic, 4,881
Santos, Brazil, 1,006
Savannah, Georgia, U.S.A., 5,854
Sydney, Canada, 5,749
Ushuaia, Argentina, 1,447
Vigo, Spain, 5,518
Wilmington, North Carolina, U.S.A., 5,805

BUKHTA BROUTONA, KURIL ISLANDS
(47°10'00'' N., 152°14'30'' E.) to:

Ports
Aleksandrovsk, Sakhalin, 747
Aomori, Japan, 664
Attu Island, Alaska, U.S.A., 869
Dutch Harbor, Alaska, U.S.A., 1,609
Hakodate, Japan, 630
Kholmsk, Sakhalin, 519
Kiska, Alaska, U.S.A., 1,041
Korsakov, Sakhalin, 431
Muroran, Japan, 625
Nemuro, Japan, 370
Nikolayevsk, U.S.S.R. (north of Sakhalin), 715
Otaru, Japan, 597
Petropavlovsk, U.S.S.R., 451
Vladivostok, U.S.S.R., 934
Wakkanai, Japan, 456
Zaliv Chikhacheva, U.S.S.R., 783

BUNBURY, AUSTRALIA
(33°17'50'' S., 115°38'40'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 97
Lombok Strait, Indonesia, 1,510
Port Said, U.A.R., 6,343

Ports
Adelaide, Australia, 1,260
Bowen, Australia, 3,072
Darwin, Australia, 1,906

BUR, SUDAN. See Port Sudan.

BUR IBRAHIM, UNITED ARAB REPUBLIC
(29°55'30'' N., 32°32'30'' E.)

For distances via Red Sea, subtract 88 miles from Port Said distances.

BUR SAFAJAH, UNITED ARAB REPUBLIC
(26°44'00'' N., 33°56'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,016
Port Said, U.A.R., 310
Singapore, 4,729

Ports
Aden, Aden Protectorate, 1,109
Port Sudan, Sudan, 508

BURKETOWN, AUSTRALIA
(17°20'00'' S., 140°03'00'' E.) to:

Junction Points*
Torres Strait, Australia, 432

Ports
Fremantle, Australia (via Clarence Strait), 2,697

BURNIE HARBOR, AUSTRALIA
(41°03'00'' S., 145°55'00'' E.) to:

Junction Points*
Wilson Promontory, Australia, 116

Ports
Hobart, Tasmania, 332
Melbourne, Australia, 223
Sydney, Australia, 525

BURNT ISLAND, SCOTLAND
(56°03'00'' N., 3°14'00'' W.)

Subtract 8 miles from Rosyth distances.

BUROTON WAN. See Bukhta Broutona.

BUSHEHR, IRAN
(28°58'30'' N., 50°45'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,032
Singapore, 3,737

Ports
Bandar-e Shapur, Iran, 158
Belawan, Indonesia, 3,372
Calcutta, India, 3,414
Darwin, Australia, 5,446
Fremantel, Australia, 5,259
Malacca, Malaysia, 3,590
Penang, Malaysia, 3,417
Rangoon, Burma, 3,425
Sabang, Indonesia, 3,106

BUSHIRE, IRAN. See Bushehr.

BUTARITARI, GILBERT ISLANDS
(3°03'00'' N., 172°48'00'' E.) to:

Junction Points*
Panama, Panama, 6,515

Ports
Honolulu, Hawaii, U.S.A., 2,050

*JUNCTION POINT.—See Preface for use of junction points.

Los Angeles, California, U.S.A., 4,272
Pago Pago, American Samoa, 1,453
Papeete, Society Islands, 2,560
San Francisco, California, U.S.A., 4,122
Suva, Fiji Islands, 1,462

CABEDELO, BRAZIL
(6°58'00'' S., 34°50'40'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 3,374
Panama, Panama, 3,149
Punta Arenas, Chile, 3,327

Ports
Belem, Brazil, 1,021
Salvador, Brazil, 468

CABIMAS, VENEZUELA
(10°23'00'' N., 71°28'00'' W.)

Add 21 miles to Maracaibo distances.

CABINDA, CABINDA
(5°32'00'' S., 12°11'00'' E.) to:

Ports
Amboim, Angola, 339
Boma, Republic of the Congo, 89
Douala, Cameroon, 668
Port Gentil, Gabon, 393

CADIZ, SPAIN
(36°32'00'' N., 6°17'00'' W.) to:

Junction Points*
Bishop Rock, England, 930
Montreal, Canada (tracks C and D), 3,209
Montreal, Canada (track E), 3,131
Montreal, Canada (track F), 3,127
Strait of Gibraltar, 50
Straits of Florida, 3,978
Ushant, France, 894

Ports
Baltimore, Maryland, U.S.A. (track A), 3,438
Baltimore, Maryland, U.S.A. (track B), 3,434
Baltimore, Maryland, U.S.A. (track C), 3,437
Bathurst, Gambia, 1,587
Belem, Brazil, 3,286
Boston, Massachusetts, U.S.A. (track A), 3,008
Boston, Massachusetts, U.S.A. (track B), 2,990
Boston, Massachusetts, U.S.A. (track C), 2,972
Buenos Aires, Argentina, 5,293
Cape Town, Republic of South Africa, 5,078
Casablanca, Morocco, 192
Charleston, South Carolina, U.S.A. (track A), 3,561
Charleston, South Carolina, U.S.A. (track B), 3,563
Charleston, South Carolina, U.S.A. (track C), 3,578
Colon, Panama, 4,286
Dakar, Senegal, 1,500
Freetown, Sierra Leone, 1,979
Funchal, Madeira Island, 579
Halifax, Canada (direct), 2,617
Halifax, Canada (tracks C and D), 2,652
Horta, Azores, 1,070
Lisboa, Portugal, 253
New York, New York, U.S.A. (track A), 3,158
New York, New York, U.S.A. (track B), 3,151
New York, New York, U.S.A. (track C), 3,143
Norfolk, Virginia, U.S.A. (direct), 3,302
Norfolk, Virginia, U.S.A. (track A), 3,317
Norfolk, Virginia, U.S.A. (track B), 3,313
Norfolk, Virginia, U.S.A. (track C), 3,316
Philadelphia, Pennsylvania, U.S.A. (track A), 3,311
Philadelphia, Pennsylvania, U.S.A. (track B), 3,304
Philadelphia, Pennsylvania, U.S.A. (track C), 3,296
Ponta Delgada, Azores, 931
Porto, Portugal, 399
Porto Grande, Cape Verde Islands, 1,547
Recife, Brazil, 3,125
Rio de Janeiro, Brazil, 4,192
San Juan, Puerto Rico, 3,312
Santa Cruz de Tenerife, Canary Islands, 702
Santander, Spain, 789
Vigo, Spain, 463

CAEN, FRANCE
(49°11'00'' N., 0°20'00'' W.) to:

Junction Points*
Bishop Rock, England, 264
Ushant, France, 240

Ports
Cherbourg, France, 73
Dover, England, 140
Southampton, England, 119

CAGLIARI, SARDINIA
(39°12'30'' N., 9°06'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,255
Strait of Gibraltar, 750

Ports
Alexandria, U.A.R., 1,136
Alger, Algeria, 332
Alicante, Spain, 473
Barcelona, Spain, 379
Bari, Italy, 652
Bizerte, Tunisia, 126
Cannes, France, 347
Castellamare di Stabia, Italy, 276
Catania, Sicily, 377
Ceuta, Morocco, 731
Civitavecchia, Italy, 239
Constanta, Rumania (via Corinth Canal), 1,289
Constanta, Rumania (south of Greece), 1,330
Genova, Italy, 359
Istanbul, Turkey (via Corinth Canal), 1,092
Istanbul, Turkey (south of Greece), 1,133
La Spezia, Italy, 336
Livorno, Italy, 304
Marseille, France, 360
Messina, Sicily, 328
Napoli, Italy, 272
Nice, France, 354
Oran, Algeria, 525
Palermo, Sicily, 221
Piraievs, Greece (via Corinth Canal), 738
Piraievs, Greece (south of Greece), 820
Savona, Italy, 362
Sete, France, 402
Toulon, France, 337
Tunis, Tunisia, 169
Valencia, Spain, 461
Valletta, Malta, 331
Venezia, Italy, 970
Volos, Greece (via Corinth Canal), 927
Volos, Greece (south of Greece), 969

CAIBARIEN, CUBA
(22°32'00'' N., 79°28'00'' W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Panama, Panama, 1,138
Straits of Florida, 252

Ports
Habana, Cuba, 208
Jacksonville, Florida, U.S.A., 526
Nuevitas, Cuba, 181

CAIRN RYAN, SCOTLAND
(54°58'00'' N., 5°02'00'' W.) to:

Junction Points*
Bishop Rock, England, 330
Fastnet, Ireland, 338
Inishtrahull, Ireland, 91
Pentland Firth, Scotland, 340

Ports
Glasgow, Scotland, 82

CAIRNS HARBOR, AUSTRALIA
(16°51'00'' S., 145°49'00'' E.) to:

Junction Points*
Torres Strait, Australia, 505
Wilson Promontory, Australia, 1,649

Ports
Brisbane, Australia, 827
Noumea, New Caledonia, 1,250
Wellington, New Zealand, 2,122

CALABAR, NIGERIA
(4°58'15'' N., 8°19'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,458
Strait of Gibraltar, 3,420
Ushant, France, 4,054

Ports
Lagos, Nigeria, 391
Matadi, Republic of the Congo, 818

CALAIS, FRANCE
(50°58'00'' N., 1°51'00'' E.) to:

Junction Points*
Bishop Rock, England, 333
Kiel Canal (east end), Germany, 408
Ushant, France, 321

Ports
Bergen, Norway, 588
Egersund, Norway, 475
Kristiansand, Norway, 486
Oslo, Norway, 634
Plymouth, England, 244
Portland, England, 170
Stavanger, Norway, 515

CALCUTTA, INDIA
(22°33'00'' N., 88°19'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,796
Cape of Good Hope, Republic of South Africa (November–March, east of Madagascar), 5,491
Cape of Good Hope, Republic of South Africa (May–September, east of Madagascar), 5,498
Cape of Good Hope, Republic of South Africa (April and October, west of Madagascar), 5,494
Lombok Strait, Indonesia (via Strait of Malacca and Selat Riouw), 2,614
Port Said, U.A.R. (October–April, south of Socotra), 4,695
Port Said, U.A.R. (May–September, south of Socotra), 4,816
Port Said, U.A.R. (May–September, north of Socotra), 4,712
Port Said, U.A.R. (Alternate, May–September, north of Socotra), 4,807
Port Said, U.A.R. (low power, May–September, south of Socotra), 4,876
Singapore, 1,649
Sunda Strait, Indonesia, 2,140

Ports
Aden, Aden Protectorate (October–April, south of Socotra), 3,308
Aden, Aden Protectorate (May–September, south of Socotra), 3,429
Aden, Aden Protectorate (Alternate, May–September, north of Socotra), 3,418
Aden, Aden Protectorate (low power, May–September, south of Socotra), 3,489
Akyab, Burma, 402
Al Bahrayn, Bahrain, 3,355
Al Basrah, Iraq, 3,593
Al Kuwayt, Kuwait, 3,504
Ao Phuket, Thailand, 1,124
Bassein, Burma, 643
Belawan, Indonesia, 1,326
Bombay, India, 2,128
Bushehr, Iran 3,414
Chalna, Mungla Anchorage, Pakistan, 288
Chittagong, Pakistan, 367
Cocanada, India 522
Colombo, Ceylon, 1,258
Dumai, Indonesia, 1,579
Fremantle, Australia, 3,693
Johore Bahru, Malaysia, 1,652
Karachi, Pakistan, 2,578
Madras, India, 769
Malacca, Malaysia, 1,523
Masqat, Mascat and Oman, 2,830
Massaua, Ethiopia (October–April), 3,695
Massaua, Ethiopia (Alternate, May–September), 3,808
Massaua, Ethiopia (May–September), 3,816
Massaua, Ethiopia (low power, May–September), 3,876
Mombasa, Kenya (via One and Half Degree Channel), 3,703
Moulmein, Burma, 824
Penang, Malaysia, 1,294
Port Blair, Andaman Islands, 775
Port Louis, Mauritius, 3,212
Port Swettenham, Malaysia, 1,444
Rangoon, Burma, 787
Sabang, Indonesia (via Duncan Passage), 1,131
Visakhapatnam, India, 458
Zanzibar, Zanzibar (via One and Half Degree Channel), 3,776

CALDERA, CHILE
(27°03'45'' S., 70°50'30'' W.) to:

Junction Points*
Panama, Panama, 2,302
Punta Arenas, Chile, 1,795

Ports
Antofagasta, Chile, 215
Arica, Chile, 522
Callao, Peru, 980
Coquimbo, Chile, 196
Guayaquil, Ecuador, 1,632
Iquique, Chile, 420
Lota, Chile, 628
Mollendo, Peru, 606
Pisco, Peru, 880
San Diego, California, U.S.A., 4,492
San Francisco, California, U.S.A., 4,894
Talcahuano, Chile, 602
Valparaiso, Chile, 376

CALDERA BAY, DOMINICAN REPUBLIC
(18°13'30'' N., 70°31'30'' W.) to:

Junction Points*
Panama, Panama, 810

Ports
Barranquilla, Colombia, 508
Kingston, Jamacia, 378

*JUNCTION POINT.—See Preface for use of junction points.

San Juan, Puerto Rico, 273
Willemstad, Curacao, 392

CALETA OLIVIA, ARGENTINA
(46°25'57'' S., 67°29'32'' W.) to:

Junction Points*
Panama, Panama, 6,204
Punta Arenas, Chile, 570

Ports
Buenos Aires, Argentina, 865
Stanley, Falkland Islands. 516

CALICUT, INDIA
(11°15'00'' N., 75°44'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,916
Singapore, 1,942

Ports
Belawan, Indonesia, 1,609
Darwin, Australia, 3,683
Fremantle, Australia, 3,484
Galle, Ceylon, 437
Malacca, Malaysia, 1,827
Penang, Malaysia, 1,654
Sebang, Indonesia, 1,343

CALLAO, PERU
(12°03'00'' S., 77°10'00'' W.) to:

Junction Points*
Panama, Panama, 1,350
Punta Arenas, Chile, 2,671
Torres Strait, Australia (via Raine Island entrance), 8,152
Wilson Promontory, Australia (via Cook Strait), 7,261

Ports
Acapulco, Mexico, 2,198
Amapala, Honduras, 1,665
Antofagasta, Chile, 813
Apia, Samoa, 5,492
Apra, Guam, 8,372
Archipielago de Colon, 1,004
Arica, Chile, 593
Auckland, New Zealand, 5,834
Avarua, Cook Islands, 4,733
Bahia Magdalena, Mexico, 3,008
Buenaventura, Colombia, 1,126
Caldera, Chile, 980
Chimbote, Peru, 206
Coquimbo, Chile, 1,136
Corinto, Nicaragua, 1,606
Corral, Chile, 1,691
Dutch Harbor, Alaska, U.S.A., 5,988
Esmeraldas, Ecuador, 909
Guayaquil, Ecuador, 712
Guaymas, Mexico, 3,117
Honolulu, Hawaii, U.S.A., 5,161
Iquique, Chile, 659
Jaluit, Marshall Islands, 6,832
La Libertad, Ecuador, 682
La Palma, Panama, 1,336
Levuka, Fiji Islands, 6,002
Los Angeles, California, U.S.A., 3,655
Lota, Chile, 1,530
Matarani, Peru, 462
Midway Island, 6,280
Mollendo, Peru, 468
Monterey, California, U.S.A., 3,907
Nome, Alaska, U.S.A., 6,578
Noumea, New Caledonia, 6,541
Omura, Bonin Islands, 8,420
Papeete, Society Islands, 4,192
Pedregal, Panama, 1,313
Pimentel, Peru, 363
Pisco, Peru, 128
Ponape, Caroline Islands, 7,515
Portland, Oregon, U.S.A., 4,611
Prince Rupert, Canada, 5,047
Puerto Masachapa, Nicaragua, 1,583
Puerto Somoza, Nicaragua, 1,608
Puntarenas, Costa Rica, 1,421
Quepos, Costa Rica, 1,387
Rabaul, New Britain, 7,713
Salaverry, Peru, 266
Salina Cruz, Mexico, 2,005
San Antonio, Chile, 1, 328
San Blas, Mexico, 2,661
San Diego, California, U.S.A., 3,585
San Francisco, California, U.S.A., 3,989
San Jose, Guatemala, 1,763
San Juan, Peru, 248
San Lorenzo, Honduras, 1,701
Santa Barbara, California, U.S.A., 3,722
Seattle, Washington, U.S.A., 4,764
Seward, Alaska, U.S.A., 5,660
Sitka, Alaska, U.S.A., 5,255
Suva, Fiji Islands, 5,995
Talara, Peru, 534
Talacahuano, Chile, 1,508
Valparaiso, Chile, 1,306
Wellington, New Zealand, 5,721

CAMDEN, NEW JERSEY, U.S.A.
(39°57'00'' N., 75°08'00'' W.)

Use Philadelphia distances.

CAMP LLOYD, GREENLAND
(66°57'30'' N., 50°56'25'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,828
Strait of Gibraltar, 2,676

Ports
Churchill, Canada, 1,434
Reykjavik, Iceland, 1,274
St. John's, Canada, 1,198

CAMPBELLTOWN, NEW ZEALAND. See Bluff Harbor.

CAMPECHE, MEXICO
(19°51'00'' N., 90°45'00'' W.) to:

Junction Points*
Panama, Panama, 1,210
Yucatan Channel, 291

Ports
Belize, British Honduras (west of Banco Chinchorro, and Isla de Cozumel), 609
Castries, St. Lucia, 1,848
Cienfuegos, Cuba, 691
Colon, Panama, 1,167
Galveston, Texas, U.S.A., 617
Gulfport, Mississippi, U.S.A., 652
Habana, Cuba, 561
Key West, Florida, U.S.A., 632
La Guaira, Venezuela, 1,635
Mobile, Alabama, U.S.A., 674
New Orleans, Louisiana (via Southwest Pass), 650
Pensacola, Florida, U.S.A., 670
Pointe a Pitre, Guadeloupe, 1,806
Port au Prince, Haiti, 1,140
Port of Spain, Trinidad, 1,913
Puerto Cabello, Venezuela, 1,595
Santo Domingo, Dominican Republic, 1,364
Tampico, Mexico, 430
Tuxpan, Mexico, 375
Veracruz, Mexico, 307
Willemstad, Curacao, 1,527

CAMPHA, VIETNAM
(21°01'30'' N., 107°22'00'' E.)

Add 12 miles to Haiphong distances.

CAMRANH BAY, VIETNAM. See Vinh Cam Ranh.

CAN THO, VIETNAM
(10°02'00'' N., 105°48'00'' E.)

Via Vung Tau pilot station (10°20'30'' N., 107°04'00'' E.). Add 74½ miles to Sai Gon distances.

*JUNCTION POINT.—See Preface for use of junction points.

CANAKKLE, TURKEY
(40°09′00″ N., 26°24′00″ E.)

For ports outside the Black Sea and Sea of Marmara, subtract 133½ miles from Istanbul distances.

CANNES, FRANCE
(43°32′00″ N., 7°01′03″ E.) to:

Junction Points*
Port Said, U.A.R., 1,472
Strait of Gibraltar, 773

Ports
Alger, Algeria, 446
Cagliari, Sardinia, 347
Genova, Italy, 107
Livorno, Italy, 149
Napoli, Italy, 381
Oran, Algeria, 594
Palma, Balearic Islands, 357
Piraievs, Greece (via Corinth Canal), 942
Piraievs, Greece (south of Greece), 1,023
Sete, France, 171

CANTON, CHINA. See Kuang-Chou.

CANTON, PHOENIX ISLANDS
(2°48′00″ S., 171°43′00″ E.) to:

Junction Points*
Panama, Panama, 5,623

Ports
Apra, Guam, 2,789
Honolulu, Hawaii, U.S.A., 1,660
Howland Island, 367
Midway Island, 1,893
Pago Pago, American Samoa, 711
Palmyra Island, 775
Papeete, Society Islands, 1,581
San Diego, California, U.S.A., 3,755
San Francisco, California, U.S.A., 3,663
Seattle, Washington, U.S.A., 4,049
Wake Island, 1,843

CAP HAITIEN, HAITI
(19°46′00″ N., 72°11′30″ W.) to:

Junction Points*
Bishop Rock, England, 3,565
Panama, Panama, 860
Straits of Florida, 604

Ports
Alvaro Obregon, Mexico, 1,298
Baltimore, Maryland, U.S.A., 1,227
Belize, British Honduras, 950
Carmen, Mexico, 1,228
Cartagena, Colombia, 697
Castries, St. Lucia, 764
Charlotte Amalie, Virgin Islands, 442
Cienfuegos, Cuba, 543
Colon, Panama, 817
Dakar, Senegal, 3,154
Guantanamo, Cuba, 175
Gulfport, Mississippi, U.S.A., 1,145
Habana, Cuba, 631
Key West, Florida, U.S.A. (via Old Bahama Channel), 619
Kingston, Jamaica, 326
New York, New York, U.S.A., 1,283
Philadelphia, Pennsylvania, U.S.A., 1,245
Pointe a Pitre, Guadeloupe (via Mona Passage), 703
Pointe a Pitre, Guadeloupe (via Virgin Passage), 702
Ponta Delgada, Azores, 2,646
Port au Prince, Haiti, 195
Port of Spain, Trinidad, 888
Puerto Cabello, Venezuela, 752
San Juan, Puerto Rico, 372
Santo Domingo, Dominican Republic, 392
Willemstad, Curacao (via Windward Passage), 697
Willemstad, Curacao (via Mona Passage), 674

CAP SAINTE-JACQUES, VIETNAM. See Vung Tau.

CAPE CHEL YUSKEN. See Mys Chelyuskin.

CAPE HAITIAN, HAITI. See Cap Haitian.

CAPE LEEUWIN, AUSTRALIA*
(34°32′00″ S., 115°08′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa (via Lat. 30° S.), 5,068
Lombok Strait, Indonesia, 1,571
Port Said, U.A.R. (October–April), 6,345
Port Said, U.A.R. (May–September), 6,389
Sunda Strait, Indonesia, 1,815
Wilson Promontary, Australia, 1,524

Ports
Adelaide, Australia, 1,165
Aden, Aden Protectorate (north of Chagos Archipelago), 4,958
Aden, Aden Protectorate (south of Chagos Archipelago), 4,973
Albany, Australia, 168
Auckland, New Zealand, 3,029
Bluff Harbor, New Zealand, 2,484
Bombay, India, 4,059
Bowen, Australia, 2,975
Bunbury, Australia, 97
Calcutta, India, 3,796
Colombo, Ceylon, 3,203
Darwin, Australia, 1,978
Dunedin, New Zealand, 2,622
Flying Fish Cove, Christmas Island, Indian Ocean, 1,540
Fremantle, Australia, 181
Geraldton, Australia, 356
Gladstone Harbor, Australia, 2,688
Hobart, Tasmania, 1,628
Karachi, Pakistan, 4,512
Khawr al Ama, Neutral Zone, Persian Gulf, 5,416
Launceston, Tasmania, 1,577
Lyttelton, New Zealand, 2,792
Madras, India, 3,480
Massau, Ethiopia (October–April), 5,345
Massau, Ethiopia (May–September), 5,390
Melbourne, Australia, 1,497
Mina Abd Allah, Kuwait, 5,437
Mina al Ahmadi, Kuwait, 5,440
Mina Su'ud, Neutral Zone, Persian Gulf, 5,418
Nelson, New Zealand, 2,794
Port Augusta, Australia, 1,252
Port des Galets, Reunion Island, 3,241
Port Lincoln, Australia, 1,100
Port Louis, Mauritius (via rhumb line), 3,214
Port Refuge, Cocos Islands, 1,678
Portland, Australia, 1,304
Rangoon, Burma, 3,359
Rapid Bay, Australia, 1,131
Ra's al Khafji, Neutral Zone, Persian Gulf, 5,414
Ra's at Tannurah, Saudi Arabia, 5,316
Sabang, Indonesia, 2,711
Simons Bay, Republic of South Africa, 4,572
Stenhouse Bay, Australia, 1,077
Strahan, Australia, 1,492
Tjilatjap, Indonesia, 1,616
Townsville, Australia, 3,023
Umm Said, Qatar, 5,245
Wallaroo, Australia, 1,153
Wellington, New Zealand, 2,863
Yampi Sound, Australia, 1,588

*JUNCTION POINT.—See Preface for use of junction points.

CAPE OF GOOD HOPE, REPUBLIC OF SOUTH AFRICA* (34°22'00'' S., 18°23'00'' E.) to:

Junction Points*
Bishop Rock, England, 5,790
Cape Leeuwin, Australia (via Lat. 41° S.), 4,660
Inishtrahull, Ireland, 6,141
Lombok Strait, Indonesia, 5,461
Montreal, Canada (via Cabot Strait), 7,134
Pentland Firth, Scotland, 6,389
Port Said, U.A.R., 5,367
Punta Arenas, Chile, 4,618
Singapore, 5,579
Strait of Gibraltar, 5,082
Straits of Florida, 6,770
Sunda Strait, Indonesia, 5,164
Torres Strait, Australia, 6,854
Ushant, France, 5,746

Ports
Abidjan, Ivory Coast, 2,712
Ad Dammam, Saudi Arabia, 4,960
Adelaide, Australia, 5,754
Aden, Aden Protectorate, 3,980
Aden, Aden Protectorate (alternate), 4,235
Agadir, Morocco, 4,719
Al Bahrayn, Bahrain, 4,957
Al Basrah, Iraq, 5,232
Al Gurdagah, U.A.R., 5,041
Al Hudaydah, Yemen, 4,137
Al Kuwayt, Kuwait, 5,141
Al Mukha, Yemen, 4,043
Albany, Australia, 4,740
Amboim, Angola, 1,530
Anecho, Togo, 747
Antsirana, Malagasy Republic, 2,313
Argentia, Canada, 6,294
Assab, Ethiopia, 4,056
Baltimore, Maryland, U.S.A., 6,924
Bandar-e Shahpur, Iran (inside Agulhas Current), 5,190
Bandar-e Shahpur, Iran (outside Agulhas Current), 5,395
Bata, Spanish Guinea, 2,291
Beira, Mozambique, 1,454
Belawan, Indonesia, 5,246
Belem, Brazil, 4,368
Bissau, Portuguese Guinea, 3,518
Bolama, Portuguese Guinea, 3,403
Boma, Republic of the Congo, 1,775
Bombay, India (west of Madagascar), 4,581
Bombay, India (east of Madagascar), 4,822
Bordeaux, France, 5,838
Boston, Massachusetts, U.S.A., 6,772
Brest, France, 5,757
Buenos Aires, Argentina, 3,815
Bur Safajah, U.A.R., 5,016
Bushehr, Iran, 5,053
Cabedelo, Brazil, 3,374
Calabar, Nigeria, 2,458
Calcutta, India (November–March, east of Madagascar), 5,603
Calcutta, India (May–September, east of Madagascar), 5,609
Calcutta, India (April and October, alternate, May–September, west of Madagascar), 5,604
Cape Town, Republic of South Africa, 35
Chalna, Mungla Anchorage, Pakistan, 5,458
Charleston, South Carolina, U.S.A., 6,838
Chittagong, Pakistan, 5,492
Clarence Bay, Ascension Island, 2,409
Cobh, Ireland, 5,892
Cocanada, India, 5,023
Colombo, Ceylon (November–March), 4,475
Colombo, Ceylon (May–September), 4,513
Colombo, Ceylon (April and October, alternate, May–September), 4,457
Colon, Panama, 6,444
Cotonou, Dahomey, 857
Dakar, Senegal, 3,610
Dar es Salaam, Tanganyika, 2,330
Darwin, Australia, 6,100
Djibouti, French Somaliland, 4,089
Durban, Republic of South Africa, 764
East London, Republic of South Africa, 508
Eilat, Israel, 5,155
El Jadida, Morocco, 4,941
Fedala, Morocco, 4,951
Flying Fish Cove, Christmas Island, Indian Ocean, 4,923
Fort Dauphin, Malagasy Republic, 1,614
Freetown, Sierra Leone, 3,190
Fremantle, Australia, 4,755
Funchal, Madeira Island, 4,689
Georgetown, British Guiana, 5,026
Greenville, Liberia, 2,826
Halifax, Canada, 6,502
Hamilton, Bermuda, 6,169
Horta, Azores, 5,152
Inhambane, Mozambique, 1,228
Jacksonville, Florida, U.S.A., 6,862
Jazireh-ye Khark, Iran, 5,018
Karachi, Pakistan, 4,668
Kenitra, Morocco, 5,056
Khawr Al Ama, Neutral Zone, Persian Gulf, 5,080
Larache, Morocco, 5,049
Lindi, Tanganyika, 2,155
Lisboa, Portugal, 5,152
Lobito, Angola, 1,440
Longji Cameroon, 2,359
Lourenco Marques, Mozambique, 1,057
Luanda, Angola, 1,627
Luderitz Bay, Southwest Africa, 511
Madras, India (November–March, east of Madagascar), 4,956
Madras, India (May–September, east of Madagascar), 4,963
Madras, India (April and October, alternate, May–September, west of Madagascar), 4,957
Malacca, Malaysia, 5,464
Manakara, Malagasy Republic, 1,779
Marshall, Liberia, 2,927
Masqat, Mascat and Oman, 4,464
Massaua, Ethiopia, 4,367
Mayumba, Gabon, 1,942
Miami, Florida, U.S.A., 6,685
Mina Abd Allah, Kuwait, 5,101
Mina Al Ahmadi, Kuwait, 5,104
Mina Su'ud, Neutral Zone, Persian Gulf, 5,082
Mocambique, Mozambique, 1,807
Mocamedes, Angola, 1,239
Mogadiscio, Somali Republic, 2,855
Mombasa, Kenya, 2,472
Montevideo, Uruguay, 3,701
Mormugao, India, 4,447
Mosselbaai, Republic of South Africa, 206
Mtwara, Tanganyika, 2,111
New York, New York, U.S.A., 6,801
Norfolk, Virginia, U.S.A., 6,802
Padang, Indonesia, 4,979
Paranagua, Brazil, 3,496
Penang, Malaysia, 5,291
Philadelphia, Pennsylvania, U.S.A., 6,874
Port Blair, Andamon Island, 5,075
Port Buchanan, Liberia, 2,919
Port des Galets, Reunion Island, 2,120
Port Elizabeth, Republic of South Africa, 390
Port Etienne, Mauritania, 4,018
Port Louis, Mauritius, 2,382
Port Nolloth, Republic of South Africa, 325
Port of Spain, Trinidad, 5,337
Port Refuge, Cocos Islands, 4,428
Porto Alegre, Brazil, 3,625
Porto Grande, Cape Verde Islands, 3,958
Portsmouth, New Hampshire, U.S.A., 6,732
Quelimane, Mozambique, 1,569
Rabat, Morocco, 5,036
Rangoon, Burma (November–March, east of Madagascar), 5,610
Rangoon, Burma (May–September, east of Madagascar), 5,593

*JUNCTION POINT.—See Preface for use of junction points.

Rangoon, Burma (April and October, alternate, May–September, west of Madagascar), 5,615
Ra's al Khafji, Neutral Zone, Persian Gulf, 5,078
Ra's as Sidr, U.A.R., 5,189
Ra's at Tannurah, Saudi Arabia, 4,980
Ra's Gharib, U.A.R., 5,114
Recife, Brazil, 3,324
Rio de Janeiro, Brazil, 3,323
River Cess, Liberia, 2,874
Sabang, Indonesia, 4,980
Safi, Morocco, 4,870
Santa Cruz de Tenerife, Canary Islands, 4,453
Simons Bay, Republic of South Africa, 23
Stanley, Falkland Islands, 4,141
Suakin, Sudan, 4,538
Sulima, Sierra Leone, 3,060
Swakopmund, Republic of South Africa, 743
Tabu, Ivory Coast, 2,751
Tamatave, Malagasy Republic, 2,104
Tanga, Tanganyika, 2,425
Tema, Ghana, 2,619
Tulear, Malagasy Republic, 1,509
Umm Said, Qatar, 4,909
Victoria, Cameroon, 2,399
Victoria, Seychelles, 2,892
Zanzibar, Zanzibar, 2,358

CAPE ST. JACQUES, VIETNAM. See Vung Tau.

CAPE TOWN, REPUBLIC OF SOUTH AFRICA
(33°54′00″ S., 18°26′00″ E.) to:

Junction Points*
Bishop Rock, England, 5,772
Cape of Good Hope, Republic of South Africa, 35
Montreal, Canada (via Cabot Strait), 7,118
Panama, Panama, 6,472
Punta Arenas, Chile, 4,631
Strait of Gibraltar, 5,064
Straits of Florida, 6,766
Ushant, France, 5,743
Yucatan Channel, 6,776

Ports
Abidjan, Ivory Coast, 2,679
Baltimore, Maryland, U.S.A., 6,912
Boma, Republic of the Congo, 1,760
Bordeaux, France, 5,820
Boston, Massachusetts, U.S.A., 6,707
Brunswick, Georgia, U.S.A., 6,857
Buenos Aires, Argentina, 3,831
Cadiz, Spain, 5,078
Charleston, South Carolina, U.S.A., 6,830
Cienfuegos, Cuba, 6,580
Cobh, Ireland, 5,894
Colon, Panama, 6,429
Dakar, Senegal, 3,593
El Ferrol del Caudillo, Spain, 5,421
Freetown, Sierra Leone, 3,164
Funchal, Madeira Island, 4,680
Guantanamo, Cuba, 6,260
Habana, Cuba, 6,724
Halifax, Canada, 6,490
Jacksonville, Florida, U.S.A., 6,854
Kingston, Jamaica, 6,278
Lisboa, Portugal, 5,134
Luanda, Angola, 1,601
Luderitz Bay, Southwest Africa, 479
Montevideo, Uruguay, 3,608
New York, New York, U.S.A., 6,786
Norfolk, Virginia, U.S.A., 6,790
Philadelphia, Pennsylvania, U.S.A., 6,867
Ponta Delgada, Azores, 5,040
Port Nolloth, Republic of South Africa, 301
Portland, Maine, U.S.A., 6,709
Recife, Brazil, 3,318
Rio de Janeiro, Brazil, 3,273
St. Helena Island, 1,697
St. John, Canada, 6,667
St. John's, Canada, 5,205
San Juan, Puerto Rico, 5,767
Santa Cruz de Tenerife, Canary Islands, 4,435
Santo Domingo, Dominican Republic, 5,934
Santos, Brazil, 3,409
Savannah, Georgia, U.S.A., 6,864
Swakopmund, Republic of South Africa, 719
Sydney, Canada, 6,425
Vigo, Spain, 5,322
Willemstad, Curacao, 5, 740
Wilmington, North Carolina, U.S.A., 6,804

CARDENAS, CUBA
(23°03′30″ N., 81°11′30″ W.) to:

Junction Points*
Straits of Florida, 140
Yucatan Channel, 269

Ports
Cienfuegos, Cuba, 905
Guantanamo, Cuba, 539
Habana, Cuba, 88
Hamilton, Bermuda, 1,122
Kingston, Jamaica, 703
Philadelphia, Pennsylvania, U.S.A., 1,124
Port au Prince, Haiti, 603
San Juan, Puerto Rico, 917
Santo Domingo, Dominican Republic, 887

CARDIFF, WALES
(51°27′00″ N., 3°09′00″ W.) to:

Junction Points*
Bishop Rock, England, 176
Fastnet, Ireland, 246
Pentland Firth, Scotland, 609

Ports
Barrow in Furness, England, 273
Belfast, Ireland, 293
Boulogne, France, 431
Brest, France, 277
Cherbourg, France, 309
Cobh, Ireland, 204
Douglas, Isle of Man, 246
Dublin, Ireland, 205
Fishguard, Wales, 130
Glasgow, Scotland, 375
Holyhead, Wales, 202
Liverpool, England, 267
London, England, 526
Londonderry, Ireland, 369
Southampton, England, 346
Swansea, Wales, 46
Workington, England, 299

CARIPITO, VENEZUELA
(10°09′15″ N., 63°02′00″ W.)
Add 5 miles to Guanoco distances.

CARMEN, MEXICO
(18°38′00″ N., 91°50′00″ W.) to:

Junction Points*
Panama, Panama, 1,289

Ports
Apalachicola, Florida, U.S.A., 756
Belize, British Honduras (west of Banco Chinchoro and Isla de Cozumel), 688
Cap Haitien, Haiti, 1,228
Castries, St. Lucia, 1,927
Charlotte Amalie, Virgin Islands (via Yucatan Channel and Windward Passage), 1,658
Charlotte Amalie, Virgin Islands (via Yucatan Channel and south of Hispaniola), 1,675
Cienfuegos, Cuba, 770
Colon, Panama, 1,246
Galveston, Texas, U.S.A., 661
Gulfport, Mississippi, U.S.A., 725
Habana, Cuba, 639
Key West, Florida, U.S.A., 708
Kingston, Jamaica, 1,056
La Guaira, Venezuela, 1,714
Mobile, Alabama, U.S.A., 749
New Orleans, Louisiana, U.S.A., 723

*JUNCTION POINT.—See Preface for use of junction points.

Pensacola, Florida, U.S.A., 745
Pointe a Pitre, Guadeloupe, 1,885
Port au Prince, Haiti, 1,219
Port of Spain, Trinidad, 1,992
Santo Domingo, Dominican Republic, 1,437
Tampico, Mexico, 401
Tuxpan, Mexico, 333
Veracruz, Mexico, 242
Willemstad, Curacao, 1,599

CARTAGENA, COLOMBIA
(10°24'20'' N., 75°32'00'' W.) to:

Junction Points*
Bishop Rock, England, 4,138
Panama, Panama, 324
Strait of Gibraltar, 4,087
Yucatan Channel, 891

Ports
Alvaro Obregon, Mexico, 1,407
Apalachicola, Florida, U.S.A., 1,366
Belize, British Honduras, 904
Bluefields, Nicaragua, 497
Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 2,036
Brunswick, Georgia, U.S.A., 1,417
Buenos Aires, Argentina, 5,240
Cap Haitien, Haiti, 697
Castries, St. Lucia, 933
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,443
Charlotte Amalie, Virgin Islands, 811
Cienfuegos, Cuba, 778
Colon, Panama, 281
Galveston, Texas, U.S.A., 1,583
Great Harbor, Culebra Island (via South Channel), 803
Guantanamo, Cuba, 586
Gulfport, Mississippi, U.S.A., 1,449
Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,142
Jacksonville, Florida, U.S.A., 1,395
Key West, Florida, U.S.A. (via Windward Passage and Old Bahama Channel), 1,130
Kingston, Jamaica, 479
La Guaira, Venezuela, 612
Limon, Costa Rica, 447
Maracaibo, Venezuela, 465
Mobile, Alabama, U.S.A., 1,450
New Orleans, Louisiana, U.S.A. (via Yucatan Channel and Southwest Pass), 1,468
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 1,853
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,658
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,825
Pointe a Pitre, Guadeloupe, 941
Porlamar, Margarita, Venezuela, 785
Port au Prince, Haiti, 639
Port of Spain, Trinidad, 932
Portsmouth, New Hampshire, U.S.A. (via Windward Passage and Crooked Island Passage), 2,053
Puerto Barrios, Guatemala, 901
Puerto Cortes, Honduras, 854
Puerto Mexico, Mexico, 1,484
Punta Cardon, Venezuela, 397
San Juan, Puerto Rico, 782
San Juan del Norte, Nicaragua, 495
Santo Domingo, Dominican Republic, 610
Savannah, Georgia, U.S.A., 1,442
Tampa, Florida, U.S.A., 1,295
Tampico, Mexico, 1,575
Tuxpan, Mexico, 1,545
Veracruz, Mexico, 1,510
Washington, D.C., U.S.A. (via Windward Passage and Crooked Island Passage), 1,794
Willemstad, Curacao, 471
Wilmington, North Carolina, U.S.A., 1,494

CARTAGENA, SPAIN
(37°35'44'' N., 0°59'00'' W.) to:

Junction Points*
Port Said, U.A.R., 1,705
Strait of Gibraltar, 259

Ports
Alexandria, U.A.R., 1,585
Algeciras, Spain, 238
Alger, Algeria, 208
Ancona, Italy, 1,338
Annaba, Algeria, 440
Banghazi, Libya, 1,119
Barcelona, Spain, 282
Bari, Italy, 1,131
Bayrut, Lebanon, 1,797
Bizerte, Tunisia, 532
Brindisi, Italy, 1,073
Castellamare di Stabia, Italy, 761
Ceuta, Morocco, 240
Dubrovnik, Yugoslavia, 1,177
Genova, Italy, 616
Gibraltar, 241
Haifa, Israel, 1,794
Iraklion, Crete, 1,279
Istanbul, Turkey (via Corinth Canal), 1,567
Istanbul, Turkey (south of Greece), 1,573
Izmir, Turkey (via Corinth Canal), 1,413
Izmir, Turkey (south of Greece), 1,430
La Spezia, Italy, 640
Livorno, Italy, 636
Malaga, Spain, 189
Marseille, France, 460
Messina, Sicily, 806
Napoli, Italy, 756
Odessa, U.S.S.R. (via Corinth Canal), 1,915
Odessa, U.S.S.R. (south of Greece), 1,932
Oran, Algeria, 115
Palermo, Sicily, 697
Palma, Balearic Islands, 222
Piraievs, Greece (via Corinth Canal), 1,214
Piraievs, Greece (south of Greece), 1,271
Rijeka, Yugoslavia, 1,405
Savona, Italy, 601
Sibenik, Yugoslavia, 1,279
Siracusa, Sicily, 817
Skikda, Algeria, 395
Split, Yugoslavia, 1,264
Tarabulus, Libya, 856
Taranto, Italy, 1,025
Thessaloniki, Greece (via Corinth Canal), 1,462
Thessaloniki, Greece (south of Greece), 1,479
Toulon, France, 471
Trieste, Free Territory, 1,439
Tunis, Tunisia, 583
Valencia, Spain, 152
Valletta, Malta, 768
Venezia, Italy, 1,449
Volos, Greece (via Corinth Canal), 1,403
Volos, Greece (south of Greece), 1,420

CARUPANO, VENEZUELA
(10°41'00'' N., 63°15'00'' W.) to:

Junction Points*
Panama, Panama, 1,088
Yucatan Channel, 1,451

Ports
Barranquilla, Colombia, 734
Port of Spain, Trinidad, 109
Santiago de Cuba, Cuba, 1,009

CASABLANCA, MOROCCO
(33°37'00'' N., 7°36'00'' W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Strait of Gibraltar, 166
Ushant, France, 960

Ports
Agadir, Morocco, 257
Amboim, Angola, 3,945
Cadiz, Spain, 192
Ceuta, Morocco, 189
Dakar, Senegal, 1,333
Freetown, Sierra Leone, 1,812
Funchal, Madeira Island, 476
Gijon, Spain, 763
Lisboa, Portugal, 324
Ponta Delgada, Azores, 915
Port Etienne, Mauritania, 1,032
Porto Grande, Sao Vicente, Cape Verde Islands, 1,387
Rota, Spain, 202
Safi, Morocco, 134
Santa Cruz de Tenerife, Canary Islands, 548
Setubal, Portugal, 313
Tangier, Morocco, 166
Vigo, Spain, 545
Vila Rial de Santo Antonio, Portugal, 218
Villa Cisneros, Spanish Sahara, 769

CASILDA, CUBA
(21°45'00'' N., 79°59'20'' W.) to:

Junction Points*
Panama, Panama, 792
Yucatan Channel, 307

Ports
Barranquilla, Colombia, 732
Kingston, Jamaica, 372
Santiago de Cuba, Cuba, 288

CASTELLAMARE, ITALY. See Castellamare Di Stabia.

CASTELLAMARE DI STABIA, ITALY
(40°41'45'' N., 14°28'28''E.) to:

Junction Ponts*
Port Said, U.A.R., 1,114
Strait of Gibraltar, 1,006

Ports
Alexandria, U.A.R., 1,003
Cagliari, Sardinia, 276
Cartagena, Spain, 761
Istanbul, Turkey (via Corinth Canal), 937
Istanbul, Turkey (south of Greece), 979
La Spezia, Italy, 308
Palermo, Sicily, 168
Toulon, France, 430

CASTRIES, ST. LUCIA
(14°01'00'' N., 61°00'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,405
Inishtrahull, Ireland, 3,499
Montreal, Canada, 2,642
Panama, Panama, 1,203
Pentland Firth, Scotland, 3,704
Punta Arenas, Chile, 5,451
Strait of Gibraltar, 3,236
Straits of Florida (via Mona Passage), 1,409
Yucatan Channel, 1,452

Ports
Alvaro Obregon, Mexico, 2,000
Baltimore, Maryland, U.S.A., 1,741
Belem, Brazil, 1,265
Belize, British Honduras, 1,609
Boston, Massachusetts, U.S.A., 1,812
Bridgetown, Barbados, (north of St. Lucia), 110
Bridgetown, Barbados (south of St. Lucia), 115
Brunswick, Georgia, U.S.A., 1,529
Buenos Aires, Argentina, 4,375
Campeche, Mexico, 1,848
Cap Haitien, Haiti, 767
Carmen, Mexico, 1,927
Cartagena, Colombia, 933
Charleston, South Carolina, U.S.A., 1,532
Charlotte Amalie, Virgin Islands, 346
Cienfuegos, Cuba, 1,246
Colon, Panama, 1,160
Dakar, Senegal, 2,543
Elizabeth Harbor, Bahamas, 1,049
Fort de France, Martinique, 37
Georgetown, British Guiana, 482
Guantanamo, Cuba, 922
Habana, Cuba (via Mona Passage), 1,370
Halifax, Canada, 1,850
Hamilton, Bermuda, 1,149
Horta, Azores, 2,265
Jacksonville, Florida, U.S.A., 1,520
Key West, Florida, U.S.A. (via Mona Passage), 1,358
Kingston, Jamaica, 950
Kingstown, St. Vincent, 60
La Guaira, Venezuela, 405
Limon, Costa Rica, 1,316
Lisboa, Portugal, 3,111
Miami, Florida, U.S.A., 1,352
Montevideo, Uruguay, 4,261
New York, New York, U.S.A., 1,747
Norfolk, Virginia, U.S.A., 1,620
Philadelphia, Pennsylvania, U.S.A., 1,753
Pointe a Pitre, Guadeloupe, 141
Port au Prince, Haiti, 950
Port of Spain, Trinidad (east of Grenadine Islands), 231
Port of Spain, Trinidad (west of Grenadine Islands), 230
Portsmouth, New Hampshire, U.S.A., 1,822
Puerto Cabello, Venezuela, 465
Puerto Cortes, Honduras, 1,578
Recife, Brazil, 2,202
Rio de Janeiro, Brazil, 3,274
St. Johns, Antigua, 204
St. Pierre, Martinique, 46
Salvador, Brazil, 2,593
San Juan, Puerto Rico (west of Saint Croix and Virgin Passage), 418
San Juan del Norte, Nicaragua, 1,344
Santo Domingo, Dominican Republic, 578
Savannah, Georgia, U.S.A., 1,548
Sint Nicolaas, Aruba, 532
Sydney, Canada, 1,967
Tuxpan, Mexico, 2,136
Willemstad, Curacao, 489

CATANIA, SICILY
(37°29'35'' N., 15°05'46'' E.) to:

Junction Points*
Port Said, U.A.R., 942
Strait of Gibraltar, 1,081

Ports
Ajaccio, Corsica, 464
Alexandria, U.A.R., 828
Almeria, Spain, 919
Banghazi, Libya, 406
Cagliari, Sardinia, 377
Genova, Italy, 535
Istanbul, Turkey (via Corinth Canal), 776
Istanbul, Turkey (south of Greece), 810
Kerkira, Greece, 290
Livorno, Italy, 464
Malaga, Spain, 1,012
Marseille, France, 627
Messina, Sicily, 53
Napoli, Italy, 225
Palermo, Sicily, 170
Pula, Yugoslavia, 594

CASTRIES BAY, U.S.S.R. See Zaliv Chikhacheva.

*JUNCTION POINT.—See Preface for use of junction points.

CATHERINE HILL BAY, AUSTRALIA
(33°09'15'' S., 151°38'30'' E.) to:

Junction Points*
Torres Strait, Australia, 1,738
Wilson Promontory, Australia, 467

Ports
Brisbane, Australia, 462
Hobart, Tasmania, 677
Port Moresby, Papua, 1,695

CATIA LA MAR, VENEZUELA
(10°36'30'' N., 67°03'00'' W.) to:

Junction Points*
Panama, Panama, 873
Yucatan Channel, 1,240

Ports
Barranquilla, Colombia, 524
Port of Spain, Trinidad, 335
San Juan, Puerto Rico, 556

CATTARO, YUGOSLAVIA. See Kotor.

CAVITE, LUZON, PHILIPPINES
(14°30'00'' N., 120°56'00'' E.)

Subtract 3 miles from Manila distances.

CAYENNE, FRENCH GUIANA
(5°02'00'' N., 52°16'00'' W.) to:

Junction Points*
Panama, Panama, 2,308
Straits of Florida (via Mona Passage), 2,177

Ports
Baltimore, Maryland, U.S.A., 2,468
Belem, Brazil, 516
Bordeaux, France, 3,670
Boston, Massachusetts, U.S.A., 2,499
Colon, Panama, 2,265
Dakar, Senegal, 2,140
Fort de France, Martinique, 782
Hamilton, Bermuda, 1,801
Natal, Brazil, 1,250
New York, New York, U.S.A., 2,447
Paramaribo, Surinam, 224
Philadelphia, Pennsylvania, U.S.A., 2,468
Pointe a Pitre, Guadeloupe, 867

CEARA, BRAZIL. See Fortaleza.

CEBU, CEBU, PHILIPPINES
(10°17'30'' N., 123°54'30'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,278
Singapore, Malaysia, 1,355

Ports
Apra, Guam, 1,344
Batangas, Philippines, 309
Da Nang, Vietnam, 1,049
Davao, Philippines, 439
Djakarta, Indonesia (via Lumbucan Channel), 1,563
Haiphong, Vietnam (via Jintotolo Channel, Romblon Island, Verde Island Passage, and south of Hainan Tao), 1,276
Hakodate, Japan, 2,177
Hong Kong, B.C.C. (via Verde Island Passage and Jintotolo Channel), 960
Honolulu, Hawaii, U.S.A., 4,610
Hsia-men, China (via Balintang Channel), 965
Ioilo, Philippines, 176
Inchon, Korea, 1,656
Kobe, Japan, 1,601
Kuang-chou, China (via Verde Island Passage and Jintotolo Channel), 1,043
Lo-hsing-ta Mao-ti, China (via Balintang Channel), 1,051
Lu-shun, China, 1,754
Manila, Philippines (via Verde Island Passage and Jintotolo Channel), 391
Nagasaki, Japan, 1,406
Pei-hai, China, 1,220
Petropavlovsk, U.S.S.R., 3,101
Portland, Oregon, U.S.A., 6,001
Pulupandan, Philippines, 225
Sai Gon, Vietnam (via Jintotolo Channel and Mindoro Strait, north of North Danger Reef), 1,152
Shang-hai, China (via San Bernardino Strait, Steep Island Pass, and Pai-chieh Hsia), 1,322
Shimonoseki, Japan, 1,547
Shan-tou, China (via Verde Island Passage and Jintotolo Channel), 952
Ta-ku, China, 1,907
Tan-shui, Taiwan (via Peng-hu Lieh Tao and Balintang Channel), 1,006
Vladivostok, U.S.S.R., 2,026
Wei- hai-wei, China, 1,679
Yen-tai, China, 1,713
Yokohama, Japan, 1,762
Zamboanga, Philippines, 252

CEKHIRA, TUNISIA. See As Sukhayrah.

CEUTA, MOROCCO
(35°53'25'' N., 5°18'45'' W.) to:

Junction Points*
Port Said, U.A.R., 1,923
Strait of Gibraltar, 23

Ports
Alexandria, U.A.R., 1,802
Alger, Algeria, 417
Alicante, Spain, 299
Ancona, Italy, 1,561
Annaba, Algeria, 656
Banghazi, Libya, 1,336
Barcelona, Spain, 515
Bari, Italy, 1,354
Bayrut, Lebanon, 2,014
Bizerte, Tunisia, 750
Brindisi, Italy, 1,296
Cagliari, Sardinia, 731
Cartagena, Spain, 240
Casablanca, Morocco, 189
Genova, Italy, 849
Haifa, Israel, 2,012
Iraklion, Crete, 1,496
Istanbul, Turkey (via Corinth Canal), 1,785
Istanbul, Turkey (south of Greece), 1,802
Izmir, Turkey (via Corinth Canal), 1,630
Izmir, Turkey (south of Greece), 1,648
La Spezia, Italy, 872
Livorno, Italy, 868
Marseille, France, 692
Melilla, Morocco, 131
Messina, Sicily, 1,029
Napoli, Italy, 982
Odessa, U.S.S.R. (via Corinth Canal), 2,133
Odessa, U.S.S.R. (south of Greece), 2,150
Oran, Algeria, 232
Palermo, Sicily, 921
Palma, Balearic Islands, 452
Piraievs, Greece (via Corinth Canal), 1,431
Piraievs, Greece (south of Greece), 1,488
Rijeka, Yugoslavia, 1,628
Savona, Italy, 834
Sibenik, Yugoslavia, 1,502
Siracusa, Sicily, 1,035

*JUNCTION POINT.—See Preface for use of junction points.

Split, Yugoslavia, 1,487
Tangier, Morocco, 29
Tarabulus, Libya, 1,074
Taranto, Italy, 1,249
Thessaloniki, Greece (via Corinth Canal), 1,679
Thessaloniki, Greece (south of Greece), 1,696
Toulon, France, 704
Trieste, Free Territory, 1,662
Tunis, Tunisia, 801
Valencia, Spain, 385
Valletta, Malta, 986
Venezia, Italy, 1,672
Volos, Greece (via Corinth Canal), 1,620
Volos, Greece (south of Greece), 1,637

CHALNA, MUNGLA ANCHORAGE, PAKISTAN
(22°28'00'' N., 89°35'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,458
Port Said, U.A.R., 4,705
Singapore, 1,578

Ports
Calcutta, India, 288
Penang, Malaysia, 1,228

CHAMPERICO, GUATEMALA
(14°17'30'' N., 91°56'00'' W.) to:

Junction Points*
Panama, Panama, 954

Ports
Acapulco, Mexico, 494
Brito, Nicaragua, 399
La Libertad, Mexico, 1,606
Mazatlan, Mexico, 1,078

CHANARAL, CHILE
(26°21'00'' S., 70°39'30'' W.) to:

Ports
Antofagasta, Chile, 173
Arica, Chile, 478
Valparaiso, Chile, 416

CHANARAL DE LAS ANIMAS, CHILE. See Chanaral.

CHAN-CHIANG, CHINA
(21°11'30'' N., 110°24'00'' E.) to:

Junction Points*
Singapore, 1,333
Sunda Strait, Indonesia, 1,710

Ports
Hong Kong, B.C.C., 245
Sai Gon, Vietnam, 838

CHANGJON, KOREA
(38°44'00'' N., 128°12'45'' E.) to:

Ports
Hakodate, Japan, 638
Maizuru, Japan, 411
Pusan, Korea, 268
Shimonoseki, Japan, 337
Vladivostok, U.S.S.R., 319

CHANG-KAN, CHINA
(19°06'30'' N., 108°37'00'' E.) to:

Junction, Points*
Sunda Strait, Indonesia, 1,588

Ports
Haiphong, Vietnam, 156
Hong Kong, B.C.C., 408
Kao-hsiung Chiang, Taiwan, 811
Sai Gon, Vietnam, 708

CHARLESTON, SOUTH CAROLINA, U.S.A.
(32°47'00'' N., 79°55'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,448
Bishop Rock, England (track B), 3,422
Bishop Rock, England (track C), 3,375
Cape of Good Hope Republic of South Africa, 6,838
Fastnet, Ireland (track A), 3,347
Fastnet, Ireland (track B), 3,318
Fastnet, Ireland (track C), 3,262
Inishtrahull, Ireland (track A), 3,473
Inishtrahull, Ireland (track B), 3,437
Inishtrahull, Ireland (track C), 3,360
Montreal, Canada (via Strait of Canso), 1,940
Panama, Panama, 1,607
Pentland Firth, Scotland (track A), 3,687
Pentland Firth, Scotland (track B), 3,641
Pentland Firth, Scotland (track C), 3,540
Punta Arenas, Chile, 6,898
Strait of Gibraltar (track A), 3,594
Straits of Florida, 637
Yucatan Channel, 819

Ports
Angmagssalik, Greenland (direct), 2,752
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,766
Antilla, Cuba (via Crooked Island Passage), 813
Argentia, Canada, 1,489
Arkhangelsk, U.S.S.R., 4,692
Banes, Cuba (via Crooked Island Passage), 802
Barranquilla, Colombia, 1,391
Belem, Brazil, 2,786
Bocas del Toro, Panama, 1,638
Bordeaux, France, (track A), 3,733
Bordeaux, France, (track B), 3,712
Bordeaux, France, (track C), 3,683
Brest, France (track A), 3,530
Brest, France (track B), 3,506
Brest, France (track C), 3,465
Bridgetown, Barbados, 1,628
Buenos Aires, Argentina, 5,817
Cadiz, Spain, 3,563
Cape Town, Republic of South Africa, 6,830
Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,443
Castries, St. Lucia, 1,532
Charlotte Amalie, Virgin Islands, 1,192
Charlottetown, Canada, 1,313
Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,264
Cienfuegos, Cuba (southbound, via Straits of Florida and Yucatan Channel), 1,104
Colon, Panama (via Yucatan Channel), 1,636
Colon, Panama (via Crooked Island Passage and Windward Passage), 1,564
Dakar, Senegal, 3,557
Elizabeth Harbor, Bahamas, 610
Gibara, Cuba (via Crooked Island Passage), 806
Great Harbor, Culebra Island, 1,176
Guantanamo, Cuba (via Crooked Island Passage and Windward Passage), 900
Habana, Cuba (southbound, via Straits of Florida), 648
Halifax, Canada, 1,077
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,064
La Guaira, Venezuela, 1,549
Lagos, Nigeria, 5,065
Las Palmas de Gran Canaria, Canary Islands, 3,341

*JUNCTION POINT.—See Preface for use of junction points.

Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 1,637
Lisboa, Portugal, 3.397
Manzanillo, Cuba (via Crooked Island Passage, Windward Passage, and Canal de Balandras), 1,105
Marcaibo, Venezuela, 1,467
Montevideo, Uruguay, 5,708
Nassau, Bahamas, 507
Nuevitas, Cuba (via Crooked Island Passage), 865
Nuevitas, Cuba (via Straits of Florida, Nicholas Channel and Old Bahama Channel, southbound), 763
Pointe a Pitre, Guadeloupe, 1,443
Ponce, Puerto Rico, 1,168
Ponta Delgada, Azores, 2,644
Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,013
Port au Prince, Haiti, 961
Port of Spain, Trinidad, 1,682
Racife, Brazil, 3,649
Rio de Janeiro, Brazil, 4,717
Salvador, Brazil, 4,040
San Juan, Puerto Rico, 1,138
Santa Cruz de Tenerife, Canary Islands, 3,275
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,373
Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 952
Santo Domingo, Dominican Republic, 1,190
Santos, Brazil, 4,908
Willemstad, Curacao (via Mona Passage), 1,472
Willemstad, Curacao (via Windward Passage), 1,446

CHARLESTOWN, NEVIS
(17°08'30'' N., 62°38'00'' W.) to:

Ports
Hamilton, Bermuda, 937
New York, New York, U.S.A., 1,539
St. Johns, Antigua, 48

CHARLOTTE AMALIE, ST. THOMAS, VIRGIN ISLANDS
(18°20'00'' N., 64°56'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,369
Fastnet, Ireland, 3,279
Inishtrahull, Ireland, 3,427
Montreal, Canada (via Strait of Canso), 2,405
Panama, Panama, 1,072
Pentland Firth, Scotland, 3,616
Punta Arenas, Chile, 5,765
Strait of Gibraltar, 3,323
Straits of Florida, 1, 087
Yucatan Channel, 1,200

Ports
Alvaro Obregon, Mexico (north of Hispaniola), 1,726
Alvaro Obregon, Mexico (south of Hispaniola), 1,747
Baltimore, Maryland, U.S.A., 1,417
Belem, Brazil, 1,598
Belize, British Honduras, 1,368
Boston, Massachusetts, U.S.A., 1,513
Bridgetown, Barbados, 442
Brunswick, Georgia, U.S.A., 1,190
Buenos Aires, Argentina, 4,689
Cap Haitien, Haiti, 442
Carmen, Mexico (via Yucatan Channel and Windward Passage), 1,658
Carmen, Mexico (south of Hispaniola and via Yucatan Channel), 1,675
Cartagena, Colombia, 811
Castries, St. Lucia, 346
Charleston, South Carolina, U.S.A., 1,192
Charlottetown, Canada, 1,778
Cienfuegos, Cuba, 973
Colon, Panama, 1,029
Dakar, Senegal, 2,751
Elizabeth Harbor, Bahamas, 704
Georgetown, British Guiana, 814
Guantanamo, Cuba (north of Hispaniola and Virgin Passage), 607
Habana, Cuba, 1,048
Halifax, Canada, 1,595
Hamilton, Bermuda, 872
Jacksonville, Florida, U.S.A., 1,181
Key West, Florida, U.S.A., 1,036
Kingston, Jamaica, 705
La Guaira, Venezuela, 479
Las Palmas de Gran Canaria, Canary Islands, 2,791
Lisboa, Portugal, 3,147
Miami, Florida, U.S.A., 991
Montevideo, Uruguay, 4,575
New Amsterdam, British Guiana, 903
New York, New York, U.S.A., 1,434
Norfolk, Virginia, U.S.A., 1,296
Pedernales, Venezuela, 562
Philadelphia, Pennsylvania, U.S.A., 1,434
Pointe a Pitre, Guadeloupe, 267
Port au Prince, Haiti, 628
Port of Spain, Trinidad, 518
Portland, Maine, U.S.A., 1,557
Portsmouth, New Hampshire, U.S.A., 1,534
Puerto Cabello, Venezuela, 506
Puerto Cortes, Honduras, 1,343
Recife, Brazil, 2,516
Rio de Janeiro, Brazil, 3,588
Salvador, Brazil, 2,907
San Juan del Norte, Nicaragua, 1,199
Santa Barbara de Samana, Dominican Republic, 261
Santa Cruz de Tenerife, Canary Islands, 2,764
Santo Domingo, Dominican Republic, 300
Savannah, Georgia, U.S.A., 1,210
Tuxpan, Mexico (via Yucatan Channel and north of Hispaniola), 1,867
Tuxpan, Mexico (via Old Bahama Channel), 1,890
Willemstad, Curacao, 457

CHARLOTTETOWN, CANADA
(46°14'00'' N., 63°07'00'' W.) to:

Junction Points*
Montreal, Canada, 708
Panama, Panama (via Strait of Canso, Crooked Island Passage and Windward Passage), 2,578
Punta Arenas, Chile, 6,907

Ports
Baltimore, Maryland, U.S.A., 1,142
Boston, Massachusetts, U.S.A. (via Strait of Canso), 621
Buenos Aires, Argentina, 5,831
Charleston, South Carolina, U.S.A., 1,313
Charlotte Amalie, Virgin Islands, 1,778
Colon, Panama (via Strait of Canso, Crooked Island Passage, and Windward Passage), 2,535
Habana, Cuba, 1,846
Halifax, Canada, 268
Key West, Florida, U.S.A., 1,788
Montevideo, Uruguay, 5,717
New York, New York, U.S.A. (via strait of Canso), 832
Philadelphia, Pennsylvania, U.S.A., 982
Portland, Maine, U.S.A. (via Strait of Canso), 579
Recife, Brazil, 3,658
Rio de Janeiro, Brazil, 4,730
Salvador, Brazil, 4,049
Savannah, Georgia, U.S.A., 1,386

CHATHAM, ENGLAND
(51°24'00'' N., 0°33'00'' E.)

Subtract 23 miles from London distances.

CHEFOO, CHINA. See Yen-tai.

*JUNCTION POINT.—See Preface for use of junction points.

CHEMULPO, KOREA. See Inchon.

CHEN-CHIANG, CHINA
(32°13'00'' N., 119°27'00'' E.)

Add 139 miles to Shang-hai distances for ports outside the Chang Chiang (Yangtze River.)

CHERBOURG, FRANCE
(49°39'00'' N., 1°37'00'' W.) to:

Junction Points*
Bishop Rock, England, 197
Kiel Canal (east end), Germany, 554
Skagens Odde, Denmark, 671

Ports
Amsterdam, Netherlands, 305
Antwerpen, Belgium, 281
Barrow in Furness, England, 448
Bergen, Norway, 734
Bremerhaven, Germany, 488
Caen, France, 73
Cardiff, Wales, 309
Cobh, Ireland, 315
Dieppe, France, 105
Dover, England, 146
Dunkerque, France, 179
Egersund, Norway, 621
Emden, Germany, 428
Esbjerg, Denmark, 514
Fecamp, France, 79
Fishguard, Wales, 306
Hamburg, Germany, 543
Holyhead, Wales, 377
Kristiansand, Norway, 632
Liverpool, England, 442
Oostende, Belgium, 203
Olso, Norway, 784
Rotterdam, Netherlands, 282
Stavanger, Norway, 661
Wilhelmshaven, Germany, 472
Zeebrugge, Belgium, 218

CHESTER, PENNSYLVANIA, U.S.A.
(39°50'00'' N., 75°22'00'' W.)

Subtract 15 miles from Philadelphia distances.

CHICHI-SHIMA, NAMPO-SHOTO, JAPAN. See Omura.

CHIKHACHEVA ZALIV. See Zaliv Chikhacheva.

CHI-LUNG CHIANG, TAIWAN
(25°08'10'' N., 121°44'00'' E.) to:

Ports
Hsia-men, China, 227
Macau, China, 516
Misumi, Japan, 654
Naha, Ryukyu Islands, 337
San-men Wan, China, 248
Shang-hai, China, 447
Ta-ku, China, 1,013
Ta-lien, China, 852
Uno, Japan, 903
Yu-lin Chiang, Hainan-tao, China, 830
Yung-chia, China, 204

CHIMBOTE, PERU
(9°05'00'' S., 78°36'00'' W.) to:

Junction Points*
Panama, Panama, 1,158
Punta Arenas, Chile, 2,843

Ports
Apra, Guam, 8,264
Callao, Peru, 206
Honolulu, Hawaii, U.S.A., 5,015
Pago Pago, American Samoa, 5,389
Papeete, Society Islands, 4,157
San Diego, California, U.S.A., 3,402
San Francisco, California, U.S.A., 3,804
Valparaiso, Chile, 1,490
Wellington, New Zealand, 5,781

CHIMU WAN, OKINAWA JIMA, RYUKYU ISLANDS
(26°25'00'' N., 128°00'00'' E.) to:

Junction Points*
Singapore, 2,046

Ports
Apra, Guam, 1,228
Manila, Philippines, 947
Shang-hai, China, 527
Yokohama, Japan, 830

CHING-TAO, CHINA
(36°05'30'' N., 120°19'00'' E.) to:

Junction Points*
Panama, Panama, 8,575
Singapore, 2,466

Ports
Aleksandrovsk, Sakhalin, 1,602
Apra, Guam, 1,900
Auckland, New Zealand, 5,378
Chin-huang-tao, China, 381
Chinnampo, Korea, 309
Darwin, Australia, 3,062
Dutch Harbor, Alaska, U.S.A., 3,385
Guayaquil, Ecuador, 8,880
Hai-kou, Hai-nan Tao (north of Taiwan), 1,370
Hong Kong, B.C.C., 1,120
Honolulu, Hawaii, U.S.A., 4,456
Hu-lu Tao, China, 414
Hua-lien Chiang, Taiwan, 792
Inchon, Korea, 333
Kodiak, Alaska, U.S.A., 3,975
Lo-hsing-ta Mao-ti, China, 715
Lu-shun, China, 280
Manila, Philippines, 1,422
Midway Island, 3,303
Mokpo, Korea, 336
Nikolayevsk, U.S.S.R., 1,750
Noumea, New Caledonia, 4,416
Pago Pago, American Samoa, 4,969
Palmyra Island, 4,660
Papeete, Society Islands, 6,046
Petropavlovsk, U.S.S.R., 2,215
Pusan, Korea, 497
Rabaul, New Britain, 3,043
Sai Gon, Vietnam, 1,969
San Diego, California, U.S.A., 5,805
San Francisco, California, U.S.A., 5,403
San-men Wan, China, 528
Shang-hai, China, 401
Sitka, Alaska, U.S.A., 4,454
Su-ao Chiang, Taiwan, 756
Surabaja, Indonesia, 2,864
Suva, Fiji Islands, 4,662
Sydney, Australia, 4,871
Tai-tung Chiang, Taiwan, 870
Ta-ku, China, 436
Ta-lien, China, 277
Tasa Do, Korea, 339
Truk, Caroline Islands, 2,459
Valparaiso, Chile, 10,274
Vladivostok, U.S.S.R., 998
Wake Island, 2,614
Wei-hai-wei, China, 205
Wonsan, Korea, 802
Yen-tai, China, 239
Yokohama, Japan, 1,160
Yung-chia, China, 623

CHINHAE, KOREA
(35°08'40'' N., 128°28'35'' E.)

Subtract 3 miles from Masan distances.

CHIN-HUANG-TAO, CHINA
(39°55'00'' N., 119°36'30'' E.) to:

Ports
Aleksandrovsk, Sakhalin, 1,755
Ching-tao, China, 381
Chinnampo, Korea, 307
Hsia-men, China, 1,114

*JUNCTION POINT.—See Preface for use of junction points.

Inchon, Korea, 406
Lo-hsing-ta Mao-ti, China (via Steep Island Pass), 977
Lu-shun, China, 113
Mokpo, Korea (south of Kasa Do), 484
Nagasaki, Japan, 702
Petropavlovsk, U.S.S.R., 2,368
Pusan, Korea, 650
Shang-hai, China, 668
Ta-ku, China, 131
Ta-lien, China, 145
Vladivostok, U.S.S.R. (via Maenggol Sudo), 1,151
Wei-hai-wei, China, 191
Wonsan, Korea, 995
Yen-tai, China, 168

CHINNAMPO, KOREA
(38°43'00'' N., 125°25'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,946
Singapore, 2,621
Sunda Strait, Indonesia, 2,974
Wetar Passage, Indonesia (via Selat Manipa), 2,861

Ports
Aleksandrovsk, Sakhalin, 1,601
Ching-tao, China, 309
Chin-huang-tao, China, 307
Djakarta, Indonesia, 2,955
Hong Kong, B.C.C. 1,263
Honolulu, Hawaii, U.S.A., 4,417
Hsia-men, China, 1,004
Inchon, Korea, 216
Krung Thep, Thailand (outer bar), 2,652
Lo-hsing-ta Mao-ti, China, 879
Los Angeles, California, U.S.A., 5,711
Lu-shun, China, 201
Manila, Philippines, 1,559
Mokpo, Korea (via Myondo Sudo), 288
Mokpo, Korea (south of Kasa Do), 320
Petropavlovsk, U.S.S.R., 2,214
Pusan, Korea (via Maenggol Sudo), 496
Sai Gon, Vietnam, 2,118
Shang-hai, China, 561
Shan-tou, China, 1,113
Ta-ku, China, 369
Ta-lien, China, 180
Tongyong, Korea, 446
Vladivostok, U.S.S.R., 997
Wei-hai-wei, China, 172
Wonsan, Korea (via Maenggol Sudo), 801
Yen-tai, China, 205
Yokohama, Japan, 1,109

CHIN WAN, OKINAWA JIMA, RYUKYU ISLANDS. See Chimu Wan.

CHINWANGTAO, CHINA. See Chin-huang-tao.

CHIOGGIA, ITALY
(45°14'00'' N., 12°17'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,307
Strait of Gibraltar, 1,682

Ports
Ancona, Italy, 111
Brindisi, Italy, 375
Rijeka, Yugoslavia, 126

CHITTAGONG, PAKISTAN
(22°18'45'' N., 91°49'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,492
Port Said, U.A.R., 4,739
Singapore, 1,517

Ports
Calcutta, India, 367
Penang, Malaysia, 1,167

CH'ONGJIN, KOREA
(41°46'30'' N., 129°49'30'' E.) to:

Ports
Hakodate, Japan, 509
Maizuru, Japan, 463
Pusan, Korea, 417
Shimonoseki, Japan, 480
Vladivostok, U.S.S.R., 135

CHOSEN, KOREA. See Changjon.

CHRISTCHURCH, NEW ZEALAND. See Lyttelton.

CHRISTIANSHAAB, GREENLAND
(68°49'00'' N., 51°11'30'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,963
Strait of Gibraltar, 2,679

Ports
Churchill, Canada, 1,523
Reykjavik, Iceland, 1,278
St. John's Canada, 1,333

CHRISTIANSTED, ST. CROIX
(17°45'20'' N., 64°42'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,370

Ports
Great Harbor, Culebra Island, 50
Guantanamo, Cuba (north of Hispaniola and Virgin Passage), 635
Horta, Azores, 2,259
Key West, Florida, U.S.A. (via Old Bahama Channel and Virgin Passage), 1,064
New York, New York, U.S.A. (via Virgin Passage), 1,465
San Juan, Puerto Rico, 104
Santa Barbara de Samana, Dominican Republic, 289

CHRISTMAS ISLAND, NORTH PACIFIC
(1°58'00'' N., 157°28'00'' W.) to:

Junction Points*
Panama, Panama, 4,751

Ports
Apia, Samoa, 1,274
Apra, Guam, 3,518
Brisbane, Australia, 3,379
Enderbury Island, Phoenix Islands, 878
Honolulu, Hawaii, U.S.A., 1,161
Jarvis Island, 209
Johnston Island, 1,137
Midway Island, 1,949
Pago Pago, American Samoa, 1,256
Palmyra Island, 368
Papeete, Society Islands, 1,266
Pearl Harbor, Hawaii, U.S.A., 1,157
San Francisco, California, U.S.A., 2,-895

CHURCHILL, CANADA
(58°46'40'' N., 94°11'42'' W.) to:

Junction Points*
Inishtrahull, Ireland (via 75 miles off Kap Farvel), 2,760

*JUNCTION POINT.—See Preface for use of junction points.

Pentland Firth, Scotland (via 75 miles off Kap Farvel), 2,820

Ports
Camp Lloyd, Greenland, 1,434
Christianshaab, Greenland, 1523
Egedesminde, Greenland, 1485
Faeringehavn, Greenland, 1,326
Frederiksdal, Greenland, 1527
Godthaab, Greenland, 1,331
Goose Bay, Canada, 1,557
Gronne Dal, Greenland, 1,418
Holsteinsborg, Greenland, 1,384
Jakobshavn, Greenland, 1,532
Nanortalik, Greenland, 1,511
Narsarssuak, Greenland, 1,513
Qutdligssat, Greenland, 1,666
Reykjavik, Iceland (via 75 miles off Kap Farvel), 2,290
Ritenbenk, Greenland, 1,695
Shelburne, Canada, 2,467
Sukkertoppen, Greenland, 1,341
Thule, Greenland, 1,909
Upernivik, Greenland, 1,669

CIENFUEGOS, CUBA
(22°08'30'' N., 80°27'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 4,056
Fastnet, Ireland (track A), 3,954
Fastnet, Ireland (track B), 3,950
Inishtrahull, Ireland (track A), 4,080
Inishtrahull, Ireland (track B), 4,070
Inishtrahull, Ireland (track C), 4,054
Panama, Panama, 815
Pentland Firth, Scotland (track A), 4,285
Pentland Firth, Scotland (track B), 4,269
Pentland Firth, Scotland (track C), 4,234
Strait of Gibraltar, 4,102
Yucatan Channel, 285

Ports
Almirante, Panama, 788
Baltimore, Maryland, U.S.A., 1,578
Barranquilla, Colombia, 755
Belem, Brazil, 2,527
Belize, British Honduras, 545
Boston, Massachusetts, U.S.A. (via Yucatan Channel), 1,903
Buenos Aires, Argentina, 5,590
Campeche, Mexico, 691
Cap Haitien, Haiti, 543
Cape Town, Republic of South Africa, 6,610
Cardenas, Cuba, 905
Carmen, Mexico, 770
Cartagena, Colombia, 778
Castries, St. Lucia, 1,246
Charleston, South Carolina, U.S.A. (via Straits of Florida), 1,107
Charlotte Amalie, Virgin Islands, 973
Colon, Panama, 772
Covenas, Colombia, 814
Fort de France, Martinique, 1,240
Galveston, Texas, U.S.A., 989
Guantanamo, Cuba, 366
Gulfport, Mississippi, U.S.A., 851
Habana, Cuba, 482
Halifax, Canada (via Straits of Florida), 2,102
Hamilton, Bermuda, 1,346
La Guaira, Venezuela, 1,050
Manzanillo, Cuba, 266
Matanzas, Cuba, 526
Miami, Florida, U.S.A., 683
Montego Bay, Jamaica, 262
Nassau, Bahamas, 868
New York, New York, U.S.A., 1,657
Norfolk, Virginia, U.S.A., 1,456
Nuevitas, Cuba, 649
Pensacola, Florida, U.S.A., 825
Philadelphia, Pennsylvania, U.S.A. (via Yucatan Channel), 1,627
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,654
Pina, Panama, 777
Pointe a Pitre, Guadeloupe, 1,204
Port au Prince, Haiti, 534
Port of Spain, Trinidad, 1,310
Puerto Cabello, Venezuela, 1,015
Rio de Janeiro, Brazil, 4,490
San Juan, Puerto Rico (via Windward Passage and north of Hispaniola), 903
San Juan, Puerto Rico (south of Hispaniola), 930
Santa Maria, Cuba, 149
Santiago de Cuba, Cuba, 334
Santo Domingo, Dominican Republic, 716
Tampico, Mexico, 1,009
Tuxpan, Mexico, 979
Veracruz, Mexico, 944
Willemstad, Curacao, 900

CIUDAD BOLIVAR, VENEZUELA
(8°08'00'' N., 63°33'00'' W.)

Add 58 miles to San Felix distances.

CIUDAD TRUJILLO, DOMINICAN REPUBLIC. See Santo Domingo.

CIVITAVECCHIA, ITALY
(42°05'36'' N., 11°47'15'' E.) to:

Junction Points*
Port Said, U.A.R., 1,243
Strait of Gibraltar, 907

Ports
Ajaccio, Corsica, 180
Alicante, Spain, 616
Bonifacio, Corsica, 131
Brindisi, Italy, 568
Cagliari, Sardinia, 239
Genova, Italy, 191
Haifa, Israel, 1,321
Istanbul, Turkey (via Corinth Canal), 1,066
Istanbul, Turkey (south of Greece), 1,107
Livorno, Italy, 120
Marseille, France, 316
Mentone, France, 180
Messina, Sicily, 308
Napoli, Italy, 152
Odessa, U.S.S.R. (via Corinth Canal), 1,414
Odessa, U.S.S.R. (south of Greece), 1,456
Oran, Algeria, 703
Palermo, Sicily, 253
Patrai, Greece, 612
Pozzuoli, Italy, 147
Salerno, Italy, 204
Sfax, Tunisia, 520
Siracusa, Sicily, 373
Valletta, Malta, 421
Viareggio, Italy, 480

CLARENCE BAY, ASCENSION ISLAND
(7°55'00'' S., 14°25'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,409

Ports
Boma, Republic of the Congo, 1,608
Colon, Panama, 4,181
Freetown, Sierra Leone, 996
Lagos, Nigeria, 1,375
Luanda, Angola, 1,657
Montevideo, Uruguay, 2,824
New York, New York, U.S.A., 4,395
Philadelphia, Pennsylvania, U.S.A., 4,469
Recife, Brazil, 1,226
Rio de Janeiro, Brazil, 1,900
St. Helena Island, 707
Santa Isabel, Fernando Poo, 1,561

COATZACOALCOS, MEXICO. See Puerto Mexico.

*JUNCTION POINT.—See Preface for use of junction points.

COBH, IRELAND
(51°50'50'' N., 8°18'00'' W.) to:

Junction Points*
Bishop Rock, England, 143
Cape of Good Hope, Republic of South Africa, 5,892
Fastnet, Ireland, 64
Pentland Firth, Scotland, 578

Ports
Barrow in Furness, England, 252

Belfast, Ireland, 264
Cape Town, Republic of South Africa, 5,894
Cardiff, Wales, 204
Cherbourg, France, 315
Dublin, Ireland, 176
Falmouth, England, 182
Fishguard, Wales, 131
Glasgow, Scotland, 346
Holyhead, Wales, 182
Limerick, Ireland, 221
Liverpool, England, 246
Londonderry, Ireland, 340

COCANADA, INDIA
(17°00'00'' N., 82°20'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,023
Lombok Strait, Indonesia, 2,567
Singapore, 1,593

Ports
Belawan, Indonesia, 1,261
Calcutta, India, 522
Fremantle, Australia, 3,515
Madras, India, 276
Malacca, Malaysia, 1,478
Penang, Malaysia, 1,273
Sabang, Indonesia, 1,019

COCHIN, INDIA
(9°58'00'' N., 76°15'20'' E.) to:

Junction Points*
Port Said, U.A.R., 3,237
Singapore, 1,853

Ports
Bombay, India, 592
Colombo, Ceylon, 318
Karachi, Pakistan, 1,044

COCKBURN TOWN, BAHAMAS
(24°03'00'' N., 74°32'18'' W.) to:

Junction Points*
Panama, Panama, 1,017
Straits of Florida, 615

Ports
New York, New York, U.S.A., 1,004
Nuevitas, Cuba, 265
San Juan, Puerto Rico, 611

COCKBURNTOWN, GRAND TURK ISLAND. See Grand Turk.

COLOMBO, CEYLON
(6°57'00'' N., 79°51'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,203
Cape of Good Hope, Republic of South Africa (east of Madagascar, November–March), 4,363
Cape of Good Hope, Republic of South Africa (east of Madagascar, May–September), 4,402
Cape of Good Hope, Republic of South Africa (west of Madagascar, April–October), 4,447
Port Said, U.A.R. (south of Socotra, October–April), 3,481
Port Said, U.A.R. (north of Socotra, May–September), 3,600
Port Said, U.A.R. (south of Socotra, May–September), 3,608
Port Said, U.A.R. (south of Socotra, lower power, May–September), 3,668
Singapore, 1,581
Sunda Strait, Indonesia, 1,781
Torres Strait, Australia (south of Java and Timor), 3,978

Ports
Aden, Aden Protectorate (south of Socotra, October–April), 2,094
Aden, Aden Protectorate (south of Socotra, May–September), 2,221
Aden, Aden Protectorate (north of Socotra, May–September), 2,210
Aden, Aden Protectorate (south of Socotra, low power, May–September), 2,281
Akyab, Burma, 1,225
Al Basrah, Iraq, 2,359
Ao Phuket, Thailand, 1,192
Bassein, Burma, 1,194
Belawan, Indonesia, 1,240
Bhavnagar, India, 1,073
Bombay, India, 895
Calcutta, India, 1,258
Cochin, India, 318
Dar es Salaam, Tanganyika, 2,565
Darwin, Australia, 3,314
Diego Garcia, Chagos Archipelago, 974
Dumai, Indonesia, 1,496
Durban, Republic of South Africa (April and October), 3677
Durban, Republic of South Africa (May–September), 3,703
Durban, Republic of South Africa (November–March), 3,664
Flying Fish Cove, Christmas Island, Indian Ocean, 1,888
Fremantle, Australia, 3,122
Johore Bahru, Malaya, 1,584
Karachi, Pakistan, 1,344
Madras, India, 611
Malacca, Malaysia, 1,458
Massaua, Ethiopia (south of Socotra, October–April), 2,481
Massaua, Ethiopia (north of Socotra, alternate, May–September), 2,600
Massaua, Ethiopia (south of Socotra, May to September), 2,608
Massaua, Ethiopia (south of Socotra, L.P., May–September), 2,669
Mombasa, Kenya (May–September), 2,555
Mombasa, Kenya (October–April), 2,519
Mormugao, India, 671
Negapatam, India, 476
Okha, India, 1,183
Penang, Malaysia, 1,285
Port Louis, Mauritius, 2,098
Port Refuge, Cocos Islands, 1,539
Rangoon, Burma, 1,268
Tamatave, Malagasy Republic, 2,351
Trincomalee, Ceylon, 347
Victoria, Seychelles, 1,652
Visakhapatnam, India, 880

COLON, PANAMA
(9°22'00'' N., 79°55'00'' W.) to:

Junction Points*
Bishop Rock, England (via Mona Passage), 4,344
Cape of Good Hope, Republic of South Africa, 6,488
Fastnet, Ireland (via Caicos Passage and track A), 4,247
Fastnet, Ireland (via Caicos Passage and track B), 4,244
Inishtrahull, Ireland (via Windward Passage), 4,362
Inishtrahull, Ireland (via Mona Passage), 4,393
Montreal, Canada (via Strait of Canso), 3,126
Panama, Panama, 44
Pentland Firth, Scotland (via Windward Passage), 4,529
Pentland Firth, Scotland (via Mona Passage), 4,594

*JUNCTION POINT.—See Preface for use of junction points.

Punta Arenas, Chile (east of South America), 6,543
Strait of Gilbraltar (via Mona Passage), 4,308
Yucatan Channel, 812

Ports
Alvaro Obregon, Mexico, 1,317
Angmagssalik, Greenland (direct), 3,879
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,893
Antilla, Cuba, 844
Apalachicola, Florida, U.S.A., 1,287
Argentia, Canada, 2,640
Arkhangelsk, U.S.S.R., 5,820
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,901
Barranquilla, Colombia, 336
Belem, Brazil, 2,403
Belize, British Honduras, 816
Bluefields, Nicaragua, 276
Bocas del Toro, Panama, 144
Bordeaux, France (via Mona Passage), 4,593
Bordeaux, France (via Windward Passage), 4,643
Boston, Massachusetts, U.S.A. (via Nantucket Light Vessel, Crooked Island Passage, and Windward Passage), 2,157
Brest, France, 4,420
Bridgetown, Barbados, 1,237
Brunswick, Georgia, U.S.A. (via Windward Passage), 1,538
Buenos Aires, Argentina, 5,472
Cadiz, Spain, 4,286
Campeche, Mexico, 1,167
Cap Haitien, Haiti, 817
Cape Town, Republic of South Africa, 6,494
Carmen, Mexico, 1,246
Cartagena, Colombia, 281
Castries, St. Lucia, 1,160
Cayenne, French Guiana, 2,265
Charleston, South Carolina, U.S.A. (via Windward Passage, and Crooked Island Passage), 1,564
Charleston, South Carolina, U.S.A. (via Yucatan Channel), 1,636
Charlotte Amalie, Virgin Islands, 1,029
Charlottetown, Canada, 2,535
Cienfuegos, Cuba, 772
Clarence Bay, Ascension Island, 4,181
Corpus Christi, Texas, U.S.A., 1,548
Dakar, Senegal, 3,694
El Ferrol del Caudillo, Spain, 4,222
Elizabeth Harbor, Bahamas, 998
Fort de France, Martinique, 1,159
Freetown, Sierra Leone, 3,976
Funchal, Madeira Island, 3,742
Georgetown, British Guiana, 1,515
Great Harbor, Culebra Island, 1,018
Guantanamo, Cuba, 689
Gulfport, Mississippi, U.S.A., 1,388
Halifax, Canada, 2,295
Hamilton, Bermuda, 1,659
Horta, Azores, 3,260
Ivigtut, Greenland, 3,536
Jacksonville, Florida, U.S.A., 1,516
Jacmel, Haiti, 683
Key West, Florida, U.S.A., 1,065
Kingston, Jamaica, 551
La Ceiba, Honduras, 666
La Guaira, Venezuela, 841
Lagos, Nigeria, 5,049
Les Cayes, Haiti, 645
Limon, Costa Rica, 190
Lisboa, Portugal (via Mona Passage), 4,152
Liverpool, Canada, 2,244
Manzanillo, Cuba, 689
Maracaibo, Venezuela, 693
Miami, Florida, U.S.A., 1,214
Mobile, Alabama, U.S.A., 1,393
Montecristi, Dominican Republic, 838
Montevideo, Uruguay, 5,349
Nassau, Bahamas (via Windward Passage), 1,166
New Orleans, Louisiana, U.S.A., 1,389
New York, New York, U.S.A. (via Crooked Island Passage), 1,974
Norfolk, Virginia, U.S.A. (via Winward Passage and Crooked Island Passage), 1,779
Norfolk, Virginia, U.S.A. (via Yucatan Channel), 2,006
Pensacola, Florida, U.S.A., 1,369
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage, and Crooked Island Passage), 1,946
Pointe a Pitre, Guadeloupe, 1,168
Ponta Delgada, Azores, 3,379
Porlamar, Venezuela, 1,012
Port Antonio, Jamaica, 582
Port Arthur, Texas, U.S.A., 1,485
Port of Spain, Trinidad, 1,159
Portland, Maine, U.S.A., 2,198
Portland Bight, Jamaica, 536
Porto Grande, Cape Verde Islands, 3,240
Portsmouth, New Hampshire, U.S.A. (via Windward Passage, Crooked Island Passage, and Nantucket Light Vessel), 2,174
Progreso, Mexico, 1,026
Puerto Barrios, Guatemala, 780
Puerto Cabello, Venezuela, 802
Puerto Cortes, Honduras, 733
Puerto Mexico, Mexico, 1,396
Recife, Brazil, 3,295
Reykjavik, Iceland, 4,098
Rio de Janeiro, Brazil, 4,367
St. Georges, Grenada, 1,118
St. John, Canada, 2,294
St. Johns, Antigua, 1,158
St. John's, Canada, 2,695
Salvador, Brazil, 3,698
San Juan, Puerto Rico, 993
Sanchez, Dominican Republic, 980
Santa Cruz de Tenerife, Canary Islands, 3,776
Santa Marta, Colombia, 365
Santiago de Cuba, Cuba, 683
Santo Domingo, Dominican Republic, 802
Santos, Brazil, 4,566
Savannah, Georgia, U.S.A. (via Yucatan Channel), 1,607
Sint Nicolaas, Aruba, 633
Sydney, Canada, 2,482
Tampa, Florida, U.S.A., 1,216
Tampico, Mexico, 1,485
Tela, Honduras, 706
Tuxpan, Mexico, 1,455
Veracruz, Mexico, 1,420
Vigo, Spain, 4,194
Willemstad, Curacao, 698
Wilmington, North Carolina, U.S.A. (via Windward Passage), 1,613
Wilmington, North Carolina, U.S.A. (via Yucatan Channel), 1,730
Yarmouth, Canada, 2,210

COLONIA, URUGUAY
(34°30′00″ S., 57°52′15″ W.)

Subtract 25 miles from Buenos Aires distances.

COMODORO RIVADAVIA, ARGENTINA
(45°51′35″ S., 67°26′35″ W.) to:

Junction Points*
Panama, Panama, 6,185
Punta Arenas, Chile, 585

Ports
Buenos Aires, Argentina, 927
Stanley, Falkland Islands, 531

COMPTROLLER BAY, MARQUESAS.
See Baie du Controleur.

CONSTANTA, RUMANIA
(44°09′56″ N., 28°40′14″ E.) to:

Junction Points*
Port Said, U.A.R., 1,000
Strait of Gibraltar (via Corinth Canal), 2,001
Strait of Gibraltar (south of Greece), 2,018

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Cagliari, Sardinia (via Corinth Canal), 1,289
Cagliari, Sardinia (south of Greece), 1,330
Iskenderun, Turkey, 1,044
Istanbul, Turkey, 201
Jaffa, Israel, 1,057
Kerch, U.S.S.R., 370
Larnaca, Cyprus, 962
Mersin, Turkey, 986
Nice, France (via Corinth Canal), 1,476
Nice, France (south of Greece), 1,518
Novorossiysk, U.S.S.R., 403
Odessa, U.S.S.R., 186
Patrai, Greece (via Corinth Canal), 653
Patrai, Greece (south of Greece), 811
Pula, Yugoslavia (via Corinth Canal), 1,206
Pula, Yugoslavia (south of Greece), 1,305
Rostov-na-Donu, U.S.S.R., 572
Sevastopol, U.S.S.R., 212

CONSTANTSA, RUMANIA. See Constanta.

CONSTANTINOPLE, TURKEY. See Istanbul.

COOK ISLANDS. See Avarua.

COPENHAGEN, DENMARK. See Kobenhavn.

COQUIMBO, CHILE
(29°57'00'' S., 71°21'00'' W.) to:

Junction Points*
Panama, Panama, 2,448
Punta Arenas, Chile, 1,623

Ports
Acapulco, Mexico, 3,259
Antofagasta, Chile, 396
Arica, Chile, 702
Caldera, Chile, 196
Callao, Peru, 1,136
Corinto, Nicaragua, 2,711
Corral, Chile, 627
Esmeraldas, Ecuador, 2,014
Guayaquil, Ecuador, 1,781
Guaymas, Mexico, 4,153
Iquique, Chile, 602
Lota, Chile, 455
Mollendo, Peru, 782
Monterey, California, U.S.A., 4,927
Pisco, Peru, 1,036
Puntarenas, Costa Rica, 2,526
Salina Cruz, Mexico, 3,091
San Blas, Mexico, 3,697
San Diego, California, U.S.A., 4,605
San Francisco, California, U.S.A., 5,007
San Jose, Guatemala, 2,864
Santa Barbara, California, U.S.A., 4,742
Talcahuano, Chile, 428
Valparaiso, Chile, 203

CORDOVA, ALASKA, U.S.A.
(60°32'45'' N., 145°46'30'' W.) to:

Ports
Ketchikan, Alaska, U.S.A., 656
Kiska, Alaska, U.S.A., 1,435
Nome, Alaska, U.S.A., 1,409
Seattle, Washington, U.S.A., 1,216

CORFU, GREECE. See Kerkira.

CORINTO, NICARAGUA
(12°28'15'' N., 87°11'00'' W.) to:

Junction Points*
Panama, Panama, 683
Punta Arenas, Chile, 4,180

Ports
Acapulco, Mexico, 792
Amapala, Honduras, 72
Antofagasta, Chile, 2,400
Arica, Chile, 2,181
Brito, Nicaragua, 107
Callao, Peru, 1,606
Coquimbo, Chile, 2,711
Corral, Chile, 3,236
Esmeraldas, Ecuador, 823
Guayaquil, Ecuador, 1,071
Guaymas, Mexico, 1,738
Iquique, Chile, 2,247
La Libertad, El Salvador, 141
La Libertad, Mexico, 1,902
La Union, El Salvador, 73
Los Angeles, California, U.S.A., 2,281
Lota, Chile, 3,081
Mollendo, Peru, 2,056
Monterey, California, U.S.A., 2,533
Pisco, Peru, 1,718
Puerto Armuelles, Panama, 409
Puntarenas, Costa Rica, 262
Salina Cruz, Mexico, 525
San Blas, Mexico, 1,282
San Diego, California, U.S.A., 2,211
San Francisco, California, U.S.A., 2,613
San Jose, Guatemala, 238
Santa Barbara, California, U.S.A., 2,348
Talcahuano, Chile, 3,062
Valparaiso, Chile, 2,875

CORK, IRELAND
(51°54'00'' N., 8°27'30'' W.)

Add 9 miles to Cobh distances.

CORPUS CHRISTI, TEXAS, U.S.A.
(27°49'00'' N., 97°24'00'' W.) to:

Junction Points*
Straits of Florida, 803
Yucatan Channel, 764

Ports
Colon, Panama, 1,548
Habana, Cuba, 864
Tampico, Mexico, 366

CORRAL, CHILE
(39°53'00'' S., 73°28'00'' W.) to:

Junction Points*
Panama, Panama, 2,983
Punta Arenas, Chile, 1,020

Ports
Antofagasta, Chile, 1,000
Arica, Chile, 1,305
Callao, Peru, 1,691
Coquimbo, Chile, 627
Corinto, Nicaragua, 3,236
Guayaquil, Ecuador, 2,313
Iquique, Chile, 1,205
Lota, Chile, 195
Mollendo, Peru, 1,378
Monterey, California, U.S.A., 5,327
Pisco, Peru, 1,596
Salina Cruz, Mexico, 3,577
San Diego, California, U.S.A., 5,007
San Francisco, California, U.S.A., 5,407
Santa Barbara, California, U.S.A., 5,144
Talcahuano, Chile, 229
Valparaiso, Chile, 442

CORUNA, SPAIN. See La Coruna.

COTONOU, DAHOMEY
(6°21'00'' N., 2°26'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 857
Ushant, France, 3,747

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Douala, Cameroon, 486
Monrovia, Liberia, 893

COVENAS, COLOMBIA
(9°25'00'' N., 75°41'10'' W.) to:

Junction Points*
Panama, Panama, 308
Yucatan Channel, 924

Ports
Cienfuegos, Cuba, 814
Kingston, Jamaica, 528
Port of Spain, Trinidad, 968

CRISTOBAL, CANAL ZONE. See Colon.

CROTONE, ITALY
(39°05'30'' N., 17°08'00'' E.) to:

Junction Points*
Port Said, U.A.R., 896
Strait of Gilbraltar, 1,412

Ports
Durres, Albania, 172
Messina, Sicily, 367
Taranto, Italy, 87

CUBI POINT, SUBIC BAY, PHILIPPINES
(14°48'00'' N., 120°16'00'' E.)

Subtract 1 mile from Olangapo distances.

CULEBRA ISLAND. See Great Harbor.

CUMANA. See Puerto Sucre.

CURACAO. See Willemstad.

CUXHAVEN, GERMANY
(53°52'00'' N., 8°43'00'' E.)

Subtract 56 miles from Hamburg distances.

DA NANG, VIETNAM
(16°06'30'' N., 108°12'00'' E.) to:

Ports
Cebu, Philippines, 1,049
Hong Kong, B.C.C., 520
Manila, Philippines, 758
Sai Gon, Vietnam, 518

DAIREN, CHINA. See Ta-lien.

DAKAR, SENEGAL
(14°41'00'' N., 17°26'00'' W.) to:

Junction Points*
Bishop Rock, England, 2,195
Cape of Good Hope, Republic of South Africa, 3,610
Inishtrahull, Ireland, 2,546
Montreal, Canada, 3,566
Panama, Panama, 3,738
Pentland Firth, Scotland, 2,794
Punta Arenas, Chile, 4,928
Strait of Gibraltar, 1,487
Straits of Florida (via Northwest Providence Channel), 3,768
Ushant, France, 2,152

Ports
Abidjan, Ivory Coast, 1,166
Agadir, Morocco, 1,109
Belem, Brazil, 2,104
Bolama, Portuguese Guinea, 272
Bordeaux, France, 2,243
Boston, Massachusetts, U.S.A., 3,221
Buenos Aires, Argentina, 3,864
Cadiz, Spain, 1,500
Cap Haitien, Haiti, 3,154
Cape Town, Republic of South Africa, 3,593
Casablanca, Morocco, 1,333
Castries, St. Lucia, 2,543
Cayenne, French Guiana, 2,140
Charleston, South Carolina, U.S.A., 3,557
Charlotte Amalie, Virgin Islands, 2,751
Colon, Panama, 3,694
El Ferrol del Caudillo, Spain, 1,843
El Jadida, Morocco, 1,317
Fedala, Morocco, 1,338
Freetown, Sierra Leone, 496
Funchal, Madeira Island, 1,091
Galway, Ireland, 2,383
Greenville, Liberia, 831
Guantanamo, Cuba, 3,312
Halifax, Canada, 2,956
Horta, Azores, 1,559
Huelva, Spain, 1,521
Jacksonville, Florida, U.S.A., 3,650
Kenitra, Morocco, 1,432
Key West, Florida, U.S.A., 3,709
Kingston, Jamaica, 3,436
La Guaira, Venezuela, 2,911
Larache, Morocco, 1,425
Libreville, Gabon, 1,982
Lisboa, Portugal, 1,544
Marshall, Liberia, 724
Monrovia, Liberia, 693
Natal, Brazil, 1,620
New York, New York, U.S.A., 3,335
Norfolk, Virginia, U.S.A., 3,408
Paramaribo, Surinam, 2,315
Philadelphia, Pennsylvania, U.S.A., 3,441
Ponta Delgada, Azores, 1,459
Port Buchanan, Liberia, 755
Port Etienne, Mauritania, 394
Port of Spain, Trinidad, 2,628
Porto, Portugal, 1,682
Portsmouth, New Hampshire, U.S.A., 3,219
Puerto Cortes, Honduras, 4,077
Rabat, Morocco, 1,412
Recife, Brazil, 1,717
Rio de Janeiro, Brazil, 2,763
River Cess, Liberia, 790
Safi, Morocco, 1,228
St. John's, Canada, 2,646
San Juan, Puerto Rico, 2,812
Santa Cruz de Tenerife, Canary Islands, 846
Santo Domingo, Dominican Republic, 3,036
Sassandra, Ivory Coast, 1,080
Sulima, Sierra Leone, 589
Tabu, Ivory Coast, 947
Tangier, Morocco, 1,483
Vigo, Spain, 1,744
Villa Cisneros, Spanish Sahara, 578

DANZIG, POLAND. See Gdansk.

DAR ES SALAAM, TANGANYIKA
(6°49'30'' S., 39°17'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,330
Port Said, U.A.R., 3,238
Singapore, 4,042

Ports
Aden, Aden Protectorate, 1,751
Belawan, Indonesia, 3,709
Colombo, Ceylon, 2,565
Darwin, Australia, 5,428
Fremantle, Australia, 4,513
Lindi, Tanganyika, 218
Malacca, Malaysia, 3,927
Mocambique, Mozambique, 533
Mtwara, Tanganyika, 230
Penang, Malaysia, 3,754
Sabang, Indonesia, 3,443

*JUNCTION POINT.—See Preface for use of junction points.

DARNAH, LIBYA
(32°46′00″ N., 22°40′00″ E.) to:

Junction Points*
Port Said, U.A.R., 514
Strait of Gibraltar, 1,450

Ports
Izmir, Turkey, 465
Piraievs, Greece, 316
Valletta, Malta, 450

DARTMOUTH, ENGLAND
(50°21′00″ N., 3°34′20″ W.) to:

Junction Points*
Bishop Rock, England, 122
Ushant, France, 135

Ports
Le Havre, France, 151
London, England, 292
Southampton, England, 100

DARWIN, AUSTRALIA
(12°28′30″ S., 130°50′00″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,978
Cape of Good Hope, Republic of South Africa, 6,100
Lombok Strait, Indonesia (south of Pulau Roti), 926
Port Said, U.A.R. (via Eight Degree Channel, October–April), 6,743
Port Said, U.A.R. (via One and Half Degree Channel, May–September), 6,846
Sunda Strait, Indonesia (via south of Java), 1,623
Torres Strait, Australia (via Clarence Strait and Dundas Strait), 735
Wetar Passage, Indonesia (via west of Bathurst Island), 326

Ports
Aden, Aden Protectorate (via Eight Degree Channel, October–April), 5,356
Aden, Aden Protectorate (via One and Half Degree Channel, May–September), 5,459
Al Bahrayn, Bahrain, 5,390
Al Basrah, Iraq, 5,650
Al Kuwayt, Kuwait, 5,597
Albany, Australia, 2,152
Aleksandrovsk, Sakhalin, 4,041
Ambon, Indonesia, 579
Antisirana, Malagasy Republic (north of Scott Reef), 4,769
Apra, Guam (via Selat Sele), 1,925
Beira, Mozambique, 5,553
Berbera, Somali Republic (south of Socotra, via Eight Degree Channel, and south of Java), 5,384
Bombay, India, 4,193
Bunbury, Australia, 1,906
Bushehr, Iran, 5,446
Calicut, India, 3,683
Ching-tao, China, 3,062
Colombo, Ceylon, 3,320
Dar es Salaam, Tanganyika, 5,428
Diego Garcia, Chagos Archipelago, 3,483
Djakarta, Indonesia, 1,706
Durban, Republic of South Africa, 5,561
Dutch Harbor, Alaska, U.S.A., 5,332
East London, Republic of South Africa, 5,673
El Ferrol del Caudillo, Spain, 1,843
Fort Dauphin, Malagasy Republic, 4,775
Fremantle, Australia, 1,847
Geraldton, Australia, 1,638
Hai-kou, China, 2,437
Hakodate, Japan (via Selat Sele), 3,422
Hong Kong, B.C.C., 2,363
Hsia-men, China, 2,411
Inchon, Korea (via Molucca Passage), 3,072
Karachi, Pakistan, 4,653
Kobe, Japan (via Selat Sele), 2,901
Kodiak, Alaska, U.S.A., 5,859
Kuang-chou, China, 2,438
Lourenco Marques, Mozambique, 5,539
Madras, India, 3,483
Majunga, Malagasy Republic, 5,069
Manila, Philippines, 1,834
Masqat, Mascat and Oman, 4,873
Massaua, Ethiopia (via Eight Degree Channel, October–April), 5,743
Massaua, Ethiopia (via One and Half Degree Channel, May–September), 5,846
Midway Island, 4,188
Mocambique, Mozambique, 5,304
Mokpo, Korea, 2,916
Mombasa, Kenya, 5,434
Mosselbaai, Republic of South Africa, 5,929
Nagasaki, Japan (via Selat Sele), 2,785
Omura, Bonin Islands (via Selat Sele), 2,549
Port Elizabeth, Republic of South Africa, 5,767
Port Louis, Mauritius (south of Scott Reef), 4,246
Port Louis, Mauritius (north of Scott Reef), 4,252
Pusan, Korea, 2,937
St. Denis, Reunion Island, 4,343
San Diego, California, U.S.A., 7,297
San Francisco, California, U.S.A., 6,984
Seattle, Washington, U.S.A., 6,892
Shang-hai, China, 2,804
Shimonoseki, Japan (via Selat Sele), 2,883
Sitka, Alaska, U.S.A., 6,338
Ta-ku, China, 3,363
Ta-lien, China, 3,204
Tamatave, Malagasy Republic, 4,702
Tanga, Tanganyika, 5,466
Teluk Kau, Halmahera, 995
Tjilatjap, Indonesia, 1,321
Truk, Caroline Islands (via Selat Sele), 2,142
Victoria, Seychelles, 4,494
Vinh Cam Ranh, Vietnam, 2,169
Vladivostok, U.S.S.R. (via Higashi Suido), 3,426
Vladivostok, U.S.S.R. (via Selat Sele), 3,445
Wake Island, 3,187
Wonsan, Korea, 3,242
Wyndham, Australia, 274
Yampi Sound, Australia, 1,457
Yin-hsien, China (via Shih-peng Chiang), 2,672
Yokohama, Japan (via Selat Sele), 2,989
Zamboanga, Philippines, 1,303
Zanzibar, Zanzibar, 5,452

DAVAO, PHILIPPINES
(7°04′38″ N., 125°37′38″ E.) to:

Junction Points*
Singapore, 1,532
Torres Strait, Australia, 1,628

Ports
Hong Kong, B.C.C., 1,382
Cebu, Philippines, 439
Makasar, Celebes, 929
Manila, Philippines, 831
Sorong, New Guinea, 601

DE-KASTRI, U.S.S.R.
(51°28′00″ N., 140°47′00″ E.) to:

Ports
Hakodate, Japan, 664
Maizuru, Japan, 1,006
Moskalvo, U.S.S.R., 200
Otaru, Japan, 505
Vladivostok, U.S.S.R., 737
Yokohama, Japan, 1,176

*JUNCTION POINT.—See Preface for use of junction points.

DEEPWATER POINT, NEW JERSEY, U.S.A.
(39°41'36'' N., 75°30'42'' W.)

Subtract 27 miles from Philadelphia distances.

DELFZIJL, NETHERLANDS
(53°20'30'' N., 6°56'15'' E.)

Subtract 10 miles from Emden, Germany distances.

DEMERARA, BRITISH GUIANA. See Georgetown.

DEN HELDER, NETHERLANDS
(52°58'00'' N., 4°45'22'' E.) to:

Junction Points*
Bishop Rock, England, 509
Kiel Canal (east end), Germany, 263
Pentland Firth, Scotland, 447

Ports
Hamburg, Germany, 249
Rotterdam, Netherlands, 97

DERINCE, TURKEY
(40°44'35'' N., 29°49'30'' E.) to:

Junction Points*
Port Said, U.A.R., 837
Strait of Gibraltar (via Corinth Canal), 1,838
Strait of Gibraltar (south of Greece), 1,855

Ports
Banghazi, Libya, 750
Genova, Italy (via Corinth Canal), 1,283
Genova, Italy (south of Greece), 1,325
Malaga, Spain (via Corinth Canal), 1,768
Malaga, Spain (south of Greece), 1,785
Patrai, Greece (via Corinth Canal), 489
Patrai, Greece (south of Greece), 648
Rostov-na-Donu, U.S.S.R., 685
Sfax, Tunisia, 1,081
Thessaloniki, Greece, 372

DERNA, LIBYA. See Darnah.

DESEADO, ARGENTINA. See Puerto Deseado.

DEVONPORT, ENGLAND
(50°22'00'' N., 4°11'00'' W.)

Add 2 miles to Plymouth distances.

DI-KASTRI, U.S.S.R. See De-Kastri.

DIEGO GARCIA, CHAGOS ARCHIPELAGO
(7°18'40'' S., 72°28'00'' E.) to:

Junction Points*
Singapore (via Udjung Masam Muka), 2,224

Ports
Aden, Aden Protectorate, 2,116
Belawan, Indonesia, 1,860
Colombo, Ceylon, 974
Darwin, Australia, 3,483
Fremantle, Australia, 2,850
Hobart, Tasmania (via D'Entrecasteaux Channel), 4,501
Malacca, Malaysia, 2,078
Penang, Malaysia, 1,905
Sabang, Indonesia, 1,594
Victoria, Seychelles, 1,032

DIEGO SUAREZ BAY, MALAGASY REPUBLIC. See Antsirana.

DIEPPE, FRANCE
(49°56'58'' N., 1°05'00'' E.) to:

Junction Points*
Bishop Rock, England, 297
Ushant, France, 270

Ports
Cherbourg, France, 105
Plymouth, England, 206

DIKILI, TURKEY
(39°04'30'' N., 26°53'00'' E.) to:

Junction Points*
Port Said, U.A.R., 596
Strait of Gibraltar, 1,532

Ports
Istanbul, Turkey, 285
Izmir, Turkey, 63
Thessaloniki, Greece, 236

DIKSON HARBOR, U.S.S.R.
(73°30'00'' N., 80°28'00'' E.) to:

Ports
Arkhangelsk, U.S.S.R., 1,105
Berlevag, Norway, 1,069
Hull, England, 2,552
Iokanga, U.S.S.R., 899
Longyearbyen, Svalbard, 1,148
Murmansk, U.S.S.R., 1,025
Mys Chelyuskin, U.S.S.R., 457
Sondre Honningsvag, Norway, 1,133

DJAKARTA, INDONESIA
(6°06'00'' S., 106°53'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 615
Port Said, U.A.R., 5,293
Singapore (via Selat Durian), 525
Singapore (via Selat Riouw, and Selat Bangka), 526
Sunda Strait, Indonesia, 77
Torrest Strait, Austrialia, 2,152
Wetar Passage, Indonesia, 1,247

Ports
Aleksandrovisk, Sakhalin, 3,942
Apra, Guam (via Makassar Strait), 2,639
Belawan, Indonesia, 864
Cebu, Philippines (via Lumbucan Channel), 1,563
Chinnampo, Korea, 2,955
Darwin, Australia, 1,706
Hakodate, Japan, 3,468
Hong Kong, B.C.C., 1,782
Hsia-men, China, 1,971
Iloilo, Philippines (via Lumbucan Channel, and Selat Gaspar), 1,476
Inchon, Korea, 2,865
Jesselton, North Borneo, 999
Kobe, Japan (via Balintang Channel), 2,987
Kuang-chou, China, 1,842
Kuching, Sarawak, 627
Lu-shun, China, 2,935
Malacca, Malaysia, 613
Manila, Philippines (via Palawan Passage), 1,559
Mokpo, Korea, 2,741
Nagasaki, Japan, 2,712
Palembang, Indonesia, 358
Petropavlovsk, U.S.S.R. (east of Japan and Balintang Channel), 4,530
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 4,555
Portland, Oregon, U.S.A. (via Balintang Channel), 7,415
Pusan, Korea, 2,836
Sai Gon, Vietnam, 1,025
San Diego, California, U.S.A., 7,985
San Francisco, California, U.S.A. (via Makassar Strait), 7,641
San Francisco, California, U.S.A. (via Balintang Channel), 7,642
Semerang, Indonesia, 236

*JUNCTION POINT.—See Preface for use of junction points.

Shang-hai, China, 2,522
Shan-tou, China, 1,880
Shimonoseki, Japan, 2,838
Sorido, Indonesia, 1,879
Sukarnopura, Indonesia, 2,187
Ta-ku, China, 3,088
Tan-shui, Taiwan, 2,094
Tjirebon, Indonesia, 156
Vinh Cam Ranh, Vietnam, 1,103
Vladivostok, U.S.S.R., 3,338
Wei-hai-wei, China, 2,860
Wonsan, Korea, 3,142
Yen-tai, China, 2,894
Yokohama, Japan, 3,194

DJIBOUTI, FRENCH SOMALILAND
(11°36'30'' N., 43°08'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,063
Port Said, U.A.R., 1,374
Singapore (north of Socotra and Strait of Malacca), 3,769

Ports
Aden, Aden Protectorate, 133
Antsirana, Malagasy Republic, 1,969

DONGES, FRANCE
(47°18'18'' N., 2°04'30'' W.)

Add 6 miles to St. Nazaire distances.

DORDRECHT, NETHERLANDS
(51°48'45'' N., 4°39'15'' E.)

Add 9 miles to Rotterdam distances.

DOUALA, CAMEROON
(4°03'00'' N., 9°41'00'' E.) to:

Junction Points*
Straits of Florida, 5,526

Ports
Anecho, Togo, 526
Bata, Spanish Guinea, 141
Boma, Republic of the Congo, 742
Cabinda, Cabinda, 668
Cotonou, Dahomey, 486
Kribi, Cameroon, 87
Lagos, Nigeria, 442
Libreville, Gabon, 228
Mayumba, Gabon, 513
Pointe Noire, Gabon, 613
Port Gentil, Gabon, 297
Sao Tome, Sao Tome, 285
Sassandra, Ivory Coast, 930

DOUGLAS, ISLE OF MAN
(54°09'00'' N., 4°28'00'' W.) to:

Junction Points*
Bishop Rock, England, 276
Fastnet, Ireland, 274
Inishtrahull, Ireland, 156
Pentland Firth, Scotland, 397

Ports
Cardiff, Wales, 246
Fishguard, Wales, 131
Holyhead, Wales, 51
Liverpool, England, 68

DOVER, ENGLAND
(51°07'00'' N., 1°20'00'' E.) to:

Junction Points*
Bishop Rock, England, 323
Kiel Canal (east end), Germany, 410
Skagens Odde, Denmark, 527
Ushant, France, 306

Ports
Amsterdam, Netherlands, 161
Antwerpen, Belgium, 137
Bergen, Norway, 590
Bremerhaven, Germany, 341
Caen, France, 140
Cherbourg, France, 146
Egersund, Norway, 477
Emden, Germany, 284
Esbjerg, Denmark, 370
Granville, France, 181
Hamburg, Germany, 399
Kristiansand, Norway, 488
Oslo, Norway, 640
Plymouth, England, 229
Portland, England, 155
Portsmouth, England, 105
Rotterdam, Netherlands, 138
St. Malo, France, 228
Southampton, England, 123
Stavanger, Norway, 517
Wilhelmshaven, Germany, 328

DUALA, CAMEROON. See Douala.

DUBLIN, IRELAND
(53°20'45'' N., 6°13'00'' W.) to:

Junction Points*
Bishop Rock, England, 232
Fastnet, Ireland, 223
Inishtrahull, Ireland, 184
Pentland Firth, Scotland, 424

Ports
Ardrossan, Scotland, 153
Avonmouth, England, 220
Barrow in Furness, England, 122
Cardiff, Wales, 205
Cobh, Ireland, 176
Londonderry, Ireland, 189
Newport, Wales, 219
Port Talbot, Wales, 179
Waterford, Ireland, 113

DUBROVNIK, YUGOSLAVIA
(42°38'24'' N., 18°06'55'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,025
Port Said, U.A.R. (south of Greece), 1,038
Strait of Gibraltar, 1,420

Ports
Bari, Italy, 108
Barletta, Italy, 113
Bayrut, Lebanon (via Corinth Canal), 1,074
Bayrut, Lebanon (south of Greece), 1,107
Cartagena, Spain, 1,177
Genova, Italy, 856
Kerkira, Greece, 208
Porto di Manfredonia, Italy, 117
Rijeka, Yugoslavia, 276
Sibenik, Yugoslavia, 144
Venezia, Italy, 320

DUDINKA, U.S.S.R.
(69°24'00'' N., 86°10'00'' E.)

Add 298 miles to Dikson Harbor distances.

DUMAI, INDONESIA
(1°42'00'' N., 101°28'00'' E.) to:

Junction Points*
Port Said, U.A.R., 4,943
Singapore, 200

Ports
Al Basrah, Iraq, 3,824
Calcutta, India, 1,579
Colombo, Ceylon, 1,496

DUNDEE, SCOTLAND
(56°27'45'' N., 2°56'40'' W.) to:

Junction Points*
Bishop Rock, England, 713
Kiel Canal (east end), Germany, 501
Pentland Firth, Scotland, 179

*JUNCTION POINT.—See Preface for use of junction points.

Skagens Odde, Denmark, 455
Ushant, France, 698

Ports
Amsterdam, Netherlands, 374
Antwerpen, Belgium, 442
Bremerhaven, Germany, 437
Dunkerque, France, 402
Emden, Germany, 400
Esbjerg, Denmark, 394
Hamburg, Germany, 485
Hull, England, 240
Le Havre, France, 505
London, England, 420
Oostende, Belgium, 398
Plymouth, England, 621
Portland, England, 547
Portsmouth, England, 497
Rotterdam, Netherlands, 383
Southampton, England, 515
Wilhelmshaven, Germany, 430
Zeebrugge, Belgium, 394

DUNEDIN, NEW ZEALAND
(45°53′00″ S., 170°31′00″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,622
Torres Strait, Australia, 2,872

Ports
Hobart, Tasmania, 1,068
Melbourne, Australia, 1,309
Noumea, New Caledonia, 1,552

DUNKERQUE, FRANCE
(51°03′00″ N., 2°22′00″ E.) to:

Junction Points*
Bishop Rock, England, 355
Kiel Canal (east end), Germany, 386
Pentland Firth, Scotland, 525
Skagens Odde, Denmark, 511
Ushant, France, 351

Ports
Aberdeen, Scotland, 418
Amsterdam, Netherlands, 135
Antwerpen, Belgium, 102
Bergen, Norway, 585
Bremerhaven, Germany, 321
Cherbourg, France, 179
Dundee, Scotland, 402
Egersund, Norway, 469
Emden, Germany, 264
Esbjerg, Denmark, 350
Hamburg, Germany, 374
Hartlepool, England, 281
Hull, England, 223
Inverness, Scotland, 526
Kristiansand, Norway, 475
Le Harve, France, 144
Leith, Scotland, 399
London, England, 112
Newcastle, England, 307
Oslo, Norway, 617
Plymouth, England, 264
Portland, England, 190
Portsmouth, England, 150
Southhampton, England, 168
Stavanger, Norway, 510
Wilhelmshaven, Germany, 308

DURADZZO, ALBANIA. See Durres.

DURBAN, REPUBLIC OF SOUTH AFRICA
(29°52′00″ S., 31°02′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 764
Port Said, U.A.R., 4,567
Singapore, 4,872

Ports
Adelaide, Australia, 5,160
Albany, Australia, 4,275
Antsirana, Malagasy Republic, 1,561
Bombay, India, 3,829
Colombo, Ceylon (April–October, alternate, May–September), 3,704.
Colombo, Ceylon (November–March), 3,664
Colombo, Ceylon (May–September), 3,703
Darwin, Australia, 5,561
East London, Republic of South Africa, 258
Fremantle, Australia, 4,243
Karachi, Pakistan, 3,915
Lourenco Marques, Mozambique, 307
Malacca, Malaysia, 4,757
Mombasa, Kenya, 1,718
Padang, Indonesia, 4,307
Penang, Malaysia, 4,584
Port des Galets, Reunion Island, 1,418
Port Louis, Mauritius, 1,560
Sabang, Indonesia, 4,273
Zanzibar, Zanzibar, 1,607

DURRES, ALBANIA
(41°18′15″ N., 19°27′15″ E.) to:

Junction Points*
Port Said, U.A.R., 951
Strait of Gibraltar, 1,349

Ports
Crotone, Italy, 172
Gallipoli, Italy, 137
Monopoli, Italy, 100
Piraievs, Greece (via Corinth Canal), 339
Ploce, Yugoslavia, 214
Porto di Manfredonia, Italy, 161
Preveza, Greece, 181
Salamis, Greece, 343
Split, Yugoslavia, 216
Taranto, Italy, 183

DUTCH HARBOR, ALASKA, U.S.A.
(53°54′00″ N., 166°30′00″ W.) to:

Junction Points*
Panama, Panama, 5,246
Punta Arenas, Chile, 8,063
Singapore, 5,364

Ports
Anadyrskiy Liman, U.S.S.R., 824
Apra, Guam, 3,403
Auckland, New Zealand, 5,578
Brisbane, Australia, 5,369
Bukhta Broutona, Kuril Islands, 1,609
Callao, Peru, 5,988
Ching-tao, China, 3,385
Darwin, Australia, 5,332
Guayaquil, Ecuador, 5,552
Hai-kou, China (via Tsugaru Kaikyo and north of Taiwan), 4,276
Hai-kou, China (south of Honshu and Taiwan), 4,385
Hakodate, Japan, 2,228
Hobart, Tasmania, 6,365
Hong Kong, B.C.C., 4,026
Honolulu, Hawaii, U.S.A., 2,040
Hot Springs Bay, Alaska, U.S.A., 451
Hsia-men, China (via La Perouse Strait), 3,771
Hsia-men, China (via Tsugaru Kaikyo), 3,770
Juneau, Alaska, U.S.A., 1,136
Kasatka, Japan, 1,846
Kiska, Alaska, U.S.A., 596
Kobe, Japan, 2,833
Kuang-chou, China, 4,117
Los Angeles, California, U.S.A., 2,382
Manila, Philippines (north of Luzon), 4,233
Matsugahama, Japan, 1,917
Melbourne,, Australia, 6,321
Midway Island, 1,651
Nagasaki, Japan (via Tsugaru Kaikyo), 3,011
Nagasaki, Japan (south of Kyushu), 3,181
Noumea, New Caledonia, 4,857
Omura, Bonin Islands, 2,858
Pago Pago, American Samoa, 4,132

*JUNCTION POINT.—See Preface for use of junction points.

Palmyra Island, 2,912
Papeete, Society Islands, 4,400
Petersburg, Alaska, U.S.A., 1,215
Petropavlovsk, U.S.S.R., 1,249
Prince Rupert, Canada, 1,274
Sai Gon, Vietnam, 4,894
Sand Bay, Alaska, U.S.A., 397
San Diego, California, U.S.A., 2,465
San Francisco, California, U.S.A., 2,051
Sasebo, Japan (via Osumi Kaikyo), 3,207
Seattle, Washington, U.S.A., 1,707
Shang-hai, China (via La Perouse Strait), 3,375
Shang-hai, China (via Tsugaru Kaikyo), 3,377
Shelekhovo, Kuril Islands, 1,411
Shimonoseki, Japan, 2,892
Slavnoye, Kuril Islands, 1,792
Surabaja, Indonesia, 5,555
Suva, Fiji Islands, 4,493
Sweeper Cove, Alaska, U.S.A., 407
Sydney, Australia, 5,761
Ta-ku, China, 3,594
Ta-lien, China (via Tsugaru Kaikyo), 3,437
Ta-lien, China (via La Perouse Strait), 3,435
Tomari, Japan, 1,978
Truk, Caroline Islands, 3,493
Unalakleet, Alaska, U.S.A., 752
Valparaiso, Chile, 7,140
Vancouver, Canada, 1,724
Vladivostock, U.S.S.R., 2,518
Wake Island, 2,463
Whittier, Alaska, U.S.A., 817
Yin-hsien, China (via Shih-peng Chiang), 3,414
Yokohama, Japan, 2,551

EAST LONDON, REPUBLIC OF SOUTH AFRICA
(33°01'30'' S., 27°54'30'' E.) to:

Junction Points*
Cape of God Hope, Republic of South Africa, 508
Port Said, U.A.R., 4,830
Singapore, 5,082

Ports
Belawan, Indonesia, 4,749
Darwin, Australia, 5,673
Durban, Republic of South Africa, 258
Fremantle, Australia, 4,304
Inhambane, Mozambique, 722
Malacca, Malaysia, 4,967
Penang, Malaysia, 4,967
Port Elizabeth, Republic of South Africa, 131
Quelimane, Mozambique, 1,062

EASTER ISLAND. See Isla de Pascua.

EDINBURGH, SCOTLAND. See Leith.

EGEDESMINDE, GREENLAND
(68°42'33'' N., 52°53'12'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,925
Strait of Gibraltar, 2,772

Ports
Churchill, Canada, 1,485
Reykjavik, Iceland, 1,371
St. John's, Canada, 1,294

EGERSUND, NORWAY
(58°27'00'' N., 6°00'00'' E.) to:

Junction Points*
Bishop Rock, England (via English Channel), 797
Pentland Firth, Scotland, 298
Skagens Odde, Denmark, 165
Ushant, France, 781

Ports
Aberdeen, Scotland, 273
Amsterdam, Netherlands, 380
Antwerpen, Belgium, 484
Bremerhaven, Germany, 312
Calais, France, 475
Cherbourg, France, 621
Dover, England, 477
Dunkerque, France, 469
Emden, Germany, 327
Esbjerg, Denmark, 226
Hamburg, Germany, 351
Hull, England, 378
Kristiansand, Norway, 86
Le Havre, France, 589
Leith, Scotland, 336
London, England, 501
Newcastle, England, 329
Oostende, Belgium, 447
Oslo, Norway, 238
Plymouth, England, 706
Portland, England, 632
Portsmouth, England, 582
Rotterdam, Netherlands, 412
Southampton, England, 600
Wilhelmshaven, Germany, 306
Zeebrugge, Belgium, 440

EILAT, ISRAEL
(29°32'42'' N., 34°57'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,155
Port Said, U.A.R., 381
Singapore, 4,868

Ports
Aden, Aden Protectorate, 1,247

ELAT, ISRAEL. See Eilat.

ELEVSIS, GREECE
(38°01'55'' N., 23°32'00'' E.)

Add 5½ miles to Piraievs distances.

EL FERROL, SPAIN. See El Ferrol del Caudillo.

EL FERROL DEL CAUDILLO, SPAIN
(43°28'30'' N., 8°15'00'' W.) to:

Junction Points*
Bishop Rock, England, 394
Ushant, France, 343

Ports
Aviles, Spain, 133
Bayonne, France, 322
Cape Town, Republic of South Africa, 5,421
Colon, Panama, 4,222
Dakar, Senegal, 1,843
Horta, Azores, 970
Lisboa, Portugal, 356
Natal, Brazil, 3,312
Ponta Delgada, Azores, 870
Puerto de Pasajes, Spain, 300
St. John's, Canada, 1,861
San Sebastian, Spain, 302
Viana do Castello, Portugal, 155

EL JADIDA, MOROCCO
(33°15'25'' N., 8°30'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,941
Ushant, France, 998

Ports
Dakar, Senegal, 1,317
Tangier, Morocco, 207

*JUNCTION POINT.—See Preface for use of junction points.

ELIZABETH HARBOR, GREAT EXUMA, BAHAMAS
(23°30'30'' N., 75°43'45'' W.) to:

Junction Points*
Strait of Gibraltar, 3,651
Straits of Florida, 544

Ports
Castries, St. Lucia, 1,049
Charleston, South Carolina, U.S.A., 610
Charlotte Amalie, Virgin Islands, 704
Colon, Panama, 998
Georgetown, British Guiana, 1,484
Guantanamo, Cuba, 334
Hamilton, Bermuda, 813
Jacksonville, Florida, U.S.A., 559
Key West, Florida, U.S.A., 485
Kingston, Jamaica, 498
Miami, Florida, U.S.A., 354
New York, New York, U.S.A., 1,048
Norfolk, Virginia, U.S.A., 848
Philadelphia, Pennsylvania, U.S.A., 1,018
Port of Spain, Trinidad, 1,170
Portsmouth, New Hampshire, U.S.A., 1,252
St. Johns, Antigua, 900
San Juan, Puerto Rico, 642

EMDEN, GERMANY
(53°21'00'' N., 7°12'00'' E.) to:

Junction Points*
Bishop Rock, England, 606
Kiel Canal (east end), Germany, 197
Pentland Firth, Scotland, 484
Skagens Odde, Denmark, 344
Ushant, France, 590

Ports
Aberdeen, Scotland, 394
Antwerpen, Belgium, 276
Bergen, Norway, 457
Bremerhaven, Germany, 128
Cherbourg, France, 428
Dover, England, 284
Dundee, Scotland, 400
Dunkerque, France, 264
Egersund, Norway, 327
Esbjerg, Denmark, 172
Hamburg, Germany, 185
Hartlepool, England, 308
Harwich, England, 252
Hull, England, 279
Inverness, Scotland, 487
Kristiansand, Norway, 316
Le Havre, France, 396
Leith, Scotland, 403
London, England, 318
Newcastle, England, 329
Oostende, Belgium, 242
Oslo, Norway, 451
Plymouth, England, 513
Portland, England, 439
Portsmouth, England, 389
Rotterdam, Netherlands, 199
Southampton, England, 407
Stavanger, Norway, 376
Wilhelmshaven, Germany, 120
Zeebrugge, Belgium, 230

EMMAHAVEN, INDONESIA. See Padang.

ENDERBURY ISLAND, PHOENIX ISLANDS
(3°08'00'' S., 171°06'00'' W.) to:

Junction Points*
Panama, Panama, 5,599

Ports
Apia, Samoa, 641
Apra, Guam, 2,827
Christmas Island, North Pacific, 878
Seattle, Washington, U.S.A., 4,047

ENIWETOK, MARSHALL ISLANDS
(11°25'51'' N., 162°21'30'' E.) to:

Junction Points*
Panama, Panama, 7,086

Ports
Apra, Guam, 1,066
Honolulu, Hawaii, U.S.A., 2,375
Kwajalien, Marshall Islands, 359
Pearl Harbor, Hawaii, U.S.A., 2,347
San Francisco, California, U.S.A., 4,282

ENSENADA, MEXICO
(31°51'30'' N., 116°38'00'' W.) to:

Junction Points*
Panama, Panama, 2,791

Ports
Acapulco, Mexico, 1,369
Los Angeles, California, U.S.A., 151
Port Hueneme, California, U.S.A., 194

ENSENADA HONDA, CULEBRA ISLAND. See Great Harbor.

ERAKLEION, CRETE. See Iraklion.

EREGLI, TURKEY
(41°17'30'' N., 31°26'00'' E.)

Add 118½ miles to Istanbul distances for ports outside the Black Sea.

ERMOUPOLIS, SIROS, GREECE
(37°26'00'' N., 24°57'00'' E.) to:

Junction Points*
Port Said, U.A.R., 535
Strait of Gibraltar (via Corinth Canal), 1,524

Ports
Izmir, Turkey, 158
Piraievs, Greece, 84
Thessaloniki, Greece, 227

ERMOUPOLIS, SYRA, GREECE. See Ermoupolis, Siros.

ESBJERG, DENMARK
(55°27'30'' N., 8°26'30'' E.) to:

Junction Points*
Bishop Rock, England, 688
Kiel Canal (east end), Germany, 372
Pentland Firth, Scotland, 443
Skagens Odde, Denmark, 234
Ushant, France, 676

Ports
Aberdeen, Scotland, 373
Amsterdam, Netherlands, 255
Antwerpen, Belgium, 362
Bergen, Norway, 361
Cherbourg, France, 514
Dover, England, 370
Dundee, Scotland, 394
Dunkerque, France, 350
Egersund, Norway, 226
Emden, Germany, 172
Hamburg, Germany, 172
Harwich, England, 338
Hartlepool, England, 336
Hull, England, 334
Inverness, Scotland, 455
Kristiansand, Norway, 206
Le Havre, France, 482
Leith, Scotland, 403
London, England, 403
Newcastle, England, 349
Oostende, Belgium, 328
Oslo, Norway, 341
Plymouth, England, 599
Portland, England, 525
Portsmouth, England, 475

*JUNCTION POINT.—See Preface for use of junction points.

Rotterdam, Netherlands, 287
Southampton, England, 493
Stavanger, Norway, 278
Wilhelmshaven, Germany, 129
Zeebrugge, Belgium, 318

ESMERALDAS, ECUADOR
(1°02'00'' N., 79°43'00'' W.) to:

Junction Points*
Panama, Panama, 474
Punta Arenas, Chile, 3,486

Ports
Acapulco, Mexico, 1,527
Antofagasta, Chile, 1,703
Arica, Chile, 1,484
Callao, Peru, 909
Coquimbo, Chile, 2,014
Corinto, Nicaragua, 823
Guayaquil, Ecuador, 356
Guaymas, Mexico, 2,467
Iquique, Chile, 1,550
Lota, Chile, 2,388
Mollendo, Peru, 1,359
Monterey, California, U.S.A., 3,262
Pisco, Peru, 1,021
Puntarenas, Costa Rica, 614
Salina Cruz, Mexico, 1,290
San Blas, Mexico, 2,011
San Diego, California, U.S.A., 2,940
San Francisco, California, U.S.A., 3,342
San Jose, Guatemala, 1,016
Talcahuano, Chile, 2,368
Valparaiso, Chile, 2,179

ESUTORU, U.S.S.R.
(49°04'25'' N., 142°01'50'' E.) to:

Ports
Akita, Japan, 596
Hakodate, Japan, 536
Moji, Japan, 1,100
Muroran, Japan, 594
Nagoya, Japan, 1,189
Nakhodka, U.S.S.R., 561
Ta-ku, China, 1,708

EXUMA HARBOR, GREAT EXUMA, BAHAMAS
(23°34'00'' N., 75°46'00'' W.) to:

Junction Points*
Panama, Panama, 1,039
Straits of Florida, 637

Ports
New York, New York, U.S.A., 1,053
Neuvitas, Cuba, 287
San Juan, Puerto Rico, 647

FAABORG, DENMARK. See Faborg.

FABORG, DENMARK
(55°05'40'' N., 10°14'22'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 53
Skagens Odde, Denmark, 234

Ports
Gdansk, Poland, 368
Goteborg, Sweden, 222
Lubeck, Germany, 102

FAERINGEHAVN, GREENLAND
(63°41'00'' N., 51°34'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,597
Strait of Gibraltar, 2,444

Ports
Churchill, Canada, 1,326
Reykjavik, Iceland, 1,043
St. John's, Canada, 969

FAKARAVA, TUAMOTU ARCHIPELAGO. See Rotoava.

FALMOUTH, ENGLAND
(50°09'20'' N., 5°03'30'' W.) to:

Junction Points*
Ushant, France, 100

Ports
Cobh, Ireland, 182
Hull, England, 464
Liverpool, England, 313
London, England, 351

FAMAGUSTA, CYPRUS
(35°07'20'' N., 33°56'40'' E.) to:

Junction Points*
Port Said, U.A.R., 257
Strait of Gibraltar, 1,991

Ports
Alexandria, U.A.R., 340
Ashdod Yam, Israel, 203
Banghazi, Libya, 768
Marseille, France, 1,558
Piraievs, Greece, 604

FANNING ISLAND, NORTH PACIFIC
(3°51'30'' N., 159°21'45'' W.) to:

Junction Points*
Panama, Panama, 4,805

Ports
Auckland, New Zealand, 2,854
Honolulu, Hawaii, U.S.A., 1,056
Johnston Island, North Pacific, 1,032
Wellington, New Zealand, 3,114

FAO, IRAQ. See Al Faw.

FARGE, GERMANY
(53°12'00'' N., 8°31'00'' E.)

Add 23 miles to Bremerhaven distances

FARSUND, NORWAY
(58°05'40'' N., 6°48'30'' E.) to:

Junction Points*
Pentland Firth, Scotland, 332
Skagens Odde, Denmark, 132

Ports
Bergen, Norway, 182
London, England, 497
Oslo, Norway, 198

FASLANE BAY, SCOTLAND
(56°04'00'' N., 4°49'00'' W.)

Subtract 11 miles from Glasgow distances.

FASTNET, IRELAND*
(51°20'00'' N., 9°36'00'' W.) to:

Junction Points*
Bishop Rock, England, 149
Montreal, Canada (tracks C and D), 2,872
Montreal, Canada (track E), 2,710
Montreal, Canada (track F), 2,678
Montreal, Canada (track G), 2,562
Montreal, Canada (track G, via Strait of Belle Isle), 2,539
Pentland Firth, Scotland (via west coast of Ireland), 578
Pentland Firth, Scotland (via east coast of Ireland), 625
Straits of Florida (track A), 3,773

*JUNCTION POINT.—See Preface for use of junction points.

Straits of Florida (track B), 3,761
Straits of Florida (track C), 3,715
Yucatan Channel (track A), 4,087
Yucatan Channel (track B), 4,076
Yucatan Channel (track C), 4,058

Ports
Ardrossan, Scotland, 348
Argentia, Canada (track F), 1,819
Avonmouth, England, 262
Baltimore, Maryland, U.S.A. (track A), 3,193
Baltimore, Maryland, U.S.A. (track B), 3,159
Baltimore, Maryland, U.S.A. (track C), 3,098
Barrow in Furness, England, 302
Belem, Brazil, 3,741
Belfast, Ireland, 311
Boston, Massachusetts, U.S.A. (track A), 2,763
Boston, Massachusetts, U.S.A. (track B), 2,715
Boston, Massachusetts, U.S.A. (track C), 2,633
Cairn Ryan, Scotland, 338
Cardiff, Wales, 246
Charleston, South Carolina, U.S.A. (track A), 3,316
Charleston, South Carolina, U.S.A. (track B), 3,288
Charleston, South Carolina, U.S.A. (track C), 3,239
Charlotte Amalie, Virgin Islands, 3,279
Cienfuegos, Cuba (track A), 3,950
Cienfuegos, Cuba (track B), 3,992
Cobh, Ireland, 64
Colon, Panama (track A), 4,244
Colon, Panama (track B), 4,243
Douglas, Isle of Man, 274
Dublin, Ireland, 223
Fishguard, Wales, 180
Fleetwood, England, 315
Funchal, Madeira Island, 1,177
Galway, Ireland, 166
Glasgow, Scotland, 395
Guantanamo, Cuba (track A), 3,585
Guantanamo, Cuba (track B), 3,626
Habana, Cuba (track A), 3,779
Habana, Cuba (track B), 3,767
Habana, Cuba (track C), 3,721
Halifax, Canada (track A), 2,451
Halifax, Canada (track B), 2,399
Halifax, Canada (tracks C and D), 2,315
Halifax, Canada (track E), 2,199
Halifax, Canada (track F), 2,176
Hamilton, Bermuda (track A), 2,663
Hamilton, Bermuda (track B), 2,656
Hamilton, Bermuda (track C), 2,655
Holyhead, Wales, 232
Jacksonville, Florida, U.S.A. (track A), 3,487
Jacksonville, Florida, U.S.A. (track B), 3,459
Jacksonville, Florida, U.S.A. (track C), 3,407
Key West, Florida, U.S.A. (track A), 3,713
Key West, Florida, U.S.A. (track B), 3,701
Key West, Florida, U.S.A. (track C), 3,685
Kingston, Jamaica (track A), 3,748
Kingston, Jamaica (track B), 3,748
Limerick, Ireland, 157
Liverpool, England, 295
Londonderry, Ireland (via west coast of Ireland), 371
Mathew Town, Great Inagua Island, 3,467
Milford Haven, England, 178
Miami, Florida, U.S.A. (track A), 3,582
Miami, Florida, U.S.A. (track B), 3,570
Miami, Florida, U.S.A. (track C), 3,554
New London, Connecticut, U.S.A. (track A), 2,832
New London, Connecticut, U.S.A. (track B), 2,795
New London, Connecticut, U.S.A. (track C), 2,723
New York, New York, U.S.A. (track A), 2,913
New York, New York, U.S.A. (track B), 2,877
New York, New York, U.S.A. (track C), 2,805
Newport, Wales, 258
Norfolk, Virginia, U.S.A. (track A), 3,072
Norfolk, Virginia, U.S.A. (track B), 3,038
Norfolk, Virginia, U.S.A. (track C), 2,977
Paramaribo, Surinam, 3,554
Philadelphia, Pennsylvania, U.S.A. (track A), 3,066
Philadelphia, Pennsylvania, U.S.A. (track B), 3,029
Philadelphia, Pennsylvania, U.S.A. (track C), 2,957
Port au Prince, Haiti (track A), 3,620
Port au Prince, Haiti (track B), 3,619
Port Talbot, Wales, 218
Providence, Rhode Island, U.S.A. (track A), 2,821
Providence, Rhode Island, U.S.A. (track B), 2,784
Providence, Rhode Island, U.S.A. (track C), 2,712
Rio de Janeiro, Brazil, 4,873
San Juan, Puerto Rico (via Mona Passage), 3,299
Santo Domingo, Dominican Republic, 3,491
Swansea, Wales, 217
Washington, D.C., U.S.A. (track A), 3,207
Washington, D.C., U.S.A. (track B), 3,173
Washington, D.C., U.S.A. (track C), 3,112
Waterford, Ireland, 110
Willemstad, Curacao, 3,708
Wilmington, North Carolina, U.S.A. (track A), 3,262
Wilmington, North Carolina, U.S.A. (track B), 3,234
Wilmington, North Carolina, U.S.A. (track C), 3,183
Workington, England, 310

FAYAL, AZORES. See Horta.

FECAMP, FRANCE
(49°46'00" N., 0°21'45" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 482
Ushant, France, 246

Ports
Cherbourg, France, 79
Plymouth, England, 183
Rotterdam, Netherlands, 228

FEDALA, MOROCCO
(33°42'52" N., 7°23'52" W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,951
Ushant, France, 944

Ports
Dakar, Senegal, 1,338
Tangier, Morocco, 158

FERNANDINA, FLORIDA, U.S.A.
(30°41'00" N., 81°27'40" W.) to:

Ports
Nassau, Bahamas, 450
San Juan, Puerto Rico, 1,115

FERNANDO DE NORONHA
(3°50'00" S., 32°25'00" W.) to:

Ports
Kingston, St. Vincent, 1,320

*JUNCTION POINT.—See Preface for use of junction points.

New York, New York, U.S.A., 3,517
Recife, Brazil, 300
Santos, Brazil, 2,405

FERNANDO PO. See Santa Isabel.

FETHIYE, TURKEY
(36°37'30'' N., 29°07'20'' E.) to:

Junction Points*
Port Said, U.A.R., 375
Strait of Gibraltar, 1,712

Ports
Ashdod Yam, Israel, 416
Banghazi, Libya, 548
Piraievs, Greece, 305

FIJI ISLANDS. See Levuka or Suva.

FISHGUARD, WALES
(52°00'30'' N., 4°58'30'' W.) to:

Junction Points*
Bishop Rock, England, 161
Fastnet, Ireland, 180
Pentland Firth, Scotland, 497

Ports
Avonmouth, England, 145
Barrow in Furness, England, 157
Belfast, Ireland, 182
Brest, France, 274
Cardiff, Wales, 130
Cherbourg, France, 306
Cobh, Ireland, 131
Douglas, Isle of Man, 131
Glasgow, Scotland, 247
London, England, 523
Southampton, England, 343
Swansea, Wales, 100

FIUME, YUGOSLAVIA. See Rijeka.

FLEETWOOD, ENGLAND
(53°55'00'' N., 3°00'00'' W.) to:

Junction Points*
Bishop Rock, England, 307
Fastnet, Ireland, 315
Inishtrahull, Ireland, 189
Pentland Firth, Scotland, 437

Ports
Southampton, England, 485

FLEKKEFJORD, NORWAY
(58°17'35'' N., 6°39'30'' E.) to:

Junction Points*
Pentland Firth, Scotland, 325
Skagens Odde, Denmark, 155

Ports
Bergen, Norway, 170
London, England, 479
Oslo, Norway, 219

FLENSBURG, GERMANY
(54°47'50'' N., 9°26'15'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 52
Skagens Odde, Denmark, 260

Ports
Gdynia, Poland, 358
Goteborg, Sweden, 272
Lubeck, Germany, 131

FLORIDA STRAITS. See Straits of Florida.

FLUSHING, NETHERLANDS. See Vlissingen.

FLYING FISH COVE, CHRISTMAS ISLAND, INDIAN OCEAN
(10°25'00'' S., 105°43'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,540
Cape of Good Hope, Republic of South Africa, 4,923
Lombok Strait, Indonesia, 603
Sunda Strait, Indonesia, 281

Ports
Colombo, Ceylon, 1,888

FOOCHOW, CHINA. See Fu-chou.

FORTALEZA, BRAZIL
(3°42'00'' S., 38°31'00'' W.) to:

Junction Points*
Punta Arenas, Chile, 3,654

Ports
Belem, Brazil, 685
New York, New York, U.S.A., 3,304
Recife, Brazil, 425
Sao Luiz, Brazil, 392

FORT BAYARD, CHINA. See Chanchiang.

FORT DAUPHIN, MALAGASY REPUBLIC
(25°01'00'' S., 47°01'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,614
Port Said, U.A.R., 4,035
Singapore, 3,975

Ports
Belawan, Indonesia, 3,642
Darwin, Australia, 4,775
Fremantle, Australia, 3,593
Malacca, Malaysia, 3,860
Penang, Malaysia, 3,687
Port Louis, Mauritius, 654
Sabang, Indonesia, 3,376

FORT DE FRANCE, MARTINIQUE
(14°36'00'' N., 61°04'15'' W.) to:

Junction Points*
Panama, Panama, 1,202
Straits of Florida, 1,389

Ports
Baltimore, Maryland, U.S.A., 1,718
Bordeaux, France, 3,607
Boston, Massachusetts, U.S.A., 1,799
Bridgetown, Barbados, 130
Castries, St. Lucia, 37
Cayenne, French Guiana, 782
Cienfuegos, Cuba, 1,240
Colon, Panama, 1,159
Habana, Cuba (via Mona Passage and Old Bahama Channel), 1,350
Kingstown, St. Vincent, 89
New York, New York, U.S.A., 1,717
Norfolk, Virginia, U.S.A., 1,597
Nuevitas, Cuba, 1,035
Philadelphia, Pennsylvania, U.S.A. (via Anegada Channel), 1,724
Pointe a Pitre, Guadeloupe, 108
Ponce, Puerto Rico, 381
Roseau, Dominica Island, 50
San Juan, Puerto Rico, 385
Santiago de Cuba, Cuba, 951
Willemstad, Curacao, 495

FORT-LIBERTE, HAITI
(19°41'30'' N., 71°50'20'' W.) to:

Junction Points*
Panama, Panama, 881
Straits of Florida, 692

Ports
Grand Turk, Grand Turk Island, 122
New York, New York, U.S.A., 1,283
Nuevitas, Cuba, 339
San Juan, Puerto Rico, 373

*JUNCTION POINT.—See Preface for use of junction points.

FREDERICIA, DENMARK
(55°33′45″ N., 9°45′35″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 85
Skagens Odde, Denmark, 169

Ports
Gdynia, Poland, 384
Goteborg, Sweden, 181
Lubeck, Germany, 155

FREDERIKSDAL, GREENLAND
(60°00′00″ N., 44°41′00″ W.) to:

Junction Points*
Pentland Firth, Scotland, 1,268
Strait of Gibraltar, 2,115

Ports
Churchill, Canada, 1,527
Reykjavik, Iceland, 714
St. John's, Canada, 800

FREDERIKSHAAB, GREENLAND
(61°59′00″ N., 49°43′00″ W.) to:

Junction Points*
Panama, Panama, 3,558
Montreal, Canada, 1,901

Ports
Baltimore, Maryland, U.S.A., 2,261
Halifax, Canada, 1,406
New York, New York, U.S.A., 1,959

FREDERIKSHAVN, DENMARK
(57°26′00″ N., 10°33′15″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 200
Skagens Odde, Denmark, 24

Ports
Arkhangelsk, U.S.S.R., 1,805
Gdynia, Poland, 395
Kobenhavn, Denmark, 142
Lubeck, Germany, 155

FREDERIKSTED, ST. CROIX
(17°43′00″ N., 64°53′20″ W.) to:

Ports
Roseau, Dominica Island, 252

FREDRIKSTAD, NORWAY
(59°12′10″ N., 10°57′00″ E.) to:

Junction Points*
Pentland Firth, Scotland, 531

Ports
Bergen, Norway, 335
Oslo, Norway, 57

FREETOWN, SIERRA LEONE
(83°30′00″ N., 13°14′00″ W.) to:

Junction Points*
Bishop Rock, England, 2,673
Cape of Good Hope, Republic of South Africa, 3,190
Inishtrahull, Ireland, 3,024
Montreal, Canada, 4,019
Pentland Firth, Scotland, 3,272
Punta Arenas, Chile, 4,731
Strait of Gibraltar, 1,966
Straits of Florida, 4,137
Ushant, France, 2,630
Yucatan Channel, 4,229

Ports
Accra, Ghana, 955
Bathurst, Gambia, 450
Boston, Massachusetts, U.S.A., 3,656
Buenos Aires, Argentina, 3,712
Cadiz, Spain, 1,979
Cape Town, Republic of South Africa, 3,164
Casablanca, Morocco, 1,812
Clarence Bay, Ascension Island, 996
Colon, Panama, 3,976
Dakar, Senegal, 496
Funchal, Maderia Island, 1,573
Grand-Bassam, Ivory Coast, 737
Guantanamo, Cuba, 3,650
Huelva, Spain, 1,999
Key West, Florida, U.S.A., 4,076
Las Palmas de Gran Canaria, Canary Islands, 1,317
Lisboa, Portugal, 2,023
Marshall, Liberia, 293
Monrovia, Liberia, 264
Natal, Brazil, 1,569
New York, New York, U.S.A., 3,757
Norfolk, Virginia, U.S.A., 3,821
Philadelphia, Pennsylvania, U.S.A., 3,862
Pointe Noire, Gabon, 1,788
Ponta Delgada, Azores, 1,941
Port Harcourt, Nigeria, 1,397
Port of Spain, Trinidad, 2,896
Porto, Portugal, 2,161
Porto Grande, Cape Verde Islands, 871
Portsmouth, New Hampshire, U.S.A., 3,654
Recife, Brazil, 1,632
Rio de Janeiro, Brazil, 2,613
St. Helena Island, 1,564
San Juan, Puerto Rico, 3,141
Santa Cruz de Tenerife, Canary Islands, 1,342
Sassandra, Ivory Coast, 582
Takoradi, Ghana, 859
Vigo, Spain, 2,223

FREMANTLE, AUSTRALIA
(32°03′00″ S., 115°44′20″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 181
Cape of Good Hope, Republic of South Africa, 4,755
Lombok Strait, Indonesia, 1,440
Port Said, U.A.R., 6,310
Sunda Strait, Indonesia, 1,691
Torres Strait, Australia, 2,531

Ports
Aden, Aden Protectorate (north of Chagos Archipelago), 4,921
Al Bahrayn, Bahrain, 5,203
Al Basrah, Iraq, 5,440
Al Kuwayt, Kuwait, 5,387
Albany, Australia, 349
Antsirana, Malagasy Republic, 3,826
Beira, Mozambique, 4,351
Berbera, Somali Republic, 4,933
Bombay, India, 3,986
Burketown, Australia (via Clarence Strait), 2,697
Bushehr, Iran, 5,259
Calcutta, India (via west of Sumatra), 3,693
Calicut, India, 3,484
Cocanada, India, 3,515
Colombo, Ceylon, 3,122
Dar es Salaam, Tanganyika, 4,513
Darwin, Australia, 1,847
Diego Garcia, Chagos Archipelago, 2,850
Durban, Republic of South Africa, 4,244
East London, Republic of South Africa, 4,304
Fort Dauphin, Malagasy Republic, 3,593
Geraldton, Australia, 213
Karachi, Pakistan, 4,446
Lourenco Marques, Mozambique, 4,283
Madras, India, 3,393
Majunga, Malagasy Republic, 4,132
Masqat, Mascat and Oman, 4,686
Mocambique, Mozambique, 4,367
Mombasa, Kenya, 4,564
Mosselbaai, Republic of South Africa, 4,525
Port Louis, Mauritius (north of Mauritius), 3,202

*JUNCTION POINT.—See Preface for use of junction points.

Port Louis, Mauritius (south of Mauritius), 3,217
Rangoon, Burma (west of Sumatra), 3,248
Sabang, Indonesia, 2,601
St. Denis, Reunion Island, 3,272
Surabaja, Indonesia (via Bali Strait and north of Madura), 1,674
Surabaja, Indonesia (via Bali Strait and south of Madura), 1,627
Tamatave, Malagasy Republic, 3,650
Tanga, Tanganyika, 4,583
Tjilatjap, Indonesia, 1,519
Victoria, Seychelles, 3,752
Wyndham, Australia, 1,780
Yampi Sound, Australia, 586
Zanzibar, Zanzibar, 4,536

FRONTERA, MEXICO. See Alvaro Obregon.

FU-CHOU, CHINA
(26°03'30'' N., 119°19'00'' E.)

Fu-chou is 9 miles above Lo-hsing-ta Mao-ti, on the River Min. See Lo-hsing-ta Mao-ti.

FUKUOKA, JAPAN. See Hagata.

FUNAFUTI, ELLICE ISLANDS
(8°30'45'' S., 179°12'15'' E.) to:

Juntion Points*
Panama, Panama, 6,217

Ports
Apia, Samoa, 632
Apra, Guam, 2,455
Brisbane, Australia, 1,895
Hong Kong, B.C.C., 4,247
Honolulu, Hawaii, U.S.A., 2,249
Jaluit, Marshall Islands, 1,041
Midway Island, 2,220
Nonouti, Gilbert Islands, 544
Noumea, New Caledonia, 1,132
Papeete, Society Islands, 1,910
San Francisco, California, U.S.A., 4,295
Seattle, Washington, U.S.A., 4,640

FUNCHAL, MADEIRA ISLAND
(32°38'00'' N., 16°54'30'' W.) to:

Junction Points*
Bishop Rock, England, 1,136
Cape of Good Hope, Republic of South Africa, 4,689
Fastnet, Ireland, 1,177
Inishtrahull, Ireland, 1,466
Montreal, Canada (tracks C and D), 2,850
Montreal, Canada (track E), 2,815
Montreal, Canada (track F), 2,815
Pentland Firth, Scotland, 1,714
Punta Arenas, Chile, 5,894
Strait of Gibraltar, 589
Straits of Florida, 3,503
Ushant, France, 1,089

Ports
Baltimore, Maryland, U.S.A., 3,028
Bathurst, Gambia, 1,182
Bordeaux, France, 1,192
Boston, Massachusetts, U.S.A. (track A), 2,604
Boston, Massachusetts, U.S.A. (track B), 2,601
Brest, France, 1,110
Buenos Aires, Argentina, 4,823
Cadiz, Spain, 579
Cape Town, Republic of South Africa, 4,680
Casablanca, Morocco, 476
Colon, Panama, 3,742
Dakar, Senegal, 1,091
Freetown, Sierra Leone, 1,573
Guantanamo, Cuba, 3,194
Horta, Azores, 677
Huelva, Spain, 578
Key West, Florida, U.S.A., 3,445
Kingston, Jamaica, 3,349
Las Palmas de Gran Canaria, Canary Islands, 282
Lisboa, Portugal, 532
New York, New York, U.S.A. (direct), 2,761
New York, New York, U.S.A. (track A), 2,764
Norfolk, Virginia, U.S.A., 2,907
Philadelphia, Pennsylvania, U.S.A. (direct), 2,901
Philadelphia, Pennsylvania, U.S.A. (track A), 2,903
Plymouth, England, 1,234
Ponta Delgada, Azores, 550
Port of Spain, Trinidad, 2,819
Porto, Portugal, 650
Porto Grande, Cape Verde Islands, 1,043
Praia, Cape Verde Islands, 1,128
Rio de Janeiro, Brazil, 3,722
San Juan, Puerto Rico, 2,773
Santa Cruz de Tenerife, Canary Islands, 258
Tangier, Morocco, 588
Vigo, Spain, 702

FUSAN, KOREA. See Pusan.

FUTAMI KO, BONIN ISLANDS. See Omura.

GABES, TUNISIA. See Qabis.

GAETA, ITALY
(41°13'00'' N., 13°35'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,150
Strait of Gibraltar, 986

Ports
Livorno, Italy, 228
Messina, Sicily, 209
Tunis, Tunisia, 315

GALAPAGOS ISLANDS. See Archipielago de Colon.

GALETS, PORT DES, REUNION ISLAND. See Port des Galets.

GALLE, CEYLON
(6°01'45'' N., 80°13'20'' E.) to:

Junction Points*
Singapore, 1,502

Ports
Bombay, India, 944
Calicut, India, 437
Karachi, Pakistan, 1,393
Trincomalee, Ceylon, 255

GALLE HARBOR, CEYLON. See Galle.

GALLIPOLI, ITALY
(40°02'00'' N., 17°59'00'' E.) to:

Junction Points*
Port Said, U.A.R., 908
Strait of Gibraltar, 1,246

Ports
Durres, Albania, 137
Izmir, Turkey (south of Greece), 606
Messina, Sicily, 201

GALVESTON, TEXAS, U.S.A.
(29°19'00'' N., 94°47'00'' W.) to:

Junction Points*
Panama, Panama, 1,536

*JUNCTION POINT.—See Preface for use of junction points.

Straits of Florida, 698
Yucatan Channel, 696

Ports
Alvaro Obregon, Mexico, 665
Barranquilla, Colombia, 1,577
Belize, British Honduras, 935
Bluefields, Nicaragua, 1,290
Campeche, Mexico, 617
Carmen, Mexico, 661
Cartagena, Colombia, 1,583
Cienfuegos, Cuba, 989
Habana, Cuba, 769
Limon, Costa Rica, 1,394
Maracaibo, Venezuela, 1,810
Puerto Barrios, Guatemala, 1,041
Puerto Cabello, Venezuela, 1,899
Puerto Cortes, Honduras, 1,001
Puerto Mexico, Mexico, 680
San Juan del Norte, Nicaragua (via inside route), 1,344
Santa Marta, Colombia, 1,588
Tampico, Mexico, 473
Tuxpan, Mexico, 530
Veracruz, Mexico, 623

GALWAY, IRELAND
(53°15′00″ N., 9°03′00″ W.) to:

Junction Points*
Fastnet, Ireland, 166
Inishtrahull, Ireland, 231
Strait of Gibraltar, 1,184

Ports
Dakar, Senegal, 2,383
Natal, Brazil, 3,786
St. John's, Canada, 1,678
Tromso, Norway, 1,352

GAVLE, SWEDEN
(60°41′28″ N., 17°13′50″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 615
Skagen Odde, Denmark, 676

Ports
Gdynia, Poland, 438
Helsinki, Finland, 292
Riga, Latvia, 355
Stockholm, Sweden, 153

GAVEN DIKSON, U.S.S.R. See Dikson Harbor.

GDANSK, POLAND
(54°22′00″ N., 18°40′00″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 344
Skagens Odde, Denmark (via The Sound), 418
Skagens Odde, Denmark (via Store Baelt), 533

Ports
Assens, Denmark, 370
Faborg, Denmark, 368
Kobenhavn, Denmark, 468
Oslo, Norway (via The Sound), 540
Oslo, Norway (via Store Baelt), 657
Szczecin, Poland, 240

GDYNIA, POLAND
(54°32′00″ N., 18°33′00″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 339
Skagens Odde, Denmark, 528

Ports
Aalborg, Denmark (via The Sound), 389
Flensburg, Germany, 358
Fredericia, Denmark, 384
Frederikshavn, Denmark, 395
Gavle, Sweden, 438
Grena, Denmark, 361
Hamina, Finland, 512
Hango, Finland, 356
Helsinki, Finland, 415
Kobenhavn, Denmark, 464
Korsor, Denmark, 344
Kyndbyvaerkets, Denmark, 334
Lubeck, Germany, 328
Masnedsund, Denmark, 330
Middlefart, Denmark, 396
Musko Island, Sweden, 288
Naestved, Denmark, 383
Nakskov, Denmark, 335
Odense, Denmark, 438
Oxelosund, Sweden, 266
Peenemunde, Germany, 220
Pitea, Sweden, 687
Porkkala, Finland, 412
Randers, Denmark, 403
Ruch'i, U.S.S.R., 530
Sassnitz, Germany, 203
Sonderborg, Denmark, 360
Stralsund, Germany, 245
Sundsvall, Sweden, 507
Tallinn, Estonia, 392
Travemunde, Germany, 307
Umea, Sweden, 574
Ventspils, Latvia, 204

GEELONG, AUSTRALIA
(38°08′00″ S., 144°22′00″ E.)

Add 6 miles to Melbourne distances.

GELIBOLU, TURKEY
(40°24′18″ N., 26°40′00″ E.)

Subtract 113 miles from Istanbul distances for ports outside the Black Sea and Sea of Marmara.

GENOA, ITALY. See Genova.

GENOVA, ITALY
(44°23′52″ N., 8°55′20″ E.) to:

Junction Points*
Port Said, U.A.R., 1,426
Strait of Gibraltar, 868

Ports
Ajaccio, Corsica, 170
Alexandria, U.A.R., 1,316
Alger, Algeria, 531
Alicante, Spain, 564
Ancona, Italy, 1,017
Annaba, Algeria, 458
Banghazi, Libya, 912
Barcelona, Spain, 356
Bari, Italy, 810
Bastia, Corsica, 108
Bayrut, Lebanon, 1,508
Beaulieu, France, 316
Bizerte, Tunisia, 437
Bonifacio, Corsica, 199
Brindisi, Italy, 752
Cagliari, Sardinia, 359
Cannes, France, 107
Cartagena, Spain, 616
Catania, Sicily, 535
Ceuta, Morocco, 849
Civitavecchia, Italy, 191
Derince, Turkey (via Corinth Canal), 1,283
Derince, Turkey (south of Greece), 1,325
Dubrovnik, Yugoslavia, 856
Gibraltar, 850
Golfe-Juan, France, 101
Golfo di Oristano, Sardinia, 285
Haifa, Israel, 1,505
Hyeres, France, 147
Iraklion, Crete, 991
Istanbul, Turkey (via Corinth Canal), 1,250
Istanbul, Turkey (south of Greece), 1,291
Izmir, Turkey (via Corinth Canal), 1,095
Izmir, Turkey (south of Greece), 1,137
Malaga, Spain, 798
Marseille, France, 204
Messina, Sicily, 492
Napoli, Italy, 338
Nice, France, 89

*JUNCTION POINT.—See Preface for use of junction points.

Odessa, U.S.S.R. (via Corinth Canal) 1,598
Odessa, U.S.S.R. (south of Greece), 1,639
Olbia, Sardinia, 221
Oran, Algeria, 686
Palermo, Sicily, 431
Palma, Balearic Islands, 448
Piraievs, Greece (via Corinth Canal), 896
Piraievs, Greece (south of Greece), 978
Port St. Louis du Rhone, France, 221
Porto Vecchio di Piombino, Italy, 116
Rijeka, Yugoslavia, 1,085
St. Raphael, France, 118
Sete, France, 266
Sibenik, Yugoslavia, 958
Siracusa, Sicily, 557
Split, Yugoslavia, 943
Tarabulus, Libya, 719
Taranto, Italy, 705
Thessaloniki, Greece (via Corinth Canal), 1,144
Thessaloniki, Greece (south of Greece), 1,186
Toulon, France, 171
Trieste, Free Territory, 1,118
Tubruq, Libya, 1,048
Tunis, Tunisia, 472
Valencia, Spain, 512
Valletta, Malta, 584
Venezia, Italy, 1,128
Villefranche, France, 88
Volos, Greece (via Corinth Canal), 1,085
Volos, Greece (south of Greece), 1,127

GENSAN, KOREA. See Wonsan.

GENT, BELGIUM. See Ghent.

GEORGE TOWN, GREAT EXUMA, BAHAMAS. See Elizabeth Harbor.

GEORGETOWN, GRAND CAYMAN
(19°18′00″ N., 81°23′00″ W.) to:

Junction Points*
Yucatan Channel, 257

GEORGETOWN, BRITISH GUIANA
(6°49′00″ N., 58°10′00″ W.) to:

Junction Points*
Bishop Rock, England, 3,643
Cape of Good Hope, Republic of South Africa, 5,026
Inishtrahull, Ireland, 3,779
Montreal, Canada, 3,077
Panama, Panama, 1,558
Pentland Firth, Scotland, 4,001
Punta Arenas, Chile (east of South America), 5,030
Strait of Gibraltar, 3,358
Straits of Florida (via Mona Passage), 1,869
Yucatan Channel, 1,846

Ports
Baltimore, Maryland, U.S.A., 2,211
Belem, Brazil, 896
Boston, Massachusetts, U.S.A., 2,282
Bridgetown, Barbados, 389
Buenos Aires, Argentina, 3,954
Castries, St. Lucia, 482
Charlotte Amalie, Virgin Islands, 814
Colon, Panama, 1,515
Elizabeth Harbor, Bahamas, 1,484
Guantanamo, Cuba, 1,316
Habana, Cuba, 1,830
Hamilton, Bermuda, 1,591
Horta, Azores, 2,488
Jacksonville, Florida, U.S.A., 1,980
Key West, Florida, U.S.A., 1,818
Kingston, Jamaica, 1,334
Limon, Costa Rica, 1,647
Lisboa, Portugal, 3,264
Miami, Florida, U.S.A., 1,788
Montevideo, Uruguay, 3,840
Natal, Brazil, 1,630
New York, New York, U.S.A., 2,217
Norfolk, Virginia, U.S.A., 2,090
Paramaribo, Surinam, 215
Philadelphia, Pennsylvania, U.S.A., 2,223
Pointe a Pitre, Guadeloupe, 606
Port of Spain, Trinidad, 376
Portsmouth, New Hampshire, U.S.A., 2,284
Puerto Cortes, Honduras, 1,933
Recife, Brazil, 1,781
Rio de Janeiro, Brazil, 2,853
St. Johns, Antigua, 689
Salvador, Brazil, 2,172
San Juan, Puerto Rico, 876
Sint Nicolaas, Aruba, 856
Wilmington, North Carolina, U.S.A., 2,011

GEORGETOWN, MALAYSIA. See Penang.

GERALDTON, AUSTRALIA
(28°47′00″ S., 114°35′00″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 356
Lombok Strait, Indonesia, 1,242
Sunda Strait, Indonesia, 1,494

Ports
Albany, Australia, 525
Darwin, Australia, 1,638
Fremantle, Australia, 213

G'HAZAOUET, ALGERIA
(35°06′18″ N., 1°51′30″ W.) to:

Junction Points*
Port Said, U.A.R., 1,784
Strait of Gibraltar, 199

Ports
Alger, Algeria, 278
Alicante, Spain, 209
Malaga, Spain, 158

GHENT, BELGIUM
(51°03′00″ N., 3°44′00″ E.)

Subtract 17 miles from Antwerpen distances.

GIBARA, CUBA
(21°06′30″ N., 76°07′00″ W.) to:

Junction Points*
Straits of Florida, 447

Ports
Charleston, South Carolina, U.S.A., 806
New York, New York, U.S.A., 1,216
Nuevitas, Cuba, 82
Port Antonia, Jamaica, 323

GIBRALTAR
(36°08′00″ N., 5°21′30″ W.) to:

Junction Points*
Port Said, U.A.R., 1,925
Strait of Gibraltar, 24

Ports
Alexandria, U.A.R., 1,805
Alger, Algeria, 420
Alicante, Spain, 300
Ancona, Italy, 1,563
Annaba, Algeria, 658
Banghazi, Libya, 1,338
Barcelona, Spain, 516
Bari, Italy, 1,356
Bayrut, Lebanon, 2,017
Brindisi, Italy, 1,298
Cartagena, Spain, 241

*JUNCTION POINT.—See Preface for use of junction points.

Genova, Italy, 850
Guantanamo, Cuba (via Turks Island Passage), 3,767
Haifa, Israel, 2,014
Iraklion, Crete, 1,499
Istanbul, Turkey (via Corinth Canal), 1,787
Istanbul, Turkey (south of Greece), 1,804
Izmir, Turkey (via Corinth Canal), 1,633
Izmir, Turkey (south of Greece), 1,650
La Spezia, Italy, 873
Livorno, Italy, 869
Marseille, France, 693
Messina, Sicily, 1,031
Napoli, Italy, 983
Odessa, U.S.S.R. (via Corinth Canal), 2,135
Odessa, U.S.S.R. (south of Greece), 2,152
Oran, Algeria, 237
Palermo, Sicily, 922
Palma, Balearic Islands, 453
Piraievs, Greece (via Corinth Canal), 1,433
Piraievs, Greece (south of Greece), 1,490
Rijeka, Yugoslavia, 1,630
Savona, Italy, 835
Sfax, Tunisia, 1,026
Sibenik, Yugoslavia, 1,504
Siracusa, Sicily, 1,037
Split, Yugoslavia, 1,489
Tarabulus, Libya, 1,076
Taranto, Italy, 1,250
Thessaloniki, Greece (via Corinth Canal), 1,682
Thessaloniki, Greece (south of Greece), 1,698
Toulon, France, 705
Trieste, Free Territory, 1,664
Tunis, Tunisia, 803
Valencia, Spain, 386
Valletta, Malta, 988
Venezia, Italy, 1,674
Volos, Greece (via Corinth Canal), 1,623
Volos, Greece (south of Greece), 1,640

GIBRALTAR, STRAIT OF. See Strait of Gibraltar.

GIJON, SPAIN
(43°33'00'' N., 5°40'30'' W.) to:

Junction Points*
Ushant, France, 294

Ports
Casablanca, Morocco, 763
Horta, Azores, 1,092
Porto de Leixoes, Portugal, 309
St. Nazaire, France, 274

GLADSTONE HARBOR, AUSTRALIA
(23°50'00'' S., 151°15'30'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,688
Torres Strait, Australia, 1,085

Ports
Brisbane, Australia, 314
Port Moresby, Papua, 1,389
Wellington, New Zealand, 1,678

GLASGOW, SCOTLAND
(55°51'45'' N., 4°18'00'' W.) to:

Junction Points*
Bishop Rock, England, 402
Fastnet, Ireland, 395
Inishtrahull, Ireland, 146
Pentland Firth, Scotland (via The Minch), 384

Ports
Ardrossan, Scotland, 43
Avonmouth, England, 390
Barrow in Furness, England, 172
Boulogne, France, 672
Cairn Ryan, Scotland, 82
Cardiff, Wales, 375
Cobh, Ireland, 346
Fishguard, Wales, 247
Loch Ewe, Scotland, 303
Londonderry, Ireland, 145
Raykjavik, Iceland, 860
Stornoway, Scotland, 283
Workington, England, 145

GLOUCESTER, ENGLAND
(51°52'00'' N., 2°13'00'' W.)

Add 34 miles to Avonmouth distances.

GODHAVN, GREENLAND
(69°14'00'' N., 53°32'00'' W.) to:

Junction Points*
Inishtrahull, Ireland (direct), 1,901
Inishtrahull, Ireland (via 75 miles off Kap Farvel), 1,953

Ports
Angmagssalik, Greenland (direct), 1,132
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,257
Ivigtut, Greenland, 560
Reykjavik, Iceland (direct), 1,396
Reykjavik, Iceland (via 75 miles off Kap Farvel), 1,483

GODTHAB, GREENLAND
(64°10'45'' N., 51°45'15'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,630
Strait of Gibraltar, 2,477

Ports
Churchill, Canada, 1,331
Reykjavik, Iceland, 1,076
St. John's, Canada, 1,005

GOLCUK, TURKEY
(40°44'00'' N., 29°49'00'' E.)

Add 34 miles to Istanbul distances for ports outside the Black Sea and Sea of Marmara.

GOLFE-JUAN, FRANCE
(43°34'00'' N., 7°05'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,462
Strait of Gibraltar, 780

Ports
Barcelona, Spain, 268
Genova, Italy, 101
Palma, Balearic Islands, 365

GOLFITO, COSTA RICA
(8°38'30'' N., 83°10'30'' W.) to:

Junction Points*
Panama, Panama, 334

Ports
Acapulco, Mexico, 1,123
Ampala, Honduras, 432
Buenaventura, Colombia, 426
La Union, El Salvador, 432

GOLFO DI ORISTANO, SARDINIA, ITALY
(39°49'00'' N., 8°26'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,343
Strait of Gibraltar, 716

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Annaba, Algeria, 176
Genova, Italy, 285
Marseille, France, 264

GONAIVES, HAITI
(19°27'00'' N., 72°42'00'' W.) to:

Junction Points*
Panama, Panama, 805

Ports
Kingston, Jamaica, 263
New York, New York, U.S.A., 1,328
Port au Prince, Haiti, 70

GOOLE, ENGLAND
(53°42'00'' N., 0°51'00'' W.)

Add 27 miles to Hull distances.

GOOSE BAY, CANADA
(53°22'00'' N., 60°18'00'' W.) to:

Junction Points*
Inishtrahull, Ireland, 1,812
Strait of Gibraltar, 2,538

Ports
Churchill, Canada, 1,557
Reykjavik, Iceland, 1,332
St. John's, Canada, 588

GOTEBORG, SWEDEN
(57°42'00'' N., 11°57'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 230
Skagens Odde, Denmark, 42

Ports
Assens, Denmark, 197
Bergen, Norway, 356
Faborg, Denmark, 222
Flensburg, Germany, 272
Fredericia, Denmark, 181
Grena, Denmark, 102
Haderslev, Denmark, 203
Hobro, Denmark, 123
Kolding, Denmark, 330
Middlefart, Denmark, 173
Naestved, Denmark, 199
Nakskov, Denmark, 201
Oslo, Norway, 159
Sonderborg, Denmark, 239
Vejle, Denmark, 176

GRAND-BASSAM, IVORY COAST
(5°11'00'' N., 3°43'00'' W.) to:

Ports
Accra, Ghana, 230
Freetown, Sierra Leone, 737
Lagos, Nigeria, 556
Monrovia, Liberia, 479

GRAND TURK, GRAND TURK ISLAND
(21°28'30'' N., 71°08'00'' W.) to:

Junction Points*
Panama, Panama, 947
Straits of Florida, 721

Ports
Fort-Liberte, Haiti, 122
New York, New York, U.S.A., 1,167
Nuevitas, Cuba, 368

GRANGEMOUTH, SCOTLAND
(56°02'00'' N., 03°41'20'' W.)

For distances outside the Firth of Forth, add 15 miles to Leith distances.

GRANVILLE, FRANCE
(48°50'00'' N., 1°36'15'' W.) to:

Junction Points*
Bishop Rock, England, 267
Ushant, France, 158

Ports
Dover, England, 181
Le Harve, France, 173
Plymouth, England, 149

GRAVESEND, ENGLAND
(51°26'45'' N., 0°22'30'' E.)

Subtract 16 miles from London distances.

GREAT HARBOR, CULEBRA ISLAND
(18°18'00'' N., 65°17'00'' W.) to:

Junction Points*
Straits of Florida (via Old Bahama Channel), 1,068
Yucatan Channel (via Windward Passage and south of Cuba), 1,170

Ports
Cartagena, Colombia (via South Channel), 803
Charleston, South Carolina, U.S.A., 1,176
Christiansted, St. Croix, 50
Colon, Panama (via South Channel and outside Crab Island), 1,018
Guantanamo, Cuba (via Windward Passage), 588
Key West, Florida, U.S.A. (north of Hispaniola, and via Old Bahama Channel), 1,017
New York, New York, U.S.A., 1,422
Porlamar, Venezuela, 470
San Juan, Puerto Rico, 58
Santa Barbara de Samana, Dominican Republic, 242
Santo Domingo, Dominican Republic, 290

GREAT WOOD BAY ANCHORAGE. See Jan Mayen.

GREENOCK, SCOTLAND
(55°57'00'' N., 4°45'00'' W.)

Subtract 17 miles from Glasgow distances.

GREENVILLE, LIBERIA
(4°59'30'' N., 9°02'55'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,826
Ushant, France, 2,981

Ports
Dakar, Senegal, 831
Takoradi, Ghana, 461

GRENA, DENMARK
(56°24'45'' N., 10°56'20'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 140
Skagens Odde, Denmark, 115

Ports
Gdynia, Poland, 361
Goteborg, Sweden, 102
Lubeck, Germany, 169

GRENADA. See St. Georges, Grenada.

GREYTOWN, NICARAGUA. See San Juan del Norte.

*JUNCTION POINT.—See Preface for use of junction points.

GRIMSBY, ENGLAND
(53°36'00'' N., 0°01'00'' W.)

Subtract 14 miles from Hull distances.

GRIMSTAD, NORWAY
(58°20'20'' N., 8°36'05'' E.) to:

Junction Points*
Pentland Firth, Scotland, 399

Ports
Bergen, Norway, 250
London, England, 542
Oslo, Norway, 135

GRONDOL, GREENLAND. See Gronne Dal.

GRONNE DAL, GREENLAND
(61°14'06'' N., 48°06'30'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,433
Strait of Gibraltar, 2,309

Ports
Churchill, Canada, 1,418
Reykjavik, Iceland, 960
St. John's Canada, 847

GROTON, CONNECTICUT, U.S.A.
(41°21'30'' N., 72°05'15'' W.)

Use New London distances.

GRUZ, YUGOSLAVIA. See Dubrovnik.

GUAM. See Apra.

GUANICA, PUERTO RICO
(17°58'00'' N., 66°55'30'' W.) to:

Ports
Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 572
Santiago de Cuba, Cuba (south of Hispaniola), 584

GUANTA, VENEZUELA
(10°14'43'' N., 64°35'30'' W.)

Add 1 mile to Puerto la Cruz distances.

GUANTANAMO, CUBA
(19°54'00'' N., 75°11'00'' W.) to:

Junction Points*
Bishop Rock, England (via Caicos Passage and track A), 3,698
Fastnet, Ireland (track A), 3,589
Fastnet, Ireland (track B), 3,585
Inishtrahull, Ireland (track A), 3,714
Inishtrahull, Ireland (track B), 3,705
Inishtrahull, Ireland (track C), 3,689
Panama, Panama, 752
Pentland Firth, Scotland (track A), 3,920
Pentland Firth, Scotland (track B), 3,904
Pentland Firth, Scotland (track C), 3,869
Strait of Gibraltar, 3,737
Straits of Florida, 638
Yucatan Channel, 582

Ports
Angmagssalik, Greenland (direct), 3,215
Angmagssalik, Greeland (via 75 miles off Kap Farvel), 3,229
Argentia, Canada, 1,976
Arkhangelsk, U.S.S.R., 5,156
Bahia Honda, Cuba, 643
Barranquilla, Colombia, 534
Belem, Brazil, 2,214
Bluefields, Nicaragua, 710
Boston, Massachusetts, U.S.A. (via Windward Passage, Crooked Island Passage, and Nantucket Light Vessel), 1,495
Brest, France, 3,784
Buenos Aires, Argentina, 5,278
Cap Haïtien, Haiti, 175
Cape Town, Republic of South Africa, 6,290
Cardenas, Cuba, 539
Cartagena, Colombia, 586
Castries, St. Lucia, 922
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 900
Charlotte Amalie, Virgin Islands (north of Hispaniola and Puerto Rico), 607
Christiansted, St. Croix (north of Hispaniola and Puerto Rico), 635
Christiansted, St. Croix (south of Hispaniola), 689
Cienfuegos, Cuba, 366
Colon, Panama, 689
Dakar, Senegal, 3,312
Elizabeth Harbor, Bahamas, 334
Freetown, Sierra Leone, 3,650
Funchal, Madeira Island, 3,194
Georgetown, British Guiana, 1,316
Gibraltar (via Turks Island Passage), 3,767
Great Harbor, Culebra Island (north of Hispaniola), 588
Habana, Cuba (via Old Bahama Channel), 600
Halifax, Canada, 1,634
Hamilton, Bermuda, 992
Horta, Azores (via Mouchoir Passage), 2,666
Ivigtut, Greenland, 2,873
Jacksonville, Florida, U.S.A., 851
Key West, Florida, U.S.A. (via Old Bahama Channel), 587
Kingston, Jamaica, 180
Kralendijk, Bonaire, 620
La Guaira, Venezuela, 737
Lisboa, Portugal, 3,570
Manzanillo, Cuba, 206
Matanzas, Cuba, 553
Miami, Florida, U.S.A., 582
Monrovia, Liberia, 3,828
Montevideo, Uruguay, 5,167
Nassau, Bahamas, 503
New York, New York, U.S.A., 1,312
Norfolk, Virginia, U.S.A., 1,117
Nuevitas, Cuba, 284
Oranjestad, St. Eustatius, 771
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,284
Pointe a Pitre, Guadeloupe, 879
Ponce, Puerto Rico (north of Hispaniola and Mona Passage), 540
Porlamar, Venezuela, 884
Port au Prince, Haiti, 179
Port of Spain, Trinidad, 987
Port Plata, Dominican Republic (via Windward Passage), 262
Porto Grande, Cape Verde Islands, 2,853
Portsmouth, New Hampshire, U.S.A. (via Crooked Island Passage, Windward Passage, and Nantucket Light Vessel), 1,512
Puerto Cortes, Honduras, 770
Reykjavik, Iceland, 3,434
Rio de Janeiro, Brazil, 4,170
St. Johns, Antigua, 837
San Juan, Puerto Rico (north of Hispaniola), 537
Santa Cruz de Tenerife, Canary Islands, 3,265
Santa Cruz del Sur, Cuba, 222
Santo Domingo, Dominican Republic, 397
Sint Nicolaas, Aruba, 544
Tampico, Mexico, 1,297
Veracruz, Mexico, 1,228
Willemstad, Curacao, 595

*JUNCTION POINT.—See Preface for use of junction points.

GUAYAQUIL, ECUADOR
(2°12′00″ S., 79°53′00″ W.) to:

Junction Points*
Panama, Panama, 824
Punta Arenas, Chile, 3,307
Singapore (via Surigao Strait), 10,726
Torres Strait, Australia (via Raine Island entrance), 8,270

Ports
Acapulco, Mexico, 1,708
Amapala, Honduras, 1,167
Antofagasta, Chile, 1,470
Apra, Guam, 8,147
Archipielago de Colon, 656
Arica, Chile, 1,251
Auckland, New Zealand, 6,087
Baie du Controleur, Marquesas, 3,656
Brito, Nicaragua, 985
Buenaventura, Colombia, 608
Caldera, Chile, 1,632
Callao, Peru, 712
Ching-tao, China, 8,880
Coquimbo, Chile, 1,781
Corinto, Nicaragua, 1,071
Corral, Chile, 2,313
Dutch Harbor, Alaska, U.S.A., 5,552
Esmeraldas, Ecuador, 356
Guaymas, Mexico, 2,640
Hai-kou, China, 9,755
Hong Kong, B.C.C., 9,505
Honolulu, Hawaii, U.S.A., 4,853
Iquique, Chile, 1,317
Kodiak, Alaska, U.S.A., 5,212
Los Angeles, California, U.S.A., 3,218
Lota, Chile, 2,155
Manila, Philippines, 9,615
Midway Island, 5,944
Mollendo, Peru, 1,126
Monterey, California, U.S.A., 3,434
Noumea, New Caledonia, 6,686
Pago Pago, American Somoa, 5,450
Palmyra Island, 5,007
Papeete, Society Islands, 4,237
Pisco, Peru, 788
Portland, Oregon, U.S.A., 4,169
Puntarenas, Costa Rica, 787
Sai Gon, Vietnam (north of Luzon), 10,321
Salaverry, Peru, 440
Salina Cruz, Mexico, 1,495
San Blas, Mexico, 2,184
San Diego, California, U.S.A., 3,112
San Francisco, California, U.S.A., 3,548
San Jose, Guatemala, 1,242
Santa Barbara, California, U.S.A., 3,249
Seattle, Washington, U.S.A., 4,326
Shang-hai, China, 8,872
Sitka, Alaska, U.S.A., 4,817
Suva, Fiji Islands, 6,067
Sydney, Australia, 7,268
Talara, Peru, 180
Talcahuano, Chile, 2,135
Truk, Caroline Islands, 7,752
Valparaiso, Chile, 1,980
Vladivostok, U.S.S.R., 8,044
Wake Island, 6,843
Yokohama, Japan, 7,987

GUAYMAS, MEXICO
(27°55′00″ N., 110°54′00″ W.) to:

Junction Points*
Panama, Panama, 2,370
Punta Arenas, Chile, 5,401

Ports
Acapulco, Mexico, 958
Antofagasta, Chile, 3,894
Arica, Chile, 3,681
Callao, Peru, 3,117
Coquimbo, Chile, 4,153
Corinto, Nicaragua, 1,738
Esmeraldas, Ecuador, 2,467
Guayaquil, Ecuador, 2,640
Iquique, Chile, 3,750
La Libertad, Mexico, 182
Los Angeles, California, U.S.A., 1,158
Lota, Chile, 4,442
Mazatlan, Mexico, 388
Mollendo, Peru, 3,556
Monterey, California, U.S.A., 1,410
Pisco, Peru, 3,227
Puntarenas, Costa Rica, 1,956
Salina Cruz, Mexico, 1,260
San Blas, Mexico, 501
San Diego, California, U.S.A., 1,088
San Francisco, California, U.S.A., 1,490
San Jose, Guatemala, 1,520
Santa Barbara, California, U.S.A., 1,225
Talcahuano, Chile, 4,428
Valpariso, Chile, 4,291

GUIRIA, VENEZUELA
(10°34′45″ N., 62°16′15″ W.) to:

Junction Points*
Panama, Panama, 1,200
Strait of Gibraltar, 3,430
Straits of Florida, 2,099

Ports
Belem, Brazil, 1,226
La Guaira, Venezuela, 339
Recife, Brazil, 2,208
Rio de Janerio, Brazil, 3,284
Rio Grande, Brazil, 3,984
Santos, Brazil, 3,467

GULFPORT, MISSISSIPPI, U.S.A.
(30°21′30″ N., 89°05′30″ W.) to:

Junction Points*
Panama, Panama, 1,413
Straits of Florida, 494
Yucatan Channel, 534

Ports
Alvaro Obregon, Mexico, 755
Belize, British Honduras, 838
Campeche, Mexico, 652
Cap Haitien, Haiti, 1,145
Carmen, Mexico, 725
Cartagena, Colombia, 1,449
Cienfuegos, Cuba, 851
Colon, Panama, 1,370
Habana, Cuba, 564
Pointe a Pitre, Guadeloupe (via Virgin Passage and Old Bahama Channel), 1,822
Pointe a Pitre, Guadeloupe (via Old Bahama Channel and Mona Passage), 1,823
Port au Prince, Haiti (via Old Bahama Channel and Windward Passage), 1,176
San Juan del Norte, Nicaragua (via inside route), 1,237
Tampico, Mexico, 725
Tuxpan, Mexico, 751
Veracruz, Mexico, 800

HABANA, CUBA
(23°08′00″ N., 82°20′30″ W.) to:

Junction Points*
Bishop Rock, England (track A), 4,000
Bishop Rock, England (track B), 3,974
Bishop Rock, England (track C), 3,926
Fastnet, Ireland (track A), 3,880
Fastnet, Ireland (track B), 3,851
Fastnet, Ireland (track C), 3,795
Inishtrahull, Ireland (track A), 4,024
Inishtrahull, Ireland (track B), 3,988
Inishtrahull, Ireland (track C), 3,910
Montreal, Canada (via Strait of Canso), 2,473
Pentland Firth, Scotland (track A), 4,220
Pentland Firth, Scotland (track B), 4,174
Pentland Firth, Scotland (track C), 4,073
Punta Arenas, Chile (east of South America), 6,800
Strait of Gibraltar, 4,024
Straits of Florida, 87
Yucatan Channel, 186

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Alvaro Obregon, Mexico, 699
Apalachicola, Florida, U.S.A., 426
Belem, Brazil, 2,654
Belize, British Honduras, 528
Bluefields, Nicaragua (via inside), 815
Bocas del Toro, Panama, 981
Bordeaux, France (track A), 4,266
Bordeaux, France (track B), 4,245
Bordeaux, France (track C), 4,217
Boston, Massachusetts, U.S.A., 1,428
Bridgeport, Connecticut, U.S.A., 1,292
Buenos Aires, Argentina, 5,724
Caibarien, Cuba, 208
Campeche, Mexico, 561
Cap Haitien, Haiti, 631
Cape Town, Republic of South Africa. 6,736
Cardenas, Cuba, 88
Carmen, Mexico, 639
Cartagena, Colombia (via Old Bahama Channel), 1,142
Castries, St. Lucia (via Mona Passage), 1,370
Charleston, South Carolina, U.S.A., 645
Charlotte Amalie, Virgin Islands, 1,048
Charlottetown, Canada, 1,846
Cienfuegos, Cuba, 482
Corpus Christi, Texas, U.S.A., 864
Fort de France, Martinique (via Old Bahama Channel and Mona Passage), 1,350
Fort de France, Martinique (via Yucatan Channel), 1,655
Galveston, Texas, U.S.A., 769
Georgetown, British Guiana, 1,830
Guantanamo, Cuba (via Old Bahama Channel and Windward Passage), 600
Gulfport, Mississippi, U.S.A., 564
Halifax, Canada, 1,640
Hamilton, Bermuda, 1,158
Isabela, Cuba, 151
Jacksonville, Florida, U.S.A., 528
Key West, Florida, U.S.A., 92
Kingston, Jamica (via Windward Passage), 762
Kingston, Jamica (via Yucatan Channel), 737
La Guaira, Venezuela (via Old Bahama Channel and Windward Passage), 1,292
Lake Charles, Louisiana, U.S.A., 750
Limon, Costa Rica, 1,170
Maracaibo, Venezuela, 1,173
Miami, Florida, U.S.A., 222
Mobile, Alabama, U.S.A., 553
Nassau Bahamas (via Northwest Providence Channel), 390
New Haven, Connecticut, U.S.A., 1,280
New Orleans, Louisiana, U.S.A., 602
New York, New York, U.S.A., 1,199
Norfolk, Virginia, U.S.A., 992
Nuevitas, Cuba, 344
Pensacola, Florida, U.S.A., 515
Philadelphia, Pennsylvania, U.S.A., 1,162
Pointe a Pitre, Guadeloupe (via Virgin Passage), 1,308
Pointe a Pitre, Guadeloupe (via Mona Passage), 1,309
Ponce, Puerto Rico (via Old Bahama Channel and Mona Passage), 981
Port Arthur, Texas, U.S.A., 749
Port au Prince, Haiti, 662
Port of Spain, Trinidad (via Old Bahama Channel and Mona Passage), 1,494
Progreso, Mexico, 430
Puerto Barrios, Guatemala, 608
Puerto Cabello, Venezuela (via Old Bahama Channel and Windward Passage), 1,260
Puerto Colombia, Colombia (via Yucatan Channel), 1,068
Puerto Manati, Cuba, 353
Puerto Mexico, Mexico (north of Banco de Campeche), 840
Puerto Siboney, Cuba (via Yucatan Channel), 729
Puerto Tanamo, Cuba, 444
Puerto Vita, Cuba, 400
Recife, Brazil (via Old Bahama Channel and Mona Passage), 3,551
Rio de Janeiro, Brazil, 4,623
Rio Yateras, Cuba, 577
St. Pierre, Martinique, 1,339
San Juan, Puerto Rico (via Old Bahama Channel), 978
San Juan del Norte, Nicaragua (via inside), 871
Santa Cruz del Sur, Cuba, 542
Santiago de Cuba, Cuba (via Windward Passage), 650
Santiago de Cuba, Cuba (via Yucatan Channel), 733
Santo Domingo, Dominican Republic, 946
Savannah, Georgia, U.S.A., 606
Tampa, Florida, U.S.A., 307
Tampico, Mexico, 864
Tuxpan, Mexico, 847
Veracruz, Mexico, 814
Willemstad, Curacao, 1,144
Wilmington, North Carolina, U.S.A., 767

HACHINOHE, JAPAN
(40°32′00″ N., 141°33′00″ E.) to:

Ports
Hakodate, Japan, 108
Muroran, Japan, 123
Nagoya, Japan, 577
Naha, Ryukyu Islands, 1,239
Yokohama, Japan, 436

HADERSLEV, DENMARK
(55°15′12″ N., 9°30′45″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 72
Skagens Odde, Denmark, 216

Ports
Goteborg, Sweden, 203
Kobenhavn, Denmark, 175
Lubeck, Germany, 137

HAFNARFJORDHUR, ICELAND
(64°04′05″ N., 21°58′36″ W.) to:

Junction Points*
Pentland Firth, Scotland, 680
Strait of Gibraltar, 1,956

Ports
Bergen, Norway, 884
Murmansk, U.S.S.R., 1,530
St. John's, Canada, 1,413

HAGATA, JAPAN
(33°36′45″ N., 130°23′15″ E.) to:

Ports
Hakodate, Japan, 709
Kobe, Japan, 304
Misumi, Japan, 161
Nagasaki, Japan, 121
Ube, Japan, 84
Yokohama, Japan, 608

HAIFA, ISRAEL
(32°49′25″ N., 35°00′00″ E.) to:

Junction Points*
Port Said, U.A.R., 171
Strait of Gibraltar, 2,031

Ports
Alexandria, U.A.R., 295
Alger, Algeria, 1,602
Alicante, Spain, 1,769
Al Mina Al Bayda, Syria, 175
Ancona, Italy (via Corinth Canal), 1,248
Ancona, Italy (south of Greece), 1,272
Annaba, Algeria, 1,378
Banghazi, Libya, 783
Baniyas, Syria, 153
Barcelona, Spain, 1,699

*JUNCTION POINT.—See Preface for use of junction points.

Bari, Italy (via Corinth Canal), 1,041
Bari, Italy (south of Greece), 1,065
Bayrut, Lebanon, 76
Bizerte, Tunisia, 1,273
Brindisi, Italy (via Corinth Canal), 983
Brindisi, Italy (south of Greece), 1,007
Cartagena, Spain, 1,794
Ceuta, Morocco, 2,012
Civitivecchia, Italy, 1,321
Genova, Italy, 1,505
Gibraltar, 2,014
Iraklion, Crete, 522
Istanbul, Turkey, 849
Izmir, Turkey, 654
Kyrenia, Cyprus, 246
La Spezia, Italy, 1,469
Livorno, Italy, 1,433
Malaga, Spain, 1,961
Marseille, France, 1,596
Matruh, U.A.R., 410
Messina, Sicily, 1,023
Napoli, Italy, 1,194
Odessa, U.S.S.R., 1,197
Oran, Algeria, 1,800
Palermo, Sicily, 1,139
Palma, Balearic Islands, 1,645
Paphos, Cyprus, 449
Piraievs, Greece, 650
Rijeka, Yugoslavia (via Corinth Canal), 1,315
Rijeka, Yugoslavia (south of Greece), 1,342
Savona, Italy, 1,515
Sayda, Lebanon, 49
Sibenik, Yugoslavia (via Corinth Canal), 1,187
Sibenik, Yugoslavia (south of Greece), 1,214
Siracusa, Sicily, 1,013
Split, Yugoslavia (via Corinth Canal), 1,172
Split, Yugoslavia (south of Greece), 1,199
Sur, Lebanon, 33
Tarabulus, Lebanon, 118
Tarabulus, Libya, 1,109
Taranto, Italy (via Corinth Canal), 1,003
Taranto, Italy (south of Greece), 1,020
Thessaloniki, Greece, 786
Toulon, France, 1,565
Trieste, Free Territory (via Corinth Canal), 1,348
Trieste, Free Territory (south of Greece), 1,375
Tunis, Tunisia, 1,260
Valencia, Spain, 1,767
Valletta, Malta, 1,038
Venezia, Italy (via Corinth Canal), 1,359
Venezia, Italy (south of Greece), 1,383
Volos, Greece, 728
Yumurtalik, Turkey, 240

HAI-KOU, HAI-NAN TAO, CHINA
(20°04′00″ N., 110°17′00″ E.) to:

Junction Points*
Panama, Panama, 9,449
Singapore, 1,338
Torres Strait, Australia, 2,801

Ports
Apra, Guam, 2,015
Ching-tao, China (north of Taiwan), 1,370
Darwin, Australia, 2,437
Dutch Harbor, Alaska, U.S.A. (south of Honshu and Taiwan), 4,385
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Strait and north of Taiwan), 4,276
Guayaquil, Ecuador, 9,755
Hong Kong, B.C.C., 267
Honolulu, Hawaii, U.S.A., 5,082
Kodiak, Alaska, U.S.A., 4,866
Manila, Philippines, 720
Midway Island, 3,950
Nikolayevsk, U.S.S.R. (via South Channel), 2,644
Noumea, New Caledonia, 4,270
Pago Pago, American Samoa, 5,130
Palmyra Island, 5,147
Papeete, Society Islands, 6,327
Petropavlovsk, U.S.S.R., 3,102
Rabaul, New Britain, 2,943
Sai Gon, Vietnam, 824
San Diego, California, U.S.A., 6,696
Shang-hai, China, 1,132
Sitka, Alaska, U.S.A., 5,345
Surabaja, Indonesia, 1,835
Suva, Fiji Islands, 4,694
Truk, Caroline Islands, 2,565
Valparaiso, Chile, 10,365
Vinh Cam Ranh, Vietnam, 610
Vladivostok, U.S.S.R., 1,899
Wake Island, 3,168
Yokohama, Japan (south of Taiwan), 1,910

HAINA, DOMINICAN REPUBLIC
(18°25′20″ N., 70°00′20″ W.) to:

Junction Points*
Panama, Panama, 845

Ports
Barranquilla, Colombia, 536
Kingston, Jamaica, 417
San Juan, Puerto Rico, 249
Willemstad, Curacao, 394

HAIPHONG, VIETNAM
(20°52′00″ N., 106°41′00″ E.) to:

Ports
Cebu, Philippines (via Jintotolo Channel, Romblon, and Verde Island Passage), 1,276
Chang-Kan, China, 156
Hong Kong, B.C.C., 477
Kobe, Japan, 1,833
Manila, Philippines, 936
Qui Nhon, Vietnam, 469
Sai Gon, Vietnam, 802
San-ya Chiang, China, 253
Shang-hai, China (via Pai-chieh Hsia, Steep Island Passage, and Hai-nan Tao), 1,285
Vinh Cam Ranh, Vietnam, 597

HAKATA, JAPAN. See Hagata.

HAKODATE, JAPAN
(41°47′00″ N., 140°43′00″ E.) to:

Junction Points*
Panama, Panama, 7,417
Punta Arenas, Chile, 9,457
Singapore (via Sea of Japan), 3,160

Ports
Akita, Japan, 150
Aleksandrovsk, Sakhalin, 631
Apia, Samoa, 4,252
Apra, Guam, 1,739
Auckland, New Zealand, 5,104
Avarua, Cook Islands, 5,022
Bukhta Broutona, Kuril Islands, 630
Cebu, Philippines (via Sea of Japan), 2,177
Cebu, Philippines (via outside route), 2,208
Changjon, Korea, 638
Chongjin, Korea, 509
Darwin, Australia (via Selat Sele), 3,422
De-Kastri, U.S.S.R., 664
Djakarta, Indonesia (east of Direction Island and Selat Gaspar), 3,468
Dutch Harbor, Alaska, U.S.A., 2,228
Esutoru, U.S.S.R., 536
Hachinohe, Japan, 108
Hagata, Japan, 709
Higashi-Iwase, Japan, 380
Hiroshima, Japan, 787
Hong Kong, B.C.C., 1,810
Honolulu, Hawaii, U.S.A., 3,314
Honto, U.S.S.R., 389
Hsia-men, China, 1,559
Hungnam, Korea, 623

*JUNCTION POINT.—See Preface for use of junction points.

Iloilo, Philippines (via Sea of Japan), 2,199
Inchon, Korea, 1,080
Jaluit, Marshall Islands, 2,670
Kagoshima, Japan, 946
Kamaishi, Japan, 192
Kasatka, Japan, 407
Kimchaek, Korea, 540
Kiska, Alaska, U.S.A., 1,656
Kobe, Japan (east of Honshu), 816
Kochi, Japan (east of Honshu), 832
Kochi, Japan (via Shimonoseki Kaikyo), 894
Kuang-chou, China, 1,893
Kushiro, Japan, 210
Levuka, Fiji Islands, 4,271
Lo-hsing-ta Mao-ti, China, 1,429
Los Angeles, California, U.S.A., 4,576
Lu-shun, China, 1,244
Maizuru, Japan, 460
Manila, Philippines, 2,066
Matsugahama, Japan, 316
Midway Island, 2,198
Miike, Japan, 864
Mokpo, Korea, 897
Nagasaki, Japan, 801
Nakhodka, U.S.S.R., 62
Nanao, Japan, 337
Nase, Japan, 1,048
Niigata, Japan, 247
Nome, Alaska, U.S.A., 2,347
Noumea, New Caledonia (via Canal Woodin and Canal de la Havannah), 4,176
Omura, Bonin Islands, 915
Pago Pago, American Samoa, 4,326
Papeete, Society Islands, 5,249
Petropavlovsk, U.S.S.R., 1,075
Pohang, Korea, 665
Ponape, Caroline Islands, 2,298
Prince Rupert, Canada (south of Aleutian Islands), 3,569
Prince Rupert, Canada (north of Aleutian Islands), 3,487
Pusan, Korea, 686
Rabaul, New Britain, 2,894
Rumoi, Japan, 248
Sakata, Japan, 189
San Francisco, California, U.S.A., 4,247
Seattle, Washington, U.S.A. (north of Aleutian Islands), 3,922
Seattle, Washington, U.S.A. (via composite sailing), 3,982
Seward, Alaska, U.S.A. (via south of Aleutian Islands), 3,069
Shan-tou, China, 1,660
Shang-hai, China, 1,166
Shelekhovo, Kuril Islands, 865
Shimonoseki, Japan, 683
Shiogama, Japan, 281
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,392
Slavnoye, Kuril Islands, 467
Sosura, Korea, 482
Sydney, Australia, 4,688
Ta-ku, China, 1,385
Ta-lien, China, 1,226
Tan-shui, Taiwan, 1,384
Tomari, Japan, 301
Tsuruga, Japan, 447
Ulsan, Korea, 661
Unggi, Korea, 486
Valparaiso, Chile, 9,197
Vladivostok, U.S.S.R., 437
Wei-hai-wei, China, 1,169
Wonsan, Korea, 638
Yen-tai, China, 1,203
Yokohama, Japan, 533

HAKONSVERN, NORWAY
(60°20′30″ N., 5°14′30″ E.) to:

Junction Points*
Pentland Firth, Scotland, 287
Skagens Odde, Denmark, 296

Ports
Bremerhaven, Germany, 442
London, England, 616
Oslo, Norway, 371

HALIFAX, CANADA
(44°39′00″ N., 63°34′00″ W.) to:

Junction Points*
Bishop Rock, England (track A), 2,616
Bishop Rock, England (track B), 2,563
Bishop Rock, England (track C and (D), 2,480
Bishop Rock, England (track E), 2,335
Bishop Rock, England (track F), 2,310
Cape of Good Hope, Republic of South Africa, 6,502
Fastnet, Ireland (track A), 2,514
Fastnet, Ireland, (track B), 2,457
Fastnet, Ireland (tracks C and D), 2,364
Fastnet, Ireland (track E), 2,215
Fastnet, Ireland (track F), 2,181
Inishtrahull, Ireland (track A), 2,642
Inishtrahull, Ireland (track B), 2,576
Inishtrahull, Ireland (tracks C and D), 2,462
Inishtrahull, Ireland (track E), 2,289
Inishtrahul, Ireland (track F), 2,238
Montreal, Canada (via Strait of Canso), 895
Montreal, Canada (via Cabot Strait), 955
Panama, Panama, 2,338
Pentland Firth, Scotland (track A), 2,845
Pentland Firth, Scotland (track B), 2,776
Pentland Firth, Scotland (tracks C and D), 2,642
Pentland Firth, Scotland (track E), 2,446
Pentland Firth, Scotland (track F), 2,380
Punta Arenas, Chile, 6,799
Strait of Gibraltar (track A), 2,762
Strait of Gibraltar (track B), 2,734
Strait of Gibraltar (tracks C and D), 2,708
Strait of Gibraltar (track E), 2,655
Strait of Gibraltar (track F), 2,657
Strait of Gibraltar (direct), 2,650
Straits of Florida, 1,610
Yucatan Channel, 1,796

Ports
Angmagssalik, Greenland (direct), 1,722
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,736
Argentia, Canada, 448
Arkhangelsk, U.S.S.R., 3,663
Baltimore, Maryland, U.S.A., 911
Belem, Brazil, 2,904
Bocas del Toro, Panama, 2,369
Bordeaux, France (track A), 2,898
Bordeaux, France (track B), 2,851
Bordeaux, France (tracks C and D), 2,786
Bordeaux, France (track E), 2,663
Bordeaux, France (track F), 2,646
Boston, Massachusetts, U.S.A., 380
Bridgeport, Connecticut, U.S.A., 552
Bridgetown, Barbados, 1,906
Brunswick, Georgia, U.S.A., 1,210
Buenos Aires, Argentina, 5,731
Cadiz, Spain (direct), 2,617
Cadiz, Spain (tracks C and D), 2,674
Cape Town, Republic of South Africa, 6,492
Castries, St. Lucia, 1,850
Charleston, South Carolina, U.S.A., 1,077
Charlotte Amalie, Virgin Islands, 1,595
Charlottetown, Canada (via Strait of Canso), 268
Cienfuegos, Cuba, 1,998
Colon, Panama, 2,295
Dakar, Senegal, 2,956
Frederikshaab, Greenland, 1,406
Guantanamo, Cuba, 1,634
Habana, Cuba, 1,614
Hamilton, Bermuda, 756
Ivigtut, Greenland, 1,380
Jacksonville, Florida, U.S.A., 1,255

*JUNCTION POINT.—See Preface for use of junction points.

Key West, Florida, U.S.A., 1,556
Kingston, Jamaica, 1,795
La Guaira, Venezuela, 2,060
Limon, Costa Rica, 2,368
Lisboa, Portugal (track A), 2,564
Lisboa, Portugal (track B), 2,532
Lisboa, Portugal (tracks C and D), 2,500
Lisboa, Portugal (track E), 2,433
Lisboa, Portugal (track F), 2,436
Miami, Florida, U.S.A., 1,413
Montevideo, Uruguay, 5,617
Murmansk, U.S.S.R., 3,368
New Haven, Connecticut, U.S.A., 540
New York, New York, U.S.A., 600
Norfolk, Virginia, U.S.A., 790
Parrsboro, Canada, 330
Philadelphia, Pennsylvania, U.S.A., 746
Ponta Delgada, Azores (direct), 1,755
Ponta Delgada, Azores (tracks C and D), 1,785
Port au Prince, Haiti, 1,671
Port of Spain, Trinidad, 2,059
Portland, Maine, U.S.A., 338
Portsmouth, New Hampshire, U.S.A., 359
Recife, Brazil, 3,558
Reykjavik, Iceland, 1,941
Rio de Janeiro, Brazil, 4,630
St. John, Canada, 278
St. John's, Canada, 531
Salvador, Brazil, 3,949
San Juan, Puerto Rico, 1,580
Santa Cruz de Tenerife, Canary Islands (direct), 2,462
Santa Cruz de Tenerife, Canary Islands (tracks C and D), 2,480
Santiago de Cuba, Cuba, 1,683
Santo Domingo, Dominican Republic, 1,709
Savannah, Georgia, U.S.A., 1,150
Vigo, Spain (tracks C and D), 2,454
Vigo, Spain (track E), 2,362
Vigo, Spain (track F), 2,358
Wilmington, North Carolina, U.S.A., 1,016

HALMSTAD, SWEDEN
(56°39'06'' N., 12°50'36'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 188
Skagens Odde, Denmark, 101

Ports
Oslo, Norway, 225
Stockholm, Sweden, 481
Szczecin, Poland, 227

HALSINGBORG, SWEDEN
(56°02'30'' N., 12°41'30'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 176
Skagens Odde, Denmark, 128

Ports
Kristiansand, Norway, 220
Oslo, Norway, 250
Stockholm, Sweden, 436

HAMBURG, GERMANY
(53°32'30'' N., 9°59'00'' E.) to:

Junction Points*
Bishop Rock, England, 717
Kiel Canal (east end), Germany, 91
Pentland Firth, Scotland, 555
Skagens Odde, Denmark, 360
Ushant, France, 703

Ports
Aberdeen, Scotland, 473
Amsterdam, Netherlands, 274
Antwerpen, Belgium, 386
Bergen, Norway, 486
Cherbourg, France, 538
Den Helder, Netherlands, 249
Dover, England, 399
Dundee, Scotland, 485
Dunkerque, France, 374
Egersund, Norway, 351
Emden, Germany, 185
Esbjerg, Denmark, 172
Hartlepool, England, 406
Harwich, England, 362
Hull, England, 384
Inverness, Scotland, 562
Kristiansand, Norway, 333
Le Harve, France, 511
Leith, Scotland, 486
London, England, 425
Newcastle, England, 424
Oslo, Norway, 461
Plymouth, England, 628
Portland, England, 554
Portsmouth, England, 504
Rotterdam, Netherlands, 307
Southampton, England, 522
Stavanger, Norway, 403
Wilhelmshaven, Germany, 111
Zeebrugge, Belgium, 342

HAMILTON, BERMUDA
(32°17'30'' N., 64°47'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 2,778
Bishop Rock, England (track B), 2,769
Cape of Good Hope, Republic of South Africa, 6,169
Fastnet, Ireland (track A), 2,676
Fastnet, Ireland (track B), 2,663
Fastnet, Ireland (track C), 2,651
Inishtrahull, Ireland (track A), 2,802
Inishtrahull, Ireland (track B), 2,783
Inishtrahull, Ireland (track C), 2,749
Montreal, Canada (via Strait of Canso), 1,572
Panama, Panama, 1,702
Pentland Firth, Scotland (track A), 3,007
Pentland Firth, Scotland (track B), 2,982
Pentland Firth, Scotland (track C), 2,929
Punta Arenas, Chile, 6,287
Strait of Gibraltar, 2,903
Straits of Florida, 1,151
Yucatan Channel, 1,321

Ports
Baltimore, Maryland, U.S.A., 805
Barranquilla, Colombia, 1,465
Basseterre, St. Christopher, 941
Belem, Brazil, 2,274
Boston, Massachusetts, U.S.A., 704
Bridgetown, Barbados, 1,208
Buenos Aires, Argentina, 5,211
Cardenas, Cuba, 1,119
Castries, St. Lucia, 1,149
Cayenne, French Guiana, 1,801
Charlestown, Nevis, 937
Charlotte Amalie, Virgin Islands, 872
Cienfuegos, Cuba, 1,346
Colon, Panama (via Caicos Passage and Windward Passage), 1,659
Elizabeth Harbor, Bahamas, 813
Georgetown, British Guiana, 1,591
Guantanamo, Cuba (via Caicos Passage), 992
Habana, Cuba, 1,150
Halifax, Canada, 756
Key West, Florida, U.S.A., 1,091
Kingston, Jamaica, 1,144
La Guaira, Venezuela, 1,335
Limon, Costa Rica, 1,715
Manzanilla, Cuba, 1,187
Matanzas, Cuba, 1,129
Miami, Florida, U.S.A., 956
Montevideo, Uruguay, 5,097
Nassau, Bahamas, 829
New London, Connecticut, U.S.A., 667
New York, New York, U.S.A., 697
Norfolk, Virginia, U.S.A., 683
Nuevitas, Cuba, 988
Paramaribo, Surinam, 1,694
Philadelphia, Pennsylvania, U.S.A., 746
Plymouth, Montserrat, 966
Port au Prince, Haiti, 1,016

*JUNCTION POINT.—See Preface for use of junction points.

Port of Spain, Trinidad, 1,346
Portsmouth, New Hampshire, U.S.A., 723
Recife, Brazil, 3,038
Rio de Janeiro, Brazil, 4,110
Roseau, Dominica Island, 1,061
St. Georges, Grenada, 1,256
San Juan, Puerto Rico, 856
Santiago de Cuba, Cuba, 1,031
Santo Domingo, Dominican Republic, 992
Sint Nicolaas, Aruba, 1,263
Washington, D.C., U.S.A., 806
Wilmington, North Carolina, U.S.A., 746

HAMINA, FINLAND
(60°30'40'' N., 27°11'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 747
Skagens Odde, Denmark, 797

Ports
Gdynia, Poland, 512
Riga, Latvia, 384
Stockholm, Sweden, 325

HAMMAMET, TUNISIA. See Al Hammamat.

HAMMERFEST, NORWAY
(70°40'00'' N., 23°41'00'' E.) to:

Ports
Bergen, Norway, 817
Harstad, Norway, 200
Oslo, Norway (via inside route), 1,-187
Oslo, Norway (via outside route), 1,-189
Tromso, Norway, 124

HAMPTON ROADS, VIRGINIA, U.S.A.
(36°57'00'' N., 76°22'00'' W.)

Subtract 6 miles from Norfolk distances.

HANGO, FINLAND
(59°49'03'' N., 22°56'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 564
Skagens Odde, Denmark, 625

Ports
Gdynia, Poland, 356
Leningrad, U.S.S.R., 233
Stockholm, Sweden, 178

HANKO, FINLAND. See Hango.

HAN-KOU, CHINA
(30°34'00'' N., 114°17'30'' E.) to:

Add 592 miles to Shang-hai distances for arrival ports outside the Chang Chiang (Yangtze River).

Ports
Nan-chang, China, 231
Nan-ching, China, 385
Shang-hai, China, 592

HANKOW, CHINA. See Han-kou.

HARSTAD, NORWAY
(68°45'15'' N., 16°34'30'' E.) to:

Junction Points*
Skagens Odde, Denmark, 911

Ports
Bergen, Norway, 673
Hammerfest, Norway, 200

HARTLEPOOL, ENGLAND
(54°41'50'' N., 1°11'30'' W.) to:

Junction Points*
Bishop Rock, England, 594
Skagens Odde, Denmark, 438
Ushant, France, 579

Ports
Amsterdam, Netherlands, 260
Antwerpen, Belgium, 325
Bremerhaven, Germany, 355
Dunkerque, France, 281
Emden, Germany, 308
Esbjerg, Denmark, 336
Hamburg, Germany, 406
Le Havre, France, 386
Oostende, Belgium, 265
Plymouth, England, 502
Portland, England, 428
Portsmouth, England, 378
Rotterdam, Netherlands, 269
Southampton, England, 396
Wilhelmshaven, Germany, 348
Zeebrugge, Belgium, 263

HARWICH, ENGLAND
(51°57'00'' N., 1°17'00'' E.) to:

Junction Points*
Skagens Odde, Denmark, 487

Ports
Amsterdam, Netherlands, 145
Antwerpen, Belgium, 97
Bremerhaven, Germany, 309
Emden, Germany, 252
Esbjerg, Denmark, 338
Hamburg, Germany, 362
Willhelmshaven, Germany, 296

HAVANA, CUBA. See Habana.

HAVRE, FRANCE. See Le Havre.

HELSINGBORG, SWEDEN. See Halsingborg.

HELSINGFORS, FINLAND. See Helsinski.

HELSINGOR, DENMARK
(56°02'00'' N., 12°37'20'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 175
Skagens Odde, Denmark, 127

Ports
Kristiansand, Norway, 219
Oslo, Norway, 249
Stockholm, Sweden (via The Sound), 445
Stockhold, Sweden (via Store Baelt), 629

HELSINKI, FINLAND
(60°09'20'' N., 24°55'40'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 625
Skagens Odde, Denmark (via The Sound), 687
Skagens Odde, Denmark (via Store Baelt), 817

Ports
Gavle, Sweden, 292
Gdynia, Poland, 415
Kotka, Finland, 99
Kobenhavn, Denmark, 772
Leningrad, U.S.S.R., 172

*JUNCTION POINT.—See Preface for use of junction points.

Norrkoping, Sweden, 307
Ornskolosvik, Sweden, 403
Oulu, Finland, 598
Oxelosund, Sweden, 268
Reposaari, Finland, 331
Stockholm, Sweden, 239
Uusikaupunki, Finland, 293

HIGASHI-IWASE, JAPAN
(36°46'00'' N., 137°14'00'' E.) to:

Ports
Hakodate, Japan, 380
Pusan, Korea, 492
Shang-hai, China, 966
Shimonoseki, Japan, 466
Vladivostok, U.S.S.R., 471

HILO, HAWAII, U.S.A.
(19°44'00'' N., 155°05'00'' W.) to:

Junction Points*
Panama, Panama, 4,527

Ports
San Diego, California, U.S.A., 2,175
San Jose, Guatemala, 3,690
Seattle, Washington, U.S.A., 2,387

HIMEJI KO, JAPAN. See Hirohata.

HINCHINBROOK CHANNEL, AUSTRALIA. See Lucinda.

HIROHATA, JAPAN
(34°46'45'' N., 134°38'00'' E.) to:

Ports
Kobe, Japan, 34
Kure, Japan, 126
Nagasaki, Japan, 373
Nagoya, Japan, 259
Sakaidecho, Japan, 89
Shimotsui, Japan, 88
Yokohama, Japan, 368

HIROSHIMA, JAPAN
(34°20'45'' N., 132°28'15'' E.) to:

Ports
Hakodate, Japan, 787
Kobe, Japan, 179
Nagasaki, Japan (via Obatake Seto and north of Kasasa Jima), 264
Nagasaki, Japan (via Moroshima Suido), 275
Nagasaki, Japan (via Kudako Suido), 285
Nagasaki, Japan (via Nuwashima Suido), 277
Yokohama, Japan, 519

HIRTSHALS, DENMARK
(57°36'00'' N., 9°58'00'' E.) to:

Junction Points*
Pentland Firth, Scotland, 429
Skagens Odde, Denmark, 30

Ports
Bergen, Norway, 280
London, England, 541
Oslo, Norway, 145

HOBART, TASMANIA
(42°53'00'' S., 147°21'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,628
Panama, Panama, 7,630
Torres Strait, Australia, 2,271

Ports
Aden, Aden Protectorate, 6,598
Albany, Australia, 1,494
Apia, Samoa, 2,773
Apra, Guam, 3,683
Auckland, New Zealand, 1,521
Avarua, Cook Islands, 2,962
Burnie Harbor, Australia, 332
Catherine Hill Bay, Australia, 677
Diego Garcia, Chagos Archipelago (east point via D'Entrecasteaux Channel), 4,501
Dunedin, New Zealand, 1,068
Dutch Harbor, Alaska, U.S.A., 6,365
Honolulu, Hawaii, U.S.A., 4,930
Jaluit, Marshall Islands, 3,223
Kiama Harbor, Australia, 583
Levuka, Fiji Islands, 2,239
Melbourne, Australia, 472
Midway Island, 4,740
Nandi Bay, Fiji Islands, 2,288
Noumea, New Caledonia, 1,604
Omura, Bonin Islands, 4,477
Pago Pago, American Samoa, 2,783
Papeete, Society Islands, 3,563
Ponape, Caroline Islands, 3,130
Port Augusta, Australia, 947
Port Kembla, Australia, 593
Port Lincoln, Australia, 830
Portland, Australia, 540
Rapid Bay, Australia, 719
Stenhouse Bay, Australia, 766
Suva, Fiji Islands, 2,198
Sydney, Australia, 638
Wellington, New Zealand, 1,288

HOBOKEN, NEW JERSEY, U.S.A.
(40°45'00'' N., 74°01'00'' W.)

For ocean distances, add 3 miles to New York distances.

HOBRO, DENMARK
(56°38'24'' N., 9°48'18'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 193
Skagens Odde, Denmark, 101

Ports
Goteborg, Sweden, 123
Lubeck, Germany, 235
Stockholm, Sweden, 610

HODEIDA, YEMEN. See Al Hudaydah

HOEK VAN HOLLAND, NETHERLANDS
(51°58'37'' N., 4°07'30'' E.)

Subtract 14½ miles from Rotterdam distances.

HOIHOW, HAINAN ISLAND. See Hai-kou.

HOLLANDIA, INDONESIA. See Sukarnapura.

HOLSTEINSBORG, GREENLAND
(66°56'42'' N., 53°41'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,802
Strait of Gibraltar, 2,649

Ports
Churchill, Canada, 1,384
Reykjavik, Iceland, 1,248
St. John's, Canada, 1,172

HOLTENAU, GERMANY. See Kiel Canal.

HOLY LOCK, SCOTLAND
(55°59'00'' N., 4°55'00'' W.)

Subtract 20 miles from Glasgow distances.

*JUNCTION POINT.—See Preface for use of junction points.

HOLYHEAD, WALES
(53°19'30'' N., 4°38'00'' W.) to:

Junction Points*
Bishop Rock, England, 232
Fastnet, Ireland, 232
Inishtrahull, Ireland, 181
Pentland Firth, Scotland, 422

Ports
Avonmouth, England, 217
Brest, France, 345
Cardiff, Wales, 202
Cherbourg, France, 377
Cobh, Ireland, 182
Douglas, Isle of Man, 51
Liverpool, England, 72
London, England, 594
Southampton, England, 414
Swansea, Wales, 171

HOMS, LIBYA. See Al Khums.

HON GAI, VIETNAM. See Hon Gay.

HON GAY, VIETNAM
(20°57'00'' N., 107°03'30'' E.)

Add 3 miles to Haiphong distances.

HONG KONG, BRITISH CROWN COLONY
(22°17'00'' N., 114°10'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia (via Linapacan Strait), 2,029
Panama, Panama, 9,195
Singapore, 1,454
Sunda Strait, Indonesia, 1,807
Torres Strait, Australia, 2,725

Ports
Aleksandrovsk, Sakhalin, 2,250
Apia, Samoa, 4,868
Apra, Guam, 1,822
Auckland, New Zealand, 5,060
Avarua, Cook Islands, 5,674
Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 960
Chan Chiang, China, 245
Chang-Kan, China, 408
Ching-tao, China, 1,120
Chinnampo, Korea, 1,263
Da Nang, Vietnam, 520
Darwin Australia, 2,363
Davao, Philippines, 1,382
Djakarta, Indonesia, 1,782
Dutch Harbor, Alaska, U.S.A., 4,026
Funafuti, Ellice Islands, 4,247
Guayaquil, Ecuador, 9,505
Hai-kou, China, 267
Haiphong, Vietnam (via West Lamma Channel and Hainan Strait), 477
Hakodate, Japan, 1,810
Honolulu, Hawaii, U.S.A., 4,857
Hsia-men, China, 290
Hua-lien Chiang, Taiwan, 518
Inchon, Korea, 1,202
Jaluit, Marshall Islands, 3,370
Kobe, Japan, 1,372
Kodiak, Alaska, U.S.A., 4,616
Kuang-chou, China, 83
Levuka, Fiji Islands, 4,574
Lo-hsing-ta Mao-ti, China, 459
Los Angeles, California, U.S.A., 6,380
Lu-shun, China, 1,265
Manila, Philippines, 631
Midway Island, 3,728
Mokpo, Korea, 1,049
Nagasaki, Japan, 1,069
Nha Trang Bay, Vietnam, 678
Nikolayevsk, U.S.S.R., 2,394
Nome, Alaska, U.S.A., 4,145
Noumea, New Caledonia, 4,107
Olongapo, Philippines, 580
Omura, Bonin Islands, 1,590
Pago Pago, American Samoa, 4,948
Palmyra Island, 4,922
Papeete, Society Islands, 6,132
Pei-hai, China, 391
Peng-hu Chiang, Taiwan, 314
Petropavlovsk, U.S.S.R., 2,863
Ponape, Caroline Islands, 2,710
Prince Rupert, Canada (south of Aleutian Islands), 5,367
Prince Rupert, Canada (north of Aleutian Islands), 5,286
Pusan, Korea, 1,144
Qui Nhon, Vietnam, 592
Rabaul, New Britain, 2,764
Sai Gon, Vietnam (west of Paracel Islands), 917
San Diego, California, U.S.A., 6,439
San Fernando, Philippines, 489
San Francisco, California, U.S.A. (via Osumi Kaikyo), 6,044
San-men Wan, China, 650
San-ya Chiang, China, 391
Seattle, Washington, U.S.A. (via Osumi Kaikyo and composite sailing), 5,768
Seward, Alaska, U.S.A. (south of Aleutian Islands), 4,867
Shang-hai, China (via Steep Island and Pai-chieh Hsia), 824
Shimonoseki, Japan, 1,179
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,191
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,095
Su-ao Chiang, Taiwan, 554
Surabaja, Indonesia, 1,925
Suva, Fiji Islands, 4,541
Tai-tung Chiang, Taiwan, 440
Ta-ku, China, 1,418
Tan-shui, Taiwan, 445
Teluk Kau, Halmahera, 1,581
Truk, Caroline Islands, 2,376
Tso-ying, Taiwan, 343
Valparaiso, Chile, 10,218
Vinh Cam Ranh, Vietnam, 707
Vladivostok, U.S.S.R., 1,646
Wake Island, 2,940
Wei-hai-wei, China, 1,190
Wonsan, Korea, 1,450
Yen-tai, China, 1,224
Yokohama, Japan, 1,585
Yu-lin Chiang, China, 383
Yung-chia, China, 595

HONNINGSVAG, NORWAY. See Sondre Honningsvag.

HONOLULU, HAWAII, U.S.A.
(21°18'30'' N., 157°52'15'' W.) to:

Junction Points*
Panama, Panama, 4,685
Punta Arenas, Chile, 6,370
Singapore (via Sulu Sea), 5,881
Torres Strait, Australia (via Bougainville Strait and China Strait), 4,191
Wilson Promontory, Australia, 4,792

Ports
Acapulco, Mexico, 3,289
Aleksandrovsk, Sakhalin, 3,589
Apia, Samoa, 2,260
Apra, Guam, 3,318
Archipielago de Colon, 4,216
Auckland, New Zealand, 3,820
Avarua, Cook Islands, 2,553
Bahia Magdelena, Mexico, 2,543
Baie du Controleur, Marquesas, 2,111
Bikini, Marshall Islands, 1,710
Brisbane, Australia (via Northwest Channel), 4,117
Brito, Nicaragua, 4,155
Butaritari, Gilbert Islands, 2,050
Callao, Peru, 5,161
Canton, Phoenix Islands, 1,660
Cebu, Philippines, 4,610
Chimbote, Peru, 5,015
Ching-tao, China, 4,456
Chinnampo, Korea, 4,417
Christmas Island, North Pacific, 1,161

*JUNCTION POINT.—See Preface for use of junction points.

Dutch Harbor, Alaska, U.S.A., 2,040
Eniwetok, Marshall Islands, 2,375
Fanning Island, North Pacific, 1,056
Funafuti, Ellice Islands, 2,249
Guayaquil, Ecuador, 4,853
Hai-kou, China, 5,082
Hakodate, Japan, 3,314
Hobart, Tasmania, 4,930
Hong Kong, B.C.C., 4,857
Hot Springs Bay, Alaska, U.S.A., 2,076
Howland Island, 1,650
Hsia-men, China, 4,592
Iloilo, Philippines, 4,632
Inchon, Korea (via Osumi Kaikyo), 4,385
Inchon, Korea (via Maenggol Suido and Bungo Suido), 4,323
Islas Juan Fernandez, 5,595
Jaluit, Marshall Islands, 2,096
Johnston Island, 717
Kiska, Alaska, U.S.A., 2,185
Kobe, Japan, 3,669
Kodiak, Alaska, U.S.A., 2,231
Koniya, Ryukyu Islands, 3,948
Kuang-chou, China, 4,940
Kwajalein, Marshalls, 2,125
Lele, Caroline Islands, 2,467
Levuka, Fiji Islands, 2,730
Lo-hsing-ta Mao-ti, China, 4,487
Los Angeles, California, U.S.A., 2,228
Lu-shun, China, 4,524
Malakal, Palau Islands, 3,997
Manila, Philippines (via San Bernardino Strait), 4,767
Manila, Philippines (north of Luzon), 4,869
Midway Island, 1,149
Mokpo, Korea (via Changjuk Sudo and Mango Strait), 4,146
Nagasaki, Japan, 3,986
Naknek, Alaska, U.S.A., 2,404
Nome, Alaska, U.S.A., 2,674
Nonouti, Gilbert Islands, 2,100
Noumea, New Caledonia, 3,371
Nukualafa, Tonga Islands, 2,749
Ocean Island, 2,480
Omura, Bonin Islands, 3,283
Pago Pago, American Samoa, 2,276
Palmyra Island, 959
Papeete, Society Islands, 2,381
Petropavlovsk, U.S.S.R., 2,762
Ponape, Caroline Islands, 2,685
Port Hueneme, California, U.S.A., 2,170
Portland, Oregon, U.S.A., 2,332
Prince Rupert, Canada, 2,393
Pusan, Korea, 3,973
Rabaul, New Britain, 3,355
Raoul Island, Kermadec Islands, 3,246
Rongelap, Marshall Islands, 1,638
Rotoava, Tuamotu Archipelago, 2,358
Sai Gon, Vietnam, 5,542
Saipan, Mariana Islands, 3,230
Salina Cruz, Mexico, 3,580
Sand Bay, Great Sitkin, Alaska, U.S.A., 1,928
Sandakan, North Borneo, 5,044
San Diego, California, U.S.A., 2,278
San Francisco, California, U.S.A., 2,091
Sasebo, Japan (via Osumi Kaikyo), 4,009
Seattle, Washington, U.S.A., 2,409
Selwyn Bay, Solomon Islands, 3,047
Seward, Alaska, U.S.A., 2,373
Shang-hai, China (via Osumi Kaikyo), 4,336
Shang-hai, China 4,396
Shan-tou, China, 4,688
Shimonoseki, Japan (via Bungo Suido), 3,854
Sitka, Alaska, U.S.A., 2,386
Sukarnapura, Indonesia, 3,878
Surabaja, Indonesia, 5,598
Suva, Fiji Islands, 2,776
Sweeper Cove, Alaska, U.S.A., 1,945
Sydney, Australia, 4,420
Taio Hae, Marquesas, 2,102
Ta-ku, China (via Osumi Kaikyo), 4,677
Ta-ku, China (via Shimonoseki Kaikyo), 4,628
Talara, Peru, 4,806
Ta-lien, China, 4,531
Ta-lien, China (via Shimonoseki Kaikyo), 4,470
Talomako, New Hebrides, 3,014
Tan-shui, Taiwan, 4,398
Teluk Kau, Halmahera, 4,490
Tinian, Mariana Islands, 3,230
Truk, Caroline Islands, 3,028
Unalakleet, Alaska, U.S.A., 2,407
Valparaiso, Chile, 5,919
Vancouver, Canada, 2,423
Victoria, Canada, 2,349
Vladivostok, U.S.S.R., 3,725
Wake Island, 2,004
Wei-hai-wei, China (via Osumi Kaikyo), 4,449
Wellington, New Zealand, 4,113
Whittier, Alaska, U.S.A., 2,474
Wonsan, Korea, 3,933
Wotho, Marshall Islands, 1,470
Wotje Island, Marshall Islands, 1,992
Yap, Caroline Islands, 3,757
Yen-tai, China (via Osumi Kaikyo), 4,483
Yin-hsien, China (via Shih-peng Chiang), 4,334
Yokohama, Japan (via great circle), 3,397
Yokohama, Japan (via rhumb line), 3,520

HONTO, U.S.S.R.
(46°40′00″ N., 141°51′00″ E.) to:

Ports
Akita, Japan, 450
Hakodate, Japan, 389
Korsakov, Sakhalin, 115
Niigata, Japan, 549
Otaru, Japan, 213

HOPETOWN, ELBOW CAY, BAHAMAS
(26°32′00″ N., 76°55′00″ W.) to:

Junction Points*
Panama, Panama, 1,203
Straits of Florida, 415

Ports
Jacksonville, Florida, U.S.A., 358
Nuevitas, Cuba, 452
San Juan, Puerto, 802

HORSENS, DENMARK
(55°51′22″ N., 9°52′30″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 131
Skagens Odde, Denmark, 170

Ports
Klaipeda, Lithuania, 459
Stockholm, Sweden, 567
Swinoujscie, Poland, 268

HORTA, FAYAL, AZORES
(38°32′00″ N., 28°37′00″ W.) to:

Junction Points*
Bishop Rock, England, 1,158
Cape of Good Hope, Republic of South Africa, 5,152
Inishtrahull, Ireland, 1,329
Montreal, Canada (via Cabot Strait), 2,145
Pentland Firth, Scotland, 1,575
Strait of Gibraltar, 1,102
Straits of Florida, 2,913

Ports
Baltimore, Maryland, U.S.A., 2,409
Bayonne, France, 1,277
Bordeaux, France, 1,348
Buenos Aires, Argentina, 4,997
Cadiz, Spain, 1,070
Castries, St. Lucia, 2,265

*JUNCTION POINT.—See Preface for use of junction points.

Christiansted, St. Croix, 2,259
Colon, Panama, 3,260
Dakar, Senegal, 1,559
El Ferrol del Caudillo, Spain, 970
Funchal, Madeira Island, 677
Georgetown, British Guiana, 2,488
Gijon, Spain, 1,092
Guantanamo, Cuba (via Mouchoir Passage), 2,666
Key West, Florida, U.S.A. (via Providence channels), 2,854
Kingston, Jamaica, 2,818
La Coruna, Spain, 967
Las Palmas de Gran Canaria, Canary Islands, 914
Lisboa, Portugal, 917
Marin, Spain, 944
Milford Haven, Wales, 1,266
New York, New York, U.S.A., 2,098
Ponta Delgada, Azores, 153
Port Harcourt, Nigeria, 3,391
Port of Spain, Trinidad, 2,461
Porto Grande, Cape Verde Islands, 1,316
Puerto de Pasajes, Spain, 1,260
Quiberon, France, 1,290
Rio de Janeiro, Brazil, 3,897
Rota, Spain, 1,096
San Juan, Puerto Rico, 2,294
San Sebastian, Spain, 957
Santa Cruz de Tenerife, Canary Islands, 881
Santander, Spain, 1,090
Sekondi, Ghana, 2,838
Setubal, Portugal, 939
Viana do Castello, Portugal, 935
Vigo, Spain, 938
Vila Rial de Santo Antonio, Portugal, 1,046
Villagarcia, Spain, 946
Willemstad, Curacao, 2,683

HORTEN, NORWAY
(59°25′00″ N., 10°29′50″ E.)

Subtract 30½ miles from Oslo distances.

HOT SPRINGS BAY, ALASKA, U.S.A.
(51°47′20″ N., 177°47′00″ W.) to:

Junction Points*
Panama, Panama, 5,653

Ports
Dutch Harbor, Alaska, U.S.A., 451
Honolulu, Hawaii, U.S.A., 2,076
Seattle, Washington, U.S.A., 2,139

HOUSTON, TEXAS, U.S.A.
(29°45′00″ N., 95°17′20″ W.)

Add 43 miles to Galveston distances.

HOWLAND ISLAND
(0°48′00″ N., 176°38′00″ W.) to:

Ports
Baker Island, 37
Canton, Phoenix Islands, 367
Honolulu, Hawaii, U.S.A., 1,650
Pago Pago, American Samoa, 989
Wake Island, 1,485

HSIA-MEN, CHINA
(24°27′00″ N., 118°04′00″ E.) to:

Junction Points*
Panama, Panama, 8,941
Punta Arenas, Chile (via Vitiaz Strait), 9,665
Singapore, 1,649
Torres Strait, Australia, 2,655

Ports
Aleksandrovsk, Sakhalin, 1,991
Apra, Guam, 1,669
Auckland, New Zealand, 4,990
Cebu, Philippines (via Balintang Channel), 965
Chi-lung Chiang, Taiwan, 227
Chin-huang-tao, China, 1,114
Chinampo, Korea, 1,004
Darwin, Australia, 2,411
Djakarta, Indonesia, 1,971
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Strait), 3,770
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,771
Hakodate, Japan, 1,559
Hong Kong, B.C.C., 290
Honolulu, Hawaii, U.S.A., 4,592
Iloilo, Philippines, 987
Inchon, Korea, 943
Kobe, Japan, 1,117
Kuang-chou, China, 373
Lo-hsing-ta Mao-ti, China, 200
Lo-shun, China, 1,006
Manila, Philippines, 662
Mokpo, Korea, 790
Nagasaki, Japan, 810
Nikolayevsk, U.S.S.R. (via South Channel), 2,138
Noumea, New Caledonia, 4,031
Pago Pago, American Samoa, 4,819
Papeete, Society Islands, 6,001
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,617
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,596
Pusan, Korea, 885
Rabaul, New Britain, 2,659
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,788
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,797
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,537
Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,463
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and south of Aleutian Islands), 5,524
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 5,464
Shang-hai, China, 603
Shan-tou, China, 146
Shimonoseki, Japan, 920
Surabaja, Indonesia, 2,121
Suva, Fiji Islands, 4,389
Sydney, Australia (via Vitiaz Strait), 4,437
Ta-ku, China, 1,169
Ta-lien, China, 1,008
Tan-shui, Taiwan, 194
Valparaiso, Chile (via Cook Strait), 10,216
Vladivostok, U.S.S.R., 1,393
Wei-hai-wei, China, 931
Wonsan, Korea, 1,191
Yen-tai, China, 978
Ying-kou, China, 1,161
Yokohama, Japan (via Osumi Kaikyo), 1,335

HSI-YING, CHINA. See Chan Chiang.

HUA-LIEN CHIANG, TAIWAN
(23°58′30″ N., 121°37′00″ E.) to:

Ports
Ching-tao, China, 792
Hong Kong, B.C.C., 518
Manila, Philippines, 648
Pusan, Korea, 782
Shang-hai, China, 533

HUANG-PU, CHINA
(23°05′42″ N., 113°26′30″ E.)

Subtract 10 miles from Kuang-chou distances.

*JUNCTION POINT.—See Preface for use of junction points.

HUELVA, SPAIN
(37°15′00″ N., 6°57′30″ W.,) to:

Junction Points*
Strait of Gibraltar, 102

Ports
Bilbao, Spain, 804
Dakar, Senegal, 1,521
Freetown, Sierra Leone, 1,999
Funchal, Madeira Island, 578
Lisboa, Portugal, 235
Ponta Delgada, Azores, 914
Porto Grande, Cape Verde Islands, 1,561
Santa Cruz de Tenerife, Canary Islands, 715
Vigo, Spain, 453

HULL, ENGLAND
(53°44′30″ N., 0°18′00″ W.) to:

Junction Points*
Bishop Rock, England, 531
Skagens Odde, Denmark, 462
Ushant, France, 523

Ports
Amsterdam, Netherlands, 212
Antwerpen, Belgium, 265
Arkhangelsk, U.S.S.R., 1,926
Bergen, Norway, 471
Boulogne, France, 225
Bremerhaven, Germany, 332
Dikson Harbor, U.S.S.R., 2,552
Dundee, Scotland, 240
Dunkerque, France, 223
Egersund, Norway, 378
Emden, Germany, 279
Esbjerg, Denmark, 334
Falmouth, England, 464
Hamburg, Germany, 384
Kristiansand, Norway, 407
Le Havre, France, 326
Leith, Scotland, 237
London, England, 239
Newcastle, England, 143
Oostende, Belgium, 207
Oslo, Norway, 559
Plymouth, England, 442
Portland, England, 368
Portsmouth, England, 318
Rosyth, Scotland, 248
Rotterdam, Netherlands, 211
Southampton, England, 336
Stavanger, Norway, 408
Trondheim, Norway, 752
Wilhelmshaven, Germany, 323
Zeebrugge, Belgium, 205

HU-LU TAO, CHINA
(40°42′30″ N., 121°00′00″ E.) to:

Ports
Ching-tao, China, 414
Inchon, Korea, 412
Shang-hai, China, 685
Shimonoseki, Japan, 781
Ta-ku, China, 214

HUNGNAM, KOREA
(39°49′00″ N., 127°37′00″ E.) to:

Ports
Hakodate, Japan, 623
Korsakov, Sakhalin, 794
Pusan, Korea, 328
Shimonoseki, Japan, 397
Vladivostok, U.S.S.R., 298

HURGHADA, U.A.R. See Al Gurdagah.

HVALFJORDHUR, ICELAND
(64°18′30″ N., 22°05′00″ W.) to:

Junction Points*
Pentland Firth, Scotland, 660
Strait of Gibraltar, 1,944

Ports
Bergen, Norway, 887
Murmansk, U.S.S.R., 1,531
St. John's, Canada, 1,437

HYERES, FRANCE
(43°05′00″ N., 6°12′00″ E.) to:

Junction Points*
Port Said, U.A.R., 1,474
Strait of Gibraltar, 725

Ports
Annaba, Algeria, 384
Barcelona, Spain, 218
Genova, Italy, 147

IGARKA, U.S.S.R.
(67°28′00″ N., 86°35′00″ E.)

Add 434 miles to Dikson Harbor distances.

IJMUIDEN, NETHERLANDS
(52°28′00″ N., 4°34′00″ E.)

Subtract 14 miles from Amsterdam distances.

ILE D'OUESSANT, FRANCE. See Ushant.

ILOILO, PANAY, PHILIPPINES
(10°42′00″ N., 122°34′40″ E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,247
Panama, Panama, 9,235
Singapore (via Lumbucan Channel), 1,268

Ports
Apra, Guam, 1,366
Batangas, Philippines, 270
Cebu, Philippines, 176
Djakarta, Indonesia (via Lumbucan Channel and Selat Gaspar), 1,476
Hakodate, Japan (via Sea of Japan), 2,199
Honolulu, Hawaii, U.S.A., 4,632
Hsia-men, China, 987
Inchon, Korea, 1,678
Jesselton, North Borneo, 501
Kobe, Japan, 1,623
Kuang-chou, China (via Mindoro Strait), 978
Kuching, Sarawak, 948
Lo-hsing-ta Mao-ti, China (via Balintang Channel), 1,073
Lu-shun, China, 1,776
Manila, Philippines (via Verde Island Passage), 361
Nagasaki, Japan, 1,428
Petropavlovsk, U.S.S.R., 3,123
Port Legaspi, Philippines, 226
Sai Gon, Vietnam, 1,051
San Francisco, California, U.S.A., 6,168
Shang-hai, China, 1,343
Shan-tou, China (via Verde Island Passage), 921
Shimonoseki, Japan, 1,569
Ta-ku, China, 1,929
Tan-shui, Taiwan (via Peng-hu Lieh Tao and Balintang Channel), 1,028
Vladivostok, U.S.S.R., 2,048
Wei-hai-wei, China, 1,701
Yen-tai, China, 1,735
Yokohama, Japan, 1,784
Zamboanga, Philippines, 241

IMABARI, JAPAN
(34°04′15″ N., 133°00′30″ E.) to:

Ports
Kobe, Japan, 120
Kure, Japan, 63
Nagoya, Japan, 341
Shimonoseki, Japan, 123
Yokohama, Japan, 454

*JUNCTION POINT.—See Preface for use of junction points.

IMMINGHAM, ENGLAND
(53°38′00″ N., 0°11′00″ W.)

Subtract 8 miles from Hull distances.

INCHON, KOREA
(37°28′00″ N., 126°37′00″ E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,885
Panama, Panama, 8,474
Singapore, 2,560
Sunda Strait, Indonesia, 2,913
Wetar Passage, Indonesia (via Molucca Passage and Selat Manipa), 2,767

Ports
Aleksandrovsk, Sakhalin (via Maenggol Sudo), 1,507
Apra, Guam (via Kaikyo Strait), 1,837
Cebu, Philippines (via San Bernardine Strait), 1,656
Ching-tao, China, 333
Chin-huang-tao, China, 406
Chinnampo, Korea, 216
Darwin, Australia (via Molucca Passage), 3,072
Djakarta, Indonesia, 2,894
Hakodate, Japan, 1,080
Hong Kong, B.C.C., 1,202
Honolulu, Hawaii, U.S.A. (via Maenggol Sudo and Bungo Suido), 4,323
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,385
Hsia-men, China, 943
Hu-lu Tao, China, 412
Iloilo, Philippines, 1,678
Kobe, Japan, 733
Krung Thep, Thailand, 2,591
Kuang-chou, China, 1,277
Lien-yun, China, 389
Lo-hsing-ta Mao-ti, China, 818
Lu-shun, China, 302
Manila, Philippines, 1,498
Masan, Korea, 403
Misumi, Japan, 478
Moji, Japan, 485
Mokpo, Korea (via Myondo Suido), 189
Mokpo, Korea (via south of Kasa Do), 236
Nagasaki, Japan, 453
Osaka, Japan, 721
Petropavlovsk, U.S.S.R. (via La Perouse Strait and Maenggol Sudo), 2,120
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,136
Petropavlovsk, U.S.S.R. (via Osumi Kaikyo), 2,449
Pohang, Korea, 511
Pusan, Korea, 402
Sai Gon, Vietnam, 2,057
San-men Wan, China, 628
Shang-hai, China (via Nan Shui-Tao), 503
Shan-tou, China, 1,052
Shimonoseki, Japan, 489
Su-ao Chiang, Taiwan, 823
Tai-tung Chiang, Taiwan, 937
Ta-ku, China, 465
Ta-lien, China, 290
Tan-shui, Taiwan, 788
Tasa Do, Korea, 266
Tso-Ying, Taiwan, 975
Ulsan, Korea, 435
Vladivostok, U.S.S.R. (via Malmul Sudo), 911
Wei-hai-wei, China, 238
Wonsan, Korea (via Maenggol Sudo), 707
Yen-tai, China, 273
Yokohama, Japan (via Maemul Sudo and Bungo Suido), 1,016
Yokohama, Japan (via Naikai), 1,070
Yung-chia, China, 723

INHAMBANE, MOZAMBIQUE
(23°52′00″ S., 35°22′42″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,228
Port Said, U.A.R., 4,138

Ports
Beira, Mozambique, 259
East London, Republic of South Africa, 722
Lourenco Marques, Mozambique, 253
Quelimane, Mozambique, 377

INISHTRAHULL, IRELAND*
(55°25′00″ N., 7°30′00″ W.) to:

Junction Points*
Bishop Rock, England, 395
Cape of Good Hope, Republic of South Africa, 6,141
Montreal, Canada (track G, via Strait of Belle Isle), 2,545
Montreal, Canada (tracks C and D, via Cabot Strait), 2,964
Montreal, Canada (track E, via Cabot Strait), 2,780
Montreal, Canada (track F, via Cabot Strait), 2,734
Pentland Firth, Scotland, 272
Punta Arenas, Chile, 7,315
Strait of Gibraltar, 1,350
Straits of Florida (track A), 3,892
Straits of Florida (track B), 3,875
Straits of Florida (track C), 3,837
Yucatan Channel (track A), 4,207
Yucatan Channel (track B), 4,189
Yucatan Channel (track C), 4,150

Ports
Angmagssalik, Greenland, 1,069
Ardrossan, Scotland, 95
Argentia, Canada, 1,874
Arkhangelsk, U.S.S.R., 1,900
Baltimore, Maryland, U.S.A., (track A), 3,312
Baltimore, Maryland, U.S.A., (track B), 3,273
Baltimore, Maryland, U.S.A., (track C), 3,190
Barrow in Furness, England, 186
Belem, Brazil, 3,972
Belfast, Ireland, 97
Boston, Massachusetts, U.S.A. (track A), 2,882
Boston, Massachusetts, U.S.A. (track B), 2,829
Boston, Massachusetts, U.S.A. (track C), 2,725
Buenos Aires, Argentina, 6,243
Cairn Ryan, Scotland, 91
Castries, St. Lucia, 3,499
Charleston, South Carolina, U.S.A. (track A), 3,435
Charleston, South Carolina, U.S.A. (track B), 3,402
Charleston, South Carolina, U.S.A. (track C), 3,331
Charlotte Amalie, Virgin Islands, 3,427
Churchill, Canada (via 75 miles off Kap Farvel), 2,760
Cienfuegos, Cuba (track A), 4,070
Cienfuegos, Cuba (track B), 4,063
Cienfgugos, Cuba (track C), 4,055
Colon, Panama (via Mona Passage), 4,393
Colon, Panama (via Windward Passage), 4,362
Dakar, Senegal, 2,546
Douglas, Isle of Man, 156
Dublin, Ireland, 184
Fleetwood, England, 189
Freetown, Sierra Leone, 3,024
Funchal, Madeira Island, 1,466
Galway, Ireland, 231
Georgetown, British Guiana, 3,779
Glasgow, Scotland, 146
Godhavn, Greenland (direct), 1,901
Godhavn, Greenland (via 75 miles off Kap Farvel), 1,953
Goose Bay, Canada, 1,812
Guantanamo, Cuba (track A), 3,705

*JUNCTION POINT.—See Preface for use of junction points.

Guantanamo, Cuba (track B), 3,697
Guantanamo, Cuba (track C), 3,690
Habana, Cuba (track A), 3,898
Habana, Cuba (track B), 3,881
Habana, Cuba (track C), 3,843
Halifax, Canada (track A), 2,570
Halifax, Canada (track B), 2,512
Halifax, Canada (tracks C and D), 2,406
Halifax, Canada (track E), 2,268
Halifax, Canada (track F), 2,231
Hamilton, Bermuda (track A), 2,783
Hamilton, Bermuda (track B), 2,769
Hamilton, Bermuda (track C), 2,747
Holyhead, Wales, 181
Horta, Azores, 1,329
Ivigtut, Greeland (direct), 1,392
Ivigtut, Greenland (via 75 miles off Kap Farvel), 1,450
Jacksonville, Florida, U.S.A., 3,499
Key West, Florida, U.S.A. (track A), 3,832
Key West, Florida, U.S.A. (track B) 3,815
Key West, Florida, U.S.A. (track C) 3,777
Kinkston, Jamaica (track A), 3,868
Kingston, Jamaica (track B), 3,861
Kingston, Jamaica (track C), 3,853
Limerick, Ireland, 279
Lisboa, Portugal, 1,093
Liverpool, England, 210
Miami, Florida, U.S.A. (track A), 3,701
Miami, Florida, U.S.A. (track B), 3,684
Miami, Florida, U.S.A. (track C), 3,646
Milford Haven, Wales, 286
New Haven, Connecticut, U.S.A., 2,867
New London, Connecticut, U.S.A. (track A), 2,951
New London, Connecticut, U.S.A. (track B), 2,909
New London, Connecticut, U.S.A. (track C) 2,815
New York, New York, U.S.A. (track A), 3,032
New York, New York, U.S.A. (track B), 2,990
New York, New York, U.S.A. (track C), 2,896
Newport, Wales, 371
Norfolk, Virginia, U.S.A. (track A), 3,191
Norfolk, Virginia, U.S.A. (track B), 3,152
Norfolk, Virginia, U.S.A. (track C), 3,069
Philadelphia, Pennsylvania, U.S.A. (track A), 3,185
Philadelphia, Pennsylvania, U.S.A. (track B), 3,143
Philadelphia, Pennsylvania, U.S.A. (track C), 3,049
Port au Prince, Haiti (track A), 3,739
Port au Prince, Haiti (track B), 3,732
Port au Prince, Haiti (track C), 3,724
Port of Spain, Trinidad, 3,706
Port Talbot, Wales, 331
Providence, Rhode Island, U.S.A. (track A), 2,940
Providence, Rhode Island, U.S.A. (track B), 2,898
Providence, Rhode Island, U.S.A. (track C), 2,804
Recife, Brazil, 4,071
Reykjavik, Iceland, 729
Rio de Janeiro, Brazil, 5,143
St. John's, Canada, 1,720
San Juan, Puerto Rico, 3,436
Santa Cruz de Tenerife, Canary Islands, 1,704
Santo Domingo, Dominican Republic, 3,621
Washington, D.C., U.S.A. (track A), 3,326
Washington, D.C., U.S.A. (track B), 3,287
Washington, D.C., U.S.A. (track C), 3,204
Waterford, Ireland, 276
Wilmington, North Carolina, U.S.A. (track A), 3,381
Wilmington, North Carolina, U.S.A. (track B), 3,348
Wilmington, North Carolina, U.S.A. (track C), 3,275
Workington, England, 148

INNAMBAN, MOZAMBIQUE. See Inhambane.

INVERGORDON, SCOTLAND
(57°41′00″ N., 4°10′00″ W.)

Subtract 6 miles from Inverness distances.

INVERNESS, SCOTLAND
(57°29′00″ N., 4°14′00″ W.) to:

Junction Points*
Skagens Odde, Denmark, 481

Ports
Amsterdam, Netherlands, 482
Antwerpen, Belgium, 554
Bremerhaven, Germany, 514
Dunkerque, France, 526
Emden, Germany, 487
Esbjerg, Denmark, 455
Hamburg, Germany, 562
Oostende, Belgium, 510
Rotterdam, Netherlands, 496
Wilhelmshaven, Germany, 508
Zeebrugge, Belgium, 506

IOKANGA, U.S.S.R.
(68°03′00″ N., 39°35′00″ E.) to:

Junction Points*
Pentland Firth, Scotland, 1,424
Skagens Odde, Denmark, 1,517

Ports
Arkhangelsk, U.S.S.R., 271
Dikson Harbor, U.S.S.R., 899
Reykjavik, Iceland, 1,646

IPSWICH, ENGLAND
(52°03′00″ N., 1°10′00″ E.)

Add 8 miles to Harwich distances.

IQUIQUE, CHILE
(20°12′00″ S., 70°10′00″ W.) to:

Junction Points*
Panama, Panama, 1,987
Punta Arenas, Chile, 2,201

Ports
Acapulco, Mexico, 2,834
Amapala, Honduras, 2,303
Antofagasta, Chile, 224
Arica, Chile, 110
Brito, Nicaragua, 2,189
Caldera, Chile, 420
Callao, Peru, 659
Coquimbo, Chile, 602
Corinto, Nicaragua, 2,247
Corral, Chile, 1,205
Esmeraldas, Ecuador, 1,550
Guayaquil, Ecuador, 1,317
Guaymas, Mexico, 3,750
Lota, Chile, 1,033
Mollendo, Peru, 220
Monterey, California, U.S.A., 4,540
Pisco, Peru, 560
Puntarenas, Costa Rica, 2,062
Salina Cruz, Mexico, 2,645
San Blas, Mexico, 3,294
San Diego, California, U.S.A., 4,218
San Francisco, California, U.S.A., 4,620
San Jose, Guatemala, 2,404
Talcahuano, Chile, 1,008
Valparaiso, Chile, 782
Yokohama, Japan, 9,026

*JUNCTION POINT.—See Preface for use of junction points.

IRAKLION, CRETE
(35°20'41'' N., 25°08'24'' E.) to:

Junction Points*
Port Said, U.A.R., 455
Strait of Gibraltar, 1,516

Ports
Al Ladhiqiyah, Syria, 527
Alexandria, U.A.R., 372
Alger, Algeria, 1,087
Alicante, Spain, 1,254
Ancona, Italy, 762
Annaba, Algeria, 863
Banghazi, Libya, 370
Barcelona, Spain, 1,186
Bari, Italy, 554
Batumi, U.S.S.R., 1,032
Bayrut, Lebanon, 526
Bizerte, Tunisia, 758
Brindisi, Italy, 496
Cartagena, Spain, 1,279
Ceuta, Morocco, 1,496
Genova, Italy, 991
Gibraltar, 1,499
Haifa, Israel, 522
Istanbul, Turkey, 445
Izmir, Turkey, 262
Kalamai, Greece, 197
Khalkis, Greece, 210
Kyrenia, Cyprus, 406
La Spezia, Italy, 956
Limassol, Cyprus, 405
Limin Khiou, Greece, 193
Livorno, Italy, 920
Malaga, Spain, 1,446
Marseille, France, 1,083
Matruh, U.A.R., 308
Messina, Sicily, 510
Napoli, Italy, 681
Navplion, Greece, 237
Odessa, U.S.S.R., 793
Oran, Algeria, 1,284
Palermo, Sicily, 626
Palma, Balearic Islands, 1,130
Paphos, Cyprus, 363
Piraievs, Greece, 175
Rijeka, Yugoslavia, 831
Rodhos, Rodhos, 171
Salamis, Greece, 190
Savona, Italy, 1,002
Sibenik, Yugoslavia, 704
Siracusa, Sicily, 495
Split, Yugoslavia, 689
Tarabulus, Libya, 630
Taranto, Italy, 509
Thessaloniki, Greece, 351
Toulon, France, 1,051
Trieste, Free Territory, 865
Tunis, Tunisia, 745
Valencia, Spain, 1,252
Valletta, Malta, 528
Venezia, Italy, 872
Volos, Greece, 292
Yumurtalik, Turkey, 540

ISABELA, CUBA
(22°57'00'' N., 80°00'24'' W.) to:

Junction Points*
Straits of Florida, 195
Yucatan Channel, 329

Ports
Habana, Cuba, 151
Jacksonville, Florida, U.S.A., 507
Nuevitas, Cuba, 212

ISABEL SEGUNDA, ISLA DE VIEQUES, PUERTO RICO
(18°10'00'' N., 65°28'00'' W.) to:

Junction Points*
Panama, Panama, 1,060
Straits of Florida, 1,064

Ports
New York, New York, U.S.A., 1,430
Port of Spain, Trinidad, 531
Willemstad, Curacao, 446

ISKENDERUN, TURKEY
(36°36'00'' N., 36°11'00'' E.) to:

Junction Points*
Port Said, U.A.R., 381
Strait of Gibraltar, 2,054

Ports
Bayrut, Lebanon, 180
Constanta, Rumania, 1,044
Istanbul, Turkey, 847
Izmir, Turkey, 652
Nice, France, 1,553
Patrai, Greece (via Corinth Canal), 748
Patrai, Greece (south of Greece), 846
Piraievs, Greece, 656
Pula, Yugoslavia (via Corinth Canal), 1,301
Pula, Yugoslavia (south of Greece), 1,341
Rostov-na-Donu, U.S.S.R., 1,483
Sete, France, 1,675
Sfax, Tunisia, 1,282
Sur, Lebanon, 218
Tarabulus, Libya, 1,167
Thessaloniki, Greece, 784
Tubruq, Libya, 667

ISLA DE PASCUA, SOUTH PACIFIC
(27°08'30'' S., 109°26'30'' W.) to:

Junction Points*
Panama, Panama, 2,785

Ports
Archipielago de Colon, 1,947
Islas Juan Fernandez, 1,633

ISLAS JUAN FERNANDEZ, SOUTH PACIFIC
(33°38'00'' S., 78°49'40'' W.) to:

Ports
Honolulu, Hawaii, U.S.A., 5,595
Isla de Pascua, 1,633
Puerto Montt, Chile, 616
Valparaiso, Chile, 364

ISTANBUL, TURKEY
(41°01'15'' N., 28°59'09'' E.) to:

Junction Points*
Port Said, U.A.R., 804
Strait of Gibraltar (via Corinth Canal), 1,804
Strait of Gibraltar (south of Greece), 1,821

Ports
Alexandria, U.A.R., 742
Alexandroupolis, Greece, 200
Alger, Algeria (via Corinth Canal), 1,376
Alger, Algeria (south of Greece), 1,393
Alicante, Spain (via Corinth Canal), 1,540
Alicante, Spain (south of Greece), 1,560
Almeria, Spain (via Corinth Canal), 1,642
Almeria, Spain (south of Greece), 1,659
Ancona, Italy (via Corinth Canal), 962
Ancona, Italy (south of Greece), 1,058
Annaba, Algeria (via Corinth Canal), 1,151
Annaba, Algeria (south of Greece), 1,168
Banghazi, Libya, 716
Barcelona, Spain (via Corinth Canal), 1,445
Barcelona, Spain (south of Greece), 1,486
Bari, Italy (via Corinth Canal), 755
Bari, Italy (south of Greece), 851
Batumi, U.S.S.R., 591
Bayrut, Lebanon, 896

*JUNCTION POINT.—See Preface for use of junction points.

Bizerte, Tunisia (via Corinth Canal), 1,046
Bizerte, Tunisia (south of Greece), 1,063
Brindisi, Italy (via Corinth Canal), 697
Brindisi, Italy (south of Greece), 793
Cagliari, Sardinia (via Corinth Canal), 1,092
Cagliari, Sardinia (south of Greece), 1,133
Cartagena, Spain (via Corinth Canal), 1,567
Cartagena, Spain (south of Greece), 1,573
Castellamare di Stabia, Italy (via Corinth Canal), 937
Castellamare di Stabia, Italy (south of Greece), 979
Catania, Sicily (via Corinth Canal), 776
Catania, Sicily (south of Greece), 810
Ceuta, Morocco (via Corinth Canal), 1,785
Ceuta, Morocco (south of Greece), 1,802
Civitavecchia, Italy (via Corinth Canal), 1,066
Civitavecchia, Italy (south of Greece), 1,107
Constanta, Rumania, 201
Dikili, Turkey, 285
Genova, Italy (via Corinth Canal), 1,250
Genova, Italy (south of Greece), 1,291
Gibraltar (via Corinth Canal), 1,787
Gibraltar (south of Greece), 1,804
Haifa, Israel, 849
Iraklion, Crete, 445
Iskenderun, Turkey, 847
Izmir, Turkey, 292
Kerch, U.S.S.R., 439
La Spezia, Italy (via Corinth Canal), 1,214
La Spezia, Italy (south of Greece), 1,256
Larnaca, Cyprus, 766
Livorno, Italy (via Corinth Canal), 1,178
Livorno, Italy (south of Greece), 1,220
Malaga, Spain (via Corinth Canal), 1,735
Malaga, Spain (south of Greece), 1,752
Marseille, France (via Corinth Canal), 1,342
Marseille, France (south of Greece), 1,383
Mersin, Turkey, 789
Messina, Sicily (via Corinth Canal), 768
Messina, Sicily (south of Greece), 810
Napoli, Italy (via Corinth Canal), 940
Napoli, Italy (south of Greece), 981
Nice, France (via Corinth Canal), 1,279
Nice, France (south of Greece), 1,321
Novorossiysk, U.S.S.R., 460
Odessa, U.S.S.R., 352
Oran, Algeria (via Corinth Canal), 1,573
Oran, Algeria (south of Greece), 1,590
Palermo, Sicily (via Corinth Canal), 884
Palermo, Sicily (south of Greece), 926
Palma, Balearic Islands (via Corinth Canal), 1,403
Palma, Balearic Islands (south of Greece), 1,446
Piraievs, Greece, 364
Pula, Yugoslavia, 1,124
Rijeka, Yugoslavia (via Corinth Canal), 1,029
Rijeka, Yugoslavia (south of Greece), 1,128
Rodhos, Rodhos, 445
Rostov-na-Donu, U.S.S.R., 640
Savona, Italy (via Corinth Canal), 1,260
Savona, Italy (south of Greece), 1,301
Sete, France (via Corinth Canal), 1,401
Sete, France (south of Greece), 1,442
Sevastopol, U.S.S.R., 305
Sibenik, Yugoslavia (via Corinth Canal), 902
Sibenik, Yugoslavia (south of Greece), 1,001
Siracusa, Sicily (via Corinth Canal), 772
Siracusa, Sicily (south of Greece), 798
Split, Yugoslavia (via Corinth Canal), 887
Split, Yugoslavia (south of Greece), 986
Tarabulus, Libya, 453
Taranto, Italy (via Corinth Canal), 717
Taranto, Italy (south of Greece), 806
Thessaloniki, Greece, 338
Toulon, France (via Corinth Canal), 1,310
Toulon, France (south of Greece), 1,351
Trieste, Free Territory (via Corinth Canal), 1,063
Trieste, Free Territory (south of Greece), 1,162
Tunis, Tunisia (via Corinth Canal), 1,033
Tunis, Tunisia (south of Greece), 1,050
Valencia, Spain (via Corinth Canal), 1,528
Valencia, Spain (south of Greece), 1,558
Valletta, Malta, 837
Venezia, Italy (via Corinth Canal), 1,073
Venezia, Italy (south of Greece), 1,169
Volos, Greece, 329

ITOZAKI, JAPAN
(34°23′00″ N., 133°06′00″ E.) to:

Ports
Kobe, Japan, 113
Kure, Japan, 73
Sasebo, Japan, 271
Shimonoseki, Japan, 133
Shiogama, Japan, 662
Yokohama, Japan, 446

IVIGTUT, GREENLAND
(61°12′30″ N., 48°10′00″ W.) to:

Junction Points*
Bishop Rock, England (direct), 1,608
Bishop Rock, England (via 75 miles off Kap Farvel), 1,652
Inishtrahull, Ireland (direct), 1,392
Inishtrahull, Ireland (via 75 miles off Kap Farvel), 1,450
Montreal, Canada, 1,472
Pentland Firth, Scotland (direct), 1,440
Pentland Firth, Scotland (via 75 miles off Kap Farvel), 1,510
Strait of Gibraltar (direct), 2,283
Strait of Gibraltar (via 75 miles off Kap Farvel), 2,304
Straits of Florida, 2,925

Ports
Angmagssalik, Greenland (direct), 624
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 754
Argentia, Canada, 1,023
Arkhangelsk, U.S.S.R. (direct), 2,573
Arkhangelsk, U.S.S.R. (via 75 miles off Kap Farvel), 2,683
Boston, Massachusetts, U.S.A., 1,731
Colon, Panama, 3,536
Godhavn, Greenland, 560
Guantanamo, Cuba, 2,873
Halifax, Canada, 1,380
Murmansk, U.S.S.R. (direct), 2,201
Murmansk, U.S.S.R. (via 75 miles off Kap Farvel), 2,310
New York, New York, U.S.A., 1,933
Norfolk, Virginia, U.S.A., 2,116
Philadelphia, Pennsylvania, U.S.A., 2,086

*JUNCTION POINT.—See Preface for use of junction points.

Portsmouth, New Hampshire, U.S.A., 1,709
Reykjavik, Iceland (direct), 887
Reykjavik, Iceland (via 75 miles off Kap Farvel), 980
St. John's, Canada, 849
San Juan, Puerto Rico, 2,720

IWAKUNI, JAPAN
(34°10'00'' N., 132°17'00'' E.) to:

Ports
Apra, Guam, 1,437
Kobe, Japan, 166
Sai Gon, Vietnam, 2,108
Shimonoseki, Japan, 93
Yokohama, Japan, 497

IZMIR, TURKEY
(38°25'39'' N., 27°07'58'' E.) to:

Junction Points*
Port Said, U.A.R., 608
Strait of Gibraltar (via Corinth Canal), 1,650
Strait of Gibraltar (south of Greece), 1,667

Ports
Alexandria, U.A.R., 547
Alger, Algeria (via Corinth Canal), 1,221
Alger, Algeria (south of Greece), 1,238
Alicante, Spain (via Corinth Canal), 1,386
Alicante, Spain (south of Greece), 1,405
Al Mina Al Bayda, Syria, 626
Ancona, Italy (via Corinth Canal), 808
Ancona, Italy (south of Greece), 904
Annaba, Algeria (via Corinth Canal), 997
Annaba, Algeria (south of Greece), 1,014
Ashdod Yam, Israel, 668
Banghazi, Libya, 561
Barcelona, Spain (via Corinth Canal), 1,290
Barcelona, Spain (south of Greece), 1,332
Bari, Italy (via Corinth Canal), 601
Bari, Italy (south of Greece), 697
Batumi, U.S.S.R., 880
Bayrut, Lebanon, 651
Bizerte, Tunisia (via Corinth Canal), 892
Bizerte, Tunisia (south of Greece), 909
Brindisi, Italy (via Corinth Canal), 543
Brindisi, Italy (south of Greece), 639
Cartagena, Spain (via Corinth Canal), 1,413
Cartagena, Spain (south of Greece), 1,430
Ceuta, Morocco (via Corinth Canal), 1,630
Ceuta, Morocco (south of Greece), 1,648
Darnah, Libya, 465
Dikili, Turkey, 63
Ermoupolis, Greece, 158
Gallipoli, Italy (south of Greece), 606
Genova, Italy (via Corinth Canal), 1,095
Genova, Italy (south of Greece), 1,137
Gibraltar (via Corinth Canal), 1,633
Gibraltar (south of Greece), 1,650
Haifa, Israel, 654
Iraklion, Crete, 262
Iskenderun, Turkey, 652
Istanbul, Turkey, 292
Kavala, Greece, 209
Khalkis, Greece, 210
Khania, Crete, 276
Kyrenia, Cyprus, 524
La Spezia, Italy (via Corinth Canal), 1,060
La Spezia, Italy (south of Greece), 1,101
Larnaca, Cyprus, 570
Limassol, Cyprus, 530
Livorno, Italy (via Corinth Canal), 1,024
Livorno, Italy (south of Greece), 1,066
Malaga, Spain (via Corinth Canal), 1,580
Malaga, Spain (south of Greece), 1,597
Marseille, France (via Corinth Canal), 1,187
Marseille, France (south of Greece), 1,229
Mersin, Turkey, 594
Messina, Sicily (via Corinth Canal), 614
Messina, Sicily (south of Greece), 655
Mitilini, Greece, 60
Napoli, Italy (via Corinth Canal), 785
Napoli, Italy (south of Greece), 827
Navplion, Greece, 258
Odessa, U.S.S.R., 640
Oran, Algeria (via Corinth Canal), 1,418
Oran, Algeria (south of Greece), 1,436
Palermo, Sicily (via Corinth Canal), 730
Palermo, Sicily (south of Greece), 772
Palma, Balearic Islands (via Corinth Canal), 1,248
Palma, Balearic Islands (south of Greece), 1,290
Piraievs, Greece, 210
Rethimnon, Crete, 277
Rijeka, Yugoslavia (via Corinth Canal), 875
Rijeka, Yugoslavia (south of Greece), 974
Rodhos, Rodhos, 256
Salamis, Greece, 225
Savona, Italy (via Corinth Canal), 1,106
Savona, Italy (south of Greece), 1,147
Sevastopol, U.S.S.R., 594
Sibenik, Yugoslavia (via Corinth Canal), 747
Sibenik, Yugoslavia (south of Greece), 846
Siracusa, Sicily (via Corinth Canal), 618
Siracusa, Sicily (south of Greece), 644
Soudha, Crete, 281
Split, Yugoslavia (via Corinth Canal), 732
Split, Yugoslavia (south of Greece), 831
Tarabulus, Libya, 799
Taranto, Italy (via Corinth Canal), 563
Taranto, Italy (south of Greece), 652
Thessaloniki, Greece, 259
Toulon, France (via Corinth Canal), 1,155
Toulon, France (south of Greece), 1,197
Trieste, Free Territory (via Corinth Canal), 908
Trieste, Free Territory (south of Greece), 1,007
Tunis, Tunisia (via Corinth Canal), 879
Tunis, Tunisia (south of Greece), 896
Valencia, Spain (via Corinth Canal), 1,374
Valencia, Spain (south of Greece), 1,403
Valletta, Malta, 683
Venezia, Italy (via Corinth Canal), 919
Venezia, Italy (south of Greece), 1,015
Volos, Greece, 226
Yumurtalik, Turkey, 639

JACKSONVILLE, FLORIDA, U.S.A.
(30°19'00'' N., 81°39'00'' W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Bishop Rock, England (track A), 3,595
Bishop Rock, England (track B), 3,571
Bishop Rock, England (track C), 3,527
Cape of Good Hope, Republic of South Africa, 6,862
Fastnet, Ireland (track A), 3,499
Fastnet, Ireland (track B), 3,470
Fastnet, Ireland (track C), 3,413
Inishtrahull, Ireland (track A), 3,625
Inishtrahull, Ireland (track B), 3,589
Inishtrahull, Ireland (track C), 3,511
Montreal, Canada, 2,119
Panama, Panama, 1,559
Pentland Firth, Scotland (track A), 3,839
Pentland Firth, Scotland (track B), 3,793
Pentland Firth, Scotland (track C), 3,691
Punta Arenas, Chile, 6,917
Strait of Gibraltar (direct), 3,740
Straits of Florida, 523

Ports
Belem, Brazil, 2,773
Belize, British Honduras, 1,047
Bridgetown, Barbados, 1,617
Buenos Aires, Argentina, 5,841
Caibarien, Cuba, 526
Cape Town, Republic of South Africa, 6,854
Cartagena, Colombia, 1,395
Castries, St. Lucia, 1,520
Charlotte Amalie, Virgin Islands, 1,181
Colon, Panama (via Crooked Island Passage and Windward Passage), 1,516
Colon, Panama (via Yucatan Channel), 1,535
Dakar, Senegal, 3,650
Elizabeth Harbor, Bahamas, 559
Georgetown, British Guiana, 1,980
Guantanamo, Cuba (via Crooked Island Passage), 851
Habana, Cuba, 528
Halifax, Canada, 1,255
Hopetown, Bahamas, 358
Isabela, Cuba, 507
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,016
Las Palmas de Gran Canaria, Canary Islands, 3, 467
Limon, Costa Rica, 1,589
Lisboa, Portugal, 3,548
Miller Anchorage, Bahamas, 507
Montevideo, Uruguay, 5,727
Nassau, Bahamas, 456
Ponce, Puerto, 1,146
Port of Spain, Trinidad, 1,685
Recife, Brazil, 3,668
Rio de Janeiro, Brazil, 4,740
San Juan, Puerto Rico, 1,121
Santo Domingo, Dominican Republic, 1,166
Santiago de Cuba, Cuba (via Crooked Island Passage, and Windward Passage), 904
Tampico, Mexico, 1,361

JACMEL, HAITI
(18°13'20'' N., 72°31'00'' W.) to:

Junction Points*
Panama, Panama, 1,461
Straits of Florida, 802

Ports
Baltimore, Maryland, U.S.A., 1,416
Boston, Massachusetts, U.S.A., 1,672
Colon, Panama, 683
Jeremie, Haiti, 176
New York, New York, U.S.A., 1,489
Philadelphia, Pennsylvania, U.S.A., 1,461
Port au Prince, Haiti, 271

JAFFA, ISRAEL
(32°03'24'' N., 34°44'48'' E.) to:

Junction Points*
Port Said, U.A.R., 135
Strait of Gibraltar, 2,030

Ports
Constanta, Rumania, 1,057
Kerch, U.S.S.R., 1,295
Larnaca, Cyprus, 181
Mersin, Turkey, 285
Nice, France, 1,541
Patrai, Greece (via Corinth Canal), 752
Patrai, Greece (south of Greece), 837
Pula, Yugoslavia (via Corinth Canal), 1,306
Pula, Yugoslavia (south of Greece), 1,331
Rostov-na-Donu, U.S.S.R., 1,496
Sete, France, 1,662
Valletta, Malta, 1,037

JAKOBSHAVN, GREENLAND
(69°13'30'' N., 51°05'30'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,972
Strait of Gibraltar, 2,819

Ports
Churchill, Canada, 1,532
Reykjavik, Iceland, 1,418
St. John's, Canada, 1,341

JAKOBSTAD, FINLAND
(63°43'00'' N., 22°41'30'' E.) to:

Ports
Oulu, Finland, 133
Vaasa, Finland, 99

JALUIT, MARSHALL ISLANDS
(5°55'00'' N., 169°38'30'' E.) to:

Junction Points*
Panama, Panama, 6,666
Punta Arenas, Chile, 6,815

Ports
Auckland, New Zealand (via Southeast Pass), 2,595
Brisbane, Australia (via Main and Howe Channels), 2,231
Callao, Peru, 6,832
Funafuti, Ellice Islands, 1,041
Hakodate, Japan, 2,670
Hobart, Tasmania (via Southeast Pass), 3,223
Hong Kong, B.C.C. (via Southeast Pass), 3,370
Honolulu, Hawaii, U.S.A., 2,096
Melbourne, Australia (via South Channel), 3,181
Midway Island, 1,535
Nagasaki, Japan (via Osumi Kaikyo), 2,808
Pago Pago, American Samoa, 1,700
Pearl Harbor, Hawaii, U.S.A., 2,101
Petropavlovsk, U.S.S.R., 2,883
Ponape, Caroline Islands, 698
Saipan, Mariana Islands, 1,545
San Francisco, California, U.S.A., 4,150
Seattle, Washington, U.S.A., 4,296
Shang-hai, China (via Southeast Pass), 3,138
Sydney, Australia (via Southeast Pass), 2,623
Tinian, Mariana Islands, 1,536
Truk, Caroline Islands, 1,078
Valparaiso, Chile, 7,034
Wake Island, 831
Yokohama, Japan (via Southeast Pass), 2,442

JAMES BAY, SOUTH ATLANTIC. See St. Helena Island.

*JUNCTION POINT.—See Preface for use of junction points.

JAN MAYEN, GREENLAND SEA
(70°57'00'' N., 8°31'00'' W.) to:

Ports
Bjornoya, Svalbard, 544
Reykjavik, Iceland, 617
Tromso, Norway, 567

JARVIS ISLAND, SOUTH PACIFIC
(0°22'30'' S., 160°01'45'' W.) to:

Junction Points*
Panama, Panama, 4,804

Ports
Christmas Island, North Pacific, 209
Johnston Island, North Pacific, 1,173
Pago Pago, American Samoa, 1,050

JAZIREH-YE KHARK, IRAN
(29°14'00'' N., 50°21'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,018
Port Said, U.A.R., 3,200
Singapore, 3,739

Ports
Aden, Aden Protectorate, 1,811
Bombay, India, 1,431

JEREMIE, HAITI
(18°39'00'' N., 74°06'30'' W.) to:

Junction Points*
Panama, Panama, 713

Ports
Jacmel, Haiti, 176
Miragoane, Haiti, 63
Port au Prince, Haiti, 100
Santo Domingo, Dominican Republic, 343

JERSEY CITY, NEW JERSEY, U.S.A.
(40°43'00'' N., 74°02'00'' W.)

For ocean distances, add 1½ miles to New York distances.

JESSELTON, NORTH BORNEO
(5°59'30'' N., 116°04'35'' E.) to:

Junction Points*
Singapore, 832
Torres Strait, Australia, 2,041

Ports
Djakarta, Indonesia, 999
Iloilo, Philippines, 501
Zamboanga, Philippines, 412

JIBUTI, FRENCH SOMALILAND. See Djibouti.

JIDDA, SAUDI ARABIA. See Juddah.

JINSEN, KOREA. See Inchon.

JOHNSTON ISLAND, NORTH PACIFIC
(16°45'00'' N., 169°30'30'' W.) to:

Junction Points*
Panama, Panama, 5,359

Ports
Apia, Samoa, 1,838
Apra, Guam, 2,665
Christmas Island, 1,137
Fanning Island, 1,032
Funafuti, Ellice Island, 1,654
Honolulu, Hawaii, U.S.A., 717
Jarvis Island, 1,173
Kahului, Hawaii, U.S.A., 798
Midway Island, 821
Palmyra Island, 783
Papeete, Society Islands, 2,371
San Francisco, California, U.S.A., 2,779
Seattle, Washington, U.S.A., 3,018

JOHORE BAHRU, MALAYA, MALAYSIA
(1°27'00'' N., 103°46'00'' E.) to:

Junction Points*
Singapore, 31

Ports
Calcutta, India, 1,652
Colombo, Ceylon, 1,584
Madras, India, 1,586
Port Swettenham, Malaysia, 206

JOLO, PHILIPPINES
(6°03'30'' N., 120°59'45'' E.) to:

Ports
Batangas, Philippines, 480
Manila, Philippines (via Apo West Pass), 550
Sandakan, North Borneo, 180
Tacloban, Philippines, 442
Zamboanga, Philippines, 85

JUAN FERNANDEZ ISLAND, SOUTH PACIFIC. See Islas Juan Fernandez.

JUDDAH, SAUDI ARABIA
(21°28'00'' N., 39°09'20'' E.) to:

Junction Points*
Port Said, U.A.R., 722

Ports
Aden, Aden Protectorate, 707
Al Aqabah, Jordan, 573
Massaua, Ethiopia, 364
Port Sudan, Sudan, 161

JULIANEHAAB, GREENLAND
(60°43'00'' N., 46°02'30'' W.) to:

Junction Points*
Montreal, Canada (via Strait of Belle Isle), 1,470

Ports
Angmagssalik, Greenland (direct), 531
Angmagssalik (via 75 miles off Kap Farvel), 665
New York, New York, U.S.A., 1,911
Reykjavik, Iceland (direct), 795
Reykjavik, Iceland (via 75 miles off Kap Farvel), 892
St. John's, Canada, 827

JUNEAU, ALASKA, U.S.A.
(58°17'45'' N., 134°25'00'' W.) to:

Ports
Dutch Harbor, Alaska, U.S.A., 1,136
Kodiak, Alaska, U.S.A., 610
Prince Rupert, Canada, 322
San Francisco, California, U.S.A., 1,371
Seattle, Washington, U.S.A., 873
Vancouver, Canada, 761

KABINDA. See Cabinda.

KAGOSHIMA, JAPAN
(31°35'30'' N., 130°33'50'' E.) to:

Ports
Hakodate, Japan, 946

*JUNCTION POINT.—See Preface for use of junction points.

Kamaishi, Japan, 875
Kobe, Japan (via Tomogashima Suido), 379
Kobe, Japan (via Bungo Suido), 422
Komatsushima, Japan, 344
Kure, Japan, 296
Macau, China, 1,114
Misumi, Japan, 184
Nagasaki, Japan, 168
Niihana, Japan, 318
Shimizu, Shikoku, Japan, 208
Shimonoseki, Japan (west of Kyushu), 306
Shimonoseki, Japan (via Bungo Suido), 295
Tokuyama, Japan, 263
Ube, Japan, 280
Yokkaichi, Japan, 476
Yokohama, Japan, 594

KAHULUI, MAUI, HAWAII, U.S.A.
(20°54′00″ N., 156°28′31″ W.) to:

Junction Points*
Panama, Panama, 4,605

Ports
Johnston Island, 798
Midway Island, 1,266
Palmyra Island, 1,010
Seattle, Washington, U.S.A., 2,364
Yokohama, Japan, 3,496

KAKUMABETSU, KURIL ISLANDS. See Shelekhovo.

KALAMAI, GREECE
(37°01′02″ N., 22°06′38″ E.) to:

Junction Points*
Port Said, U.A.R., 644
Strait of Gibraltar, 1,370

Ports
Banghazi, Libya, 313
Iraklion, Crete, 197
Messina, Sicily, 355
Taranto, Italy, 351
Tunis, Tunisia, 599

KALAMATA, GREECE. See Kalamai.

KALAMON, GREECE. See Kalamai.

KALINIGRAD, U.S.S.R.
(54°42′30″ N., 20°28′00″ E.)

Add 21½ miles to Baltiysk distances.

KALMAR, SWEDEN
(56°39′45″ N., 16°22′30″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 289
Skagens Odde (via Store Baelt), 470
Skagens Odde (via The Sound), 342

Ports
Oslo, Norway (via Store Baelt), 596
Oslo, Norway (via The Sound), 464

KALPOS SOUDHAS, CRETE. See Soudha, Ormos Soudhas.

KALUNDBORG, DENMARK
(55°40′07″ N., 11°05′00″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 111
Skagens Odde, Denmark, 141

Ports
Kobenhavn, Denmark, 115
Stockholf, Sweden, 531
Swinoujscie, Poland, 175

KAMAISHI, JAPAN
(39°16′18″ N., 141°53′36″ E.) to:

Ports
Hakodate, Japan, 192
Kagoshima, Japan, 875
Kobe, Japan, 631
Nagasaki, Japan, 972
Yokohama, Japan, 348

KANDALAKSHA, U.S.S.R.
(67°08′00″ N., 33°24′00″ E.)

Add 101 miles to Arkhangelsk distances.

KANDLA, INDIA
(23°02′00″ N., 70°13′30″ E.)

Add 76½ miles to Okha distances.

KANEOHE BAY, HAWAII, U.S.A.
(21°26′23″ N., 157°47′00″ W.) to:

Junction Points*
Panama, Panama, 4,686

Ports
Apra, Guam, 3,354
Seattle, Washington, U.S.A., 2,388
Yokohama, Japan, 3,406

KAOE BAY, HALMAHERA. See Teluk Kau.

KAO-HSIUNG CHIANG, TAIWAN
(22°37′00″ N., 120°16′00″ E.) to:

Ports
Chang-Kan, China, 811
Macau, China, 329
Nha Trang Bay, Vietnam, 895
San Fernando, Philippines, 356
San-ya Chiang, China, 682
Vinh Cam Ranh, Vietnam, 915
Yu-lin Chiang, China, 674

KARACHI, PAKISTAN
(24°49′00″ N., 66°58′20″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 4,512
Cape of Good Hope, Republic of South Africa, 4,658
Port Said, U.A.R., 2,865
Singapore, 2,882
Torres Strait, Australia (south of Java and Timor), 5,298

Ports
Aden, Aden Protectorate, 1,472
Al Basrah, Iraq, 1,177
Bandar Abbas, Iran, 643
Belawan, Indonesia, 2,550
Bhavnagar, India, 481
Bombay, India, 504
Calcutta, India, 2,578
Cochin, India, 1,044
Colombo, Ceylon, 1,344
Darwin, Australia (south of Java and Timor Islands), 4,624
Durban, Republic of South Africa, 3,887
Fremantle, Australia, 4,437
Galle, Ceylon, 1,393
Madras, India, 1,908
Malacca, Malaysia, 2,768
Masqat, Mascat and Oman, 468
Massaua, Ethiopia, 1,865
Mombasa, Kenya, 2,361
Mormugao, India, 690
Okha, India, 194
Penang, Malaysia, 2,595
Rangoon, Burma, 2,561
Sabang, Indonesia, 2,284
Tamatave, Malagasy Republic, 2,788
Trincomalee, Ceylon, 1,667

*JUNCTION POINT.—See Preface for use of junction points.

KARDELJEVO, YUGOSLAVIA. See Ploce.

KARLSKRONA, SWEDEN
(56°10′00″ N., 15°36′00″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 235
Skagens Odde, Denmark, 295

Ports
Kobenhavn, Denmark, 148
Leningrad, U.S.S.R., 563
Stockholm, Sweden, 290

KASATKA, JAPAN
(45°00′00″ N., 147°44′00″ E.) to:

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 595
Aomori, Japan, 441
Attu Island, Alaska, U.S.A., 1,106
Dutch Harbor, Alaska, U.S.A., 1,846
Hakodate, Japan, 407
Kholmsk, Sakhalin, U.S.S.R., 368
Kiska, Alaska, U.S.A., 1,274
Korsakov, Sakhalin, U.S.S.R., 285
Muroran, Japan, 401
Nemuro, Japan, 139
Nikolayevsk, U.S.S.R. (south of Sakhalin), 747
Otaru, Japan, 441
Petropavlovsk, U.S.S.R., 690
Vladivostok, U.S.S.R., 779
Wakkanai, Japan, 310
Zaliv Chikhacheva, U.S.S.R., 632

KAUNAKAKAI, HAWAII, U.S.A.
(21°05′00″ N., 157°02′00″ W.) to:

Junction Points*
Panama, Panama, 4,633

Ports
Midway Island, 1,220
Seattle, Washington, U.S.A., 2,398
Yokohama, Japan, 3,454

KAVALA, GREECE
(40°55′50″ N., 24°24′11″ E.) to:

Junction Points*
Port Said, U.A.R., 714
Strait of Gibralta (via Corinth Canal), 1,689
Strait of Gibraltar (south of Greece), 1,706

Ports
Alger, Algeria (via Corinth Canal), 1,260
Alger, Algeria (south of Greece), 1,277
Bayrut, Lebanon, 756
Izmir, Turkey, 209
Piraievs, Greece, 249
Siracusa, Sicily (via Corinth Canal), 656
Siracusa, Sicily (south of Greece), 682
Thessaloniki, Greece, 160
Volos, Greece, 162

KAWASAKI, JAPAN
(35°30′00″ N., 139°45′00″ E.)

Use Yokohama distances.

KEFLAVIK, ICELAND
(64°25′00″ N., 22°33′25″ W.) to:

Junction Points*
Pentland Firth, Scotland, 671
Strait of Gibraltar, 1,947

Ports
Bergen, Norway, 875
Murmansk, U.S.S.R., 1,521
St. John's, Canada, 1,404

KENITRA, MOROCCO
(34°16′13″ N., 6°35′00″ W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,056
Ushant, France, 954

Ports
Dakar, Senegal, 1,432
Tangier, Morocco, 115

KERCH, U.S.S.R.
(45°21′16″ N., 36°28′40″ E.) to:

Junction Points*
Port Said, U.A.R., 1,238
Strait of Gibraltar (via Corinth Canal), 2,239
Strait of Gibraltar (south of Greece), 2,256

Ports
Almeria, Spain (via Corinth Canal), 2,077
Almeria, Spain (south of Spain), 2,094
Constanta, Rumania, 370
Istanbul, Turkey, 439
Jaffa, Israel, 1,295
Mersin, Turkey, 1,214
Nice, France (via Corinth Canal), 1,714
Nice, France (south of Greece), 1,756
Patrai, Greece (via Corinth Canal), 890
Patrai, Greece (south of Greece), 1,049
Pula, Yugoslavia (via Corinth Canal), 1,444
Pula, Yugoslavia (south of Greece), 1,543
Rostov-na-Donu, U.S.S.R., 208
Sete, France (via Corinth Canal), 1,836
Sete, France (south of Greece), 1,877

KERET, U.S.S.R.
(66°17′00″ N., 33°35′00″ E.)

Add 54 miles to Arkhangelsk distances.

KERKIRA, GREECE
(39°37′45″ N., 19°54′35″ E.) to:

Junction Points*
Port Said, U.A.R., (via Corinth Canal), 826
Port Said, U.A.R. (south of Greece), 845
Strait of Gibraltar, 1,324

Ports
Brindisi, Italy, 123
Catania, Sicily, 290
Dubrovnik, Yugoslavia, 208
Patrai, Greece, 138
Taranto, Italy, 167

KETCHIKAN, ALASKA, U.S.A.
(55°20′30″ N., 131°38′45″ W.) to:

Ports
Cordova, Alaska, U.S.A., 656
Seattle, Washington, U.S.A., 634
Sitka, Alaska, U.S.A., 224
Whittier, Alaska, U.S.A., 1,839

KETTA, GHANA. See Kwitta.

*JUNCTION POINT.—See Preface for use of junction points.

KEY WEST, FLORIDA, U.S.A.
(24°33'30'' N., 81°48'30'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,828
Bishop Rock, England (track B), 3,812
Bishop Rock, England (track C), 3,783
Fastnet, Ireland (track A), 3,807
Fastnet, Ireland (track B), 3,778
Fastnet, Ireland (track C), 3,772
Inishtrahull, Ireland (track A), 3,852
Inishtrahull, Ireland (track B), 3,826
Inishtrahull, Ireland (track C), 3,767
Montreal, Canada, 2,466
Panama, Panama, 1,108
Pentland Firth, Scotland (track A), 4,147
Pentland Firth, Scotland (track B), 4,101
Pentland Firth, Scotland (track C), 4,000
Strait of Gibraltar, 3,949
Straits of Florida, 73
Yucatan Channel, 251

Ports
Alvaro Obregon, Mexico, 748
Angmagssalik, Greenland (direct), 3,209
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,223
Antilla, Cuba, 434
Argentia, Canada, 1,953
Arkhangelsk, U.S.S.R., 5,150
Baracoa, Cuba, 490
Belem, Brazil, 2,603
Belize, British Honduras (via main ship channel), 590
Bridgetown, Barbados, 1,459
Buenos Aires, Argentina, 5,712
Champeche, Mexico (via main ship channel), 632
Cap Haitien, Haiti (via Old Bahama Channel), 619
Carmen, Mexico (via main ship channel), 708
Cartagena, Colombia (via Old Bahama Channel and Windward Passage), 1,130
Cartagena, Colombia (via Yucatan Channel), 1,144
Castries, St. Lucia, 1,358
Charlotte Amalie, Virgin Islands, 1,036
Charlottetown, Canada, 1,788
Christiansted, Virgin Islands, 1,064
Colon, Panama (via ship channel and Yucatan Channel), 1,065
Dakar, Senegal, 3,709
Elizabeth Harbor, Bahamas, 485
Freetown, Sierra Leone, 4,076
Funchal, Madeira Island, 3,445
Georgetown, British Guiana, 1,818
Great Harbor, Culebra Island (via Old Bahama Channel and north of Hispaniola), 1,017
Guantanamo, Cuba (via Old Bahama Channel), 587
Habana, Cuba, 92
Halifax, Canada, 1,602
Hamilton, Bermuda, 1,093
Horta, Azores, 2,857
Kingston, Jamaica (via Windward Passage), 752
Kingston, Jamaica (via Yucatan Channel), 802
La Guaira, Venezuela (via Old Bahama Channel and Windward Passage), 1,280
Lisboa, Portugal, 3,765
Nuevitas, Cuba, 331
Pointe a Pitre, Guadeloupe (via Virgin Passage), 1,296
Pointe a Pitre, Guadeloupe (via Mona Passage), 1,297
Ponce, Puerto Rico (via Old Bahama Channel and Mona Passage), 969
Port au Prince, Haiti (via Old Bahama Channel), 650
Port of Spain, Trinidad (via Old Bahama Channel and Mona Passage), 1,484
Port of Spain, Trinidad (via Old Bahama Channel and Windward Passage), 1,534
Puerto Cabello, Venezuela (via Old Bahama Channel and Windward Passage), 1,248
Recife, Brazil (via Old Bahama Channel and Mona Passage), 3,539
Rio de Janeiro, Brazil, 4,611
San Juan, Puerto Rico, 966
Santa Barbara de Samana, Dominican Republic, 811
Santiago de Cuba, Cuba (via Windward Passage), 637
Santiago de Cuba, Cuba (via west end of Cuba), 796
Santo Domingo, Dominican Republic, 936
Tampico, Mexico, 907
Tuxpan, Mexico, 891
Veracruz, Mexico, 869
Willemstad, Curacao (via Windward Passage), 1,134

KHAFJI, RA'S AL, NEUTRAL ZONE, PERSIAN GULF. See Ra's al Khafji.

KHALKIS, GREECE
(38°27'40'' N., 23°35'15'' E.) to:

Junction Points*
Port Said, U.A.R., 630
Strait of Gibraltar (via Corinth Canal), 1,545
Strait of Gibraltar (south of Greece), 1,562

Ports
Iraklion, Crete, 210
Izmir, Turkey, 210
Volos, Greece, 88

KHANIA, CRETE
(35°31'15'' N., 24°01'00'' E.) to:

Junction Points*
Port Said, U.A.R., 515
Strait of Gibraltar, 1,459

Ports
Izmir, Turkey, 276
Messina, Sicily, 452
Piraievs, Greece, 148

KHARK, JAZIREH-YE, IRAN. See Jazireh-Ye Khark.

KHAWR AL AMA, NEUTRAL ZONE, PERSIAN GULF
(28°38'00'' N., 48°28'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,416
Cape of Good Hope, Republic of South Africa, 5,080
Port Said, U.A.R., 3,262
Singapore, 3,801

Ports
Aden, Aden Protectorate, 1,873
Bombay, India, 1,493

KHOLMSK, SAKHALIN, U.S.S.R.
(47°03'00'' N., 142°02'45'' E.) to:

Ports
Bukhta Broutona, Kuril Islands, 519
Kasatka, Japan, 368
Matsugahama, Japan, 361
Shelekhovo, Kuril Islands, 707
Slavnoye, Kuril Islands, 364
Tomari, Japan, 314

KHORRAMSHAHR, IRAN
(30°25'30'' N., 48°10'00'' E.)

Subtract 18½ miles from Al Basrah distances.

*JUNCTION POINT.—See Preface for use of junction points.

KIAMA HARBOR, AUSTRALIA
(34°40'00'' S., 150°52'00'' E.) to:

Junction Points*
Torres Strait, Australia, 1,760
Wilson Promontory, Australia, 379

Ports
Hobart, Tasmania, 583
Newcastle, Australia, 117
Wellington, New Zealand, 1,213

KIEL, GERMANY
(54°20'00'' N., 10°09'30'' E.)

For distances via Kiel Canal, add 2½ miles to Kiel Canal (east end)

For distances via Kiel Fiord, add 1½ miles to Kiel Canal (east end)

KIEL CANAL (EAST END), GERMANY*
(54°22'00'' N., 10°09'00'' E.) to:

Junction Points*
Bishop Rock, England, 727
Pentland Firth, Scotland, 565
Ushant, France, 716

Ports
Aalborg, Denmark, 207
Aarhus, Denmark, 131
Abenra, Denmark, 66
Amsterdam, Netherlands, 291
Antwerpen, Belgium, 398
Assens, Denmark, 65
Baltiysk, U.S.S.R., 353
Bremerhaven, Germany, 129
Calais, France, 408
Cherbourg, France, 554
Den Helder, Netherlands, 263
Dover, England, 410
Dundee, Scotland, 501
Dunkerque, France, 386
Emden, Germany, 197
Esbjerg, Denmark, 372
Faborg, Denmark, 53
Fecamp, France, 482
Flensburg, Germany, 52
Fredericia, Denmark, 85
Frederikshavn, Denmark, 200
Gavle, Sweden, 615
Gdansk, Poland, 344
Gdynia, Poland, 339
Goteborg, Sweden, 230
Grena, Denmark, 140
Haderslev, Denmark, 72
Halmsted, Sweden, 188
Halsingborg, Sweden, 176
Hamburg, Germany, 91
Hamina, Finland, 747
Hango, Finland, 564
Helsingor, Denmark, 175
Helsinki, Finland, 625
Hobro, Denmark, 193
Horsens, Denmark, 131
Kalmar, Sweden, 289
Kalundborg, Denmark, 111
Karlskrona, Sweden, 235
Klaipeda, Lithuania, 400
Kobenhavn, Denmark (via Store Baelt), 202
Kobenhavn, Denmark (via The Sound), 162
Koge, Denmark, 153
Kolding, Denmark, 86
Korsor, Denmark, 73
Kotka, Finland, 694
Kyndbyvaerkets, Denmark, 164
Landskrona, Sweden, 167
Le Havre, France, 522
Leningrad, U.S.S.R., 779
Liepaja, Latvia, 405
Limhamn, Sweden, 159
London, England, 439
Lubeck, Germany, 99
Lulea, Sweden, 875
Malmo, Sweden, 205
Masnedsund, Denmark, 149
Middlefart, Denmark, 84
Musko Island, Sweden, 473
Naestved, Denmark, 94
Nakskov, Denmark, 46
Newcastle, England, 439
Norrkoping, Sweden, 459
Odense, Denmark, 117
Oostende, Belgium, 364
Ornskolosvik, Sweden, 733
Oulu, Finland, 918
Oxelosund, Sweden, 420
Peenemunde, Germany, 185
Pitea, Sweden, 864
Plymouth, England, 639
Porkkala, Finland, 647
Portland, England, 565
Portsmouth, England, 515
Randers, Denmark, 188
Rauma, Finland, 678
Reposaari, Finland, 654
Riga, Latvia, 555
Ronne, Denmark, 175
Rostock, Germany, 92
Rotterdam, Netherlands, 323
Ruch'i, U.S.S.R., 766
Sassnitz, Germany, 143
Sonderborg, Denmark, 46
Southampton, England, 533
Stockholm, Sweden, 503
Stralsund, Germany, 104
Sundsvall, Sweden, 684
Swinoujscie, Poland, 186
Szczecin, Poland, 222
Tallinn, Estonia, 603
Travemunde, Germany, 88
Trelleborg, Sweden, 141
Turku, Finland, 576
Uusikaupunki, Finland, 624
Umea, Sweden, 751
Vaasa, Finland, 744
Vejle, Denmark, 106
Ventspils, Latvia, 434
Wilhelmshaven, Germany, 126
Wismar, Germany, 84
Zeebrugge, Belgium, 354

KIIRUN, TAIWAN. See Chi-Lung Chiang.

KIMCHAEK, KOREA
(40°39'15'' N., 129°12'30'' E.) to:

Ports
Hakodate, Japan, 540
Maizuru, Japan, 431
Pusan, Korea, 351
Shimonoseki, Japan, 421
Vladivostok, U.S.S.R., 206
Yosu, Korea, 439

KINGSTON, JAMAICA
(17°57'30'' N., 76°47'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,854
Fastnet, Ireland (track A), 3,752
Fastnet, Ireland (track B), 3,748
Inishtrahull, Ireland (track A), 3,878
Inishtrahull, Ireland (track B), 3,868
Inishtrahull, Ireland (track C), 3,852
Panama, Panama, 594
Pentland Firth, Scotland (track A), 4,083
Pentland Firth, Scotland (track B), 4,067
Pentland Firth, Scotland (track C), 4,032
Strait of Gibraltar, 3,891
Straits of Florida (via Windward Passage), 802
Yucatan Channel, 550

Ports
Almirante, Panama, 657
Alvaro Obregon, Mexico, 1,092
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,401
Baracoa, Cuba, 265
Barahona, Dominican Republic, 364

*JUNCTION POINT.—See Preface for use of junction points.

Barranquilla, Colombia, 442
Belem, Brazil, 2,231
Belize, British Honduras, 685
Bocas del Toro, Panama, 604
Boston, Massachusetts, U.S.A., 1,657
Brunswick, Georgia, U.S.A., 1,038
Buenos Aires, Argentina, 5,295
Caldera Bay, Dominican Republic, 378
Cap Haitien, Haiti, 326
Cape Town, Republic of South Africa, 6,314
Cardenas, Cuba, 703
Carmen, Mexico, 1,056
Cartagena, Colombia, 479
Casilda, Cuba, 372
Castries, St. Lucia, 950
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,064
Charlotte Amalie, Virgin Islands, 705
Colon, Panama, 551
Covenas, Colombia, 528
Dakar, Senegal, 3,436
Elizabeth Harbor, Bahamas, 498
Funchal, Madeira Island, 3,349
Georgetown, British Guiana, 1,334
Gonaives, Haiti, 263
Guantanamo, Cuba, 180
Habana, Cuba (via Yucatan Channel), 737
Habana, Cuba (via Windward Passage), 762
Haina, Dominican Republic, 417
Halifax, Canada, 1,795
Hamilton, Bermuda, 1,144
Horta, Azores, 2,818
Jacksonville, Florida, U.S.A. (via Crooked Island Passage and Windward Passage), 1,016
Key West, Florida, U.S.A. via Windward Passage), 752
Key West, Florida, U.S.A. (via Yucatan Channel), 802
La Guaira, Venezuela, 732
La Romana, Dominican Republic, 470
Lake Charles, Louisiana, U.S.A., 1,190
Limon, Costa Rica, 605
Lisboa, Portugal, 3,725
Liverpool, Canada, 1,744
Manzanillo, Cuba, 283
Matanzas, Cuba, 717
Miami, Florida, U.S.A., 746
Miragoane, Haiti, 243
Nassau, Bahamas, 667
New York, New York, U.S.A. (via Crooked Island Passage and Windward Passage), 1,474
Norfolk, Virginia, U.S.A. (via Crooked Island Passage and Windward Passage), 1,279
Nuevitas, Cuba, 448
Oranjestad, Aruba, 223
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,446
Pina, Panama, 558
Pointe a Pitre, Guadeloupe, 910
Port au Prince, Haiti, 277
Port de Paix, Haiti, 432
Port of Spain, Trinidad, 1,003
Portland, Maine, U.S.A., 1,679
Portsmouth, New Hampshire, U.S.A., 1,655
Puerto Barrios, Guatemala, 715
Puerto Cabello, Venezuela, 697
Puerto Cabezas, Nicaragua, 451
Puerto Cayo Moa, Cuba, 301
Puerto Colombia, Colombia, 438
Puerto Cortes, Honduras, 671
Puerto Tanamo, Cuba, 318
Puerto Vita, Cuba, 364
Punta Cardon, Venezuela, 530
Rio de Janeiro, Brazil, 4,194
St. John, Canada, 1,794
St. Johns, Antigua, 870
St. Louis, Marie Galante, 903
St. Marc, Haiti, 254
San Juan, Puerto Rico (south of Hispaniola), 643
San Juan, Puerto Rico (north of Hispaniola), 685
San Pedro de Macoris, Dominican Republic, 461
Santa Lucia, Cuba, 651
Santiago de Cuba, Cuba, 176
Santo Domingo, Dominican Republic, 430
Savannah, Georgia, U.S.A. (via Crooked Island Passage and Windward Passage), 1,063
Sint Nicolaas, Aruba, 528
Surgidero de Batahona, Cuba, 595
Sydney, Canada, 1,982
Tampico, Mexico, 1,252
Tuxpan, Mexico, 1,243
Veracruz, Mexico, 1,210
Wilmington, North Carolina, U.S.A. (via Crooked Island Passage and Windward Passage), 1,115
Yarmouth, Canada, 1,710

KINGSTOWN, ST. VINCENT
(13°09'00'' N., 61°14'00'' W.) to:

Ports
Bridgetown, Barbados, 98
Castries, St. Lucia, 60
Fernando de Noronha, 1,320
Fort de France, Martinique, 89
Hamilton, Bermuda, 1,185
New York, New York, U.S.A., 1,791

KIRKENES, NORWAY
(69°43'45'' N., 30°02'00'' E.) to:

Ports
Longyearbyen, Svalbard, 637
Pechenga, U.S.S.R., 53

KIRKWALL, ORKNEY ISLANDS
(59°00'00'' N., 2°57'30'' W.) to:

Ports
Reykjavik, Iceland, 700

KISKA, ALASKA, U.S.A.
(51°59'00'' N., 177°32'30'' E.) to:

Ports
Anadyrskiy Liman, U.S.S.R., 804
Apra, Guam, 2,822
Barrow, Alaska, U.S.A., 1,427
Bukhta Broutona, Kuril Islands, 1,041
Cordova, Alaska, 1,435
Dutch Harbor, Alaska, U.S.A., 596
Hakodate, Japan, 1,656
Honolulu, Hawaii, U.S.A., 2,185
Kasatka, Japan, 1,274
Manila, Philippines, 3,664
Matsugahama, Japan, 1,345
Midway Island, 1,453
Petropavlovsk, U.S.S.R., 724
San Francisco, California, U.S.A., 2,629
Shelekhovo, Kuril Islands, 863
Slavnoye, Kuril Islands, 1,227
Tomari, Japan, 1,406
Yokohama, Japan, 1,997

KITTA, GHANA. See Kwitta.

KLAIPEDA, LITHUANIA
(55°43'00'' N., 21°07'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 400
Skagens Odde, Denmark (via Store Baelt), 592
Skagens Odde, Denmark (via The Sound and north of Bornholm), 462

Ports
Horsens, Denmark, 459
Koge, Denmark, 350
Oslo, Norway (light draft), 584
Oslo, Norway (via Store Baelt and south of Bornholm), 716
Oxelosund, Sweden, 232
Rostock, Germany, 347

*JUNCTION POINT.—See Preface for use of junction points.

KOBE, JAPAN
(34°40'00'' N., 135°12'00'' E.) to:

Junction Points*
Panama, Panama, 7,964
Punta Arenas, Chile, 9,429
Singapore, 2,689

Ports
Aleksandrovsk, U.S.S.R., 1,384
Apra, Guam, 1,386
Auckland, New Zealand, 4,875
Cebu, Philippines (via San Bernardino Strait), 1,601
Darwin, Australia (via Selat Sele), 2,901
Djkarta, Indonesia (via Balintang Channel), 2,987
Dutch Harbor, Alaska, U.S.A., 2,833
Hagata, Japan, 304
Haiphong, Vietnam (via Osumi Kaikyo and Hainan Strait), 1,833
Hakodate, Japan, 816
Hirohata, Japan, 34
Hiroshima, Japan, 179
Hong Kong, B.C.C. (via Osumi Kaikyo), 1,372
Honolulu, Hawaii, U.S.A., 3,669
Hsia-men, China (via Osumi Kaikyo), 1,117
Iloilo, Philippines (via San Bernardino Strait), 1,623
Imabari, Japan, 120
Inchon, Korea, 733
Itozaki, Japan, 113
Iwakuni, Japan, 166
Kagoshima, Japan (via Tomogashima Suido), 379
Kagoshima, Japan (via Bungo Suido), 422
Kamaishi, Japan, 631
Kuang-chou, China (via Osumi Kaikyo), 1,455
Kushiro, Japan, 876
Lo-hsing-ta Mao-ti, China (via Osumi Kaikyo), 1,003
Los Angeles, California, U.S.A., 5,185
Lu-shun, China, 881
Manila, Philippines (via Balintang Channel), 1,563
Miike, Japan, 462
Nagasaki, Japan, 400
Nagoya, Japan, 245
Najin, Korea, 754
Nase, Japan, 483
Niihama, Japan, 113
Pago Pago, American Samoa, 4,308
Petropavlovsk, U.S.S.R., 1,705
Portland, Oregon, U.S.A., 4,590
Pusan, Korea, 361
Sakaidecho, Japan, 107
San Diego, California, U.S.A., 5,204
San Francisco, California, U.S.A., 4,819
Seattle, Washington, U.S.A. (south of Aleutian Islands), 4,559
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,527
Shang-hai, China (via Naikai), 789
Shang-hai, China (via Osumi Kaikyo), 826
Shan-tou, China (via Osumi Kaikyo), 1,222
Shimizu, Honshu, Japan, 279
Shimonoseki, Japan, 241
Sydney, Australia, 4,384
Ta-ku, China (via Naikai), 1,034
Ta-lien, China, 877
Tan-shui, China (via Osumi Kaikyo), 933
Uno, Japan, 71
Valparaiso, Chile, 9,534
Vancouver, Canada, 4,541
Vinh Cam Ranh, Vietnam, 2,013
Vladivostok, U.S.S.R. (via Naikai), 805
Wei-hai-wei, China (via Naikai), 806
Yen-tai, China, 840
Yokohama, Japan, 357

KOBENHAVN, DENMARK
(55°42'00'' N., 12°36'06'' E.) to:

Junction Points*
Kiel Canal (east end) (via Store Baelt), Germany, 202
Kiel Canal (east end) (via The Sound), Germany, 162
Skagens Odde, Denmark, 150

Ports
Aalborg, Denmark, 138
Aarhus, Denmark, 108
Abenra, Denmark, 204
Frederikshavn, Denmark, 142
Gdansk, Poland, 468
Gdynia, Poland, 464
Haderslev, Denmark, 175
Helsinki, Finland, 772
Kalundborg, Denmark, 115
Karlskrona, Sweden, 148
Leningrad, U.S.S.R., 917
Lubeck, Germany, 148
Oslo, Norway, 272
Peenemunde, Germany, 128
Riga, Latvia, 696
Rostock, Germany, 231
Sassnitz, Germany, 95
Stockholm, Sweden (via Store Baelt and Dalaro Kanal), 603
Stockholm, Sweden (via Store Baelt and Sandofjarden), 646
Stralsund, Germany, 81
Travemunde, Germany (via Store Baelt), 234
Travemunde, Germany (via The Sound), 139
Vejle, Denmark, 149
Wismar, Germany, 132

KOCHI, JAPAN
(33°32'06'' N., 133°33'30'' E.) to:

Ports
Hakodate, Japan (east of Honshu), 832
Hakodate, Japan (via Shimonoseki Kaikyo), 894
Nagasaki, Japan (via Osumi Kaikyo), 366
Yokohama, Japan, 372

KODIAK, ALASKA, U.S.A.
(57°47'00'' N., 152°25'00'' W.) to:

Junction Points*
Panama, Panama, 4,907
Singapore, 6,020

Ports
Apra, Guam, 3,928
Auckland, New Zealand, 5,942
Ching-tao, China, 3,975
Darwin, Australia, 5,859
Guayaquil, Ecuador, 5,212
Hai-kou, Hai-nan Tao, 4,866
Hong Kong, B.C.C., 4,616
Honolulu, Hawaii, U.S.A., 2,231
Juneau, Alaska, U.S.A., 610
Malakal, Palau Islands, 4,579
Manila, Philippines (north of Aleutian Islands), 4,823
Midway Island, 2,088
Naknek, Alaska, U.S.A., 881
Noumea, New Caledonia, 5,281
Pago Pago, American Samoa, 4,441
Palmyra Island, 3,162
Papeete, Society Islands, 4,532
Sai Gon, Vietnam, 5,484
San Diego, California, U.S.A., 2,121
San Francisco, California, U.S.A., 1,693
Seattle, Washington, U.S.A., 1,257
Shang-hai, China, 3,967
Surabaja, Indonesia, 6,086
Suva, Fiji Islands, 4,853
Sydney, Australia, 6,222
Truk, Caroline Islands, 4,008
Unalakleet, Alaska, U.S.A., 884
Valparaiso, Chile, 6,803
Vladivostok, U.S.S.R., 3,105
Wake Island, 2,961
Yokohama, Japan (north of Aleutian Islands), 3,141

*JUNCTION POINT.—See Preface for use of junction points.

KOGE, DENMARK
(55°27'15'' N., 12°12'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 153
Skagens Odde, Denmark, 161

Ports
Klaipeda, Lithuania, 350
Swinoujscie, Poland, 156

KOKURA, JAPAN
(33°55'00'' N., 130°52'00'' E.)

Eastbound from Kokura, add 7 miles to Moji distances.
Westbound from Kokura, subtract 7 miles from Moji distances.

KOLDING, DENMARK
(55°29'40'' N., 9°30'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 86
Skagens Odde, Denmark, 289

Ports
Goteborg, Sweden, 330
Liepaja, Latvia, 472
Swinoujscie, Poland, 253

KOMATSUSHIMA, JAPAN
(34°01'00'' N., 134°36'00'' E.) to:

Ports
Aomori, Japan, 813
Kagoshina, Japan, 344
Kure, Japan, 217
Osaka, Japan, 58
Yokohama, Japan, 320

KONAN, KOREA. See Hungnam.

KONIYA, RYUKYU ISLANDS
(28°08'30'' N., 129°18'45'' E.) to:

Ports
Honolulu, Hawaii, U.S.A., 3,948
Midway Island, 2,799
Port Moresby, Papua, 3,063
Saipan, Mariana Islands, 1,199
Wake Island, 2,107

KORSAKOV, SAKHALIN, U.S.S.R.
(46°37'30'' N., 142°45'30'' E.) to:

Ports
Bukhta Broutona, Kuril Islands, 431
Honto, U.S.S.R., 115
Hungnam, Korea, 794
Kasatka, Japan, 285
Matsugahama, Japan, 279
Shelekhovo, Kuril Islands, 618
Slavnoye, Kuril Islands, 276
Sovetskaya Gaven, U.S.S.R., 264
Tomari, Japan, 239

KORSOR, DENMARK
(55°20'07'' N., 11°07'48'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 73
Skagens Odde, Denmark, 162

Ports
Gdynia, Poland, 344
Stockholm, Sweden, 524
Swinoujscie, Poland, 239

KOTKA, FINLAND
(60°27'00'' N., 26° 59'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 694
Skagens Odde, Denmark, 755

Ports
Helsinki, Finland, 99
Riga, Latvia, 296
Stockholm, Sweden, 311
Vysotsk, U.S.S.R., 69

KOTONU, DAHOMEY. See Cotonou.

KOUNDA, U.S.S.R.
(66°42'00'' N., 32°52'00'' E.)

Add 76½ miles to Arkhangelsk distances.

KOYVISTO, U.S.S.R.
(60°21'30'' N., 28°36'00'' E.)

Via Ostrov Ruonti pilot station. Subtract 1 mile from Vysotsk distances.

KRAGERO, NORWAY
(58°51'40'' N., 9°23' 35'' E.) to:

Junction Points*
Pentland Firth, Scotland, 441

Ports
Bergen, Norway, 289
London, England, 582
Oslo, Norway, 95

KRALENDIJK, BONAIRE
(12°09'30'' N., 68°16'40'' W.) to:

Ports
Guantanamo, Cuba, 620

KRIBI, CAMEROON
(2°56'00'' N., 9°54'00'' E.) to:

Ports
Douala, Cameroon, 81
Port Gentil, Gabon, 231
Santa Isabel, Fernando Poo, 106
Takoradi, Ghana, 704

KRISTIANSAND, NORWAY
(58°08'30'' N., 7°59'40'' E.) to:

Junction Points*
Bishop Rock, England, 309
Pentland Firth, Scotland, 372
Skagens Odde, Denmark, 92
Ushant, France, 794

Ports
Aberdeen, Scotland, 338
Amsterdam, Netherlands, 381
Antwerpen, Belgium, 488
Bergen, Norway, 226
Bodo, Norway, 733
Bremerhaven, Germany, 292
Calais, France, 486
Cherbourg, France, 632
Dover, England, 488
Dunkerque, France, 475
Egersund, Norway, 86
Emden, Germany, 316
Esbjerg, Denmark, 206
Hamburg, Germany, 333
Hull, England, 407
Kristiansund, Norway, 447
Le Havre, France, 600
Leith, Scotland, 394
London, England, 514
Newcastle, England, 376
Oostende, Belgium, 453
Oslo, Norway, 163
Plymouth, England, 717
Portland, England, 643
Portsmouth, England, 593
Rotterdam, Netherlands, 413
Southampton, England, 611
Stavanger, Norway, 142
Trondheim, Norway, 436
Wilhelmshaven, Germany, 286

*JUNCTION POINT.—See Preface for use of junction points.

KRISTIANSUND, NORWAY
(63°06'40'' N., 7°45'00'' E.) to:

Ports
Bergen, Norway, 232
Kristiansand, Norway, 447
Oslo, Norway, 599
Stavanger, Norway (inner lead), 332

KRONSHTADT, U.S.S.R.
(59°59'00'' N., 29°45'00'' E.)

Subtract 17 miles from Leningrad distances.

KRUNG THEP, THAILAND
(13°43'00'' N., 100°31'00'' E.) to:

Junction Points*
Singapore, 842
Sunda Strait, Indonesia, 1,292

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 3,639
Chinnampo, Korea, 2,652
Inchon, Korea, 2,591
Los Angeles, California, U.S.A. (via Balintang Channel), 7,775
Manila, Philippines, 1,435
Mokpo, Korea, 2,438
Petropavlovsk, U.S.S.R., 4,252
Pusan, Korea, 2,533
Sihanoukville, Cambodia, 300
Vinh Cam Ranh, Vietnam, 817
Vladivostok, U.S.S.R., 3,035
Wonsan, Korea, 2,885

KUANG-CHOU, CHINA
(23°07'00'' N., 113°16'00'' E.) to:

Junction Points*
Panama, Panama, 9,201
Singapore, 1,518
Torres Strait, Australia, 2,803

Ports
Apra, Guam, 1,905
Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 1,043
Darwin, Australia, 2,438
Djakarta, Indonesia, 1,842
Dutch Harbor, Alaska, U.S.A., 4,117
Hakodate, Japan, 1,893
Hong Kong, B.C.C., 83
Honolulu, Hawaii, U.S.A., 4,940
Hsia-men, China, 373
Iloilo, Philippines (via Verde Island Passage and Jintotolo Channel), 1,013
Iloilo, Philippines (via Mindoro Strait), 978
Inchon, Korea, 1,277
Kobe, Japan (via Osumi Kaikyo), 1,455
Lo-hsing-ta Mao-ti, China, 542
Lu-shun, China, 1,348
Manila, Philippines, 714
Nagasaki, Japan, 1,152
Nikolayevsk, U.S.S.R., 2,486
Noumea, New Caledonia, 4,208
Pago Pago, American Samoa, 5,038
Papeete, Society Islands, 6,227
Petropavlovsk, U.S.S.R. (via Proliv Chelvertyy Kurilskiy and La Perouse Strait), 2,941
Rabaul, New Britain, 2,856
Shang-hai, China (via Hsiao-pan Men), 923
Shan-tou, China, 266
Shimonoseki, Japan, 1,262
Surabaja, Indonesia, 1,977
Suva, Fiji Islands, 4,596
Ta-ku, China, 1,501
Tan-shui, Taiwna, 528
Vladivostock, U.S.S.R., 1,728
Wei-hai-wei, China, 1,273
Yen-tai, China, 1,307
Yokohama, Japan, 1,668

KUCHING, SARAWAK
(1°33'35'' N., 110°20'35'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 974
Singapore, 443

Ports
Djakarta, Indonesia, 627
Iloilo, Philippines, 948
Olongapo, Philippines, 992
Zamboanga, Philippines, 863

KUNDLA, INDIA. See Kandla.

KUNSAN, JAPAN
(35°59'18'' N., 126°43'00'' E.) to:

Ports
Pusan, Korea, 376
Sasebo, Japan, 343
Shang-hai, China, 457
Ta-lien, China, 94
Yosu, Korea, 245

KURE, JAPAN
(34°14'00'' N., 132°32'00'' E.) to:

Ports
Apra, Guam, 1,460
Hirohata, Japan, 126
Imabari, Japan, 63
Itozaki, Japan, 73
Kagoshima, Japan, 296
Komatsushima, Japan, 217
Niihama, Japan, 76½
Sakaidecho, Japan, 107
Shimizu, Shikoku, Japan, 141
Shimonoseki, Japan, 116
Tokuyama, Japan, 76
Uno, Japan, 117
Wakamatsu, Japan, 125
Yokohama, Japan, 515

KUSAIE ISLAND, CAROLINE ISLANDS. See Lele.

KUSHIRO, JAPAN
(42°58'00'' N., 144°21'30'' E.) to:

Ports
Hakodate, Japan, 210
Kobe, Japan, 876
Pusan, Korea, 876
Vladivostok, U.S.S.R., 624
Yokohama, Japan, 594

KUSIRO, JAPAN. See Kushiro.

KUWAIT. See Al Kuwayt.

KWAJALEIN, MARSHALL ISLANDS
(9°23'00'' N., 167°28'30'' E.) to:

Ports
Apra, Guam, 1,332
Eniwetok, Marshall Islands, 359
Honolulu, Hawaii, U.S.A., 2,125
San Diego, California, U.S.A., 4,394
San Francisco, California, U.S.A., 4,124

KYNDBYVAERKETS, DENMARK
(55°48'36'' N., 11°52'48'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 164
Skagens Odde, Denmark, 136

Ports
Gdynia, Poland, 334
Stockholm, Sweden, 493
Swinoujscie, Poland, 195

*JUNCTION POINT.—See Preface for use of junction points.

KYOMIPO, KOREA
(38°44'00'' N., 125°37'00'' E.)

Add 16 miles to Chinnampo distances.

KYRENIA, CYPRUS
(35°20'45'' N., 33°19'00'' E.) to:

Junction Points*
Port Said, U.A.R., 297
Strait of Gibraltar, 1,910

Ports
Haifa, Israel, 246
Iraklion, Crete, 406
Izmir, Turkey, 524

LA CEIBA, HONDURAS
(15°46'30'' N., 86°50'00'' W.) to:

Junction Points*
Panama, Panama, 709

Ports
Colon, Panama, 666
New York, New York, U.S.A., 1,743
Puerto Cabezas, Nicaragua, 316

LA CORUNA, SPAIN
(43°22'00'' N., 8°24'00'' W.) to:

Junction Points*
Ushant, France, 331

Ports
Horta, Azores, 967
New York, New York, U.S.A., 2,917
San Juan, Puerto Rico, 3,255
Santander, Spain, 224

LA GUAIRA, VENEZUELA
(10°37'00'' N., 66°56'30'' W.) to:

Junction Points*
Bishop Rock, England, 3,777
Montreal, Canada, 2,941
Panama, Panama, 884
Strait of Gibraltar, 3,634
Straits of Florida (via Windward Passage), 1,331
Yucatan Channel, 1,242

Ports
Alvaro Obregon, Mexico, 1,781
Amuay, Venezuela, 276
Baltimore, Maryland, U.S.A., 1,813
Barranquilla, Colombia, 531
Belize, British Honduras, 1,328
Boston, Massachusetts, U.S.A., 1,955
Campeche, Mexico, 1,635
Carmen, Mexico, 1,714
Cartagena, Colombia, 614
Castries, St. Lucia, 405
Charleston, South Carolina, U.S.A., 1,549
Charlotte Amalie, Virgin Islands, 479
Cienfuegos, Cuba, 1,050
Colon, Panama, 841
Dakar, Senegal, 2,911
Guantanamo, Cuba, 737
Guiria, Venezuela, 339
Gulfport, Mississippi, U.S.A. (via Old Bahama Channel and Windward Passage), 1,806
Gulfport, Mississippi, U.S.A. (via Yucatan Channel), 1,801
Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,292
Halifax, Canada, 2,060
Hamilton, Bermuda, 1,335
Key West, Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 1,280
Kingston, Jamaica, 732
New York, New York, U.S.A. (via Mona Passage), 1,848
Norfolk, Virginia, U.S.A., 1,687
Oranjestad, Aruba, 207
Paramaribo, Surinam, 832
Pedernales, Venezuela, 359
Philadelphia, Pennsylvania, U.S.A., 1,838
Pointe a Pitre, Guadeloupe, 467
Port au Prince, Haiti, 801
Port of Spain, Trinidad (south of Isla de Margarita), 329
Puerto Colombia, Colombia, 539
Puerto Cortes, Honduras, 1,294
Puerto Cumarebo, Venezuela, 168
Puerto la Cruz, Venezuela, 145
Puerto Sucre, Venezuela, 205
St. Georges, Grenada, 322
St. John, Canada, 2,086
San Felix, Venezuela, 673
San Fernando, Trinidad, 340
San Juan, Puerto Rico, 506
San Juan del Norte, Nicaragua, 1,026
Santo Domingo, Dominican Republic, 502
Savannah, Georgia, U.S.A. (via Mona Passage), 1,575
Sint Nicolaas, Aruba, 207
Sydney, Canada, 2,215
Tuxpan, Mexico, 1,923
Veracruz, Mexico, 1,888
Willemstad, Curacao, 150

LA ISABELA, CUBA. See Isabela.

LA LIBERTAD, ECUADOR
(2°11'45'' S., 80°55'00'' W.) to:

Junction Points*
Panama, Panama, 674
Punta Arenas, Chile, 3,258

Ports
Buenaventura, Colombia, 445
Callao, Peru, 682

LA LIBERTAD, EL SALVADOR
(13°28'30'' N., 89°19'15'' W.) to:

Junction Points*
Panama, Panama, 806

Ports
Corinto, Nicaragua, 141
Puntarenas, Costa Rica, 383
Salina Cruz, Mexico, 391
San Juan del Sur, Nicaragua, 239

LA LIBERTAD, MEXICO
(29°54'00'' N., 112°45'00'' W.) to:

Junction Points*
Panama, Panama, 2,534

Ports
Acajutla, El Salvador, 1,739
Acapulco, Mexico, 1,122
Champerico, Guatemala, 1,606
Corinto, Nicaragua, 1,902
Guaymas, Mexico, 182
La Union, El Salvador, 1,875
Los Angeles, California, U.S.A., 1,315
Mazatlan, Mexico, 548
Puntarenas, Costa Rica, 2,120
Salina Cruz, Mexico, 1,424
San Blas, Mexico, 660
San Diego, California, U.S.A., 1,246
San Francisco, California, U.S.A., 1,648
San Jose, Guatemala, 1,684
San Juan del Sur, Nicaragua, 2,000

LA LUZ, CANARY ISLANDS. See Las Palmas de Gran Canaria

LA PALLICE, FRANCE
(46°09'36'' N., 1°13'21'' W.) to:

Junction Points*
Strait of Gibraltar, 950
Ushant, France, 245

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Bilboa, Spain, 214
Bordeaux, France, 111
St. Nazaire, France, 108
Santander, Spain, 201

LA PALMA, PANAMA
(8°25'00'' N., 78°08'00'' W.) to:

Junction Points*
Panama, Panama, 104

Ports
Acapulco, Mexico, 1,466
Callao, Peru, 1,336

LA PLATA, ARGENTINA
(34°47'00'' S., 57°51'15'' W.)

Subtract 28 miles from Buenos Aires distances.

LA ROCHELLE, FRANCE
(46°09'00'' N., 1°09'00'' W.)

Add 2 miles to La Pallice distances.

LA ROMANA, DOMINICAN REPUBLIC
(18°24'00'' N., 68°57'00'' W.) to:

Junction Points*
Panama, Panama, 889

Ports
Barranquilla, Colombia, 569
Kingston, Jamaica, 470
San Juan, Puerto Rico, 191
Willemstad, Curacao, 391

LA SALINA, VENEZUELA
(10°22'00'' N., 71°28'00'' W.)

Add 21 miles to Maracaibo distances.

LA SPEZIA, ITALY
(44°05'33'' N., 9°49'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,391
Strait of Gibraltar, 891

Ports
Alexandria, U.A.R., 1,280
Alger, Algeria, 540
Alicante, Spain, 588
Ancona, Italy, 979
Annaba, Algeria, 463
Banghazi, Libya, 876
Barcelona, Spain, 383
Bari, Italy, 775
Bayrut, Lebanon, 1,473
Bizerte, Tunisia, 414
Brindisi, Italy, 717
Cagliari, Sardinia, 336
Cartagena, Spain, 640
Castellamare di Stabia, Italy, 308
Ceuta, Morocco, 872
Gibraltar, 873
Haifa, Israel, 1,469
Iraklion, Crete, 956
Istanbul, Turkey (via Corinth Canal), 1,214
Istanbul, Turkey (south of Greece), 1,256
Izmir, Turkey (via Corinth Canal), 1,060
Izmir, Turkey (south of Greece), 1,101
Malaga, Spain, 821
Marseille, France, 231
Messina, Sicily, 450
Napoli, Italy, 302
Odessa, U.S.S.R. (via Corinth Canal), 1,562
Odessa U.S.S.R. (south of Greece), 1,604
Oran, Algeria, 701
Palermo, Sicily, 395
Palma, Balearic Islands, 474
Piraievs, Greece(via Corinth Canal), 860
Piraievs, Greece (south of Greece), 942
Rijeka, Yugoslavia, 1,049
Sibenik, Yugoslavia, 923
Siracusa, Sicily, 521
Split, Yugoslavia, 908
Tarabulus, Libya, 790
Taranto, Italy, 669
Thessaloniki, Greece (via Corinth Canal), 1,109
Thessaloniki, Greece (south of Greece), 1,150
Toulon, France, 199
Trieste, Free Territory, 1,083
Tunis, Tunisia, 448
Valencia, Spain, 538
Valletta, Malta, 554
Venezia, Italy, 1,093
Volos, Greece (via Corinth Canal), 1,050
Volos, Greece (south of Greece), 1,091

LA UNION, EL SALVADOR
(13°20'00'' N., 87°49'00'' W.) to:

Junction Points*
Panama, Panama, 748

Ports
Corinto, Nicaragua, 73
Golfito, Costa Rica, 432
La Libertad, Mexico, 1,875
San Francisco, California, U.S.A., 2,586

LAE, NEW GUINEA
(6°44'30'' S., 147°01'00'' E.) to:

Ports
Apra, Guam, 1,315
Brisbane, Australia, 1,560
Noumea, New Caledonia, 1,519
Port Moresby, Papua, 2,635
Rabaul, New Britain, 448
Wellington, New Zealand, 2,635

LAGOS, NIGERIA
(6°27'00'' N., 3°23'00'' E.) to:

Junction Points*
Strait of Gibraltar, 3,100
Straits of Florida, 5,225
Ushant, France, 3,746

Ports
Accra, Ghana, 229
Baltimore, Maryland, U.S.A., 5,063
Benguela, Angola, 1,289
Boma, Republic of the Congo, 977
Boston, Massachusetts, U.S.A., 4,774
Calabar, Nigeria, 391
Charleston, South Carolina, U.S.A., 5,065
Clarence Bay, Ascension Island, 1,375
Colon, Panama, 5,050
Douala, Cameroon, 442
Grand-Bassam, Ivory Coast, 556
Longji, Cameroon, 463
Marshall, Liberia, 894
Mocamedes, Angola, 1,399
Natal, Brazil, 2,425
New York, New York, U.S.A., 4,883
Norfolk, Virginia, U.S.A., 4,941
Philadelphia, Pennsylvania, U.S.A., 4,985
Pointe Noire, Gabon, 851
Port Harcourt, Nigeria, 318
Port of Spain, Trinidad, 3,950
Porto Grande, Cape Verde Islands, 1,991
Santa Isabel, Fernando Poo, 384
Sao Tome, Sao Tome, Gulf of Guinea, 422
Sassandra, Ivory Coast, 577
Sekondi, Ghana, 317
Tema, Ghana, 216
Victoria, Cameroon, 410
Willemstad, Curacao, 4,359

*JUNCTION POINT.—See Preface for use of junction points.

LAKE CHARLES, LOUISIANA, U.S.A.
(30°13'30'' N., 93°14'00'' W.) to:

Junction Points*
Straits of Florida, 677
Yucatan Channel, 689

Ports
Habana, Cuba, 750
Kingston, Jamaica, 1,190
Veracruz, Mexico, 688

LANDSKRONA, SWEDEN
(55°52'08'' N., 12°49'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 167
Skagens Odde, Denmark, 137

Ports
Oslo, Norway, 261
Stockholm, Sweden, 424
Szczecin, Poland, 170

LARACHE, MOROCCO
(35°10'54'' N., 6°08'54'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,049
Ushant, France, 926

Ports
Dakar, Senegal, 1,425
Tangier, Morocco, 48

LARNACA, CYPRUS
(34°54'44'' N., 33°38'23'' E.) to:

Junction Points*
Port Said, U.A.R., 231
Strait of Gibraltar, 1,953

Ports
Al Ladhiqiyah, Syria, 114
Bayrut, Lebanon, 112
Constanta, Rumania, 962
Istanbul, Turkey, 766
Izmir, Turkey, 570
Jaffa, Israel, 181
Mersin, Turkey, 149
Nice, France, 1,457
Patrai, Greece (via Corinth Canal), 658
Patrai, Greece (via south of Greece), 750
Piraievs, Greece, 566
Pula, Yugoslavia (via Corinth Canal), 1,212
Pula, Yugoslavia (via south of Greece), 1,245
Rostov-na-Donu, U.S.S.R., 1,402
Sete, France, 1,579
Sfax, Tunisia, 1,163
Tarabulus, Libya, 1,050
Thessaloniki, Greece, 703

LARNAKA, CYPRUS. See Larnaca.

LARVIK, NORWAY
(59°03'00'' N., 10°01'35'' E.) to:

Junction Points*
Pentland Firth, Scotland, 461

Ports
Bergen, Norway, 317
London, England, 604
Oslo, Norway, 72

LAS CALDERAS, DOMINICAN REPUBLIC. See Caldera Bay.

LAS PALMAS DE GRAN CANARIA, CANARY ISLANDS
(28°08'30'' N., 15°25'00'' W.) to:

Junction Points*
Bishop Rock, England, 1,360
Strait of Gibraltar, 681
Straits of Florida, 3,713

Ports
Baltimore, Maryland, U.S.A., 3,251
Brunswick, Georgia, U.S.A., 3,442
Charleston, South Carolina, U.S.A., 3,341
Charlotte Amalie, Virgin Islands, 2,791
Freetown, Sierra Leone, 1,317
Funchal, Madeira Island, 282
Horta, Azores, 914
Jacksonville, Florida, U.S.A., 3,467
Lisboa, Portugal, 712
New York, New York, U.S.A., 2,965
Norfolk, Virginia, U.S.A., 3,130
Ponta Delgada, Azores, 774
Plymouth, England, 1,432
Recife, Brazil, 2,453
Savannah, Georgia, U.S.A., 3,409

LAS PIEDRAS, VENEZUELA
(11°42'15'' N., 70°13'15'' W.) to :

Ports
Boston, Massachusetts, U.S.A., 1,907
Maracaibo, Venezuela, 126
New York, New York, U.S.A., 1,796
Philadelphia, Pennsylvania, U.S.A., 1,786

LAUNCESTON, TASMANIA
(41°27'00'' S., 147°07'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,577
Torres Strait, Australia, 2,278

Ports
Melbourne, Australia, 246
Sydney, Australia, 514
Wellington, New Zealand, 1,326

LAUTHALA HARBOR, FIJI ISLANDS
(18°10'00'' S., 178°28'00'' E.)

Use Suva distances.

LAUTOKA HARBOR, FIJI ISLANDS
(17°36'09'' S., 177°26'16'' E.) to:

Junction Points*
Torres Strait, Australia, 2,204
Wilson Promontory, Australia, 2,070

Ports
Apra, Guam, 2,899
Sydney, Australia, 1,732
Wellington, New Zealand, 1,554

LE HAVRE, FRANCE
(49°29'00'' N., 0°06'00'' E.) to:

Junction Points*
Bishop Rock, England, 263
Kiel Canal (east end), Germany, 522
Skagens Odde, Denmark, 554
Ushant, France, 243

Ports
Aberdeen, Scotland, 522
Amsterdam, Netherlands, 273
Antwerpen, Belgium, 244
Belfast, Ireland, 542
Bergen, Norway, 702
Bremerhaven, Germany, 453
Dartmouth, England, 151
Dundee, Scotland, 505
Dunkerque, France, 144
Egersund, Norway, 589

*JUNCTION POINT.—See Preface for use of junction points.

Emden, Germany, 396
Esbjerg, Denmark, 482
Granville, France, 173
Hamburg, Germany, 511
Hartlepool, England, 386
Hull, England, 326
Kristiansand, Norway, 600
Leith, Scotland, 503
Liverpool, England, 510
London, England, 205
Narvik, Norway, 1,304
Newcastle, England, 411
Oostende, Belgium, 168
Oslo, Norway, 752
Plymouth, England, 177
Rotterdam, Netherlands, 250
St. Malo, France, 156
Shoreham By Sea, England, 90
Stavanger, Norway, 629
Wilhelmshaven, Germany, 440
Zeebrugge, Belgium, 186

LE VERDON, FRANCE. See Le Verdon-sur-Mer.

LE VERDON-SUR-MER, FRANCE
(45°33'00'' N., 1°02'30'' W.)

Subtract 50 miles from Bordeaux distances.

LEGASPI, PHILIPPINES. See Port Legaspi.

LEGHORN, ITALY. See Livorno.

LEITH, SCOTLAND
(55°59'00'' N., 3°10'30'' W.) to:

Junction Points*
Bishop Rock, England, 708
Skagens Odde, Denmark, 472
Ushant, France, 696

Ports
Amsterdam, Netherlands, 372
Antwerpen, Belgium, 453
Bergen, Norway, 386
Blyth, England, 96
Bremerhaven, Germany, 442
Dunkerque, France, 399
Egersund, Norway, 336
Emden, Germany, 403
Esbjerg, Denmark, 403
Hamburg, Germany, 486
Hull, England, 237
Kristiansand, Norway, 394
Le Havre, France, 503
London, England, 417
Middlesbrough, England, 133
Oostende, Belgium, 396
Oslo, Norway, 546
Plymouth, England, 619
Portland, England, 545
Portsmouth, England, 495
Rotterdam, Netherlands, 381
Seaham Harbor, England, 117
Southampton, England, 513
Stavanger, Norway, 346
Wilhelmshaven, Germany, 435
Zeebrugge, Belgium, 392

LEIXOES, PORTUGAL. See Porto de Leixoes.

LELE, CAROLINE ISLANDS
(5°20'00'' N., 163°01'25'' E.) to:

Junction Points*
Panama, Panama, 7,059

Ports
Apia, Samoa, 1,895
Apra, Guam, 1,206
Brisbane, Australia, 2,097
Honolulu, Hawaii, U.S.A., 2,467
Midway Island, 1,773
Noumea, New Caledonia, 1,722
Omura, Bonin Islands, 1,772
Pago Pago, American Samoa, 1,969
San Francisco, California, U.S.A., 4,478
Sydney, Australia, 2,503

LENINGRAD, U.S.S.R.
(59°55'00'' N., 30°15'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 779
Skagens Odde, Denmark (via The Sound), 841
Skagens Odde, Denmark (via Store Baelt), 971

Ports
Hango, Finland, 233
Helsinki, Finland, 172
Karlskrona, Sweden, 563
Kobenhavn, Denmark, 917
Musko Island, Sweden, 401
Oslo, Norway (via Store Baelt), 1,095
Oslo, Norway (via The Sound), 963
Pitea, Sweden, 687
Stockholm, Sweden, 386
Sundsvall, Sweden, 507
Tallinn, Estonia, 189
Umea, Sweden, 574
Ventspils, Latvia, 374

LES CAYES, HAITI
(18°10'00'' N., 73°45'00'' W.) to:

Junction Points*
Panama, Panama, 688
Straits of Florida, 738

Ports
Baltimore, Maryland, U.S.A., 1,374
Boston, Massachusetts, U.S.A., 1,630
Colon, Panama, 645
New York, New York, U.S.A., 1,447
Philadelphia, Pennsylvania, U.S.A., 1,419
Port au Prince, Haiti, 202

LESNOY, U.S.S.R.
(66°40'42'' N., 34°22'00'' E.)

Add 49 miles to Arkhangelsk distances.

LEVUKA, FIJI ISLANDS
(17°40'30'' S., 178°51'15'' E.) to:

Junction Points*
Panama, Panama (via Ndaveta Namuka), 6,288
Punt Arenas, Chile, 5,342
Torres Strait, Australia (via Raine Island entrance), 2,268

Ports
Apia, Samoa, 600
Apra, Guam, 2,847
Auckland, New Zealand, 1,175
Avarua, Cook Islands, 1,268
Brisbane, Australia, 1,569
Callao, Peru, 6,002
Hakodate, Japan, 4,271
Hobart, Tasmania, 2,237
Hong Kong, B.C.C. (west side of Santa Cruz Island), 4,574
Honolulu, Hawaii, U.S.A., 2,730
Melbourne, Australia, 2,274
Midway Island, 2,833
Nagasaki, Japan (via Tanegashima Kaikyo), 4,260
Nonuti, Gilbert Islands, 1,162
Noumea, New Caledonia (via Havannah Passage and Woodin Passage), 776
Omura, Bonin Islands, 3,533
Pago Pago, American Samoa, 643
Papeete, Society Islands, 1,831
Petropavlovsk, U.S.S.R., 4,518
Ponape, Caroline Islands, 2,024

*JUNCTION POINT.—See Preface for use of junction points.

Rabaul, New Britain, 1,836
Rotoava, Tuamotu Archipelago, 2,060
San Francisco, California, U.S.A., 4,705
Seattle, Washington, U.S.A., 5,120
Selwyn Bay, Solomon Islands, 1,154
Shang-hai, China, 4,528
Sydney, Australia, 1,779
Valparaiso, Chile, 5,753
Yokohama, Japan, 4,015

LIBAU, LATVIA. See Liepaja.

LIBERTAD ANCHORAGE, MEXICO. See La Libertad.

LIBREVILLE, GABON
(0°22'00'' N., 9°25'00'' E.) to:

Ports
Dakar, Senegal, 1,982
Douala, Cameroon, 228
Pointe Noire, Gabon, 399

LICATA, SICILY, ITALY. See Porto di Licata.

LIEN-YUN, CHINA
(34°44'30'' N., 119°27'30'' E.) to:

Ports
Inchon, Korea, 389
Nagasaki, Japan, 558
Shang-hai, China, 414
Ta-lien, China, 348

LIEPAJA, LATVIA
(56°32'00'' N., 20°59'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 405
Skagens Odde, Denmark (via Store Baelt), 597
Skagens Odde, Denmark (via The Sound), 467

Ports
Kolding, Denmark, 472
Oslo, Norway (via Store Baelt), 721
Oslo, Norway (via The Sound), 589
Wismar, Germany, 379

LILLESAND, NORWAY
(58°14'50'' N., 8°23'00'' E.) to:

Junction Points*
Pentland Firth, Scotland, 390
Skagens Odde, Denmark, 80

Ports
Bergen, Norway, 241
London, England, 533
Oslo, Norway, 144

LIMASSOL, CYPRUS
(34°40'00'' N., 33°03'00'' E.) to:

Junction Points*
Port Said, U.A.R., 208
Strait of Gibraltar, 1,914

Ports
Alexandria, U.A.R., 272
Iraklion, Crete, 405
Izmir, Turkey, 530

LIMERICK, IRELAND
(52°39'40'' N., 8°38'15'' W.) to:

Junction Points*
Fastnet, Ireland, 157
Inishtrahull, Ireland, 279
Pentland Firth, Scotland, 538

Ports
Belfast, Ireland (north of Ireland), 376
Cobh, Ireland, 221

LIMHAMN, SWEDEN
(55°35'30'' N., 12°55'40'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 159
Skagens Odde, Denmark, 159

Ports
Oslo, Norway, 279
Stockholm, Sweden, 427
Swinoujscie, Poland, 128

LIMIN KHIOU, KHIOS, GREECE
(38°22'00'' N., 26°08'20'' E.) to:

Junction Points*
Port Said, U.A.R., 540
Strait of Gibraltar, 1,239

Ports
Iraklion, Crete, 193
Piraievs, Greece, 162
Volos, Greece, 193

LIMON, COSTA RICA
(9°59'30'' N., 83°01'00'' W.) to:

Junction Points*
Panama, Panama, 234
Yucatan Channel, 732

Ports
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,974
Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 2,230
Brunswick, Georgia, U.S.A., 1,611
Cartagena, Colombia, 447
Castries, St. Lucia, 1,316
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,637
Colon, Panama, 190
Galveston, Texas, U.S.A. 1,394
Georgetown, British Guiana, 1,647
Habana, Cuba, 1,170
Halifax, Canada, 2,368
Hamilton, Bermuda (via Windward Passage), 1,715
Jacksonville, Florida, U.S.A., 1,589
Kingston, Jamaica, 605
Mobile, Alabama, U.S.A. (via inside route), 1,292
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2,047
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,852
Pensacola, Florida, U.S.A., 1,256
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,019
Port of Spain, Trinidad, 1,313
Puerto Cortes, Honduras, 623
San Juan, Puerto Rico (via Mona Passage), 1,119
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,636
Veracruz, Mexico, 1,338
Wilmington, North Carolina, U.S.A., 1,680

LINDI, TANGANYIKA
(9°59'54'' S., 39°44'03'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,155

Ports
Beira, Mozambique, 832

*JUNCTION POINT.—See Preface for use of junction points.

Dar es Salaam, Tanganyika, 218
Mocambique, Mozambique, 356

LINGKAS, BORNEO, INDONESIA. See Tarakan.

LINKAS, BORNEO, INDONESIA. See Tarakan.

LISBOA, PORTUGAL

(38°42′00″ N., 9°08′00″ W.) to:

Junction Points*
Bishop Rock, England, 710
Cape of Good Hope, Republic of South Africa, 5,152
Inishtrahull, Ireland, 1,093
Montreal, Canada (via tracks C and D), 3,032
Montreal, Canada (via track E), 2,945
Montreal, Canada (via track F), 2,940
Pentland Firth, Scotland, 1,341
Punta Arenas, Chile, 6,398
Strait of Gibraltar, 286
Straits of Florida, 3,823
Ushant, France, 666

Ports
Argentia, Canada (track F), 2,081
Bathurst, Gambia, 1,632
Belem, Brazil, 3,251
Bordeaux, France, 733
Boston, Massachusetts, U.S.A. (track A), 2,838
Boston, Massachusetts, U.S.A. (track B), 2,817
Boston, Massachusetts, U.S.A. (track C), 2,793
Buenos Aires, Argentina, 5,339
Cadiz, Spain, 253
Cape Town, Republic of South Africa, 5,134
Casablanca, Morocco, 324
Castries, St. Lucia, 3,111
Charleston, South Carolina, U.S.A. (track B), 3,390
Charlotte Amalie, Virgin Islands, 3,147
Colon, Panama (via Mona Passage), 4,152
Dakar, Senegal, 1,544
El Ferrol del Caudillo, Spain, 356
Freetown, Sierra Leone, 2,023
Funchal, Madeira Island, 532
Georgetown, British Guiana, 3,264
Guantanamo, Cuba, 3,570
Halifax, Canada (track A), 2,526
Halifax, Canada (track B), 2,500
Halifax, Canada (tracks C and D), 2,475
Halifax, Canada (track E), 2,433
Halifax, Canada (track F), 2,437
Horta, Azores, 917
Huelva, Spain, 235
Jacksonville, Florida, U.S.A. (track A), 3,541
Key West, Florida, U.S.A., 3,765
Kingston, Jamaica, 3,725
Las Palmas de Gran Canaria, Canary Islands, 712
Marin, Spain, 255
Monrovia, Liberia, 2,225
New York, New York, U.S.A. (track A), 2,988
New York, New York, U.S.A. (track B), 2,978
New York, New York, U.S.A. (track C), 2,964
Norfolk, Virginia, U.S.A. (track A), 3,147
Norfolk, Virginia, U.S.A. (track B), 3,140
Norfolk, Virginia, U.S.A. (track C), 3,137
Philadelphia, Pennsylvania, U.S.A. (track A), 3,141
Philadelphia, Pennsylvania, U.S.A. (track B), 3,131
Philadelphia, Pennsylvania, U.S.A. (track C), 3,117
Ponta Delgada, Azores, 783
Port of Spain, Trinidad, 3,287
Porto, Portugal, 176
Porto de Leixoes, Portugal, 180
Porto Grande, Cape Verde Islands, 1,555
Praia, Azores, 850
Recife, Brazil, 3,156
Rio de Janeiro, Brazil, 4,219
San Juan, Puerto Rico, 3,185
Santa Cruz de Tenerife, Canary Islands, 714
Viana do Castello, Portugal, 210
Vigo, Spain, 247
Villa do Porto, Azores, 771
Villagarcia, Spain, 264

LISBON, PORTUGAL. See Lisboa.

LITTLE CREEK, VIRGINIA, U.S.A. (36°56′00″ N., 76°10′40″ W.)

Subtract 13½ miles from Norfolk distances.

LIVERPOOL, ENGLAND (53°27′00″ N., 3°01′00″ W.) to:

Junction Points*
Bishop Rock, England, 297
Fastnet, Ireland, 295
Inishtrahull, Ireland (north of Isle of Man), 210
Pentland Firth, Scotland (via The Minch), 451
Pentland Firth, Scotland (south of Isle of Man), 460

Ports
Antwerpen, Belgium, 698
Ardrossan, Scotland, 180
Arkhangelsk, U.S.S.R., 2,075
Avonmouth, England, 282
Brest, France, 410
Cardiff, Wales, 267
Cherbourg, France, 442
Cobh, Ireland, 246
Douglas, Isle of Man, 68
Falmouth, England, 313
Holyhead, Wales, 72
Kingston, Jamaica, 1,744
LeHavre, France, 510
London, England, 659
Londonderry, Ireland, 215
Milford Haven, Wales, 197
Murmansk, U.S.S.R., 1,703
Newport, Wales, 284
Port Talbot, Wales, 244
Southhampton, England, 479
Swansea, Wales, 236
Waterford, Ireland, 189

LIVERPOOL, CANADA (44°02′30″ N., 64°42′00″ W.) to:

Ports
Boston, Massachusetts, U.S.A., 317
Colon, Panama, 2,244
Kingston, Jamaica, 1,744
New York, New York, U.S.A., 536
Norfolk, Virginia, U.S.A., 724
Philadelphia, Pennsylvania, U.S.A., 686
St. John, Canada, 212
San Juan, Puerto Rico, 1,540
Sydney, Canada, 293

LIVINGSTON, GUATEMALA (15°50′30″ N., 88°43′00″ W.) to:

Junction Points*
Panama, Panama, 815

Ports
Mobile, Alabama, U.S.A., 942
New York, New York, U.S.A. (via Straits of Florida), 1,796
Norfolk, Virginia, U.S.A. 1,595

*JUNCTION POINT.—See Preface for use of junction points.

LIVORNO, ITALY
(43°33′06″ N., 10°17′45″ E.) to:

Junction Points*
Port Said, U.A.R., 1,355
Strait of Gibraltar, 887

Ports
Alexandria, U.A.R., 1,244
Alger, Algeria, 528
Alicante, Spain, 585
Ancona, Italy, 946
Anaba, Algeria, 431
Banghazi, Lyba, 841
Barcelona, Spain, 386
Bari, Italy, 739
Bayrut, Lebanon, 1,437
Beaulieu, France, 130
Bizerte, Tunisia, 382
Brindisi, Italy, 681
Cagliari, Sardinia, 304
Cannes, France, 149
Cartagena, Spain, 636
Catania, Sicily, 464
Ceuta, Morocco, 868
Civitavecchia, Italy, 120
Gaeta, Italy, 228
Gibraltar, 869
Haifa, Israel, 1,433
Iraklion, Crete, 920
Istanbul, Turkey (via Corinth Canal), 1,178
Istanbul, Turkey (south of Greece), 1,220
Izmir, Turkey (via Corinth Canal), 1,024
Izmir, Turkey (south of Greece), 1,066
Malaga, Spain, 817
Marseille, France, 236
Messina, Sicily, 414
Napoli, Italy, 267
Nice, France, 134
Odessa, U.S.S.R. (via Corinth Canal), 1,527
Odessa, U.S.S.R. (south of Greece), 1,568
Oran, Algeria, 691
Palermo, Sicily, 359
Palma, Balearic Islands, 470
Piraievs, Greece (via Corinth Canal), 825
Piraievs, Greece (south of Greece), 906
Rijeka, Yugoslavia, 1,013
Sete, France, 298
Sibenik, Yugoslavia, 887
Siracusa, Sicily, 486
Split, Yugoslavia, 872
Tarabulus, Libya, 754
Taranto, Italy, 634
Terracina, Italy, 212
Thessaloniki, Greece (via Corinth Canal), 1,073
Thessaloniki, Greece (south of Greece), 1,114
Toulon, France, 204
Trieste, Free Territory, 1,047
Tunis, Tunisia, 417
Valencia, Spain, 539
Valletta, Malta, 519
Venezia, Italy, 1,057
Villefranche, France, 133
Volos, Greece (via Corinth Canal), 1,014
Volos, Greece (south of Greece), 1,056

LOANDA, ANGOLA. See Luanda.

LOBITO, ANGOLA
(12°20′00″ S., 13°34′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,440
Ushant, France, 4,670

Ports
Accra, Ghana, 1,356
Luanda, Angola, 237
Pointe Noire, Gabon, 473

LOCH EWE, SCOTLAND
(57°47′30″ N., 5°38′00″ W.) to:

Junction Points*
Pentland Firth, Scotland, 119

Ports
Belfast, Ireland, 228
Glasgow, Scotland, 303

LO-HSING-TA MAO-TI, CHINA
(25°59′00″ N., 119°26′30″ E.) to:

Junction Points*
Singapore, 1,817

Ports
Aleksandrovsk, U.S.S.R., 1,868
Apra, Guam, 1,617
Cebu, Philippines (via Balintang Channel), 1,051
Ching-tao, China (via Steep Island Passage), 715
Chin-huang-tao, China, 977
Chinnampo, Korea, 879
Hakodate, Japan, 1,429
Hong Kong, B.C.C., 459
Honolulu, Hawaii, U.S.A., 4,487
Hsia-men, China, 200
Iloilo, Philippines (via Balintang Channel), 1,073
Inchon, Korea, 818
Kobe, Japan, 1,003
Kuang-chou, China, 542
Lu-shun, China, 876
Manila, Philippines, 787
Mokpo, Korea, 665
Nagasaki, Japan, 691
Petropavlovsk, U.S.S.R., 2,481
Pusan, Korea, 762
Shang-hai, China, 440
Shan-tou, China, 309
Shimonoseki, Japan, 799
Ta-ku, China (via Steep Island Passage), 1,029
Ta-lien, China, 871
Tan-shui, Taiwan, 127
Vladivostok, U.S.S.R., 1,264
Wei-hai-wei, China (via Steep Island Passage), 801
Wonsan, Korea, 1,068
Yen-tai, China, 835
Yokohama, Japan, 1,217

LOMBOK STRAIT, INDONESIA*
(8°50′00″ S., 115°43′00″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,571
Cape of Good Hope, Republic of South Africa, 5,461
Singapore, 963
Sunda Strait, Indonesia (north of Java), 677

Ports
Ambon, Indonesia, 819
Balikpapan, Borneo, 472
Ban Sattahip, Thailand, 1,620
Bandjermasin, Borneo, 357
Belawan, Indonesia, 1,342
Bunbury, Australia, 1,510
Calcutta, India, 2,614
Calicut, India, 2,916
Cebu, Philippines, 1,278
Chinnampo, Korea, 2,946
Cocanada, India, 2,567
Darwin, Australia (south of Pulau Roti), 926
Djakarta, Indonesia, 615
Flying Fish Cove, Christmas Island, Indian Ocean, 603
Fremantle, Australia, 1,440
Geraldton, Australia, 1,242
Hong Kong, B.C.C. (via Linapacan Strait), 2,029
Iloilo, Philippines, 1,247
Inchon, Korea, 2,885
Kuching, Sarawak, 974
Madras, India, 2,559
Makasar, Celebes, 339
Malacca, Malaysia, 1,091

*JUNCTION POINT.—See Preface for use of junction points.

Manila, Philippines (via Mindoro Strait, Cuyo West Pass, Sibutu Passage, and Makassar Strait), 1,514
Mokpo, Korea, 2,725
Port Kembla, Australia, 3,388
Port Legaspi, Philippines, 1,667
Port Refuge, Cocos Islands, 1,132
Sabang, Indonesia, 1,575
Sai Gon, Vietnam, 1,408
Semarang, Indonesia, 416
Shang-hai, China (via Pai-chieh Hsia, Steep Island Passage, east of Taiwan, Mindoro Strait, and Sibutu Passage), 2,577
Sukarnopura, Indonesia, 1,702
Surabaja, Indonesia (heavy draft, north of Madura), 275
Surabaja, Indonesia (light draft, south of Madura), 232
Tarakan, Borneo, 830
Tjilatjap, Indonesia, 413
Tjirebon, Indonesia, 503
Whyalla, Australia, 2,782
Zamboanga, Philippines, 1,047

LOME, TOGO
(6°07'00'' N., 1°13'30'' E.) to:

Ports
Monrovia, Liberia, 789
Pointe Noire, Gabon, 910
Santa Isabel, Fernando Poo, 480
Takoradi, Ghana, 200

LOMONOSOV, U.S.S.R.
(59°55'45'' N., 29°46'45'' E.)

Subtract 13½ miles from Leningrad distances.

LONDON, ENGLAND
(51°30'00'' N., 0°01'00'' E.) to:

Junction Points*
Bishop Rock, England, 413
Kiel Canal (east end), Germany, 439
Pentland Firth, Scotland, 536
Skagens Odde, Denmark, 554
Ushant, France, 397

Ports
Aberdeen, Scotland, 429
Alesund, Norway, 733
Amsterdam, Netherlands, 208
Antwerpen, Belgium, 193
Arendal, Norway, 551
Arkhangelsk, U.S.S.R., 2,061
Barrow in Furness, England, 665
Bergen, Norway, 613
Blyth, England, 318
Bremerhaven, Germany, 375
Cardiff, Wales, 526
Dartmouth, England, 292
Dundee, Scotland, 420
Dunkerque, France, 112
Egersund, Norway, 501
Emden, Germany, 318
Esbjerg, Denmark, 403
Falmouth, England, 351
Farsund, Norway, 497
Fishguard, Wales, 523
Flekkefjord, Norway, 479
Grimstad, Norway, 542
Hakonsvern, Norway, 616
Hamburg, Germany, 425
Hirtshals, Denmark, 541
Holyhead, Wales, 594
Hull, England, 240
Kragero, Norway, 582
Kristiansand, Norway, 514
Larvik, Norway, 604
Le Havre, France, 205
Leith, Scotland, 417
Lillesand, Norway, 533
Liverpool, England, 659
Mandal, Norway, 503
Methil, Scotland, 407
Middlesbrough, England, 293
Narvik, Norway, 1,215
Newcastle, England, 325
Oostende, Belgium, 123
Oslo, Norway, 650
Plymouth, England, 321
Portland, England, 247
Portsmouth, England, 197
Risor, Norway, 572
Rotterdam, Netherlands, 184
Sandefjord, Norway, 610
Seaham Harbor, England, 308
Shoreham By Sea, England, 161
Skien, Norway, 609
Sogndal, Norway, 641
Southampton, England, 215
Stavanger, Norway, 539
Stockholm, Sweden, 1,251
Sunderland, England, 312
Tonsberg, Norway, 624
Tvedestrand, Norway, 565
Wilhelmshaven, Germany, 362
Zeebrugge, Belgium, 131

LONDONDERRY, NORTHERN IRELAND
(55°00'00'' N., 7°19'00'' W.) to:

Junction Points*
Bishop Rock, England, 396
Fastnet, Ireland (west of Ireland), 371
Pentland Firth, Scotland, 310

Ports
Avonmouth, England, 384
Belfast, Ireland (via Rathlin Sound), 102
Cardiff, Wales, 369
Cobh, Ireland, 340
Dublin, Ireland, 189
Glasgow, Scotland, 145
Liverpool, England, 215

LONG BEACH, CALIFORNIA, U.S.A.
(33°46'12'' N., 118°13'18'' W.)

Use Los Angeles distances.

LONGJI, CAMEROON
(3°05'00'' N., 9°57'20'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,359
Ushant, France, 4,179

Ports
Lagos, Nigeria, 463
Matadi, Republic of the Congo, 731

LONGYEARBYEN, SVALBARD
(78°14'30'' N., 15°34'00'' E.) to:

Ports
Arkhangelsk, U.S.S.R., 1,051
Bergen, Norway, 1,124
Dikson Harbor, U.S.S.R., 1,148
Inverness, Scotland, 1,340
Kirkenes, Norway, 637
Murmansk, U.S.S.R., 695
Narvik, Norway, 659
Oslo, Norway, 1,482
Pechenga, U.S.S.R., 638
Reykjavik, Iceland (north of Iceland), 1,160
Reykjavik, Iceland (south of Iceland), 1,310
Tromso, Norway, 556
Trondheim, Norway, 943
Vardo, Norway, 586

LORIENT, FRANCE
(47°43'45'' N., 3°21'51'' W.) to:

Junction Points*
Bishop Rock, England, 202
Ushant, France, 107

Ports
Bilbao, Spain, 274

*JUNCTION POINT.—See Preface for use of junction points.

LOS ANGELES, CALIFORNIA, U.S.A.
(33°45′00″ N., 118°16′15″ W.) to:

Junction Points*
Panama, Panama, 2,913
Punta Arenas, Chile, 5,871
Singapore (via San Bernardino Strait), 7,867
Sunda Strait, Indonesia (via Makassar Strait), 7,976
Wilson Promontory, Australia, 6,879

Ports
Acapulco, Mexico, 1,501
Aleksandrovsk, U.S.S.R., 4,687
Antofagasta, Chile, 4,430
Apia, Samoa, 4,181
Archipielago de Colon, 2,634
Arica, Chile, 4,219
Auckland, New Zealand, 5,658
Avarua, Cook Islands, 4,064
Brisbane, Australia, 6,274
Butaritari, Gilbert Islands, 4,272
Callao, Peru, 3,655
Chinnampo, Korea, 5,711
Corinto, Nicaragua, 2,281
Dutch Harbor, Alaska, U.S.A., 2,382
Ensenada, Mexico, 151
Guayaquil, Ecuador, 3,218
Guaymas, Mexico, 1,158
Hakodate, Japan, 4,576
Hong Kong, B.C.C., 6,380
Honolulu, Hawaii, U.S.A., 2,228
Kobe, Japan, 5,185
Krung Thep, Thailand (via Balintang Channel), 7,775
La Libertad, Mexico, 1,315
Manila, Philippines (via San Bernardino Strait), 6,588
Manila, Philippines (north of Luzon), 6,530
Manzanilla, Mexico, 1,205
Mazatlan, Mexico, 1,011
Melbourne, Australia, 7,032
Mollendo, Peru, 4,094
Nagasaki, Japan, 5,572
Newcastle, Australia, 6,456
Nome, Alaska, U.S.A., 2,968
Noumea, New Caledonia, 5,521
Nukualofa, Tonga Islands, 4,633
Ocean Island, 4,553
Pago Pago, American Samoa, 4,163
Palmyra Island, 2,959
Papeete, Society Islands, 3,571
Pearl Harbor, Hawaii, U.S.A., 2,233
Petropavlovsk, U.S.S.R., 3,615
Prince Rupert, Canada, 1,432
Puerto Armuelles, Panama, 2,645
Puntarenas, Costa Rica, 2,499
Pusan, Korea, 5,229
Sai Gon, Vietnam (via San Bernardino Strait), 7,403
Salina Cruz, Mexico, 1,803
San Jose, Guatemala, 2,054
Santa Rosalia, Mexico, 1,192
Seward, Alaska, U.S.A., 2,045
Shang-hai, China, 5,810
Sitka, Alaska, U.S.A., 1,640
Surabaja, Indonesia (via Makassar Strait), 7,622
Suva, Fiji Islands, 4,788
Sydney, Australia, 6,511
Taio Hae, Marquesas, 2,858
Valparaiso, Chile, 4,808
Victoria, Canada, 1,091
Vladivostok, U.S.S.R., 4,981
Wellington, New Zealand, 5,857
Wonsan, Korea, 5,181
Yokohama, Japan, 4,839

LOTA, CHILE
(37°05′40″ S., 73°09′40″ W.) to:

Junction Points*
Panama, Panama, 2,825
Punta Arenas, Chile, 1,191

Ports
Acapulco, Mexico, 3,573
Antofagasta, Chile, 828
Arica, Chile, 1,134
Caldera, Chile, 628
Callao, Peru, 1,530
Coquimbo, Chile, 455
Corinto, Nicaragua, 3,081
Corral, Chile, 195
Esmeraldas, Ecuador, 2,388
Guayaquil, Ecuador, 2,155
Guaymas, Mexico, 4,442
Iquique, Chile, 1,033
Mollendo, Peru, 1,209
Monterey, California, U.S.A., 5,202
Pisco, Peru, 1,432
Puntarenas, Costa Rica, 2,899
Salina Cruz, Mexico, 3,430
San Blas, Mexico, 3,990
San Diego, California, U.S.A., 4,881
San Francisco, California, U.S.A., 5,282
San Jose, Guatemala, 3,220
Santa Barbara, California, U.S.A., 5,018
Talcahuano, Chile, 50
Valparaiso, Chile, 268

LOURENCO MARQUES, MOZAMBIQUE
(25°58′30″ S., 32°34′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,057
Port Said, U.A.R., 4,348
Singapore, 4,769

Ports
Aden, Aden Protectorate, 2,973
Antsirana, Malagasy Republic, 1,313
Beira, Mozambique, 476
Belawan, Indonesia, 4,436
Darwin, Australia, 5,539
Durban, Republic of South Africa, 307
Fremantle, Australia, 4,283
Inhambane, Mozambique, 253
Majunga, Malagasy Republic, 1,034
Malacca, Malaysia, 4,654
Mombasa, Kenya, 1,508
Penang, Malaysia, 4,481
Port Louis, Mauritius, 1,448
Sabang, Indonesia, 4,170
St. Denis, Reunion Island, 1,325
Tamatave, Malagasy Republic, 1,242
Zanzibar, Zanzibar, 1,388

LUANDA, ANGOLA
(8°47′00″ S., 13°15′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,627

Ports
Boma, Republic of the Congo, 190
Cape Town, Republic of South Africa, 1,601
Clarence Bay, Ascension Island, 1,657
Lobito, Angola, 237
New York, New York, U.S.A., 5,670
Pointe Noire, Gabon, 266
Port Harcourt, Nigeria, 941
Porto Grande, Cape Verde Islands, 2,778

LUBECK, GERMANY
(53°52′44″ N., 10°41′27″ E.) to:

Junction Points*
Kiel Canal (east end), Germany
Skagens Odde, Denmark, 263

Ports
Aalborg, Denmark (via Store Baelt), 248
Abenra, Denmark, 131
Assens, Denmark, 127
Faborg, Denmark, 102
Flensburg, Germany, 131
Fredericia, Denmark, 155
Frederikshavn, Denmark, 155
Gdynia, Poland, 328
Grena, Denmark, 169
Haderslev, Denmark, 137

*JUNCTION POINT.—See Preface for use of junction points.

Hobro, Denmark, 235
Kobenhavn, Denmark, 148
Middlefart, Denmark, 149
Naestved, Denmark, 136
Stockholm, Sweden, 491
Vejle, Denmark, 173

LUCINDA, AUSTRALIA
(18°31'15'' S., 146°20'00'' E.) to:

Junction Points*
Torres Strait, Australia, 634
Wilson Promontory, Australia, 1,621

Ports
Brisbane, Australia, 804
Wellington, New Zealand, 2,102

LUDERITZ BAY, SOUTHWEST AFRICA
(26°38'00'' S., 15°08'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 511

Ports
Baltimore, Maryland, U.S.A., 6,538
Belem, Brazil, 4,076
Boston, Massachusetts, U.S.A., 6,302
Cape Town, Republic of South Africa, 479
New York, New York, U.S.A., 6,393
Philadelphia, Pennsylvania, U.S.A., 6,477
Walvisbaai, Southwest Africa, 240

LULEA, SWEDEN
(65°34'30'' N., 22°10'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 875
Skagens Odde, Denmark (via Store Baelt), 1,067
Skagens Odde, Denmark (via The Sound), 941

Ports
Oslo, Norway (via Store Baelt), 1,195
Oslo, Norway (via The Sound), 1,063

LU-SHUN, CHINA
(38°48'00'' N., 121°15'00'' E.) to:

Junction Points*
Singapore, 2,623

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 1,654
Apra, Guam (via Tokara Kaikyo), 1,976
Cebu, Philippines (via San Bernardino Strait), 1,754
Ching-tao, China, 280
Chin-huang-tao, China, 113
Chinnampo, Korea, 201
Djakarta, Indonesia, 2,935
Hakodate, Japan, 1,244
Hong Kong, B.C.C., 1,265
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,524
Hsia-men, China, 1,006
Iloilo, Philippines, 1,776
Inchon, Korea, 302
Kobe, Japan, 881
Kuang-chou, China, 1,348
Lo-hsing-ta Mao-ti, China (via Steep Island Passage), 876
Manila, Philippines (east of Taiwan and Boca Chica), 1,573
Manila, Philippines (via Formosa Strait), 1,583
Mokpo, Korea, 383
Nagasaki, Japan, 601
Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilskiy, La Perouse Strait and Maenggol Sudo), 2,267
Petropavlovsk, U.S.S.R. (via Osumi Kaikyo), 2,588
Pusan, Korea (via Maenggol Sudo), 549
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,477
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,700
Shang-hai, China (via South Channel), 558
San-tou, China, 1,115
Shimonoseki, Japan, 637
Ta-ku, China, 175
Tan-shui, Taiwan, 859
Vladivostok, U.S.S.R., 1,050
Wonsan, Korea, 854
Yokohama, Japan, 1,181

LYTTELTON, NEW ZEALAND
(43°36'25'' S., 172°43'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,792
Torres Strait, Australia, 2,849

Ports
Melbourne, Australia, 1,518
Port Augusta, Australia, 2,082
Sydney, Australia, 1,419
Wellington, New Zealand, 174

MAASSLUIS, NETHERLANDS
(51°55'45'' N., 4°15'12'' E.)

Subtract 8½ miles from Rotterdam distances.

MACAO, CHINA. See Macau.

MACAU, CHINA
(22°10'40'' N., 113°34'50'' E.) to:

Ports
Chi-lung Chiang, Taiwan, 516
Kagoshima, Japan, 1,114
Kao-hsiung Chiang, Taiwan, 329
Manila, Philippines, 654
Shang-hai, China, 903

MACEIO, BRAZIL
(9°41'00'' S., 35°44'00'' W.) to:

Junction Points*
Punta Arenas, Chile, 3,138

Ports
Belem, Brazil, 1,211
Rio de Janeiro, Brazil, 972
Salvador, Brazil, 285

MACKAY, AUSTRALIA
(21°09'15'' S., 149°14'00'' E.) to:

Junction Points*
Torres Strait, Australia, 864

Ports
Brisbane, Australia, 512
Noumea, New Caledonia, 1,253
Port Moresby, Papua, 1,168
Rabaul, New Britain, 1,871

MACKENZIE, BRITISH GUIANA
(6°00'00'' N., 58°17'00'' W.)

Add 66 miles to Georgetown distances.

MADEIRA. See Funchal.

MADRAS, INDIA
(13°06'00'' N., 80°18'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,480
Cape of Good Hope, Republic of South Africa (November–March, east of Madagascar and west of Reunion Island), 4,844

*JUNCTION POINT.—See Preface for use of junction points.

Cape of Good Hope, Republic of South Africa (May–September, east of Madagascar and Reunion Island), 4,852
Cape of Good Hope, Republic of South Africa (April and October, west of Madagascar), 4,947
Lombok Strait, Indonesia, 2,559
Port Said, U.A.R. (October–April, south of Socotra), 4,048
Port Said, U.A.R. (May–September, south of Socotra), 4,169
Port Said, U.A.R. (alternate, May–September, north of Socotra), 4,161
Port Said, U.A.R. (low power, May–September, south of Socotra), 4,229
Singapore, 1,583

Ports
Aden, Aden Protectorate (October–April, south of Socotra), 2,661
Aden, Aden Protectorate (May–September, south of Socotra), 2,782
Aden, Aden Protectorate (alternate, May–September, north of Socotra), 2,771
Aden, Aden Protectorate (low power, May–September, south of Socotra), 2,842
Belawan, Indonesia, 1,252
Bombay India, 1,482
Calcutta, India, 769
Cocanada, India, 276
Colombo, Ceylon, 611
Darwin, Australia, 3,483
Fremantle, Australia, 3,389
Johore Bahru, Malaysia, 1,586
Karachi, Pakistan, 1,908
Malacca, Malaysia, 1,470
Moulmein, Burma, 1,043
Penang, Malaysia, 1,285
Port Blair, Andaman Islands, 758
Port Swettenham, Malaysia, 1,384
Rangoon, Burma, 1,003
Sabang, Indonesia, 994
Visakhapatnam, India, 332

MAGADAN, U.S.S.R. See Nagayevo.

MAGALLANES, CHILE. See Punta Arenas.

MAGDALENA BAY, MEXICO. See Bahia Magdalena.

MAHE, SEYCHELLES. See Victoria.

MAHON, BALEARIC ISLANDS (39°53′20″ N., 4°16′00″ E.) to:

Junction Points*
Port Said, U.A.R., 1,484
Strait of Gibraltar, 552

Ports
Alger, Algeria, 200
Barcelona, Spain, 144
Marseille, France, 219

MAIZURU, JAPAN (35°31′00″ N., 135°20′00″ E.) to:

Ports
Akita, Japan, 352
Changjon, Korea, 411
Chongjin, Korea, 463
De-Kastri, U.S.S.R., 1,006
Hakodate, Japan, 460
Kimchaek, Korea, 431
Nanao, Japan, 213
Niigata, Japan, 256
Pohang, Korea, 313
Pusan, Korea, 333
Sakata, Japan, 314
Shang-hai, China, 800
Shimonoseki, Japan, 302
Sosura, Korea, 469
Ulsan, Korea, 315
Unggi, Korea, 474
Vladivostok, U.S.S.R., 485
Wakamatsu, Japan, 299

MAJUNGA, MALAGASY REPUBLIC (15°44′00″ S., 46°18′00″ E.) to:

Junction Points*
Port Said, U.A.R., 3,471
Singapore, 3,845

Ports
Beira, Mozambique, 732
Belawan, Indonesia, 3,512
Darwin, Australia, 5,069
Fremantle, Australia, 4,132
Lourenco Marques, Mozambique, 1,034
Malacca, Malaysia, 3,710
Penang, Malaysia, 3,557
Sabang, Indonesia, 3,246
Tulear, Malagasy Republic, 625

MAKASAR, CELEBES (5°08′00″ S., 119°24′00″ E.) to:

Junction Points*
Lombok Strait, Indonesia, 339
Panama, Panama (via Selat Salajar and Selat Sagewin), 9,855
Singapore (via Selat Riouw), 1,070
Sunda Strait, Indonesia, 861
Wetar Passage, Indonesia, 614

Ports
Ban Sattahip, Thailand, 1,753
Bandjermasin, Borneo, 399
Belawan, Indonesia, 1,439
Davao, Philippines, 929
Manila, Philippines (via Mindoro Strait and Sibutu Passage), 1,232
Mokpo, Korea, 2,483
Seletar, Malaysia, 1,071
Semarang, Indonesia, 596
Sihanoukville, Cambodia, 1,584
Sorido, Indonesia, 1,180
Sorong, New Guinea, 872
Tandjung Uban, Indonesia, 1,075
Tjirebon, Indonesia, 156
Tso-ying, Taiwan, 1,757

MAKASSAR, CELEBES. See Makasar.

MALACCA, MALAYSIA (2°10′00″ N., 102°14′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,464
Lombok Strait, Indonesia, 1,091
Port Said, U.A.R., 4,906
Singapore, 117
Sunda Strait, Indonesia, 619
Torres Strait, Australia, 2,588

Ports
Aden, Aden Protectorate, 3,517
Al Bahrayn, Bahrain, 3,534
Al Basra, Iraq, 3,771
Al Kuwayt, Kuwait, 3,718
Albany, Australia, 2,602
Antsirana, Malagasy Republic 3,439
Beira, Mozambique, 4,405
Belawan, Indonesia, 253
Berbera, Somali Republic, 3,531
Bombay, India, 2,327
Bushehr, Iran, 3,590
Calcutta, India, 1,523
Calicut, India, 1,827
Cocanada, India, 1,478
Colombo, Ceylon, 1,458
Dar es Salaam, Tanganyika, 3,927
Diego Garcia, Chagos Archipelago, 2,078
Djakarta, Indonesia, 613
Durban, Republic of South Africa, 4,757
East London, Republic of South Africa, 4,967

*JUNCTION POINT.—See Preface for use of junction points.

Fort Dauphin, Malagasy Republic, 3,860
Karachi, Pakistan, 2,768
Lourence Marques, Mozambique, 4,654
Madras, India, 1,470
Majunga, Malagasy Republic, 3,730
Masqat, Mascat and Oman, 3,017
Moçambique, Mozambique, 3,965
Mombasa, Kenya, 3,872
Mosselbaai, Republic of South Africa, 5,269
Penang, Malaysia, 252
Port Elizabeth, Republic of South Africa, 5,094
Port Louis, Mauritius, 3,215
Rangoon, Burma, 986
Sabang, Indonesia, 486
Saint Denis, Reunion Island, 3,330
Surabaja, Indonesia, 881
Tamatave, Malagasy Republic, 3,560
Victoria, Seychelles, 2,952
Zanzibar, Zanzibar, 3,945

MALAGA, SPAIN
(36°42'44'' N., 4°25'00'' W.) to:

Junction Points*
Port Said, U.A.R., 1,873
Strait of Gibraltar, 78

Ports
Alexandria, U.A.R., 1,752
Alger, Algeria, 368
Alicante, Spain, 248
Ancona, Italy, 1,510
Annaba, Algeria, 607
Banghazi, Libya, 1,286
Barcelona, Spain, 464
Bari, Italy, 1,303
Bayrut, Lebanon, 1,964
Bizerte, Tunisia, 699
Brindisi, Italy, 1,245
Cartagena, Spain, 189
Catania, Sicily, 1,012
Derince, Turkey (via Corinth Canal), 1,768
Derince, Turkey (south of Greece), 1,785
Genova, Italy, 798
Ghazaouet, Algeria, 158
Haifa, Israel, 1,961
Iraklion, Crete, 1,446
Istanbul, Turkey (via Corinth Canal), 1,735
Istanbul, Turkey (south of Greece), 1,752
Izmir, Turkey (via Corinth Canal), 1,580
Izmir, Turkey (south of Greece), 1,597
La Spezia, Italy, 821
Livorno, Italy, 817
Marseille, France, 641
Melilla, Morocco, 116
Mers el Kebir, Algeria, 194
Messina, Sicily, 979
Napoli, Italy, 932
Odessa, U.S.S.R. (via Corinth Canal), 2,083
Odessa, U.S.S.R. (south of Greece), 2,100
Oran, Algeria, 195
Palermo, Sicily, 870
Palma, Balearic Islands, 401
Piraievs, Greece (via Corinth Canal), 1,381
Piraievs, Greece (south of Greece), 1,438
Rijeka, Yugoslavia, 1,578
Savona, Italy, 783
Sibenik, Yugoslavia, 1,452
Siracusa, Sicily, 985
Split, Yugoslavia, 1,436
Tarabulus, Libya, 1,024
Taranto, Italy, 1,198
Tarragona, Spain, 431
Thessaloniki, Greece (via Corinth Canal), 1,629
Thessaloniki, Greece (south of Greece), 1,646
Toulon, France, 652
Trieste, Free Territory, 1,611
Valencia, Spain, 334
Valletta, Malta, 928
Venezia, Italy, 1,621
Villa Sanjurjo, Morocco, 93
Volos, Greece (via Corinth Canal) 1,570
Volos, Greece (south of Greece), 1,587

MALAKAL, PALAU ISLANDS
(7°20'00'' N., 134°26'30'' E.) to:

Junction Points*
Panama, Panama, 8,674
Singapore (via Basilan Strait), 2,006

Ports
Apia, Samoa, 3,446
Apra, Guam, 706
Brisbane, Australia, 2,642
Honolulu, Hawaii, U.S.A., 3,997
Kodiak, Alaska, U.S.A., 4,579
Manila, Philippines (via Verde Island Passage and San Bernardino Strait), 1,044
Noumea, New Caledonia, 2,612
Ponape, Caroline Islands, 1,418
Sai Gon, Vietnam, 1,801
Surabaja, Indonesia, 1,656
Suva, Fiji Islands, 3,041
Yokohama, Japan, 1,731

MALDONADO, URUGUAY
(34°56'00'' S., 55°00'00'' W.) to:

Junction Points*
Panama, Panama, 5,352
Punta Arenas, Chile, 1,321

Ports
Santos, Brazil, 1,172
Stanley, Falkland Islands, 1,023

MALMO, SWEDEN
(55°37'00'' N., 13°00'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany (via Store Baelt), 205
Skagens Odde, Denmark, 155

Ports
Oslo, Norway, 278
Stockholm, Sweden (via Drogen Channel), 435
Stockholm, Sweden (via Flint Channel), 422

MALTA. See Valletta, Malta.

MALTEPE, TURKEY
(40°54'00'' N., 29°08'00'' E.)

Add 5 miles to Istanbul distances for ports outside of the Black Sea and Sea of Marmara.

MANAKARA, MALAGASY REPUBLIC
(22°08'20'' S., 48°01'19'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,779
Port Said, U.A.R., 3,842

Ports
Beira, Mozambique, 974
Mocambique, Mozambique, 1,197
Tulear, Malagasy Republic, 467

MANAMA, BAHRAIN. See Al Bahrayn.

*JUNCTION POINT.—See Preface for use of junction points.

MANAUS, BRAZIL
(3°08′00″ S., 60°01′00″ W.)

Add 920 miles to Belem distances.

MANCHESTER, ENGLAND
(53°29′00″ N., 2°14′00″ W.)

Add 39 miles to Liverpool distances.

MANDAL, NORWAY
(58°01′30″ N., 7°27′20″ E.) to:

Junction Points*
Pentland Firth, Scotland, 351
Skagens Odde, Denmark. 110

Ports
Bergen, Norway, 201
London, England, 503
Oslo, Norway, 177

MANFREDONIA, ITALY. See Porto Di Manfredonia.

MANILA, PHILIPPINES
(14°35′00″ N., 120°58′00″ E.) to:

Junction Points*
Lombok Strait, Indonesia (via Apo East Pass, Mindoro Strait, Sibutu Passage, and Makassar Strait), 1,514
Lombok Strait, Indonesia, (via Apo West Pass, Mindoro Strait, Sibutu Passage, and Makassar Strait), 1,474
Panama, Panama (north of Luzon), 9,347
Panama, Panama (via San Bernardino Strait), 9,370
Singapore (north of North Danger Reef), 1,330
Sunda Strait, Indonesia (via Palawan Passage and Selat Gaspar), 1,578
Torres Strait, Australia (via Verde Islands and Djailolo Passage), 2,168
Torres Strait, Australia (via Basilan and Mindoro Straits), 2,193
Torres Strait, Australia (via San Bernardino Strait), 2,239

Ports
Aleksandrovsk, U.S.S.R., 2,507
Ambon, Indonesia, 1,260
Apra, Guam (via San Bernardino Strait), 1,499
Apra, Guam (north of Luzon), 1,742
Balikpapan, Borneo (via Mindoro Strait, Sibutu Passage and Makassar Strait), 1,057
Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 391
Chimu Wan, Ryukyu Islands, 947
Ching-tao, China, 1,422
Chinnampo, Korea, 1,559
Da Nang, Vietnam, 758
Darwin, Australia (via Mindoro Strait, Basilan Strait, Selat Bangka, and Selat Minipa), 1,834
Davao, Philippines, 831
Djakarta, Indonesia (via Palawan Passage), 1,559
Dutch Harbor, Alaska, U.S.A. (north of Luzon), 4,233
Guayaquil, Ecuador, 9,615
Hai-kou, Hai-nan Tao, 720
Haiphong, Vietnam (south of Hai-nan Tao), 936
Hakodate, Japan, 2,066
Hong Kong, B.C.C., 631
Honolulu, Hawaii, U.S.A. (via San Bernardino Strait) 4,767
Honolulu, Hawaii, U.S.A. (north of Luzon), 4,869
Hsia-men, China, 662
Hua-lien Chiang, Taiwan, 648
Iloilo, Philippines (via Verde Island Passage and Jintotolo Channel), 361
Inchon, Korea, 1,498
Jolo, Philippines (via West Apo Channel), 550
Kiska, Alaska, U.S.A., 3,664
Kobe, Japan (via Balintang Channel), 1,563
Kodiak, Alaska, U.S.A., 4,823
Krung Thep, Thailand, 1,435
Kuang-chou, China, 714
Lo-hsing-ta Mao-ti, China, 787
Los Angeles, California, U.S.A. (via north of Luzon), 6,530
Los Angeles, California, U.S.A. (via San Bernardino Strait), 6,588
Lu-shun, China (east of Taiwan), 1,573
Lu-shun, China (via Formosa Strait), 1,583
Macau, China, 654
Makasar, Celebes (via Mindoro Strait and Sibutu Passage), 1,232
Malakal, Palau Islands (via Verde Island Passage and San Bernardino Strait), 1,044
Midway Island (north of Luzon), 3,752
Midway Island (via San Barnardino Strait), 3,685
Moji, Japan, 1,436
Mokpo, Korea, 1,338
Nagasaki, Japan, 1,298
Nakagusuku, Ryukyu Islands, 935
Nha Trang Bay, Vietnam, 706
Nome, Alaska, U.S.A., 4,379
Noumea, New Caledonia, 3,616
Pago Pago, American Samoa (via San Bernardino Strait), 4,519
Palmyra Island, 4,675
Papeete, Society Islands, 5,728
Peng-hu Chiang, Taiwan, 606
Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilsky and La Perouse Strait), 3,117
Port Legaspi, Philippines, 370
Portland, Oregon, U.S.A., 6,024
Prince Rupert, Canada (north of Luzon, and south of Aleutian Islands), 5,546
Prince Rupert, Canada (via alternate route, north of Aleutian Islands), 5,493
Pulupandan, Philippines, 363
Pusan, Korea, 1,402
Rabaul, New Britain, 2,281
Sai Gon, Vietnam, 907
San Diego, California, U.S.A., 6,604
San Fernando, Philippines, 207
San Francisco, California, U.S.A. (via Balintang Channel), 6,221
San Francisco, California (via San Barnardino Strait), 6,299
San-ya Chiang, China, 714
Sasebo, Japan, 1,349
Seattle, Washington, U.S.A. (north of Luzon), 5,959
Seattle, Washington, U.S.A. (via San Bernardino Strait), 6,077
Seletar, Malaysia, 1,333
Seward, Alaska, U.S.A. (north of Luzon and south of Aleutian Islands), 5,046
Shang-hai, China (via Formosa Strait), 1,166
Shang-hai, China (east of Taiwan), 1,156
Shan-tou, China, 623
Shimonoseki, Japan, 1,424
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,370
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,302
Su-ao Chiang, Taiwan, 684
Surabaja, Indonesia, 1,540
Suva, Fiji Islands, 4,048
Ta-ku, China (east of Taiwan), 1,722
Ta-ku, China (via Formosa Strait), 1,732
Ta-lien, China (east of Taiwan), 1,561
Ta-lien, China (via Formosa Strait), 1,571

*JUNCTION POINT.—See Preface for use of junction points.

Tandjung Uban, Indonesia, 1,328
Tan-shui, Taiwan, 742
Tarakan, Indonesia, 785
Teluk Kau, Halmahera, 1,049
Truk, Caroline Islands, 1,994
Tso-Ying, Taiwan, 552
Valparaiso, Chile (via San Bernardino Strait), 9,710
Vinh Cam Ranh, Vietnam, 710
Vladivostok, U.S.S.R., 1,912
Wake Island, Pacific, 2,772
Wei-hai-wei, China (east of Taiwan), 1,498
Wei-hai-wei, China (via Formosa Strait), 1,508
Wonsan, Korea, 1,708
Wotje Island, Marshall Islands, 3,027
Yap, Caroline Islands, 1,154
Yen-tai, China (east of Formosa), 1,532
Yokohama, Japan (via Balintang Channel), 1,758
Yu-lin Chiang, Hainan-tao, China, 713
Zamboanga, Philippines (via East Apo Channel), 532

MANZANILLO, CUBA
(20°21'00'' N., 77°09'00'' W.) to:

Junction Points*
Panama, Panama, 732
Yucatan Channel, 432

Ports
Charleston, South Carolina, U.S.A., 1,105
Cienfuegos, Cuba, 266
Colon, Panama, 689
Guantanamo, Cuba, 206
Hamilton, Bermuda, 1,187
Kingston, Jamaica, 283
Port au Prince, Haiti, 372
San Juan, Puerto Rico, 738
Santiago de Cuba, Cuba, 168
Santo Domingo, Dominican Republic, 558
Willemstad, Curacao, 746

MANZANILLO, MEXICO
(19°03'30'' N., 104°19'50'' W.) to:

Ports
Acapulco, Mexico, 295
Los Angeles, California, U.S.A., 1,205
Mazatlan, Mexico, 297
San Diego, California, U.S.A., 1,136
San Francisco, California, U.S.A., 1,538
San Jose, Guatemala, 840

MAOKA, SAKHALIN. See Kholmsk

MARACAIBO, VENEZUELA
(10°38'00'' N., 71°37'00'' W.) to:

Junction Points*
Montreal, Canada, 2,931
Panama, Panama, 737
Straits of Florida (via Windward Passage), 1,205
Yucatan Channel, 1,096

Ports
Baltimore, Maryland, U.S.A. (via Windward Passage), 1,804
Boston, Massachusetts, U.S.A., 2,001
Cartagena, Colombia, 465
Charleston, South Carolina, U.S.A., 1,467
Colon, Panama, 693
Galveston, Texas, U.S.A., 1,810
Habana, Cuba, 1,173
Las Piedras, Venezuela, 126
New Orleans, Louisiana, U.S.A. (via South Pass), 1,629
New York, New York, U.S.A., 1,890
Norfolk, Virginia, U.S.A., 1,682
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage), 1,849
Portland, Maine, U.S.A., 2,042
Puerto Padre, Cuba, 834
Santo Domingo, Dominican Republic, 496
Savannah, Georgia, U.S.A., 1,466
Willemstad, Curacao, 222

MAR DEL PLATA, ARGENTINA
(38°02'00'' S., 57°31'00'' W.) to:

Junction Points*
Panama, Panama, 5,543
Punta Arenas, Chile, 1,112

Ports
Buenos Aires, Argentina, 276
Santos, Brazil, 1,363

MARANHAO, BRAZIL. See Sao Luis.

MARCUS HOOK, PENNSYLVANIA, U.S.A.
(39°48'12'' N., 75°25'12'' W.)

Subtract 18 miles from Philadelphia distances.

MARE ISLAND, CALIFORNIA, U.S.A.
(38°36'00'' N., 122°16'00'' W.)

Add 22 miles to San Francisco distances.

MARGARITA, VENEZUELA. See Porlamar.

MARIEL, CUBA
(23°00'00'' N., 82°45'15'' W.) to:

Junction Points*
Straits of Florida, 86
Yucatan Channel, 164

Ports
Kingston, Jamaica, 716
Nuevitas, Cuba, 366
San Juan, Puerto Rico, 999
Swan Island, 437

MARIN, PONTE VEDRA BAY, SPAIN
(42°24'00'' N., 8°43'00'' W.) to:

Junction Points*
Strait of Gibraltar, 517
Ushant, France, 437

Ports
Bilboa, Spain, 387
Horta, Azores, 944
Lisboa, Portugal, 255

MARMAGAO, INDIA. See Mormugao.

MARSALA, SICILY, ITALY
(37°46'45'' N., 12°26'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,081
Strait of Gibraltar, 881

Ports
Napoli, Italy, 214
Tunis, Tunisia, 124
Valletta, Malta, 157

MARSAXLOKK, MALTA
(35°48'54'' W., 14°33'06'' E.) to:

Junction Points*
Port Said, U.A.R., 942
Strait of Gibraltar, 1,017

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Messina, Sicily, 164
Tarabulus, Libya, 191
Tunis, Tunisia, 246

MARSEILLE, FRANCE
(43°19'10'' N., 5°21'17'' E.) to:

Junction Points*
Port Said, U.A.R., 1,518
Strait of Gibraltar, 711

Ports
Ajaccio, Corsica, 188
Alcudia, Balearic Islands, 235
Alexandria, U.A.R., 1,407
Alger, Algeria, 410
Alicante, Spain, 406
Ancona, Italy, 1,109
Annaba, Algeria, 409
Banghazi, Libya, 1,004
Baniyas, Syria, 1,610
Barcelona, Spain, 189
Bari, Italy, 902
Batumi, U.S.S.R. (via Corinth Canal), 1,929
Batumi, U.S.S.R. (south of Greece), 1,970
Bayrut, Lebanon, 1,600
Bizerte, Tunisia, 428
Bonifacio, Corsica, 213
Brindisi, Italy, 844
Cagliari, Sardinia, 360
Cartagena, Spain, 460
Catania, Sicily, 627
Ceuta, Morocco, 692
Civitavecchi, Italy, 316
Famagusta, Cyprus, 1,558
Genova, Italy, 204
Gibraltar, 693
Golfo di Oristano, Sardinia, 264
Haifa, Israel, 1,596
Iraklion, Crete, 1,083
Istanbul, Turkey (via Corinth Canal), 1,342
Istanbul, Turkey (south of Greece), 1,383
Izmir, Turkey (via Corinth Canal), 1,187
Izmir, Turkey (south of Greece), 1,229
La Spezia, Italy, 231
Livorno, Italy, 236
Mahon, Balearic Islands, 219
Malaga, Spain, 641
Messina, Sicily, 577
Napoli, Italy, 456
Odessa, U.S.S.R. (via Corinth Canal), 1,690
Odessa, U.S.S.R. (south of Greece), 1,731
Oran, Algeria, 536
Palermo, Sicily, 495
Palma, Balearic Islands, 300
Piraievs, Greece (via Corinth Canal), 988
Piraievs, Greece (south of Greece), 1,069
Pollenza, Balearic Islands, 234
Port Vendres, France, 109
Porto Vecchio di Piombino, Italy, 247
Rijeka, Yugoslavia, 1,176
Savona, Italy, 189
Sayda, Lebanon, 1,596
Sibenik, Yugoslavia, 1,050
Siracusa, Sicily, 649
Skikda, Algeria, 398
Split, Yugoslavia, 1,035
Tarabulus, Lebanon, 1,613
Tarabulus, Libya, 745
Taranto, Italy, 797
Thessaloniki, Greece (via Corinth Canal), 1,236
Thessaloniki, Greece (south of Greece), 1,278
Trieste, Free Territory, 1,210
Tunis, Tunisia, 476
Valencia, Spain, 347
Valletta, Malta, 637
Venezia, Italy, 1,220
Viareggio, Italy, 238
Volos, Greece (via Corinth Canal), 1,177
Volos, Greece (south of Greece), 1,219

MARSHALL, LIBERIA
(6°07'00'' N., 10°24'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,927
Strait of Gibraltar, 2,197
Straits of Florida (via Providence channels), 4,349

Ports
Accra, Ghana, 671
Bathurst, Gambia, 681
Benguela, Angola, 1,811
Dakar, Senegal, 724
Freetown, Sierra Leone, 293
Lagos, Nigeria, 894
New York, New York, U.S.A., 3,991

MARTABAN, BURMA
(16°32'00'' N., 97°37'00'' E.)

Use Moulmein distances.

MARTINIQUE. See Fort de France.

MASAN, KOREA
(35°11'00'' N., 128°35'00'' E.) to:

Ports
Inchon, Korea, 403
Shimonoseki, Japan, 146
Ta-lien, China, 546
Tsuruga, Japan, 385
Vladivostok, U.S.S.R., 542

MASNEDSUND, DENMARK
(55°59'48'' N., 11°52'36'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 149
Skagens Odde, Denmark, 122

Ports
Gdynia, Poland, 330
Stockholm, Sweden, 531
Swinoujscie, Poland, 193

MASQAT, MASCAT AND OMAN
(23°37'30'' N., 58°36'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,443
Singapore, 3,153

Ports
Aden, Aden Protectorate, 1,211
Al Basrah, Iraq, 773
Belawan, Indonesia, 2,799
Bombay, India, 852
Calcutta, India, 2,830
Darwin, Australia, 4,873
Fremantle, Australia, 4,686
Karachi, Pakistan, 468
Malacca, Malaysia, 3,017
Penang, Malaysia, 2,844
Rangoon, Burma, 2,840

MASSAUA, ETHIOPIA
(15°36'45'' N., 39°28'30'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,345
Cape of Good Hope, Republic of South Africa, 4,341
Port Said, U.A.R., 1,041
Singapore (May–September), 4,035
Singapore (October–April), 4,018
Torres Strait, Australia (via Eight Degree Channel, May–September), 6,424
Torres Strait, Australia (via One and Half Degree Channel, October–April), 6,409

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Aden, Aden Protectorate, 400
Al Aqabah, Jordan, 897
Al Basrah, Iraq, 2,372
Bombay, India (October–April), 2,050
Bombay, India (May–September), 2,068
Calcutta, India (October–April), 3,695
Calcutta, India (May–September). 3,712
Colombo, Ceylon (October–April, via South of Socotra), 2,481
Colombo, Ceylon (May–September), 2,494
Darwin, Australia (via One and Half Degree Channel, October–April), 5,749
Darwin, Australia (via Eight Degree Channel, May–September), 5,764
Juddah, Saudi Arabia, 364
Karachi, Pakistan, 1,865
Mombasa, Kenya, 2,006
Port Sudan, Sudan, 306
Rangoon, Burma (October–April), 3,705
Rangoon, Burma (May–September), 3,723

MASSAWA, ETHIOPIA See Massaua.

MATADI, REPUBLIC OF THE CONGO
(5°49'00'' S., 13°27'00'' E.) to:

Ports
Bata, Spanish Guinea, 663
Calabar, Nigeria, 818
Longji, Cameroon, 731
Mayumba, Gabon, 282
Port Nolloth, Republic of South Africa, 1,559
Swakopmund, Republic of South Africa, 1,144
Victoria, Cameroon, 770

MATAGORDA BAY, TEXAS, U.S.A.
(28°20'00'' N., 96°23'00'' W.) to:

Junction Points*
Panama, Panama, 1,558
Straits of Florida, 754
Yucatan Channel, 729

Ports
Alvaro Obregon, Mexico, 621
Belize, British Honduras, 957
Tampico, Mexico, 380
Tuxpan, Mexico, 445
Veracruz, Mexico, 549

MATANZAS, CUBA
(23°03'30'' N., 81°33'30'' W.) to:

Junction Points*
Straits of Florida, 119
Yucatan Channel, 241

Ports
Antilla, Cuba, 407
Cienfuegos, Cuba, 526
Guantanamo, Cuba, 553
Hamilton, Bermuda, 1,131
Kingston, Jamaica, 717
New Orleans, Louisiana, U.S.A., 641
New York, New York, U.S.A., 1,167
Philadelphia, Pennsylvania, U.S.A., 1,147
Port au Prince, Haiti, 617
Puerto Padre, Cuba, 330
San Juan, Puerto Rico, 931
Santo Domingo, Dominican Republic, 901
Tampa, Florida, U.S.A. (via Northwest Channel), 325
Tampico, Mexico, 914

MATARANI, PERU
(16°59'36'' S., 72°07'12'' W.) to:

Junction Points*
Panama, Panama, 1,790
Punta Arenas, Chile, 2,380

Ports
Antofagasta, Chile, 423
Callao, Peru, 462

MATHEW TOWN, GREAT INAGUA ISLAND
(20°57'30'' N., 73°40'40'' W.) to:

Junction Point*
Fastnet, Ireland, 3,467

Ports
Belize, British Honduras, 902
New York, New York, U.S.A. (via Crooked Island Passage), 1,205

MATRUH, UNITED ARAB REPUBLIC
(31°22'30'' N., 27°14'30'' E.) to:

Junction Points*
Port Said, U.A.R., 281
Strait of Gibraltar, 1,695

Ports
Banghazi, Libya, 267
Haifa, Israel, 410
Iraklion, Crete, 308

MATSUGAHAMA, JAPAN
(43°44'00'' N., 146°42'30'' E.) to:

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 589
Aomori, Japan, 350
Attu Island, Alaska, U.S.A., 1,179
Dutch Harbor, Alaska, U.S.A., 1,917
Hakodate, Japan, 316
Kholmsk, Sakhalin, U.S.S.R., 361
Kiska, Alaska, U.S.A., 1,345
Korsakov, Sakhalin, U.S.S.R., 279
Muroran, Japan, 310
Nemuro, Japan, 61
Nikolayevsk, U.S.S.R., 741
Otaru, Japan, 435
Petropavlovsk, U.S.S.R., 765
Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 730
Wakkanai, Japan, 294
Zaliv, Chikhacheva, U.S.S.R., 625

MAURITIUS. See Port Louis

MAYPORT, FLORIDA, U.S.A.
(30°23'42'' N., 81°25'54'' W.)

Subtract 18 miles from Jacksonville distances.

MAYUMBA, GABON
(3°23'27'' S., 10°39'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,942
Ushant, France, 4,437

Ports
Douala, Cameroon, 513
Matadi, Republic of the Congo, 282

MAZAGAN, MOROCCO. See El Jadida.

MAZATLAN, MEXICO
(23°10'15'' N., 106°26'30'' W.) to:

Junction Points*
Panama, Panama, 2,006

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Acapulco, Mexico, 595
Amapala, Honduras, 1,350
Champerico, Guatemala, 1,078
Guaymas, Mexico, 388
La Libertad, Mexico, 548
Los Angeles, California, U.S.A., 1,011
Manzanillo, Mexico, 297
San Diego, California, U.S.A., 939
San Francisco, California, U.S.A., 1,337
San Jose, Guatemala, 1,149
Yokohama, Japan, 5,782

MELBOURNE, AUSTRALIA
(37°49'15'' S., 144°56'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,497
Panama, Panama (via Foveaux Strait), 7,928
Wilson Promontory, Australia, 154

Ports
Adelaide, Australia, 512
Albany, Australia, 1,363
Apia, Samoa, 2,834
Apra, Guam, 3,631
Auckland, New Zealand, 1,649
Avarua, Cook Islands, 3,090
Bluff Harbor, New Zealand, 1,211
Burnie Harbor, Australia, 223
Dunedin, New Zealand, 1,309
Dutch Harbor, Alaska, U.S.A., 6,321
Hobart, Tasmania, 472
Honolulu, Hawaii, U.S.A., 4,942
Jaluit, Marshall Islands, 3,181
Launceston, Tasmania, 246
Levuka, Fiji Islands, 2,274
Los Angeles, California, U.S.A., 7,032
Lyttelton, New Zealand, 1,518
Nandi Bay, Fiji Islands, 2,323
Noumea, New Caledonia, 1,595
Omura, Bonin Islands, 4,425
Pago Pago, American Samoa, 2,851
Papeete, Society Islands, 3,691
Penang, Malaysia, 4,181
Ponape, Caroline Islands, 3,078
Port Lincoln, Australia, 588
Port Pirie, Australia, 689
Portland, Australia, 206
Rabaul, New Britain, 2,408
Rapid Bay, Australia, 458
San Francisco, California, U.S.A., 6,970
Seattle, Washington, U.S.A., 7,332
Stenhouse Bay, Australia, 505
Strahan, Australia, 303
Whyalla, Australia, 665

MELILLA, MOROCCO
(35°17'30'' N., 2°56'00'' W.) to:

Junction Points*
Port Said, U.A.R., 1,821
Strait of Gibraltar, 153

Ports
Alicante, Spain, 224
Arzew, Algeria, 146
Ceuta, Morocco, 131
Malaga, Spain, 116
Mers el Kebir, Algeria, 154
Mostaganem, Algeria, 119
Oran, Algeria, 120
Villa Sanjurjo, Morocco, 64

MEMEL, LITHUANIA. See Klaipeda.

MENTON, FRANCE
(43°46'30'' N., 7°30'40'' E.) to:

Junction Points*
Port Said, U.A.R., 1,449
Strait of Gibraltar, 791

Ports
Barcelona, Spain, 285
Civitavecchia, Italy, 180
Palma, Balearic Islands, 382

MERS EL KEBIR, ALGERIA
(35°44'00'' N., 0°42'00'' W.) to:

Junction Points*
Port Said, U.A.R., 1,714
Strait of Gibraltar, 252

Ports
Alicante, Spain, 160
Malaga, Spain, 194
Melilla, Morocco, 119

MERSIN, TURKEY
(36°47'26'' N., 34°38'07'' E.) to:

Junction Points*
Port Said, U.A.R., 358
Strait of Gibraltar, 1,996

Ports
Al Ladhiqiyah, Syria, 94
Bayrut, Lebanon, 179
Constanta, Rumania, 986
Istanbul, Turkey, 789
Izmir, Turkey, 594
Jaffa, Israel, 285
Kerch, U.S.S.R., 1,214
Larnaca, Cyprus, 149
Nice, France, 1,495
Patrai, Greece (via Corinth Canal), 690
Patrai, Greece (south of Greece), 789
Piraievs, Greece, 598
Pula, Yugoslavia (via Corinth Canal), 1,244
Pula, Yugoslavia (south of Greece), 1,260
Rostou-na-Donu, U.S.S.R., 1,426
Tarabulus, Libya, 1,109
Thessaloniki, Greece, 726

MESSINA, SICILY, ITALY
(38°11'28'' N., 15°33'44'' E.) to:

Junction Points*
Port Said, U.A.R., 945
Strait of Gibraltar, 1,049

Ports
Al Khums, Libya, 342
Alexandria, U.A.R., 834
Alger, Algeria, 621
Alicante, Spain, 776
Ancona, Italy, 536
Annaba, Algeria, 401
As Sukhayrah, Tunisia, 406
Banghazi, Libya, 430
Barcelona, Spain, 681
Bari, Italy, 329
Bayrut, Lebanon, 1,027
Bizerte, Tunisia, 364
Brindisi, Italy, 270
Cagliari, Sardinia, 328
Cartagena, Spain, 806
Catania, Sicily, 53
Ceuta, Morocco, 1,029
Civitavecchia, Italy, 308
Crotone, Italy, 367
Gaeta, Italy, 209
Gallipoli, Italy, 201
Genova, Italy, 492
Gibraltar, 1,031
Haifa, Israel, 1,023
Iraklion, Crete, 510
Istanbul, Turkey (via Corinth Canal), 768
Istanbul, Turkey (south of Greece), 810
Izmir, Turkey (via Corinth Canal), 614
Izmir, Turkey (south of Greece), 655
Kalamai, Greece, 355
Khania, Crete, 452
La Spezia, Italy, 450
Livorno, Italy, 414
Malaga, Spain, 979
Marsaxlokk, Malta, 164
Marseille, France, 577

*JUNCTION POINT.—See Preface for use of junction points.

Napoli, Italy, 175
Nice, France, 515
Odessa, U.S.S.R. (via Corinth Canal), 1,116
Odessa, U.S.S.R. (south of Greece), 1,158
Oran, Algeria, 818
Palermo, Sicily, 120
Palma, Balearic Islands, 639
Piraievs, Greece (via Corinth Canal), 414
Piraievs, Greece (south of Greece), 496
Porto di Licata, Sicily, 173
Pozzuoli, Italy, 177
Preveza, Greece, 274
Rethimnon, Crete, 479
Rijeka, Yugoslavia, 603
Salerno, Italy, 158
Savona, Italy, 496
Sete, France, 636
Sibenik, Yugoslavia, 477
Siracusa, Sicily, 75
Soudha, Crete, 473
Split, Yugoslavia, 462
Tarabulus, Libya, 344
Taranto, Italy, 223
Thessaloniki, Greece (via Corinth Canal), 663
Thessaloniki, Greece (south of Greece), 704
Toulon, France, 546
Trapani, Sicily, 177
Trieste, Free Territory, 637
Tunis, Tunisia, 302
Valencia, Spain, 764
Valletta, Malta, 156
Venezia, Italy, 647
Volos, Greece (via Corinth Canal), 604
Volos, Greece (south of Greece), 645

METHIL, SCOTLAND
(56°11'00'' N., 3°00'00'' W.) to:

Junction Points*
Bishop Rock, England, 698
Pentland Firth, Scotland, 246

Ports
London, England, 407

MIAMI, FLORIDA, U.S.A.
(25°47'00'' N., 80°11'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,679
Bishop Rock, England (track B), 3,663
Bishop Rock, England (track C), 3,634
Cape of Good Hope, Republic of South Africa, 6,685
Fastnet, Ireland (track A), 3,663
Fastnet, Ireland (track B), 3,634
Fastnet, Ireland (track C), 3,578
Inishtrahull, Ireland (track A), 3,703
Inishtrahull, Ireland (track B), 3,677
Inishtrahull, Ireland (track C), 3,618
Pentland Firth, Scotland (track A), 4,003
Pentland Firth, Scotland (track B), 3,957
Pentland Firth, Scotland (track C), 3,856
Straits of Florida, 217
Yucatan Channel, 387

Ports
Belize, British Honduras, 734
Castries, St. Lucia, 1,352
Charlotte Amalie, Virgin Islands, 991
Cienfuegos, Cuba (via Windward Passage), 947
Cilenfuegos, Cuba (via Yucatan Channel), 671
Colon, Panama (via Windward Passage), 1,249
Colon, Panama (via Yucatan Channel), 1,214
Elizabeth Harbor, Bahamas, 354
Georgetown, British Guiana, 1,788
Guantanamo, Cuba, 582
Habana, Cuba, 216
Halifax, Canada, 1,413
Hamilton, Bermuda, 956
Kingston, Jamaica, 746
Nassau, Bahamas, 191
Pointe a Pitre, Guadeloupe, 1,247
Port au Prince, Haiti, 643
Port of Spain, Trinidad, 1,482
Recife, Brazil, 3,500
San Juan, Puerto Rico, 960
Santiago de Cuba, Cuba, 630
Santo Domingo, Dominican Republic, 930

MIDDLEFART, DENMARK
(55°30'30'' N., 9°44'14'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 84
Skagens Odde, Denmark, 186

Ports
Gdynia, Poland, 396
Goteborg, Sweden, 173
Lubeck, Germany, 149

MIDDLESBROUGH, ENGLAND
(54°34'45'' N., 1°13'00'' W.) to:

Junction Points*
Bishop Rock, England, 591
Pentland Firth, Scotland, 326

Ports
Leith, Scotland, 133
London, England, 293

MIDWAY ISLAND, NORTH PACIFIC
(28°13'00'' N., 177°22'00'' W.) to:

Junction Points*
Panama, Panama, 5,707
Punta Arenas, Chile, 7,382
Singapore (via Surigao Strait), 4,828

Ports
Apia, Samoa, 2,546
Apra, Guam, 2,301
Auckland, New Zealand, 3,937
Avarua, Cook Islands, 3,140
Baie du Controleur, Marquesas, 3,124
Brisbane, Australia, 3,757
Callao, Peru, 6,280
Canton, Phoenix Islands, 1,893
Ching-tao, China, 3,303
Christmas Island, North Pacific, 1,949
Darwin, Australia (via Selat Sele), 4,188
Dutch Harbor, Alaska, U.S.A., 1,651
Funafuti, Ellice Islands, 2,220
Guayaquil, Ecuador, 5,944
Hai-kou, Hai-nan Tao, 3,950
Hakodate, Japan, 2,198
Hobart, Tasmania, 4,740
Hong Kong, B.C.C., 3,728
Honolulu, Hawaii, U.S.A., 1,149
Jaluit, Marshall Islands, 1,535
Johnston Island, 821
Kahului, Hawaii, U.S.A., 1,266
Kaunakakai, Hawaii, U.S.A., 1,220
Kiska, Alaska, U.S.A., 1,453
Kodiak, Alaska, U.S.A., 2,088
Koniya, Ryukyu Islands, 2,799
Lele, Caroline Islands, 1,773
Levuka, Fiji Islands, 2,833
Manila, Philippines (via San Bernardino Strait), 3,685
Manila, Philippines (north of Luzon), 3,752
Nagasaki, Japan, 2,830
Noumea, New Caledonia, 3,207
Omura, Bonin Islands, 2,149
Pago Pago, American Samoa, 2,593
Palmyra Island, 1,602
Papeete, Society Islands, 3,190
Petropavlovsk, U.S.S.R., 1,831
Ponape, Caroline Islands. 1,882

*JUNCTION POINT.—See Preface for use of junction points.

Rabaul, New Britain, 2,688
Sai Gon, Vietnam, 4,421
San Diego, California, U.S.A., 3,097
San Francisco, California, U.S.A., 2,792
Seattle, Washington, U.S.A., 2,817
Shang-hai, China, 3,184
Sitka, Alaska, U.S.A., 2,473
Surabaja, Indonesia (via Makassar Strait), 4,632
Suva, Fiji Islands, 2,872
Sydney, Australia, 4,138
Truk, Caroline Islands, 2,146
Valparaiso, Chile, 7,042
Vladivostok, U.S.S.R., 2,612
Wake Island, Pacific, 1,034
Yokohama, Japan, 2,250

MIIKE, JAPAN
(33°00'40'' N., 130°25'05'' E.) to:

Ports
Hakodate, Japan, 864
Kobe, Japan, 462
Nagasaki, Japan, 82
Shimonoseki, Japan, 222
Yokohoma, Japan (via Osumi Kaikyo), 725
Yokohoma, Japan (via Bungo Suido), 766

MILAZZO, SICILY, ITALY. See Porto di Milazzo.

MILFORD HAVEN, WALES
(51°42'00'' N., 5°02'00'' W.) to:

Junction Points*
Bishop Rock, England, 129
Fastnet, Ireland, 178
Inishtrahull, Ireland, 286

Ports
Belfast, Ireland, 222
Horta, Azores, 1,266
Liverpool, England, 197

MILLER ANCHORAGE, ELEUTHERA ISLAND, BAHAMA ISLANDS
(24°39'15'' N., 76°11'30'' W.) to:

Junction Points*
Panama, Panama, 1,115
Straits of Florida, 495

Ports
Jacksonville, Florida, U.S.A., 507
Neuvitas, Cuba, 363
San Juan, Puerto Rico, 714

MINA ABD ALLAH, KUWAIT
(29°01'00'' N., 48°12'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,437
Cape of Good Hope, Republic of South Africa, 5,101
Port Said, U.A.R., 3,283
Singapore, 3,822

Ports
Aden, Aden Protectorate, 1,894
Bombay, India, 1,514

MINA ABDULLAH, KUWAIT. See Mina Abd Allah.

MINA AL AHMADI, KUWAIT
(29°04'00'' N., 48°10'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,440
Cape of Good Hope, Republic of South Africa, 5,104
Port Said, U.A.R., 3,286
Singapore, 3,825

Ports
Al Basrah, Iraq, 140
Bombay, India, 1,517

MINA SU'UD, NEUTRAL ZONE, PERSIAN GULF
(28°44'00'' N., 48°28'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,418
Cape of Good Hope, Republic of South Africa, 5,082
Port Said, U.A.R., 3,264
Singapore, 3,803

Ports
Aden, Aden Protectorate, 1,875
Bombay, India, 1,495

MINATITLAN, MEXICO
(18°00'00'' N., 94°32'00'' W.)

Add 18 miles to Puerto Mexico distances.

MINDELLO, CAPE VERDE ISLANDS. See Porto Grande.

MIRAGOANE, HAITI
(18°27'30'' N., 73°06'00'' W.) to:

Ports
Jeremie, Haiti, 63
Kingston, Jamaica, 243
Puerto Colombia, Colombia, 549
San Juan, Puerto Rico, 526
Santo Domingo, Dominican Republic, 407

MISUMI, JAPAN
(32°36'00'' N., 130°28'00'' E.) to:

Ports
Chi-lung Chiang, Taiwan, 654
Hagata, Japan, 161
Inchon, Korea, 478
Kagoshima, Japan, 184
Shang-hai, China, 490

MITILINI, GREECE
(39°06'13'' N., 26°33'23'' E.) to:

Junction Points*
Port Said, U.A.R., 592
Strait of Gibraltar (via Corinth Canal), 1,631
Strait of Gibraltar (south of Greece), 1,528

Ports
Izmir, Turkey, 60
Piraievs, Greece, 191
Thessaloniki, Greece, 232

MITYLENE, GREECE. See Mitilini.

MOA, CUBA. See Puerto Cayo Moa.

MOBILE, ALABAMA, U.S.A.
(30°42'30'' N., 88°02'30'' W.) to:

Junction Points*
Straits of Florida, 471
Yucatan Channel, 558

Ports
Alvaro Obregon, Mexico, 778
Belize, British Honduras, 845
Bocas del Toro, Panama, 1,340
Campeche, Mexico, 674
Carmen, Mexico, 749
Cartagena, Colombia, 1,450
Colon, Panama, 1,371
Habana, Cuba, 553
Limon, Costa Rica, 1,292

*JUNCTION POINT.—See Preface for use of junction points.

Livingston, Guatemala, 942
Puerto Barrios, Guatemala, 950
Puerto Cortes, Honduras, 915
Puerto Mexico, Mexico, 834
San Juan del Norte, Nicaragua, 1,240
Tampico, Mexico, 750
Tuxpan, Mexico, 776
Veracruz, Mexico, 825

MOCAMBIQUE, MOZAMBIQUE
(15°01'00'' S., 40°43'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,807
Port Said, U.A.R., 3,522
Singapore, 4,080

Ports
Antsirana, Malagasy Republic, 570
Beira, Mozambique, 476
Belawan, Indonesia, 3,747
Dar es Salaam, Tanganyika, 533
Darwin, Australia (via 20 miles north of Scott Reef), 5,304
Fremantle, Australia (north of Madagascar), 4,367
Lindi, Tanganyika, 356
Malacca, Malaysia, 3,965
Manakara, Malagasy Republic, 1,197
Mtwara, Tanganyika, 327
Penang, Malaysia, 3,792
Quelimane, Mozambique, 327
Sabang, Indonesia, 3,481
Tulear, Malagasy Republic, 532
Victoria, Seychelles, 1,085

MOCAMEDES, ANGOLA
(15°11'20'' S., 12°08'15'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,239
Ushant, France, 4,697

Ports
Lagos, Nigeria, 1,399
Porto Grande, Cape Verde Islands, 2,939
Walvisbaai, Southwest Africa, 518

MOCHA ROAD, YEMEN. See Al Mukha.

MOENGO, SURINAM
(5°37'42'' N., 54°24'39'' W.)

Add 88½ miles to Paramaribo distances.

MOGADISCIO, SOMALI REPUBLIC
(2°01'21'' N., 45°21'02'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,855
Port Said, U.A.R., 2,493
Singapore, 3,611

Ports
Aden, Aden Protectorate, 1,106
Mombosa, Kenya, 502

MOHAMMADIA, MOROCCO. See Fedala.

MOJI, JAPAN
(33°56'30'' N., 130°57'30'' E.) to:

Ports
Esutoru, U.S.S.R., 1,100
Inchon, Korea, 485
Manila, Philippines, 1,436
Nagasaki, Japan, 152
Pusan, Korea, 123
Ta-lien, China, 633
Tien-ching, China, 840
Yen-tai, China, 600

MOKPO, KOREA
(34°46'45'' N., 126°23'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,725
Singapore, 2,407
Sunda Strait, Indonesia, 2,760
Wetar Passage, Indonesia (via Molucca Passage), 2,632

Ports
Aleksandrovsk, U.S.S.R., 1,330
Balikpapan, Borneo, 2,308
Ching-huang-tao, China (south of Kasa Do), 484
Ching-tao, China, 336
Chinnampo, Korea (south of Kasa Do), 320
Chinnampo, Korea (via Myondo Sudo), 288
Darwin, Australia, 2,916
Djakarta, Indonesia, 2,741
Hakodate, Japan, 897
Hong Kong, B.C.C., 1,049
Honolulu, Hawaii, U.S.A., 4,146
Hsia-men, China, 790
Inchon, Korea (south of Kasa Do), 236
Inchon, Korea (via Myondo Do), 189
Krung Thep, Thailand, 2,438
Lo-hsing-ta Mao-ti, China, 665
Lu-shun, China (south of Kasa Do), 383
Makasar, Celebes, 2,483
Manila, Philippines (east of Taiwan), 1,338
Nagaski, Japan, 261
Osaka, Japan, 544
Petropavlovsk, U.S.S.R. (via Myongyangdo), 1,923
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 1,943
Pusan, Korea, 225
Sai Gon, Vietnam, 1,904
San Francisco, California, U.S.A., 5,125
Shang-hai, China (via South Channel), 369
Shan-tou, China, 899
Ta-ku, China (south of Kasa Do), 536
Ta-lien, China (south of Kasa Do), 377
Tongyong, Korea, 189
Valdivostok, U.S.S.R., 726
Wei-hai-wei, China (south of Kasa Do), 308
Wonsan, Korea, 530
Yen-tai, China (south of Kasa Do), 342
Yokohama, Japan, 838
Yosu, Korea, 151

MOKUHO, KOREA. See Mokpo.

MOLDE, NORWAY
(62°44'06'' N., 7°10'00'' E.) to:

Junction Points*
Penland Firth, Scotland, 412
Skagens Odde, Denmark, 492

Ports
Bergen, Norway, 201
Reykjavik, Iceland, 875

MOLLENDO, PERU
(17°01'10'' S., 72°01'35'' W.) to:

Junction Points*
Panama, Panama, 1,796
Punta Arenas, Chile, 2,374

Ports
Acapulco, Mexico, 2,643
Antofagasta, Chile, 417
Arica, Chile, 137
Caldera, Chile, 606
Callao, Peru, 468

*JUNCTION POINT.—See Preface for use of junction points.

Coquimbo, Chile, 782
Corinto, Nicaragua, 2,056
Corral, Chile, 1,378
Esmeraldas, Ecuador, 1,359
Guayaquil, Ecuador, 1,126
Guaymas, Mexico, 3,556
Iquique, Chile, 220
Los Angeles, California, U.S.A. 4,094
Lota, Chile, 1,209
Monterey, California, U.S.A., 4,346
Pisco, Peru, 367
Puerto Montt, Chile, 1,578
Puntarenas, Costa Rica, 1,871
Salina Cruz, Mexico, 2,454
San Blas, Mexico, 3,100
San Diego, California, U.S.A., 4,024
San Francisco, California, U.S.A., 4,426
San Jose, Guatemala, 2,213
Santa Barbara, California, U.S.A., 4,161
Talcahuano, Chile, 1,184
Valparaiso, Chile, 962

MOMBASA, KENYA
(4°03'30'' S., 39°41'15'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,472
Port Said, U.A.R., 3,006
Singapore, 3,987

Ports
Aden, Aden Protectorate, 1,619
Beira, Mozambique, 1,146
Belawan, Indonesia, 3,654
Bombay, India (May-September), 2,404
Bombay, India (October–April), 2,420
Calcutta, India (via One and Half Degree Channel), 3,703
Colombo, Ceylon (all seasons), 2,555
Darwin, Australia, 5,434
Durban, Republic of South Africa, 1,718
Fremantle, Australia, 4,564
Karachi, Pakistan, 2,361
Lourenco Marques, Mozambique, 1,508
Malacca, Malaysia, 3,872
Massaua, Ethiopia, 2,006
Mogadiscio, Somali Republic, 502
Penang, Malaysia, 3,699
Rangoon, Burma, 3,714
Sabang, Indonesia, 3,388
Tanga, Tanganyika, 69

MOMBASSA, KENYA. See Mombasa.

MONACO, MONACO
(43°44'00'' N., 7°26'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,450
Strait of Gibraltar, 792

Ports
Barcelona, Spain, 280
Napoli, Italy, 363
Palma, Balearic Islands, 377

MONOPOLI, ITALY
(40°57'20'' N., 17°18'30'' E.) to:

Junction Points*
Port Said, U.A.R., 953
Strait of Gibraltar, 1,346

Ports
Ancona, Italy, 239
Durres, Albania, 100
Split, Yugoslavia, 173

MONROVIA, LIBERIA
(6°20'00'' N., 10°49'00'' W.) to:

Ports
Anecho, Togo, 850
Cotonou, Dahomey, 893
Dakar, Senegal, 693
Freetown, Sierra Leone, 264
Grand-Bassam, Ivory Coast, 479
Guantanamo, Cuba, 3,828
Lisboa, Portugal, 2,225
Lome, Togo, 789
Natal, Brazil, 1,629
New York, New York, U.S.A., 3,965
Pointe Noire, Gabon, 1,525
Port of Spain, Trinidad, 3,045
Porto Grande, Cape Verde Islands, 1,069
Sassandra, Ivory Coast, 342
Sekondi, Ghana, 599
Takoradi, Ghana, 597

MONTE CHRISTI, DOMINICAN REPUBLIC. See Montecristi.

MONTECRISTI, DOMINICAN REPUBLIC
(19°53'30'' N., 71°40'30'' W.) to:

Junction Points*
Panama, Panama, 881
Straits of Florida, 711

Ports
Baltimore, Maryland, U.S.A., 1,213
Boston, Massachusetts, U.S.A., 1,415
Colon, Panama, 838
New York, New York, U.S.A., 1,265
Philadelphia, Pennsylvania, U.S.A., 1,250

MONTEGO BAY, JAMAICA
(18°29'15'' N., 77°57'30'' W.) to:

Junction Points*
Straits of Florida, 642
Yucatan Channel, 450

Ports
Cienfuegos, Cuba, 262
Puerto Siboney, Cuba, 159
Rio Yateras, Cuba, 196
Santa Cruz del Sur, Cuba, 134
Santiago de Cuba, Cuba, 154

MONTELIMAR, NICARAGUA. See Puerto Masachapa.

MONTEREY, CALIFORNIA, U.S.A.
(36°36'30'' N., 121°53'00'' W.) to:

Junction Points*
Panama, Panama, 3,165
Punta Arenas, Chile, 6,113

Ports
Acapulco, Mexico, 1,753
Antofagasta, Chile, 4,682
Arica, Chile, 4,471
Callao, Peru, 3,907
Coquimbo, Chile, 4,927
Corinto, Nicaragua, 2,533
Corral, Chile, 5,327
Esmeraldas, Ecuador, 3,262
Guayaquil, Ecuador, 3,434
Guaymas, Mexico, 1,410
Iquique, Chile, 4,540
Lota, Chile, 5,202
Mollendo, Peru, 4,346
Pisco, Peru, 4,017
Puntarenas, Costa Rica, 2,751
Salina Cruz, Mexico, 2,055
San Blas, Mexico, 1,337
San Jose, Guatemala, 2,315
Talcahuano, Chile, 5,190
Valparaiso, Chile, 5,060

MONTEVIDEO, URUGUAY
(34°54'30'' S., 56°13'30'' W.) to:

Junction Points*
Bishop Rock, England, 5,834
Cape of Good Hope, Republic of South Africa, 3,591

*JUNCTION POINT.—See Preface for use of junction points.

Montreal, Canada, 6,344
Panama, Panama, 5,379
Punta Arenas, Chile, 1,300
Strait of Gibraltar, 5,178
Straits of Florida, 5,598
Ushant, France, 5,802
Yucatan Channel, 5,609

Ports
Angra dos Reis, Brazil, 1,031
Bahia Blanca, Argentina, 466
Baltimore, Maryland, U.S.A., 5,831
Boston, Massachusets, U.S.A., 5,728
Bridgetown, Barbados, 4,096
Brunswick, Georgia, U.S.A., 5,731
Cape Town, Republic of South Africa, 3,608
Castries, St. Lucia, 4,261
Charleston, South Carolina, U.S.A., 5,708
Charlotte Amalie, Virgin Islands, 4,530
Charlottetown, Canada, 5,717
Clarence Bay, Ascension Island, 2,824
Colon, Panama, 5,267
Georgetown, British Guiana, 3,840
Guantanamo, Cuba, 5,167
Halifax, Canada, 5,617
Hamilton, Bermuda, 5,097
Jacksonville, Florida, U.S.A., 5,727
New York, New York, U.S.A., 5,749
Norfolk, Virginia, U.S.A., 5,710
Paranagua, Brazil, 797
Philadelphia, Pennsylvania, U.S.A., 5,804
Portland, Maine, U.S.A., 5,759
Porto Alegre, Brazil, 482
Recife, Brazil, 2,067
Rio de Janeiro, Brazil, 1,037
Rio Grande, Brazil, 313
St. Helena Island, 2,936
Salvador, Brazil, 1,735
Santos, Brazil, 893
Savannah, Georgia, U.S.A., 5,740
Stanley, Falkland Islands, 1,013
Valparaiso, Chile, 2,740
Wilmington, North Carolina, U.S.A., 5,691

MONTREAL, CANADA*
(45°30'10" N., 73°33'00" W.) to:

Junction Points*
Bishop Rock, England (track D), 3,055
Bishop Rock, England (track E), 2,856
Bishop Rock, England (track F), 2,816
Bishop Rock, England (track G, via Strait of Belle Isle), 2,681
Cape of Good Hope, Republic of South Africa (via Cabot Strait), 7,134
Fastnet, Ireland (tracks C and D, via Cabot Strait), 2,941
Fastnet, Ireland (track E, via Cabot Strait), 2,732
Fastnet, Ireland (track F, via Cabot Strait), 2,687
Fastnet, Ireland (track G, via Strait of Belle Isle), 2,539
Inishtrahull, Ireland (tracks C and D, via Cabot Strait), 3,039
Inishtrahull, Ireland (track E, via Cabot Strait), 2,805
Inishtrahull, Ireland (track F), 2,744
Inishtrahull, Ireland (track G, via Strait of Belle Isle), 2,545
Panama, Panama (via Crooked Island Passage and Windward Passage), 3,204
Pentland Firth, Scotland (tracks C and D, via Cabot Strait), 3,214
Pentland Firth, Scotland (track E, via Cabot Strait), 2,959
Pentland Firth, Scotland (track F), 2,881
Pentland Firth, Scotland (track G, via Strait of Belle Isle), 2,641
Punta Arenas, Chile (via Strait of Canso), 7,513
Punta Arenas, Chile (via Cabot Strait), 7,527
Strait of Gibraltar (tracks C and D), 3,283
Strait of Gibraltar (track E), 3,172
Strait of Gibraltar (track F), 3,163
Straits of Florida (via Strait of Canso), 2,467
Straits of Florida (via Cabot Strait), 2,531

Ports
Angmagssalik, Greenland (direct), 1,870
Angmagssalik, Greenland (via 75 miles of Kap Farvel), 1,904
Argentia, Canada, 943
Baltimore, Maryland, U.S.A. (via Strait of Canso), 1,769
Belem, Brazil (via Cabot Strait), 3,680
Belize, British Honduras (via Strait of Canso), 2,985
Bordeaux, France (tracks C and D, via Cabot Strait), 3,362
Bordeaux, Frances (track E, via Cabot Strait), 3,183
Bordeaux, France (track F, via Cabot Strait), 3,152
Bordeaux, France (via Strait of Belle Isle), 3,045
Boston, Massachusets, U.S.A. (via Cabot Strait), 1,308
Boston, Massachusetts, U.S.A. (via Strait of Canso), 1,248
Brunswick, Georgia, U.S.A., 2,074
Buenos Aires, Argentina (via Cabot Strait), 6,455
Cadiz, Spain (tracks C and D), 3,250
Cadiz, Spain (track E), 3,137
Cadiz, Spain (track F), 3,129
Cape Town, Republic of South Africa (via Cabot Strait), 7,118
Castries, St. Lucia (via Strait of Canso), 2,642
Charleston, South Carolina, U.S.A. (via Strait of Canso), 1,940
Charlotte Amalie, Virgin Islands (via Strait of Canso), 2,405
Charlottetown, Canada, 708
Colon, Panama (via Strait of Canso), 3,126
Dakar, Senegal, 3,566
Frederikshaab, Greenland, 1,901
Freetown, Sierra Leone, 4,019
Funchal, Madeira Island (tracks C and D), 2,877
Funchal, Madeira Island (track E), 2,815
Funchal, Madeira Island (track F), 2,812
Georgetown, British Guiana (via Strait of Canso), 3,077
Habana, Cuba (via Strait of Canso), 2,473
Halifax, Canada (via Cabot Strait), 955
Halifax, Canada (via Strait of Canso), 895
Hamilton, Bermuda (via Strait of Canso), 1,572
Horta, Azores (via Cabot Strait), 2,145
Ivigtut, Greenland (via Strait of Belle Isle), 1,472
Jacksonville, Florida, U.S.A. (via Cabot Strait), 2,199
Julianehaab, Greenland (via Strait of Belle Isle), 1,470
Key West, Florida, U.S.A. (via Strait of Canso), 2,415
La Guaira, Venezuela (via Strait of Canso), 2,941
Lisboa, Portugal (tracks C and D), 3,076
Lisboa, Portugal (track E), 2,953
Lisboa, Portugal (track F), 2,943
Maracaibo, Venezuela (via Strait of Canso), 2,931
Montevideo, Uruguay, 6,344
Murmansk, U.S.S.R., 3,870
New York, New York, U.S.A. (via Strait of Canso), 1,460

*JUNCTION POINT.—See Preface for use of junction points.

New York, New York, U.S.A. (via Cabot Strait), 1,520
Norfolk, Virginia, U.S.A. (via Cabot Strait), 1,700
Paramaribo, Surinam (via Strait of Canso), 3,150
Philadelphia, Pennsylvania, U.S.A. (via Cabot Strait), 1,671
Philadelphia, Pennsylvania, U.S.A. (via Strait of Canso), 1,609
Ponta Delgada, Azores (tracks C and D), 2,361
Ponta Delgada, Azores (track E), 2,288
Ponta Delgada, Azores (track F), 2,287
Port of Spain, Trinidad (via Cabot Strait), 2,901
Portland, Maine, U.S.A., 1,206
Recife, Brazil (via Cabot Strait), 4,283
Reykjavik, Iceland (via Strait of Belle Isle), 2,130
Rio de Janeiro, Brazil (via Strait of Canso), 5,357
Rio de Janeiro, Brazil (via Cabot Strait), 5,354
St. John, Canada (via Cabot Strait), 1,209
St. John's, Canada (via Cabot Strait), 1,043
St. John's, Canada (via Strait of Belle Isle), 1,146
Salvador, Brazil (via Cabot Strait), 4,673
Salvador, Brazil (via Strait of Canso), 4,676
San Juan del Norte, Nicaragua (via Strait of Canso and Crooked Island Passage), 3,220
Santa Cruz de Tenerife, Canary Islands (direct), 3,011
Santa Cruz de Tenerife, Canary Islands (tracks C and D), 3,056
Santa Cruz de Tenerife, Canary Islands (track E), 3,012
Santo Domingo, Dominican Republic (via Cabot Strait), 2,579
Santos, Brazil, 5,544
Savannah, Georgia, U.S.A. (via Strait of Canso), 2,013
Shelburne, Canada, 1,050
Vigo, Spain (tracks C and D), 3,030
Vigo, Spain (track E), 2,882
Vigo, Spain (track F), 2,865
Willemstad, Curacao (via Cabot Strait), 2,866

MOPPO, KOREA. See Mokpo.

MORMUGAO, INDIA
(15°25'00'' N., 73°47'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,447
Port Said, U.A.R., 3,078
Singapore, 2,217

Ports
Bombay, India, 235
Colombo, Ceylon, 671
Karachi, Pakistan, 690
Okha, India, 533

MOSJOEN, NORWAY
(65°51'18'' N., 13°11'05'' E.) to:

Junction Points*
Pentland Firth, Scotland, 651
Skagens Odde, Denmark, 732

Ports
Bergen, Norway, 473
Reykjavik, Iceland, 1,023

MOSKALVO, U.S.S.R.
(53°34'00'' N., 142°29'00'' E.) to:

Ports
Aleksandrovsk, U.S.S.R., 230
De-Kastri, U.S.S.R., 200
Nagayevo, U.S.S.R., 472
Yokohama, Japan, 1,453

MOSS, NORWAY
(59°26'18'' N., 10°39'30'' E.)

Subtract 19 miles from Oslo distances.

MOSSAMEDES, ANGOLA. See Mocamedes.

MOSSELBAAI, REPUBLIC OF SOUTH AFRICA
(34°10'00'' S., 22°09'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 206
Singapore, 5,384

Ports
Belawan, Indonesia, 5,051
Darwin, Australia, 5,929
Fremantle, Australia, 4,525
Malacca, Malaysia, 5,269
Penang, Malaysia, 5,096
Sabang, Indonesia, 4,785

MOSSEL BAY, REPUBLIC OF SOUTH AFRICA. See Mosselbaai.

MOSTAGANEM, ALGERIA
(35°56'12'' N., 0°04'22'' E.) to:

Junction Points*
Port Said, U.A.R., 1,678
Strait of Gibraltar, 283

Ports
Alger, Algeria, 172
Alicante, Spain, 148
Melilla, Morocco, 154

MOULMEIN, BURMA
(16°30'00'' N., 97°37'00'' E.) to:

Junction Points*
Port Said, U.A.R., 4,742
Singapore, 1,094

Ports
Calcutta, India, 824
Madras, India, 1,043
Penang, Malaysia, 743

MOZAMBIQUE, MOZAMBIQUE. See Mocambique.

MTWARA, TANGANYIKA
(10°15'30'' S., 40°13'04'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,111
Port Said, U.A.R., 3,265
Singapore, 4,042

Ports
Dar es Salaam, Tanganyika, 230
Mocambique, Mozambique, 327

MUHON, BALEARIC ISLANDS. See Mahon.

MURMANSK, U.S.S.R.
(68°58'30'' N., 33°03'00'' E.) to:

Junction Points*
Montreal, Canada, 3,870

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Akureyri, Iceland, 1,256
Bergen, Norway, 1,105
Boston, Massachusetts, U.S.A., 3,719
Dikson Harbor, U.S.S.R., 1,025
Hafnarfjordhur, Iceland, 1,530
Halifax, Canada, 3,368
Hvalfjordhur, Iceland, 1,531
Ivigtut, Greenland (via 75 miles off Kap Farvel), 2,310
Ivigtut, Greenland (direct), 2,201
Keflavik, Iceland, 1,521
Liverpool, England, 1,703
Longyearbyen, Svalbard, 695
Mys Chelyuskin, U.S.S.R., 1,390
New York, New York, U.S.A. (south of Iceland), 3,948
New York, New York, U.S.A. (north of Iceland), 3,844
Oslo, Norway, 1,469
Philadelphia, Pennsylvania, U.S.A., 4,042
Portland, Maine, U.S.A., 3,677
Scoresbysund, Greenland, 1,163
Seydhisfjordhur, Iceland, 1,173
Reykjavik, Iceland (north of Iceland), 1,501
Reykjavik, Iceland (south of Iceland), 1,529

MURORAN, JAPAN
(42°19'20'' N., 140°58'40'' E.) to:

Ports
Bukhta Broutona, Kuril Islands, 625
Esutoru, U.S.S.R., 594
Hachinohe, Japan, 123
Kastka, Japan, 401
Matsugahama, Japan, 310
Shelekhovo, Kuril Islands, 859
Slavnoye, Kuril Islands, 462
Tomari, Japan, 295

MUSAY'ID, OATAR. See Umm Said

MUSCAT, MUSCAT AND OMAN. See Masqat.

MUSEL, SPAIN. See Gijon.

MUSKO ISLAND, SWEDEN
(58°59'30'' N., 18°09'36'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 473
Skagens Odde, Denmark, 524

Ports
Gdynia, Poland, 288
Leningrad, U.S.S.R., 401
Riga, Latvia, 250

MYS CHELUSKIN, U.S.S.R.
(77°54'00'' N., 104°15'00'' E.) to:

Ports
Arkhangelsk, U.S.S.R., 1,469
Dikson Harbor, U.S.S.R., 457
Murmansk, U.S.S.R., 1,390
Tiksi, U.S.S.R., 579

MYTILINI, GREECE. See Mitilini.

NAESTVED, DENMARK
(55°13'33'' N., 11°45'24'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 74
Skagens Odde, Denmark, 212

Ports
Gdynia, Poland, 383
Goteborg, Sweden, 199
Lubeck, Germany, 136

NAGASAKI, JAPAN
(32°44'30'' N., 129°52'15'' E.) to:

Junction Points*
Panama, Panama (west of Honshu), 8,200
Panama, Panama (east of Honshu), 8,299
Punta Arenas, Chile, 9,567
Singapore (via Formosa Strait), 2,427
Singapore (east of Taiwan), 2,413

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 1,253
Apia, Samoa, 4,414
Apra, Guam, 1,445
Auckland, New Zealand (via Tokara Kaikyo), 4,963
Auckland, New Zealand (via Koshiki Kaikyo and Tanegashima Kaikyo), 4,930
Avarua, Cook Islands, 5,219
Cebu, Philippines (via San Bernardino Strait), 1,406
Chin-huang-tao, China, 702
Darwin, Australia (via Selat Sele), 2,785
Djakarta, Indonesia, 2,712
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 3,011
Dutch Harbor, Alaska, U.S.A. (south of Kyushu), 3,181
Hagata, Japan, 121
Hakodate, Japan, 801
Hirohata, Japan, 373
Hiroshima, Japan (via Obatake Seto and north of Kasasa Jima), 264
Hiroshima, Japan (via Moroshima Suido), 275
Hiroshima, Japan (via Kudako Suido), 285
Hiroshima, Japan (via Nuwashima Suido), 277
Hong Kong, B.C.C., 1,069
Honolulu, Hawaii, U.S.A., 3,986
Hsia-men, China, 810
Iloilo, Philippines, 1,428
Inchon, Korea, 453
Jaluit, Marshall Islands, 2,808
Kagoshima, Japan, 168
Kamaishi, Japan, 972
Kobe, Japan, 400
Kochi, Japan, 366
Kuang-chou, China, 1,152
Levuka, Fiji Islands (via Tanegashima Kaikyo), 4,260
Lien-yun, China, 558
Lo-hsing-ta Mao-ti, China, 691
Los Angeles, California, U.S.A., 5,572
Lu-shun, China, 601
Manila, Philippines, 1,298
Midway Island, 2,830
Miike, Japan, 82
Moji, Japan, 152
Mokpo, Korea, 261
Nase, Japan, 270
Noumea, New Caledonia (via Bougainville Strait), 3,967
Omura, Bonin Islands, 786
Pago Pago, American Samoa, 4,489
Papeete, Society Islands, 5,572
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 1,845
Petropavlovsk, U.S.S.R. (via Tsugaru Strait), 1,858
Petropavlovsk, U.S.S.R. (via Osumi Kaikyo), 2,039
Ponape, Caroline Islands, 2,256
Pusan, Korea, 163
Rabaul, New Britain, 2,612
San Francisco, California, U.S.A. (via Tsugaru Strait), 5,030
San Francisco, California, U.S.A. (via Osumi Strait), 5,151
Seattle, Washington, U.S.A. (via Tsugaru Strait and south of Aleutian Islands), 4,765
Seattle, Washington, U.S.A. (via Tsugaru Strait and north of Aleutian Islands), 4,705

*JUNCTION POINT.—See Preface for use of junction points.

Shang-hai, China, 463
Shan-tou, China, 919
Shimonoseki, Japan, 159
Sydney, Australia, 4,439
Ta-ku, China, 754
Tan-shui, Taiwan, 636
Valparaiso, Chile, 9,806
Vladivostok, U.S.S.R., 657
Wei-hai-wei, China, 526
Wonsan, Korea, 452
Yen-tai, China, 560
Yokohama, Japan (via Osumi Kaikyo), 691

NAGAYEVO, U.S.S.R.
(59°33'00'' N., 150°45'00'' E.) to:

Ports
Moskalvo, U.S.S.R., 472
Petropavlovsk, U.S.S.R., 864
Reyd Urkt, U.S.S.R., 441

NAGOYA, JAPAN
(35°05'00' N., 136°53'00'' E.) to:

Ports
Apra, Guam, 1,378
Esutoru, U.S.S.R., 1,189
Hachinohe, Japan, 577
Hirohata, Japan, 259
Imabari, Japan, 341
Kobe, Japan, 245
Shimizu, Japan, 143
Shimonoseki, Japan, 434
Ube, Japan, 419
Yokohama, Japan, 214

NAHA, OKINAWA JIMA, RYUKYU ISLANDS
(26°12'20'' N., 127°40'11'' E.) to:

Ports
Apra, Guam, 1,236
Chi-lung Chiang, Taiwan, 337
Hachinohe, Japan, 1,239
Pusan, Korea, 550
Shang-hai, China, 479
Shimonoseki, Japan, 530

NAJKIN, KOREA
(42°14'00'' N., 130°18'00'' E.) to:

Ports
Kobe, Japan, 754
Tongyong, Korea, 501
Ulsan, Korea, 418
Yosu, Korea, 535

NAKAGUSUKU, OKINAWA JIMA, RYUKYU ISLANDS
(26°17'00'' N., 127°53'00'' E.) to:

Ports
Apra, Guam, 1,216
Manila, Philippines, 935
Shang-hai, China, 515
Ta-ku, China, 1,026
Yokohama, Japan, 839

NAKHODKA, U.S.S.R.
(42°49'07'' N., 132°53'52'' E.) to:

Ports
Esutoru, U.S.S.R., 561
Hakodate, Japan, 62
Pusan, Korea, 508
Shang-hai, China, 991
Shimonoseki, Japan, 552

NAKNEK, ALASKA, U.S.A.
(58°42'00'' N., 157°15'00'' W.) to:

Junction Points*
Panama, Panama, 5,604

Ports
Honolulu, Hawaii, U.S.A., 2,404
Kodiak, Alaska, U.S.A., 881
San Diego, California, U.S.A., 2,788
Seattle, Washington, U.S.A., 2,020

NAKSKOV, DENMARK
(54°50'00'' N., 11°07'30'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 46
Skagens, Odde, Denmark, 213

Ports
Gdynia, Poland, 335
Goteborg, Sweden, 201
Swinoujscie, Poland, 190

NAMSOS, NORWAY
(64°28'00'' N., 11°29'25'' E.) to:

Junction Points*
Pentland Firth, Scotland, 615
Skagens Odde, Denmark, 696

Ports
Bergen, Norway, 384
Reykjavik, Iceland, 1,018

NANAIMO, CANADA
(49°10'00'' N., 123°55'45'' W.) to:

Ports
Bellingham, Washington, U.S.A., 76
New Westminister, Canada, 47
Port Angeles, Washington, U.S.A., 98
Prince Rupert, Canada, 453
Seattle, Washington, U.S.A., 132
Vancouver, Canada, 35
Victoria, Canada, 86

NANAO, JAPAN
(37°03'40'' N., 136°58'00'' E.) to:

Ports
Hakodate, Japan, 337
Maizuru, Japan, 213
Pusan, Korea, 476
Shimonoseki, Japan, 453
Vladivostok, U.S.S.R., 460

NAN-CHANG, CHINA
(28°42'30'' N., 115°53'30'' E.) to:

Add 483 miles to Shang-hai distances for ports outside the Yangze River.

Ports
Han-kou, China, 231
Nan-ching, China, 306
Shang-hai, China, 513

NAN-CHING, CHINA
(32°06'00'' N., 118°44'00'' E.) to:

Add 177 miles to Shang-hai distances.

Ports
Han-kou, China, 385
Nan-chang, China, 306
Shang-hai, China, 207

NANDI BAY, FIJI ISLANDS
(16°58'00'' S., 178°48'00'' E.) to:

Ports
Apra, Guam, 2,886
Auckland, New Zealand, 1,224
Brisbane, Australia, 1,618
Hobart, Tasmania, 2,288
Melbourne, Australia, 2,323

NANKING, CHINA. See Nan-ching.

NANORTALIK, GREENLAND
(60°08'30'' N., 45°14'35'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,291
Strait of Gibraltar, 2,138

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Churchill, Canada, 1,511
Reykjavik, Iceland, 737
St. John's, Canada, 821

NANTES, FRANCE
(47°11'42'' N., 1°35'15'' W.)

Add 29 miles to St. Nazaire distances.

NAPLES, ITALY. See Napoli.

NAPOLI, ITALY
(40°50'19'' N., 14°16'20'' E.) to:

Junction Points*
Port Said, U.A.R., 1,116
Strait of Gibraltar, 1,001

Ports
Al Ladhiqiyah, Syria, 1,191
Alexandria, U.A.R., 1,005
Alger, Algeria, 582
Alicante, Spain, 723
Ancona, Italy, 707
Annaba, Algeria, 388
Banghazi, Libya, 602
Barcelona, Spain, 559
Bari, Italy, 500
Basti, Corsica, 258
Bayrut, Lebanon, 1,198
Bizerte, Tunisia, 300
Brindisi, Italy, 442
Cagliari, Sardinia, 272
Cannes, France, 381
Cartagena, Spain, 756
Catania, Sicily, 225
Ceuta, Morocco, 982
Civitavecchia, Italy, 152
Genova, Italy, 338
Gibraltar, 983
Haifa, Israel, 1,194
Iraklion, Crete, 681
Istanbul, Turkey (via Corinth Canal), 940
Istanbul, Turkey (south of Greece), 981
Izmir, Turkey (via Corinth Canal), 785
Izmir, Turkey (south of Greece), 827
La Spezia, Italy, 302
Livorno, Italy, 267
Malaga, Spain, 932
Marsala, Sicily, 214
Marseille, France, 456
Messina, Sicily, 175
Monaco, Monaco, 363
Nice, France, 369
Odessa, U.S.S.R. (via Corinth Canal), 1,288
Odessa, U.S.S.R. (south of Greece), 1,329
Olbia, Sardinia, 222
Oran, Algeria, 775
Palermo, Sicily, 170
Palma, Balearic Islands, 582
Patrai, Greece, 485
Piraievs, Greece (via Corinth Canal), 586
Piraievs, Greece (south of Greece), 667
Port Vendres, France, 521
Porto di Milazzo, Sicily, 54
Porto di Reggio Calabria, Sicily, 179
Porto Vecchio di Piombino, 227
Rijeka, Yugoslavia, 775
Savona, Italy, 350
Sete, France, 515
Sibenik, Yugoslavia, 648
Siracusa, Sicily, 247
Split, Yugoslavia, 633
Taormina, Sicily, 202
Tarabulus, Libya, 516
Taranto, Italy, 395
Terracina, Italy, 65
Thesaloniki, Greece (via Corinth Canal), 834
Thessaloniki, Greece (south of Greece), 876
Toulon, France, 424
Trapani, Italy, 198
Trieste, Free Territory, 808
Tunis, Tunisia, 313
Valencia, Spain, 690
Valletta, Malta, 327
Venezia, Italy, 818
Villa San Giovanni, Italy, 173
Villefranche, France, 369
Volos, Greece (via Corinth Canal), 775
Volos, Greece (south of Greece), 817

NARSARSSUAK, GREENLAND
(61°09'45'' N., 45°27'45'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,384
Strait of Gibraltar, 2,257

Ports
Churchill, Canada, 1,513
Reykjavik, Iceland, 830
St. John's, Canada, 916

NARVIK, NORWAY
(68°25'30'' N., 17°25'00'' E.) to:

Junction Points*
Bishop Rock, England (via English Channel), 1,505
Ushant, France, 1,498

Ports
Antwerpen, Belgium, 1,211
Bergen, Norway, 624
Bremerhaven, Germany, 1,058
Le Havre, France, 1,304
London, England, 1,215
Longyearbyen, Svalbard, 659
Oslo, Norway, 993
Pechenga, U.S.S.R., 500
Philadelphia, Pennsylvania, U.S.A. (track B), 3,976
Rotterdam, Netherlands, 1,139
Stockholm, Sweden, 1,612

NASE, JAPAN
(28°23'12'' N., 129°30'00'' E.) to:

Ports
Hakodate, Japan, 1,048
Kobe, Japan, 483
Nagasaki, Japan, 270
Skimonoseki, Japan, 406
Yokohama, Japan, 686

NASSAU, BAHAMA ISLANDS
(25°05'10'' N., 77°19'50'' W.) to:

Junction Points*
Panama, Panama (via Windward Passage), 1,210
Straits of Florida, 393
Yucatan Channel, 556

Ports
Baltimore, Maryland, U.S.A., 880
Boston, Massachusetts, U.S.A., 1,173
Bridgetown, Barbados, 1,284
Charleston, South Carolina, U.S.A., 507
Cienfuegos, Cuba, 868
Colon, Panama, 1,178
Fernandina, Florida, U.S.A., 450
Guantanamo, Cuba, 503
Habana, Cuba, 390
Hamilton, Bermuda, 829
Jacksonville, Florida, U.S.A. (via Northeast Providence Channel), 456
Kingston, Jamaica, 667
Miami, Florida, U.S.A., 191
New York, New York, U.S.A., 962
Norfolk, Virginia, U.S.A., 758
Nuevitas, Cuba, 454
Philadelphia, Pennsylvania, U.S.A., 930
Port au Prince, Haiti, 564

*JUNCTION POINT.—See Preface for use of junction points.

San Juan, Puerto Rico, 799
Santiago de Cuba, Cuba, 566
Santo Domingo, Dominican Republic, 851
Savannah, Georgia, U.S.A., 503
Wilmington, North Carolina, U.S.A., 561

NATAL, BRAZIL
(5°45'00'' S., 35°11'00'' W.) to:

Junction Points*
Punta Arenas, Chile, 3,400
Strait of Gibraltar, 3,003
Ushant, France, 3,619

Ports
Belem, Brazil, 954
Bissau, Portuguese Guiana, 1,604
Buenos Aires, Argentina, 2,329
Cayenne, French Guiana, 1,250
Dakar, Senegal, 1,620
El Ferrol del Caudillo, Spain, 3,312
Freetown, Sierra Leone, 1,569
Galway, Ireland, 3,786
Georgetown, British Guiana, 1,630
Lagos, Nigeria, 2,425
Monrovia, Liberia, 1,629
New York, New York, U.S.A., 3,532
Paramaribo, Surinam, 1,476
Rio de Janeiro, Brazil, 1,228
St. John's, Canada, 3,341

NAUPLIA, GREECE. See Navplion.

NAVPLION, GREECE
(37°33'45'' N., 22°47'00'' E.) to:

Junction Points*
Port Said, U.A.R., 613
Strait of Gibraltar, 1,484

Ports
Iraklion, Crete, 237
Izmir, Turkey, 258
Piraievs, Greece, 142

NAZE, JAPAN. See Nase.

NEGAPATAM, INDIA
(10°46'00'' N., 79°55'00'' E.) to:

Junction Point*
Singapore, 1,568

Ports
Colombo, Ceylon, 476

NELSON, NEW ZEALAND
(41°14'00'' S., 173°15'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,794
Torres Strait, Australia, 2,646

Ports
Auckland, New Zealand, 633
Brisbane, Australia, 1,380
Sydney, Australia, 1,166

NEMOURS, ALGERIA. See Ghazaouet.

NEMURO, JAPAN
(43°20'30'' N., 145°35'00'' E.) to:

Ports
Bukhta Broutona, Kuril Islands, 370
Kasatka, Japan, 139
Matsugahama, Japan, 61
Reyd Urkt, U.S.S.R., 631
Shelekhovo, Kuril Islands, 598
Slavnoye, Kuril Islands, 199
Tomari, Japan, 22
Yokohama, Japan, 653

NEVEL'SK, U.S.S.R. See Honto.

NEW AMSTERDAM, BRITISH GUIANA
(6°25'00'' N., 57°28'36'' W.) to:

Junction Points*
Panama, Panama, 1,581
Yucatan Channel, 1,907

Ports
Belem, Brazil, 859
Charlotte Amalie, Virgin Islands, 903
Port of Spain, Trinidad, 437

NEW HAVEN, CONNECTICUT, U.S.A.
(41°17'24'' N., 75°54'30'' W.) to:

Junction Points*
Inishtrahull, Ireland, 2,867
Panama, Panama, 2,106
Strait of Gibraltar, 3,161

Ports
Habana, Cuba, 1,280
Halifax, Canada, 540

NEW LONDON, CONNECTICUT, U.S.A.
(41°21'30'' N., 72°05'30'' W.) to:

Junction Points*
Bishop Rock, England (track A), 2,992
Bishop Rock, England (track B), 2,954
Bishop Rock, England (track C), 2,881
Fastnet, Ireland (track A), 2,884
Fastnet, Ireland (track B), 2,845
Fastnet, Ireland (track C), 2,763
Inishtrahull, Ireland (track A), 3,010
Inishtrahull, Ireland (track B), 2,964
Inishtrahull, Ireland (track C), 2,861
Pentland Firth, Scotland (track A), 3,224
Pentland Firth, Scotland (track B), 3,168
Pentland Firth, Scotland (track C), 3,041
Strait of Gibraltar (track A), 3,132
Strait of Gibraltar (track B), 3,122
Strait of Gibraltar (track C), 3,106

Ports
Bordeaux, France (track A), 3,270
Bordeaux, France (track B), 3,239
Bordeaux, France (track C), 3,184
Hamilton, Bermuda, 667

NEW ORLEANS, LOUISIANA, U.S.A.
(29°57'00'' N., 90°03'30'' W.) to:

Junction Points*
Panama, Panama (via South Pass), 1,433
Straits of Florida (via South Pass), 524
Yucatan Channel, 577

Ports
Alvaro Obregon, Mexico, 755
Barranquilla, Colombia, 1,458
Belize, British Honduras (via South Pass), 850
Bluefields, Nicaragua (via South Pass and inside route), 1,201
Bocas del Toro, Panama (via South Pass and inside route), 1,353
Campeche, Mexico (via Southwest Pass), 650
Carmen, Mexico, 723
Cartagena, Colombia, 1,468
Colon, Panama, 1,389
Habana, Cuba (via South Pass), 602
Marcaibo, Venzuela (via South Pass), 1,629
Matanzas, Cuba, 641

*JUNCTION POINT.—See Preface for use of junction points.

Progreso, Mexico, 556
Puerto Barrios, Guatemala, 961
Puerto Cortes, Honduras (via South Pass), 916
Puerto Mexico, Mexico, 801
San Juan del Norte, Nicaragua, 1,262
Tampico, Mexico (via Southwest Pass), 711
Tela, Honduras, 915
Tuxpan, Mexico (via Southwest Pass), 739
Veracruz, Mexico (via Southwest Pass), 789

NEW SHOREHAM, ENGLAND. See Shoreham By Sea.

NEW WESTMINISTER, CANADA (49°12'00'' N., 122°54'30'' W.) to:

Ports
Nanaimo, Canada, 47
Port Angles, Washington, U.S.A., 90
Prince Rupert, Canada, 492
Seattle, Washington, U.S.A., 126

NEW YORK, NEW YORK, U.S.A. (40°42'00'' N., 74°01'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,069
Bishop Rock, England (track B), 3,030
Bishop Rock, England (track C), 2,957
Cape of Good Hope, Republic of South Africa, 6,801
Fastnet, Ireland (track A), 2,959
Fastnet, Ireland (track B), 2,916
Fastnet, Ireland (track C), 2,837
Inishtrahull, Ireland (track A), 3,089
Inishtrahull, Ireland (track B), 3,043
Inishtrahull, Ireland (track C), 2,940
Montreal, Canada (via Strait of Canso), 1,460
Montreal, Canada (via Cabot Strait), 1,520
Panama, Panama, 2,018
Pentland Firth, Scotland (track A), 3,303
Pentland Firth, Scotland (track B), 3,247
Pentland Firth, Scotland (track C), 3,120
Punta Arenas, Chile, 6,947
Strait of Gibraltar (track A), 3,208
Strait of Gibraltar (track B), 3,194
Strait of Gibraltar (tracks C and D), 3,180
Straits of Florida (via outer route), 1,184
Straits of Florida (via inner route), 1,237
Yucatan Channel (southbound, outside route) 1,366

Ports
Abraham Bay, Bahamas, 1,115
Angmagssalik, Greenland (direct), 2,275
Angmagssalik, Greenland (via 75 miles of Kap Farvel), 2,290
Antilla, Cuba, 1,226
Argentia, Canada, 1,009
Arkhangelsk, U.S.S.R. (Clear of general maximum winter solid pack ice in the vicinity of Iceland), 4,320
Arkhangelsk, U.S.S.R., 4,216
Bahia Blanca, Argentina, 6,154
Bahia de Samana, Dominican Republic, 1,328
Bahia Honda, Cuba (outside), 1,226
Banes, Cuba (via Crooked Island Passage), 1,216
Baracoa, Cuba, 1,226
Barranquilla, Colombia, 1,801
Basse-Terre, Guadeloupe (via Anegada Channel), 1,624
Basseterre, St. Christopher, 1,531
Belem, Brazil, 3,015
Bilbao, Spain (track C), 3,160
Bluefields, Nicaragua (via Yucatan Channel), 1,995
Bluefields, Nicaragua (via Windward Passage), 2,001
Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 2,048
Boma, Republic of the Congo, 5,591
Bordeaux, France (track A), 3,344
Bordeaux, France (track B), 3,310
Bordeaux, France (track C), 3,258
Brest, France (track A), 3,151
Brest, Fracne (track B), 3,114
Brest, France (track C), 3,049
Bridgetown, Barbados, 1,829
Buenos Aires, Argentina, 5,871
Cadiz, Spain (track A), 3,175
Cadiz, Spain (track B), 3,160
Cadiz, Spain (tracks C and D), 3,146
Cap Haitien, Haiti, 1,283
Cape Town, Republic of South Africa, 6,786
Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,853
Castries, St. Lucia, 1,747
Cayenne, French Guiana, 2,447
Charlestown, Nevis, 1,539
Charlotte Amalie, Virgin Islands, 1,434
Charlottetown, Canada (via Strait of Canso), 832
Christiansted, Virgin Islands (via Virgin Passage), 1,465
Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,682
Clarence Bay, Ascension Island, 4,395
Cockburn Town, Bahamas, 1,004
Colon, Panama (via Crooked Island Passage), 1,974
Colon, Panama (via Yucatan Channel), 2,176
Dakar, Senegal, 3,335
Elizabeth Harbor, Bahamas, 1,048
Exuma Harbor, Bahamas, 1,053
Fernando de Noronha, 3,517
Fort de France, Martinique (via Anegada Channel), 1,717
Fort Liberte, Haiti, 1,283
Fortaleza, Brazil, 3,304
Frederikshaab, Greenland, 1,959
Freetown, Sierra Leone, 3,757
Funchal, Madeira Island (direct), 2,761
Funchal, Madeira Island (track A), 2,766
Georgetown, British Guiana, 2,317
Gibara, Cuba (via Crooked Island Passage), 1,216
Gonaives, Haiti, 1,328
Grand Turk, Grand Turk Island, 1,167
Great Harbor, Culebra Island, 1,422
Guantanamo, Cuba (via Crooked Island Passage and Windward Passage), 1,312
Habana, Cuba, 1,186
Halifax, Canada, 600
Hamilton, Bermuda, 697
Horta, Fayal, Azores, 2,098
Isabel Segunda, Isla de Vieques, 1,430
Ivigtut, Greenland, 1,933
Jacmel, Haiti, 1,489
Julianehaab, Greenland, 1,911
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,474
Kingstown, St. Vincent, 1,791
La Ceiba, Honduras, 1,743
La Coruna, Spain, 2,917
La Guaira, Venezuela (via Mona Passage), 1,848
Lagos, West Africa, 4,883
Las Palmas de Gran Canaria, Canary Islands, 2,965
Las Piedras, Venezuela, 1,796
Las Cayes, Haiti, 1,447
Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 2,047

*JUNCTION POINT.—See Preface for use of junction points.

Lisboa, Portugal (track A), 3,009
Lisboa, Portugal (track B), 2,991
Lisboa, Portugal (tracks C and D), 2,972
Liverpool, Canada, 536
Livingston, Guatemala (via Straits of Florida, southbound), 1,796
Luanda, Angola, 5,670
Luderitz Bay, Southwest Africa, 6,393
Maracaibo, Venezuela, 1,890
Marshall, Liberia, 3,991
Matanzas, Cuba, 1,167
Mathew Town, Great Inagua Island (via Crooked Island Passage), 1,205
Monrovia, Liberia, 3,965
Montecristi, Dominican Republic, 1,265
Montevideo, Uruguay, 5,753
Murmansk, U.S.S.R. (north of Iceland), 3,844
Murmansk, U.S.S.R. (south of Iceland), 3,948
Nassau, Bahamas (via Northwest Providence Channel), 962
Natal, Brazil, 3,541
Nuevitas, Cuba (via Crooked Island Passage), 1,274
Paramaribo, Surinam, 2,334
Parrsboro, Canada, 591
Plymouth, Montserrat, 1,574
Pointe à Pitre, Guadeloupe, 1,652
Ponce, Puerto Rico (via Mona Passage), 1,462
Ponta Delgada, Azores (track A), 2,262
Ponta Delgada, Azores (track B), 2,255
Ponta Delgada, Azores (direct), 2,247
Porlamar, Venezuela (via Virgin Passage), 1,879
Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,423
Port au Prince, Haiti (via Crooked Island Passage), 1,372
Port of Spain, Trinidad (via Virgin Passage), 1,939
Port Plata, Dominican Republic (via Turks Island Passage), 1,270
Porto, Portugal (track C), 2,953
Porto Grande, Cape Verde Islands, 2,913
Praia, Azores, 2,173
Pregreso, Mexico, 1,609
Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,804
Puerto Cortes, Honduras (via Straits of Florida, southbound), 1,764
Puerto Manati, Cuba, 1,244
Recife, Brazil, 3,698
Reykjavik, Iceland, 2,495
Rio de Janeiro, Brazil, 4,770
Roosevelt Roads, Puerto Rico, 1,429
St. John, Canada (via Vineyard Sound and Long Island Sound), 486
St. John, Canada (Nantucket Light Vessel), 545
St. Johns, Antigua (via Anegada Channel), 1,572
St. John's, Canada, 1,093
St. Pierre, Martinique (via Anegada Channel), 1,705
Salvador, Brazil, 4,089
San Juan, Puerto Rico, 1,399
San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,047
San Juan del Norte, Nicaragua (via Crooked Island Passage and Windward Passage), 2,032
Sanchez, Dominican Republic, 1,350
Santa Barbara de Samana, Dominican Republic, 1,334
Sant Cruz de Tenerife, Canary Islands, 2,936
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,783
Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 1,362
Santo Dominga, Dominican Republic, 1,489
Santos, Brazil, 4,957
Sao Luiz, Brazil, 3,076
Sint Nicolass, Aruba (via Mona Passage), 1,761
Sint Nicolaas, Aruba (via Windward Passage), 1,805
Stanley, Falkland Islands, 6,547
Sydney, Canada, 808
Vigo, Spain (track A), 2,986
Vigo, Spain (track B), 2,960
Vigo, Spain (tracks C and D), 2,926
Villa do Porto, Azores, 2,279
Vitoria, Brazil, 4,507
Walvisbaai, Southwest Africa, 6,228
Willemstad, Curacao, 1,771
Yarmouth, Canada (Nantucket Light Vessel), 464
Yarmouth, Canada (via Pollok Rip Channel), 440

NEWARK, NEW JERSEY, U.S.A. See Port Newark.

NEWCASTLE, AUSTRALIA
(32°55'30" S., 151°47'00" E.) to:

Junction Point*
Panama, Panama, 7,654

Ports
Kiama Harbor, Australia, 117
Los Angeles, California, U.S.A., 6,456
Portland, Oregon, U.S.A., 6,833
San Francisco, California, U.S.A., 6,467

NEWCASTLE, ENGLAND
(54°58'00" N., 1°35'00" W.) to:

Junction Points*
Bishop Rock, England, 616
Kiel Canal (east end), Germany, 439
Pentland Firth, Scotland, 265
Skagens Odd, Denmark, 445
Ushant, France, 604

Ports
Amsterdam, Netherlands, 286
Antwerpen, Belgium, 351
Bergen, Norway, 403
Bremerhaven, Germany, 374
Dunkerque, France, 307
Egersund, Norway, 329
Emden, Germany, 329
Esberg, Denmark, 349
Hamburg, Germany, 424
Hull, England, 143
Kristiansand, Norway, 376
Le Harve, France, 411
London, England, 325
Nieuwpoort, Belgium, 309
Oostende, Belgium, 291
Oslo, Norway, 528
Plymouth, England, 524
Portland, England, 453
Portsmouth, England, 403
Rotterdam, Netherlands, 285
Southampton, England, 421
Stavanger, Norway, 349
Wilhelmshaven, Germany, 367
Zeebrugge, Belgium, 289

NEWCHWANG, CHINA. See Kingkou.

NEWPORT, RHODE ISLAND, U.S.A.
(44°29'50" N., 71°19'50" W.)

Subtract 20 miles from Providence distances.

NEWPORT, WALES
(51°33'20" N., 2°58'00" W.) to:

Junction Points*
Bishop Rock, England, 177
Fastnet, Ireland, 258
Inishtrahull, Ireland, 371

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Dublin, Ireland, 219
Liverpool, England, 284

NEWPORT NEWS, VIRGINIA, U.S.A.
(36°58′00″ N., 76°26′00″ W.)

Subtract 3 miles from Norfolk distances.

NHA BE, VIETNAM
(10°42′00″ N., 106°45′00″ E.)

Subtract 9 miles from Sai Gon distances.

NHA TRANG BAY, VIETNAM
(12°15′00″ N., 109°13′00″ E.) to:

Junction Points*
Singapore, 769

Ports
Hong Kong, B.C.C., 678
Kao-hsiung Chiang, Taiwan, 895
Manila, Philippines, 706
Sai Gon, Vietnam, 264

NICARO, LENGUA DE PAJARO, CUBA
(20°43′12″ N., 75°32′52″ W.) to:

Junction Points*
Panama, Panama, 881
Straits of Florida, 488

Ports
Neuvitas, Cuba, 132
San Juan, Puerto Rico, 561

NICE, FRANCE
(43°41′40″ N., 7°17′07″ E.) to:

Junction Points*
Port Said, U.A.R., 1,456
Strait of Gibraltar, 788

Ports
Ajaccio, Corsica, 138
Almeria, Spain, 627
Cagliari, Sardinia, 354
Constanta, Rumania (via Corinth Canal), 1,476
Constanta, Rumania (south of Greece), 1,518
Genova, Italy, 89
Iskenderun, Turkey, 1,553
Istanbul, Turkey (via Corinth Canal), 1,279
Istanbul, Turkey (south of Greece), 1,321
Jaffa, Israel, 1,541
Kerch, U.S.S.R. (via Corinth Canal), 1,714
Kerch, U.S.S.R. (south of Greece), 1,756
Larnaca, Cyprus, 1,457
Livorno, Italy, 134
Mersin, Turkey, 1,495
Messina, Sicily, 515
Napoli, Italy, 369
Patrai, Greece, 825
Sant Antioco Ponti, Sardinia, 310
Valletta, Malta, 592

NIEUWPOORT, BELGIUM
(51°08′07″ N., 2°45′30″ E.) to:

Junction Points*
Bishop Rock, England, 375
Pentland Firth, Scotland, 531

Ports
Bremerhaven, Germany, 312
Newcastle, England, 309
Southampton, England, 176

NIIGATA, JAPAN
(37°58′00″ N., 139°04′00″ E.) to:

Ports
Hakodate, Japan, 247
Honto, U.S.S.R., 549
Maizuru, Japan, 256
Pusan, Korea, 516
Shimonoseki, Japan, 492
Vladivostok, U.S.S.R., 453

NIIHAMA, JAPAN
(33°59′00″ N., 133°16′00″ E.) to:

Ports
Kagoshima, Japan, 318
Kobe, Japan, 113
Kure, Japan, 77
Osaka, Japan, 122
Shimonoseki, Japan, 137

NIKOLAEVSK, U.S.S.R. See Nikolayevsk.

NIKOLAYEVSK, U.S.S.R.
(53°07′30″ N., 140°43′00″ E.) to:

Junction Points*
Panama, Panama (via Unimak Pass), 7,296

Ports
Aleksandrovsk, U.S.S.R. (via South Channel), 162
Bukhta Broutona, Kuril Islands, 715
Ching-tao, China, 1,750
Hai-kou, Hai-nan Tao, 2,644
Hong Kong, B.C.C. (via South Channel), 2,394
Hsia-men, China (via South Channel), 2,138
Kasatka, Japan (via south of Sakhalin), 747
Kuang-chou, China, 2,486
Matsugahama, Japan, 741
Pago Pago, American Samoa (via Nemuro Strait and La Perouse Strait), 4,913
Reyd Urkt, U.S.S.R. (north of Sakhalin), 209
San Francisco, California, U.S.A. (via Unimak Pass), 4,099
Seattle, Washington, U.S.A. (via Unimak Pass), 3,748
Shang-hai, China, 1,742
Shelekhovo, Kuril Islands (north of Sakhalin), 677
Slavnoye, Kuril Islands (south of Sakhalin), 743
Sovetskaya Gaven, U.S.S.R. (via South Channel), 276
Ta-ku, China, 1,961
Tomari, Japan, 694
Yin-hsien, China (via Shih-peng Chiang and South Channel), 1,779
Zaliv Chikachova, U.S.S.R., 132

NINGPO, CHINA. See Yin-hsien.

NOME, ALASKA, U.S.A.
(64°29′00″ N., 165°25′00″ W.) to:

Junction Points*
Panama, Panama, 5,834

Ports
Apra, Guam, 3,686
Auckland, New Zealand, 6,159
Barrow, Alaska, U.S.A., 566
Callao, Peru, 6,578
Cordova, Alaska, U.S.A., 1,409
Hakodate, Japan, 2,347
Hong Kong, B.C.C., 4,145
Honolulu, Hawaii, U.S.A. (via Unimak Pass), 2,674
Los Angeles, California, U.S.A., 2,968
Manila, Philippines, 4,379

*JUNCTION POINT.—See Preface for use of junction points.

Pago Pago, American Samoa, 4,748
Petropavlovsk, U.S.S.R., 1,317
Pevek, U.S.S.R., 700
Prince Rupert, Canada, 1,846
San Francisco, California, U.S.A., 2,636
Sasebo, Japan (via Osumi Kaikyo), 3,373
Seattle, Washington, U.S.A. (via Juan de Fuca Strait), 2,288
Sydney, Australia, 6,280
Valparaiso, Chile, 7,728
Vancouver, Canada, 2,304
Yokohama, Japan, 2,696

NONOUTI, GILBERT ISLANDS (0°43'00'' S., 174°17'00'' E.) to:

Junction Points*
Panama, Panama, 6,439

Ports
Apia, Samoa, 1,136
Apra, Guam, 1,981
Brisbane, Australia, 2,032
Funafuti, Ellice Islands, 544
Honolulu, Hawaii, U.S.A., 2,100
Levuka, Fiji Islands, 1,162
Ponape, Caroline Islands, 1,082
Yokohama, Japan, 2,931

NONUTI, GILBERT ISLANDS. See Nonouti.

NORDENHAM, GERMANY (53°29'00'' N., 8°29'40'' E.)

Add 5½ miles to Bremerhaven distances.

NORD-OSTSEE-KANAL. See Kiel Canal.

NORFOLK, VIRGINIA, U.S.A. (36°51'00'' N., 76°18'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,202
Bishop Rock, England (track B), 3,168
Bishop Rock, England (track C), 3,107
Cape of Good Hope, Republic of South Africa, 6,802
Fastnet, Ireland (track A), 3,109
Fastnet, Ireland (track B), 3,072
Fastnet, Ireland (track C), 3,002
Inishtrahull, Ireland (track A), 3,235
Inishtrahull, Ireland (track B), 3,191
Inishtrahull, Ireland (track C), 3,100
Montreal, Canada (via Cabot Strait), 1,700
Panama, Panama, 1,822
Pentland Firth, Scotland (track A, eastbound), 3,449
Pentland Firth, Scotland (track B, eastbound), 3,395
Pentland Firth, Scotland (track C, eastbound), 3,280
Punta Arenas, Chile, 6,900
Strait of Gibraltar (track A), 3,349
Strait of Gibraltar (track B), 3,340
Strait of Gibraltar (direct), 3,335
Straits of Florida (via outer route), 980
Yucatan Channel, 1,165

Ports
Angmagssalik, Greenland (direct), 2,458
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,472
Argentia, Canada, 1,189
Arkhangelsk, U.S.S.R., 4,399
Banes, Cuba (via Crooked Island Passage), 1,018
Belem, Brazil, 2,832
Belize, British Honduras, 1,503
Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 1,853
Bordeaux, France (track A), 3,495
Bordeaux, France (track B), 3,466
Bordeaux, France (track C), 3,423
Buenos Aires, Argentina, 5,824
Cadiz, Spain (track A), 3,315
Cadiz, Spain (track B), 3,306
Cadiz, Spain (direct), 3,302
Cape Town, Republic of South Africa, 6,790
Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,658
Castries, St. Lucia, 1,620
Charlotte Amalie, Virgin Islands, 1,296
Cienfuegnos, Cuba (Windward Passage), 1,482
Colon, Panama (via Crooked Island Passage and Windward Passage), 1,779
Dakar, Senegal, 3,408
Elizabeth Harbor, Bahamas, 848
Fort de France, Martinique, 1,597
Freetown, Sierra Leone, 3,821
Funchail, Madeira Island, 2,907
Georgetown, British Guiana, 2,090
Guantanamo, Cuba, 1,117
Habana, Cuba (southbound, outside), 985
Halifax, Canada, 790
Hamilton, Bermuda, 683
Ivigtut, Greenland, 2,116
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,279
La Guaira, Venezuela, 1,687
Lagos, Nigeria, 4,941
Las Palmas de Gran Canaria, Canary Islands, 3,130
Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 1,852
Lisboa, Portugal (track A), 3,149
Lisboa, Portugal (track B), 3,137
Lisboa, Portugal (tracks C and D, eastbound), 3,128
Liverpool, Canada, 724
Livingston, Guatemala, 1,595
Maracaibo, Venezuela, 1,682
Montevideo, Uruguay, 5,710
Nassau, Bahamas, 758
Nuevitas, Cuba, 1,076
Parrsboro, Canada, 784
Pointe a Pitre, Guadeloupe, 1,527
Ponta Delgada, Azores (track A), 2,402
Ponta Delgada, Azores (direct), 2,401
Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,228
Port au Prince, Haiti, 1,178
Port of Spain, Trinidad, 1,799
Porto Grande, Cape Verde Islands, 2,971
Puerto Barrios, Guatemala, 1,603
Puerto Cortes, Honduras (via Straits of Florida), 1,568
Puerto Mexico, Mexico, 1,736
Recife, Brazil, 3,651
Reykjavik, Iceland, 2,677
Rio de Janeiro, Brazil, 4,723
St. John, Canada, 731
St. John's, Canada, 1,277
Salvador, Brazil, 4,042
San Juan, Puerto Rico, 1,252
San Juan del Norte, Nicaragua (via Straits of Florida), 1,846
San Juan del Norte, Nicaragua (via Windward Passage), 1,837
Santa Cruz de Tenerife, Canary Islands, 3,057
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,588
Santiago de Cuba, Cuba, 1,167
Santo Domingo, Dominican Republic, 1,329
Santos, Brazil, 4,910

*JUNCTION POINT.—See Preface for use of junction points.

Sint Nicolaas, Aruba (via Mona Passage), 1,600
Sint Nicolaas, Aruba (via Windward Passage), 1,611
Sydney, Canada, 996
Takoradi, Ghana, 4,620
Vigo, Spain (track A), 3,126
Vigo, Spain (track B), 3,106
Vigo, Spain (tracks C and D), 3,082
Willemstad, Curacao, 1,611
Yarmouth, Canada, 656

NORRKOPING, SWEDEN
(58°36'00'' N., 16°12'54'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 459
Skagens Odde, Denmark, 520

Ports
Helsinki, Finland, 307
Riga, Latvia, 300
Stockholm, Sweden, 143

NOUMEA, NEW CALEDONIA
(22°16'30'' S., 166°27'00'' E.) to:

Junction Points*
Panama, Panama, 6,982
Punta Arenas, Chile (composite sailing with Lat. 49° S. the limiting latitude), 5,745
Punta Arenas, Chile (via great circle), 5,527
Torres Strait, Australia (via Raine Island entrance), 1,622

Ports
Apia, Samoa, 1,371
Apra, Guam, 2,528
Auckland, New Zealand, 998
Avarua, Cook Islands, 1,887
Baker Island, 1,707
Bowen, Australia, 1,342
Brisbane, Australia, 807
Cairns Harbor, Australia, 1,250
Callao, Peru, 6,541
Ching-tao, China, 4,416
Dunedin, New Zealand, 1,552
Dutch Harbor, Alaska, U.S.A., 4,857
Funafuti, Ellice Islands, 1,132
Guayaquil, Ecuador, 6,686
Hai-kou, Hai-nan Tao, 4,270
Hakodate, Japan (via Canal Woodin and Canal de la Havannah), 4,176
Hobart, Tasmania, 1,604
Hong Kong, B.C.C., 4,107
Honolulu, Hawaii, U.S.A., 3,371
Hsia-men, China, 4,031
Kodiak, Alaska, U.S.A., 5,281
Kuang-chou, China, 4,208
Lae, New Guinea, 1,519
Lele, Caroline Islands, 1,722
Levuka, Fiji Islands, 776
Los Angeles, California, U.S.A., 5,521
Mackay, Australia, 1,253
Malakal, Palau Islands, 2,612
Manila, Philippines, 3,616
Melbourne, Australia, 1,595
Midway Island, 3,207
Nagasaki, Japan (via Bougainville Strait), 3,967
Nukualofa, Tonga Islands, 1,059
Omura, Bonin Islands, 3,325
Pago Pago, American Samoa (via Kandavu Passage), 1,416
Palmyra Island, Pacific, 2,870
Papeete, Society Islands, 2,497
Petropavlovsk, U.S.S.R., 4,587
Ponape, Caroline Islands, 1,892
Port Augusta, Australia, 2,179
Rabaul, New Britain, 1,383
Raoul, Kermadec Islands, 957
Rockhampton, Australia, 902
Rotoava, Tuamotu Archipelago, 2,737
San Diego, California, U.S.A., 5,491
San Francisco, California, U.S.A., 5,410
Seattle, Washington, U.S.A., 5,760
Selwyn Bay, Solomon Islands, 850
Shang-hai, China, 4,185
Sitka, Alaska, U.S.A., 5,613
Suva, Fiji Islands, 734
Sydney, Australia, 1,069
Taio Hae, Marquesas, 3,183
Ta-ku, China, 4,667
Talomako, New Hebrides, 524
Townsville, Australia, 1,155
Truk, Caroline Islands, 2,068
Valparaiso, Chile, 6,115
Vladivostok, U.S.S.R., 4,590
Wake Island, Pacific, 2,551
Wallaroo, Australia, 2,099
Wotje Island, Marshall Islands, 1,972
Yap Island, Caroline Islands, 2,568
Yin-hsien, China (via Shih-peng Chiang), 4,118
Yokohama, Japan (via Bougainville Strait), 3,837

NOVOROSSISK, U.S.S.R. See Novorossiysk.

NOVOROSSIYSK, U.S.S.R.
(39°33'52'' N., 2°38'17'' E.) to:

Junction Points*
Port Said, U.A.R., 1,260
Strait of Gibraltar (via Corinth Canal), 2,260
Strait of Gibraltar (south of Greece), 2,277

Ports
Batumi, U.S.S.R., 255
Constanta, Rumania, 403
Istanbul, Turkey, 460
Odessa, U.S.S.R., 369
Thessaloniki, Greece, 794

NUEVA GERONA, CUBA
(21°55'00'' N., 82°48'00'' W.)

Subtract 82 miles from Surgidero de Batabano distances.

NUEVITAS, CUBA
(21°32'40'' N., 77°12'40'' W.) to:

Junction Points*
Straits of Florida, 386
Yucatan Channel, 528

Ports
Abraham Bay, Bahamas, 243
Bahia de Samana, Dominican Republic, 510
Baltimore, Maryland, U.S.A. (via Old Bahama Channel), 1,220
Boston, Massachusetts, U.S.A. (via Old Bahama Channel and Santaren Channel), 1,545
Caibarien, Cuba, 181
Charleston, South Carolina, U.S.A., 750
Cienfuegos, Cuba, 649
Cockburn Town, Bahamas, 265
Exuma Harbor, Bahamas, 287
Fort de France, Martinique, 1,035
Fort Liberte, Haiti, 339
Gibara, Cuba, 82
Grand Turk, Grand Turk Island, 368
Guantanamo, Cuba, 284
Habana, Cuba, 344
Hamilton, Bermuda, 988
Hopetown, Bahamas, 452
Isabela, Cuba, 212
Key West, Florida, U.S.A., 331
Kingston, Jamaica, 448
Mariel, Cuba, 366
Miller Anchorage, Bahamas, 363
Nassau, Bahamas, 454
New York, New York, U.S.A. (via Straits of Florida), 1,299
New York, New York, U.S.A. (via Crooked Island Passage), 1,274
Nicaro, Cuba, 132
Norfolk, Virginia, U.S.A. (via Old Bahama Channel), 1,098

*JUNCTION POINT.—See Preface for use of junction points.

Philadelphia, Pennsylvania, U.S.A. (via Old Bahama Channel), 1,269
Port Antonio, Jamaica, 398
Port au Prince, Haiti, 348
Puerto Cayo Moa, Cuba, 154
St. Marc, Haiti, 306
San Juan, Puerto Rico, 663
Santa Lucia, Cuba, 447
Santo Domingo, Dominican Republic, 632

NUKUALOFA, TONGA ISLANDS
(21°07'30'' S., 175°12'00'' W.) to:

Junction Points*
Panama, Panama, 5,953

Ports
Apia, Samoa, 509
Apra, Guam, 3,202
Auckland, New Zealand, 1,099
Brisbane, Australia (via Main Channel and Howe Channel), 1,819
Honolulu, Hawaii, U.S.A., 2,749
Los Angeles, California, U.S.A., 4,633
Noumea, New Caledonia, 1,059
Pago Pago, American Samoa, 490
Papeete, Society Islands, 1,468
Ponape, Caroline Islands, 2,341
Port Kembla, Australia, 1,987
Suva, Fiji Islands, 416

NYKOBING, DENMARK
(55°54'48'' N., 11°40'42'' E.)

Add 12 miles to Masnedsund distances.

NYSTAD, FINLAND. See Uusikaupunki.

OAKLAND, CALIFORNIA, U.S.A.
(37°48'12'' N., 122°19'30'' W.)

Add 3 miles to San Francisco distances.

OCEAN ISLAND, PACIFIC
(0°52'30'' S., 169°35'00'' E.) to:

Junction Points*
Panama, Panama, 6,724

Ports
Honolulu, Hawaii, U.S.A., 2,480
Los Angeles, California, U.S.A., 4,553
Pago Pago, American Samoa, 1,409
Papeete, Society Islands, 2,609
San Francisco, California, U.S.A., 4,406
Seattle, Washington, U.S.A., 4,611
Suva, Fiji Islands, 1,207
Yokohama, Japan, 2,761

ODENSE, DENMARK
(55°24'40'' N., 10°23'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 117
Skagens Odde, Denmark, 126

Ports
Gdynia, Poland, 438
Stockholm, Sweden, 609
Swinoujscie, Poland, 293

ODESSA, U.S.S.R.
(46°29'47'' N., 30°44'40'' E.) to:

Junction Points*
Port Said, U.A.R., 1,152
Strait of Gibraltar (via Corinth Canal), 2,152
Strait of Gibraltar (south of Greece), 2,169

Ports
Alexandria, U.A.R., 1,090
Alger, Algeria (via Corinth Canal), 1,724
Alger, Algeria (south of Greece), 1,741
Alicante, Spain (via Corinth Canal), 1,888
Alicante, Spain (south of Greece), 1,908
Ancona, Italy (via Corinth Canal), 1,310
Ancona, Italy (south of Greece), 1,407
Annaba, Algeria (via Corinth Canal), 1,499
Annaba, Algeria (south of Greece), 1,516
Banghazi, Libya, 1,064
Barcelona, Spain (via Corinth Canal), 1,793
Barcelona, Spain (south of Greece), 1,834
Bari, Italy (via Corinth Canal), 1,103
Bari, Italy (south of Greece), 1,200
Batumi, U.S.S.R., 569
Bayrut, Lebanon, 1,194
Bizerte, Tunisia (via Corinth Canal), 1,394
Bizerte, Tunisia (south of Greece), 1,411
Brindisi, Italy (via Corinth Canal), 1,045
Brindisi, Italy (south of Greece), 1,142
Cartagena, Spain (via Corinth Canal), 1,915
Cartagena, Spain (south of Greece), 1,932
Ceuta, Morocco (via Corinth Canal), 2,133
Ceuta, Morocco (south of Greece), 2,150
Civitavecchia, Italy (via Corinth Canal), 1,414
Civitavecchia, Italy (south of Greece), 1,456
Constanta, Rumania, 186
Genova, Italy (via Corinth Canal), 1,598
Genova, Italy (south of Greece), 1,639
Gibraltar (via Corinth Canal), 2,135
Gibraltar (south of Greece), 2,152
Haifa, Israel, 1,197
Iraklion, Crete, 793
Istanbul, Turkey, 352
Izmir, Turkey, 640
La Spezia, Italy (via Corinth Canal), 1,562
La Spezia, Italy (south of Greece), 1,604
Livorno, Italy (via Corinth Canal), 1,527
Livorno, Italy (south of Greece), 1,568
Malga, Spain (via Corinth Canal), 2,083
Malga, Spain (south of Greece), 2,100
Marseille, France (via Corinth Canal), 1,690
Marseille, France (south of Greece), 1,731
Messina, Sicily (via Corinth Canal), 1,116
Messina, Sicily (south of Greece), 1,158
Napoli, Italy (via Corinth Canal), 1,288
Napoli, Italy (south of Greece), 1,329
Novorossiysk, U.S.S.R., 369
Oran, Algeria (via Corinth Canal), 1,921
Oran, Algeria (south of Greece), 1,938
Palermo, Sicily (via Corinth Canal), 1,232
Palermo, Sicily (south of Greece), 1,274
Palma, Balearic Islands (via Corinth Canal), 1,751
Palma, Balearic Islands (south of Greece), 1,792
Piraievs, Greece, 712

*JUNCTION POINT.—See Preface for use of junction points.

Rijeka, Yugoslavia (via Corinth Canal), 1,377
Rijeka, Yugoslavia (south of Greece), 1,476
Savona, Italy (via Corinth Canal), 1,608
Savona, Italy (south of Greece), 1,650
Sevastopol, U.S.S.R., 167
Sibenik, Yugoslavia (via Corinth Canal), 1,250
Sibenik, Yugoslavia (south of Greece), 1,349
Siracusa, Sicily (via Corinth Canal), 1,120
Siracusa, Sicily (south of Greece), 1,146
Split, Yugoslavia (via Corinth Canal), 1,235
Split, Yugoslavia (south of Greece), 1,334
Tarabulus, Libya, 1,301
Taranto, Italy (via Corinth Canal), 1,065
Taranto, Italy (south of Greece), 1,154
Thessaloniki, Greece, 686
Toulon, France (via Corinth Canal), 1,658
Toulon, France (south of Greece), 1,699
Trieste, Free Territory (via Corinth Canal), 1,411
Trieste, Free Territory (south of Greece), 1,510
Tunis, Tunisia (via Corinth Canal), 1,382
Tunis, Tunisia (south of Greece), 1,399
Valencia, Spain (via Corinth Canal), 1,876
Valencia, Spain (south of Greece), 1,906
Valetta, Malta, 1,185
Venezia, Italy (via Corinth Canal), 1,421
Venezia, Italy (south of Greece), 1,518
Volos, Greece, 677

OKHA, INDIA
(22°28'30'' N., 69°05'15'' E.) to:

Junction Points*
Port Said, U.A.R., 2,887

Ports
Bombay, India, 341
Colombo, Ceylon, 1,183
Karachi, Pakistan, 194
Mormugao, India, 533

OLBIA, SARDINIA
(40°55'18'' N., 9°31'24'' E.) to:

Junction Points*
Port Said, U.A.R., 1,278
Strait of Gibraltar, 828

Ports
Bizerte, Tunisia, 236
Genova, Italy, 221
Napoli, Italy, 222

OLONGAPO, PHILIPPINES
(14°49'00'' N., 120°16'30'' E.) to:

Junction Points*
Singapore, 1,335

Ports
Apra, Guam (north of Luzon), 1,663
Hong Kong, B.C.C., 580
Kuching, Sarawak, 992
Pago Pago, American Samoa (via San Bernardino Strait), 4,622
Sai Gon, Vietnam, 872

OLYMPIA, WASHINGTON, U.S.A.
(47°03'06'' N., 122°54'18'' W.)

Add 44 miles to Seattle distances.

OMURA, BONIN ISLANDS
(27°05'20'' N., 142°11'40'' E.) to:

Junction Points*
Panama, Panama, 7,766
Punta Arenas, Chile, 8,765

Ports
Apia, Samoa, 3,641
Apra, Guam, 834
Auckland, New Zealand, 4,366
Avarua, Cook Islands, 4,448
Brisbane, Australia (via Bougainville Strait), 3,455
Callao, Peru, 8,420
Darwin, Australia (via Selat Sele), 2,549
Dutch Harbor, Alaska, U.S.A., 2,853
Hakodate, Japan, 915
Hobart, Tasmania, 4,477
Hong Kong, B.C.C., 1,590
Honolulu, Hawaii, U.S.A., 3,283
Lele, Caroline Islands, 1,772
Levuka, Fiji Islands, 3,533
Melbourne, Australia (via Bougainville Strait), 4,425
Midway Island, Pacific, 2,149
Nagasaki, Japan (via Osumi Kaikyo), 786
Noumae, New Caledonia, 3,325
Papeete, Society Islands, 4,792
Petropavlovsk, U.S.S.R., 1,736
Ponape, Caroline Islands, 1,519
Port Moresby, Papua (via Torres Strait), 3,164
Port Moresby, Papua (west of New Ireland and via China Strait), 2,712
Rabaul, New Britain (via Steffen Strait), 2,007
Saipan, Mariana Islands, 750
San Diego, California, U.S.A., 5,063
San Francisco, California, U.S.A., 4,688
Seattle, Washington, U.S.A., 4,466
Shang-hai, China, 1,130
Sydney, Australia, 3,860
Valparaiso, Chile, 9,023
Vladivostok, U.S.S.R. (via Shimonoseki Kaikyo), 1,292
Wake Island, 1,426
Yokohama, Japan, 523

ONEGA, U.S.S.R.
(63°54'00'' N., 38°06'00'' E.)

Add 102 miles to Arkhangelsk distances.

OOSTENDE, BELGIUM
(51°14'00'' N., 2°55'00'' E.) to:

Junction Points*
Bishop Rock, England, 400
Kiel Canal (east end), Germany, 364
Pentland Firth, Scotland, 509
Skagens Odde, Denmark, 489
Ushant, France, 365

Ports
Aberdeen, Scotland, 406
Amsterdam, Netherlands, 117
Antwerpen, Belgium, 79
Bergen, Norway, 563
Bremerhaven, Germany, 299
Cherbourg, France, 203
Dundee, Scotland, 398
Egersund, Norway, 447
Emden, Germany, 242
Esbjerg, Denmark, 328
Hartlepool, England, 265
Hull, England, 207
Inverness, Scotland, 510
Kristiansand, Norway, 453
Le Havre, France, 168
Leith, Scotland, 396
London, England, 123
Newcastle, England, 291
Oslo, Norway, 596

*JUNCTION POINT.—See Preface for use of junction points.

Plymouth, England, 288
Portland, England, 214
Portsmouth, England, 174
Rotterdam, Netherlands, 86
Southampton, England, 192
Stavanger, Norway, 488
Wilhelmshaven, Germany, 286

OPORTO, PORTUGAL. See Porto.

ORAN, ALGERIA
(35°42'52'' N., 0°38'00'' W.) to:

Junction Points*
Port Said, U.A.R., 1,711
Strait of Gibraltar, 252

Ports
Alcudia, Balearic Islands, 281
Alexandria, U.A.R., 1,590
Algeciras, Spain, 229
Alger, Algeria, 205
Alicante, Spain, 159
Ancona, Italy, 1,349
Annaba, Algeria, 444
Banghazi, Libya, 1,124
Barcelona, Spain, 365
Bari, Italy, 1,142
Bayrut, Lebanon, 1,803
Bizerte, Tunisia, 538
Brindisi, Italy, 1,084
Cagliari, Sardinia, 525
Cannes, France, 594
Cartagena, Spain, 115
Ceuta, Morocco, 232
Civitavecchia, Italy, 703
Genova, Italy, 686
Gibraltar, 237
Haifa, Israel, 1,800
Iraklion, Crete, 1,284
Istanbul, Turkey (via Corinth Canal), 1,573
Istanbul, Turkey (south of Greece), 1,590
Izmir, Turkey (via Corinth Canal), 1,418
Izmir, Turkey (south of Greece), 1,436
La Spezia, Italy, 701
Livorno, Italy, 691
Malaga, Spain, 195
Marseille, France, 536
Melilla, Morocco, 120
Messina, Sicily, 818
Napoli, Italy, 775
Odessa, U.S.S.R. (via Corinth Canal), 1,921
Odessa, U.S.S.R. (south of Greece), 1,938
Palermo, Sicily, 709
Palma, Balearic Islands, 281
Piraievs, Greece (via Corinth Canal), 1,219
Piraievs, Greece (south of Greece), 1,276
Pollenza, Balearic Islands, 346
Rijeka, Yugoslavia, 1,417
Savona, Italy, 672
Sibenik, Yugoslavia, 1,290
Siracusa, Sicily, 823
Skikda, Algeria, 398
Split, Yugoslavia, 1,275
Tarabulus, Libya, 862
Taranto, Italy, 1,037
Tarragona, Spain, 336
Thessaloniki, Greece (via Corinth Canal), 1,467
Thessaloniki, Greece (south of Greece), 1,484
Toulon, France, 545
Trieste, Free Territory, 1,450
Tunis, Tunisia, 589
Valencia, Spain, 238
Valletta, Malta, 774
Venezia, Italy, 1,460
Volos, Greece (via Corinth Canal), 1,408
Volos, Greece (south of Greece), 1,426

ORANGE, TEXAS, U.S.A.
(30°05'20'' N., 93°44'00'' W.)

Add 20 miles to Port Arthur distances.

ORANJESTAD, ARUBA, NETHERLANDS WEST INDIES
(12°31'15'' N., 70°02'45'' W.) to:

Junction Points*
Panama, Panama, 661
Yucatan Channel, 1,024

Ports
Barranquilla, Colombia, 506
Kingston, Jamaica, 223
La Guaira, Venezuela, 207

ORANJESTAD, ST. EUSTATIUS
(17°29'00'' N., 62°59'00'' W.) to:

Junction Points*
Straits of Florida, 1,207

Ports
Guantanamo, Cuba, 771
Port of Spain, Trinidad, 432
Puerto Cabezas, Nicaragua, 1,195
San Juan, Puerto Rico, 195

ORMOS SOUDHAS, CRETE. See Soudha, Ormos Soudhas.

ORNSKOLDSVIK, SWEDEN
(63°16'37'' N., 18°44'20'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 733
Skagens Odde, Denmark, 798

Ports
Helsinki, Finland, 403
Riga, Latvia, 461
Stockholm, Sweden, 274

OSAKA, JAPAN
(34°38'00'' N., 135°26'00'' E.) to:

Junction Points*
Panama, Panama, 7,969

Ports
Aleksandrovsk, U.S.S.R., 1,394
Inchon, Korea, 721
Komatsushima, Japan, 58
Mokpo, Korea, 544
Niihama, Japan, 122
Pago Pago, American Samoa, 4,307
Petropavlovsk, U.S.S.R., 1,709
Shimotsui, Japan, 116
Vladivostok, U.S.S.R., 815
Wonsan, Korea, 627
Yokkaichi, Japan, 236
Yokohama, Japan (via Kii Suido), 359

OSLO, NORWAY
(59°54'20'' N., 10°44'00'' E.) to:

Junction Points*
Bishop Rock, England, 947
Pentland Firth, Scotland, 524
Skagens Odde, Denmark, 131
Ushant, France, 946

Ports
Aarhus, Denmark, 255
Aberdeen, Scotland, 490
Amsterdam, Netherlands, 522
Antwerpen, Belgium, 630
Arendal, Norway, 120
Baltiysk, U.S.S.R. (via Store Baelt), 668
Baltiysk, U.S.S.R. (via The Sound), 551
Bergen, Norway, 378
Bodo, Norway, 885
Bremerhaven, Germany, 427
Calais, France, 634
Cherbourg, France, 784
Dover, England, 640
Dunkerque, France, 617
Egersund, Norway, 238
Emden, Germany, 451
Esbjerg, Denmark, 341

*JUNCTION POINT.—See Preface for use of junction points.

Farsund, Norway, 198
Flekkefjord, Norway, 219
Fredrikstad, Norway, 57
Gdansk, Poland (via Store Baelt), 657
Gdansk, Poland (via The Sound), 540
Goteborg, Sweden, 159
Grimstad, Norway, 135
Hakonsvern, Norway, 371
Halmstad, Sweden, 225
Halsingborg, Sweden, 250
Hamburg, Germany, 461
Hammerfest, Norway (outside route), 1,189
Hammerfest, Norway (inner route), 1,187
Helsingor, Denmark, 249
Hirtshals, Denmark, 145
Hull, England, 559
Kalmar, Sweden (via Store Baelt), 596
Kalmar, Sweden (via The Sound), 464
Klaipeda, Lithuania (via Store Baelt and south of Bornholm), 716
Klaipeda, Lithuania (via The Sound), 584
Kobenhavn, Denmark, 272
Kragero, Norway, 95
Kristiansand, Norway, 163
Kristiansund, Norway, 599
Landskrona, Sweden, 261
Larvik, Norway, 72
Le Havre, France, 752
Leith, Scotland, 546
Leningrad, U.S.R.R. (via Store Baelt), 1,095
Leningrad, U.S.S.R. (via The Sound), 963
Liepaja, Latvia (via Store Baelt and south of Bornholm), 724
Liepaja, Latvia (via Store Baelt and north of Bornholm), 721
Liepaja, Latvia (via The Sound), 589
Lillesand, Norway, 144
Limhamn, Sweden, 279
London, England, 650
Longyearbyen, Svalbard, 1,482
Lulea, Sweden (via Store Baelt), 1,195
Lulea, Sweden (via The Sound), 1,063
Malmo, Sweden, 278
Mandal, Norway, 177
Murmansk, U.S.S.R., 1,469
Narvik, Norway, 988
Newcastle, England, 528
Oostende, Belgium, 596
Plymouth, England, 869
Portland, England, 795
Portsmouth, England, 745
Reykjavik, Iceland, 1,173
Riga, Latvia (via Store Baelt), 871
Riga, Latvia (via The Sound), 739
Risor, Norway, 106
Ronne, Denmark (via Store Baelt), 491
Rosyth, Scotland, 550
Rotterdam, Netherlands, 554
Sogndal, Norway, 228
Southampton, England, 763
Stavanger, Norway, 294
Stockholm, Sweden (via Store Baelt), 819
Stockholm, Sweden (via Sandhamnsleden), 689
Stockholm, Sweden (via Huvudskar), 683
Swinoujscie, Poland (via Store Baelt), 503
Swinoujscie, Poland (via The Sound), 397
Szczecin, Poland (via The Sound), 431
Travemunde, Germany (via Store Baelt), 389
Travemunde, Germany (via The Sound), 410
Trelleborg, Sweden (via Store Baelt), 467
Trelleborg, Sweden (via The Sound), 314
Tromso, Norway, 1,069
Trondheim, Norway, 688
Turku, Finland (via Store Baelt), 892
Turku, Finland (via The Sound), 764
Tvedestrand, Norway, 121
Uusikaupunki, Finland (via Store Baelt), 939
Uusikaupunki, Finland (via The Sound), 808
Vysotsk, U.S.S.R. (via Store Baelt), 1,047
Vysotsk, U.S.S.R. (via The Sound), 925
Wilhelmshaven, Germany, 421
Zeebrugge, Belgium, 586

OSTENDE, BELGIUM. See Oostende.

OTARU, JAPAN
(43°12′00″ N., 141°01′00″ E.) to:

Ports
Bukhta Broutona, Kuril Islands, 597
De-Kastri, U.S.S.R., 505
Honto, U.S.S.R., 213
Kasatka, Japan, 441
Matsugahama, Japan, 435
Rumoi, Japan, 57
Shang-hai, China, 1,233
Shelekhovo, Kuril Islands, 784
Slavnoye, Kuril Islands, 442
Tomari, Japan, 387
Unggi, Korea, 188

OTOMARI, SAKHALIN, U.S.S.R. See Korsakov.

OUESSANT, ILE D', FRANCE. See Ushant.

OULU, FINLAND
(65°02′00″ N., 25°23′00″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 918
Skagens Odde, Denmark, 979

Ports
Helsinki, Finland, 598
Jakobstad, Finland, 133
Stockholm, Sweden, 456

OXELOSUND, SWEDEN
(58°39′52″ N., 17°06′32″ E.) to:

Junction Points*
Kiel Canal (east end), Germany, 420
Skagens Odde, Denmark, 481

Ports
Gdynia, Poland, 266
Helsinki, Finland, 268
Klaipeda, Lithuania, 232

PAARDEN BAAI, ARUBA, NETHERLANDS WEST INDIES. See Oranjestad.

PADANG, INDONESIA
(1°00′00″ S., 100°22′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,979
Singapore, 1,011
Sunda Strait, Indonesia, 488

Ports
Durban, Republic of South Africa, 4,307
Penang, Malaysia, 931
Tjilatjap, Indonesia, 738
Trincomalee, Ceylon, 1,301

PAGODA ANCHORAGE, CHINA. See Lo-hsing-ta Mao-ti.

*JUNCTION POINT.—See Preface for use of junction points.

PAGO PAGO, AMERICAN SAMOA
(14°16'30'' S., 170°41'00'' W.) to:

Junction Points*
Panama, Panama, 5,656
Punta Arenas, Chile, 5,181
Torres Strait, Australia (via Raine Island entrance), 2,848
Wilson Promontory, Australia, 2,707

Ports
Acapulco, Mexico, 4,595
Aleksandrovsk, U.S.S.R. (via Nemuro Strait and La Perouse Strait), 4,765
Antofagasta, Chile, 5,604
Aomori, Japan, 4,358
Apia, Samoa, 80
Apra, Guam, 3,156
Auckland, New Zealand, 1,565
Avarua, Cook Islands, 750
Baie du Controleur, Marquesas, 1,835
Brisbane, Australia, 2,221
Butaritari, Gilbert Islands, 1,453
Canton, Phoenix Islands, 711
Chimbote, Peru, 5,389
Ching-tao, China, 4,969
Christmas Island, North Pacific, 1,256
Dutch Harbor, Alaska, U.S.A., 4,132
Guayaquil, Ecuador, 5,450
Hai-kou, Hai-nan Tao, 5,130
Hakodate, Japan, 4,326
Hobart, Tasmania, 2,783
Hong Kong, B.C.C., 4,948
Honolulu, Hawaii, U.S.A., 2,276
Howland Island, 989
Hsia-men, China, 4,819
Jaluit, Marshall Islands, 1,700
Jarvis Island, 1,050
Kobe, Japan, 4,308
Kodiak, Alaska, U.S.A., 4,441
Kuang-chou, China, 5,038
Lele, Caroline Islands, 1,969
Levuka, Fiji Islands, 643
Los Angeles, California, U.S.A., 4,163
Manila, Philippines, 4,519
Melbourne, Australia, 2,851
Midway Island, Pacific, 2,593
Nagasaki, Japan, 4,489
Nikolayevsk, U.S.S.R. (via Nemuro Strait and La Perouse Strait), 4,913
Nome, Alaska, U.S.A., 4,748
Noumea, New Caledonia (via Kandavu Passage), 1,416
Nukualofa, Tonga Islands, 490
Ocean Island, 1,409
Olongapo, Philippines (via San Bernardino Strait), 4,622
Osaka, Japan, 4,307
Palmyra Island, 1,320
Papeete, Society Islands, 1,236
Petropavlovsk, U.S.S.R., 4,350
Ponape, Caroline Islands, 2,266
Portland, Oregon, U.S.A., 4,525
Prince Rupert, Canada, 4,652
Pusan, Korea (via Bungo Suido), 4,561
Sai Gon, Vietnam, 5,216
Salina Cruz, Mexico, 4,839
San Diego, California, U.S.A., 4,176
San Francisco, California, U.S.A., 4,150
Seattle, Washington, U.S.A., 4,611
Seward, Alaska, U.S.A., 4,589
Shang-hai, China (via Tokara Kaikyo), 4,794
Shimonoseki, Japan, 4,440
Sitka, Alaska, U.S.A., 4,635
Suva, Fiji Islands, 688
Sydney, Australia, 2,377
Ta-ku, China, 5,194
Ta-lien, China, 5,035
Teluk Kau, Halmahera, 3,819
Truk, Carolina Islands, 2,603
Valparaiso, Chile, 5,378
Vancouver, Canada, 4,637
Victoria, Canada, 4,563
Vladivostok, U.S.S.R., 4,739
Wake Island, 2,436
Wellington, New Zealand, 1,847
Wonsan, Korea, 4,816
Wotje Island, Marshall Islands, 1,856
Yin-hsien, China (via Shih-peng Chiang), 4,757
Yokohama, Japan, 4,135

PALEMBANG, INDONESIA
(3°00'00'' S., 104°45'00'' E.) to:

Junction Points*
Singapore, 304
Sunda Strait, Indonesia, 362

Ports
Djakarta, Indonesia, 358
Sai Gon, Vietnam, 869
Surabaja, Indonesia, 638

PALERMO, SICILY, ITALY
(38°07'43'' N., 13°22'12'' E.) to:

Junction Points*
Port Said, U.A.R., 1,061
Strait of Gibraltar, 940

Ports
Alexandria, U.A.R., 950
Algeciras, Spain, 924
Alger, Algeria, 513
Alicante, Spain, 667
Ancona, Italy, 652
Annaba, Algeria, 292
Augusta, Sicily, 187
Banghazi, Libya, 547
Barcelona, Spain, 574
Bari, Italy, 445
Bayrut, Lebanon, 1,143
Bizerte, Tunisia, 192
Brindisi, Italy, 387
Cagliari, Sardinia, 221
Cartagena, Spain, 697
Castellamare di Stabia, Italy, 168
Catania, Sicily, 170
Ceuta, Morocco, 921
Civitavecchia, Italy, 253
Genova, Italy, 431
Gibraltar, 922
Haifa, Israel, 1,139
Iraklion, Crete, 626
Istanbul, Turkey (via Corinth Canal), 884
Istanbul, Turkey (south of Greece), 926
Izmir, Turkey (via Corinth Canal), 730
Izmir, Turkey (south of Greece), 772
La Spezia, Italy, 395
Livorno, Italy, 359
Malaga, Spain, 870
Marseille, France, 495
Messina, Sicily, 120
Napoli, Italy, 170
Odessa, U.S.S.R. (via Corinth Canal), 1,232
Odessa, U.S.S.R. (south of Greece), 1,274
Oran, Algeria, 709
Palma, Balearic Islands, 531
Piraievs, Greece (via Corinth Canal), 531
Piraievs, Greece (south of Greece), 612
Porto di Milazzo, Sicily, 97
Porto di Reggio Calabria, Sicily, 124
Rijeka, Yugoslavia, 719
Salerno, Italy, 167
Savona, Italy, 434
Sibenik, Yugoslavia, 593
Siracusa, Sicily, 192
Split, Yugoslavia, 578
Taormina, Sicily, 147
Tarabulus, Libya, 460
Taranto, Italy, 339
Terracina, Italy, 191
Thessaloniki, Greece (via Corinth Canal), 779
Thessaloniki, Greece (south of Greece), 820
Toulon, France, 464
Trieste, Free Territory, 753
Tunis, Tunisia, 193
Valencia, Spain, 656
Valletta, Malta, 242
Venezia, Italy, 763
Villa San Giovanni, Italy, 118
Volos, Greece (via Corinth Canal), 720
Volos, Greece (south of Greece), 761

*JUNCTION POINT.—See Preface for use of junction points.

PALMA, BALEARIC ISLANDS
(39°33'52'' N., 2°38'17'' E.) to:

Junction Points*
Port Said, U.A.R., 1,555
Strait of Gibraltar, 471

Ports
Alexandria, U.A.R., 1,435
Alicante, Spain, 173
Almeria, Spain, 308
Ancona, Italy, 1,170
Annaba, Algeria, 307
Banghazi, Libya, 970
Barcelona, Spain, 140
Bari, Italy, 963
Bayrut, Lebanon, 1,648
Bejaia, Algeria, 212
Bizerte, Tunisia, 384
Brindisi, Italy, 905
Cannes, France, 357
Cartagena, Spain, 222
Ceuta, Morocco, 452
Genova, Italy, 448
Gibraltar, 453
Golfe-Juan, France, 365
Haifa, Israel, 1,645
Iraklion, Crete, 1,130
Istanbul, Turkey (via Corinth Canal), 1,403
Istanbul, Turkey (south of Greece), 1,446
Izmir, Turkey (via Corinth Canal), 1,248
Izmir, Turkey (south of Greece), 1,290
La Spezia, Italy, 474
Livorno, Italy, 470
Malaga, Spain, 401
Marseille, France, 300
Mentone, France, 382
Messina, Sicily, 639
Monaco, Monaco, 377
Napoli, Italy, 582
Odessa, U.S.S.R. (via Corinth Canal), 1,751
Odessa, U.S.S.R. (south of Greece), 1,792
Oran, Algeria, 281
Palermo, Sicily, 531
Piraievs, Greece (via Corinth Canal), 1,049
Piraievs, (south of Greece), 1,131
Rijeka, Yugoslavia, 1,238
St. Raphael, France, 347
Sant Antioco Ponti, Sardinia, 298
Savona, Italy, 433
Sibenik, Yugoslavia, 1,112
Siracusa, Sicily, 668
Split, Yugoslavia, 1,096
Tarabulus, Libya, 708
Taranto, Italy, 858
Tarragona, Spain, 134
Thessaloniki, Greece (via Corinth Canal), 1,297
Thessaloniki, Greece (south of Greece), 1,339
Toulon, France, 308
Trieste, Free Territory, 1,271
Tunis, Tunisia, 435
Valencia, Spain, 146
Valletta, Malta, 619
Venezia, Italy, 1,281
Volos, Greece (via Corinth Canal), 1,238
Volos, Greece (south of Greece), 1,280

PALMYRA ISLAND, NORTH PACIFIC
(5°52'30'' N., 162°08'00'' W.) to:

Junction Points*
Panama, Panama, 4,994
Singapore, 5,741
Torres Strait, Australia (via Raine Island entrance), 3,593

Ports
Apra, Guam, 3,194
Auckland, New Zealand, 2,875
Baie du Controleur, Marquesas, 1,608
Canton, Phoenix Islands, 775
Ching-tao, China, 4,660
Christmas Island, North Pacific, 368
Dutch Harbor, Alaska, U.S.A., 2,918
Guayaquil, Ecuador, 5,007
Hai-kou, Hai-nan Tao, China, 5,147
Hong Kong, B.C.C., 4,922
Honolulu, Hawaii, U.S.A., 959
Johnston Island, 783
Kahului, Hawaii, U.S.A., 1,010
Kodiak, Alaska, U.S.A., 3,162
Los Angeles, California, U.S.A., 2,959
Manila, Philippines (via San Bernardino Strait), 4,675
Midway Island, 1,602
Noumea, New Caledonia, 2,870
Pago Pago, American Samoa, 1,320
Papeete, Society Islands, 1,590
Pearl Harbor, Hawaii, U.S.A., 960
Sai Gon, Vietnam (via San Bernardino Strait), 5,480
San Diego, California, U.S.A., 2,983
San Francisco, California, U.S.A., 2,892
Seattle, Washington, U.S.A., 3,307
Shang-hai, China, 4,540
Sitka, Alaska, U.S.A., 3,323
Surabaja, Indonesia, 5,263
Suva, Fiji Islands, 1,864
Sydney, Australia, 3,561
Taio Hae, Marquesas, 1,596
Truk, Caroline Islands, 2,747
Valparaiso, Chile, 5,621
Vladivostok, U.S.S.R., 4,136
Wake Island, 1,996
Yokohama, Japan, 3,680

PANAMA, PANAMA*
(8°53'00'' N., 79°31'00'' W.) to:

Junction Points*
Bishop Rock, England (via Mona Passage), 4,388
Montreal, Canada, 3,204
Punta Arenas, Chile, 3,932
Singapore (via San Bernardino Strait), 10,505
Strait of Gibraltar (via Anegada Channel), 4,351
Torres Strait, Australia (via Raine Island entrance), 8,451
Wilson Promontory, Australia (via Foveaux Strait), 7,770
Wilson Promontory, Australia (via Cook Strait), 7,842
Yucatan Channel, 855

Ports
Abraham Bay, Bahamas, 922
Acajutla, El Salvador, 833
Acapulco, Mexico, 1,426
Almirante, Panama, 198
Alvaro Obregon, Mexico, 1,361
Amapala, Honduras, 745
Amuay, Venezuela, 678
Angra dos Reis, Brazil, 4,527
Antilla, Cuba, 887
Antofagasta, Chile, 2,140
Apalachicola, Florida, U.S.A., 1,330
Apia, Samoa, 5,710
Apra, Guam, 7,988
Archipielago de Colon, 864
Arica, Chile, 1,921
Auckland, New Zealand, 6,516
Avarua, Cook Islands, 5,092
Bahia Blanca, Argentina, 5,776
Bahia de Samana, Dominican Republic, 1,015
Bahia Magdalena, Mexico, 2,265
Baie du Controleur, Marquesas, 3,823
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,944
Barahona, Dominican Republic, 796
Barbers Point, Hawaii, U.S.A., 4,694
Barcelona, Venezuela, 1,014
Barrow, Alaska, U.S.A., 6,383
Belize, British Honduras, 859
Bikini, Marshalls, 4,915
Bluefields, Nicaragua, 319
Bocas del Toro, Panama, 187
Bordeaux, France (via Mona Passage), 4,641

*JUNCTION POINT.—See Preface for use of junction points.

Boston, Massachusetts, U.S.A. (Nantucket Light Vessel, and via Crooked Island Passage and Windward Passage), 2,200
Bridgeport, Connecticut, U.S.A., 2,118
Bridgetown, Barbados, 1,280
Brisbane, Australia, 7,687
Brunswick, Georgia, U.S.A., 1,581
Buenaventura, Colombia, 352
Butaritari, Gilbert Islands, 6,515
Cabedelo, Brazil, 3,149
Caibarien, Cuba, 1,138
Caldera, Chile, 2,302
Caldera Bay, Dominican Republic, 810
Caleta Olivia, Argentina, 6,204
Callao, Peru, 1,350
Campeche, Mexico, 1,210
Canton, Phoenix Islands, 5,623
Cap Haitien, Haiti, 860
Cape Town, Republic of South Africa, 6,508
Carmen, Mexico, 1,289
Cartagena, Colombia, 324
Carupano, Venezuela, 1,088
Casilda, Cuba, 792
Castries, St. Lucia, 1,203
Catia la Mar, Venezuela, 873
Cayenne, French Guiana, 2,308
Champerico, Guatemala, 954
Charleston, South Carolina, U.S.A., 1,607
Charlotte Amalie, Virgin Islands, 1,072
Charlottetown, Canada, 2,578
Chimbote, Peru, 1,158
Ching-tao, China, 8,575
Christmas Island, North Pacific, 4,751
Cienfuegos, Cuba, 815
Cockburn Town, Bahamas, 1,017
Colon, Panama, 44
Comodoro Rivadavia, Argentina, 6,185
Coquimbo, Chile, 2,448
Corinto, Nicaragua, 683
Corral, Chile, 2,983
Covenas, Cuba, 308
Dakar, Senegal, 3,738
Dutch Harbor, Alaska, U.S.A., 5,246
Enderbury Island, Phoenix Islands, 5,599
Eniwetok, Marshall Islands, 7,086
Ensenada, Mexico, 2,791
Esmeraldas, Ecuador, 472
Exuma Harbor, Bahamas, 1,039
Fanning Island, 4,805
Fort de France, Martinique, 1,202
Fort Liberte, Haiti, 881
Frederikshaab, Greenland, 3,558
Funafuti Island, Ellice Islands, 6,217
Galveston, Texas, U.S.A., 1,536
Georgetown, British Guiana, 1,558
Golfito, Costa Rica, 334
Gonaives, Haiti, 805
Grand Turk, Grand Turk Island, 947
Guantanamo, Cuba, 732
Guayaquil, Ecuador, 824
Guaymas, Mexico, 2,370
Guiria, Venezuela, 1,200
Gulfport, Mississippi, U.S.A. (northbound), 1,431
Hai-kou, Hai-nan Tao, China, 9,359
Haina, Dominican Republic, 845
Hakodate, Japan, 7,417
Halifax, Canada, 2,338
Hamilton, Bermuda, 1,702
Hilo, Hawaii, U.S.A., 4,527
Hobart, Tasmania, 7,630
Hong Kong, B.C.C., 9,195
Honolulu, Hawaii, U.S.A., 4,685
Hopetown, Bahamas, 1,203
Hot Springs Bay, Alaska, U.S.A., 5,653
Hsia-men, China (via Osumi Kaikyo), 8,943
Hsia-men, China (via Tsugaru Kaikyo), 8,959
Iloilo, Philippines, 9,235
Inchon, Korea, 8,474
Iquique, Chile, 1,987
Isabel Segunda, Isla de Vieques, 1,060
Isla de Pascua, Pacific, 2,785
Jacksonville, Florida, U.S.A., 1,559
Jacmel, Haiti, 726
Jaluit, Marshall Islands, 6,666
Jarvis Island, 1,173
Jeremi, Haiti, 713
Johnston Island, 5,359
Kahului, Hawaii, U.S.A., 4,605
Kaneohe Bay, Hawaii, U.S.A., 4,686
Kaunakakai, Hawaii, U.S.A., 4,633
Key West, Florida, U.S.A., 1,108
Kingston, Jamaica, 594
Kobe, Japan, 7,964
Kodiak, Alaska, U.S.A., 4,907
Kuang-chou, China, 9,201
La Ceiba, Honduras, 709
La Guaira, Venezuela, 884
La Libertad, Ecuador, 674
La Libertad, El Salvador, 806
La Libertad, Mexico, 2,534
La Palma, Panama, 104
La Romana, Dominican Republic, 889
La Union, El Salvador, 748
Lele, Caroline Islands, 7,059
Les Cayes, Haiti, 688
Levuka, Fiji Islands, 6,288
Limon, Costa Rica, 234
Livingston, Guatemala, 815
Los Angeles, California, U.S.A., 2,913
Lota, Chile, 2,825
Makasar, Celebes (via Selat Sagewin and Selat Salajar), 9,855
Malakal, Palau Islands, 8,674
Maldonado, Uruguay, 5,352
Manila, Philippines (via Balintang Channel), 9,347
Manila, Philippines (via San Bernardino Strait), 9,370
Manzanillo, Cuba, 732
Maracaibo, Venezuela, 737
Mar del Plata, Argentina, 5,543
Matagorda Bay, Texas, U.S.A., 1,558
Matarani, Peru, 1,790
Mazatlan, Mexico, 2,006
Melbourne, Australia (via Foveaux Strait), 7,928
Midway Island, 5,707
Miller Anchorage, Bahamas, 1,115
Mollendo, Peru, 1,796
Montecristi, Dominican Republic, 881
Monterey, California, U.S.A., 3,165
Montevideo, Uruguay, 5,379
Nagasaki, Japan (east of Honshu), 8,200
Nagasaki, Japan (west of Honshu), 8,299
Naknek, Alaska, U.S.A., 5,604
Nassau, Bahamas (via Windward Passage), 1,210
New Amsterdam, British Guiana, 1,581
New Haven, Connecticut, U.S.A., 2,106
New Orleans, Louisiana, U.S.A. (northbound via South Pass), 1,444
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2,018
Newcastle, Australia, 7,654
Nicaro, Cuba, 881
Nikolayevsk, U.S.S.R. (south of Aleutian Islands), 7,293
Nikolayevsk, U.S.S.R. (via Unimak Passage), 7,296
Nome, Alaska, U.S.A., 5,834
Nonouti, Gilbert Islands, 6,439
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,822
Noumea, New Caledonia, 6,982
Nukualofa, Tonga Islands, 5,953
Ocean Island, 6,724
Omura, Japan, 7,766
Oranjestad, Aruba, 661
Osaka, Japan, 7,969
Pago Pago, American Samoa, 5,656
Palmyra Island, 4,994
Papeete Society Islands, 4,493
Paramaribo, Surinam, 1,691
Paranagua, Brazil, 4,607
Pearl Harbor, Hawaii, U.S.A., 4,692
Pedernales, Venezuela, 1,224
Pedregal, Panama, 308
Petropavlovsk, U.S.S.R., 6,492

*JUNCTION POINT.—See Preface for use of junction points.

Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,989
Pisagua, Chile, 1,962
Pisco, Peru, 1,458
Pointe a Pitre, Guadeloupe, 1,211
Ponape, Caroline Islands, 7,321
Ponce, Puerto Rico, 976
Port Antonio, Jamaica, 625
Port au Prince, Haiti, 817
Port Gallegos, Argentina, 6,455
Port Hueneme, California, U.S.A., 2,958
Port of Spain, Trinidad, 1,202
Port Pirie, Australia, 8,467
Port Plata, Dominican Republic, 942
Portland, Maine, U.S.A. (Nantucket Light Vessel, via Crooked Island Passage and Windward Passage), 2,241
Portland, Oregon, U.S.A., 3,869
Porto Alegre, Brazil, 5,148
Prince Rupert, Canada, 4,303
Progreso, Mexico, 1,069
Puerto Armuelles, Panama, 306
Puerto Barrios, Guatemala, 823
Puerto Cabello, Venezuela, 845
Puerto Cabezas, Nicaragua, 390
Puerto Cayo Moa, Cuba, 853
Puerto Colombia, Colombia, 358
Puerto Concepcion, Argentina, 6,067
Puerto Cortez, Honduras, 776
Puerto Cumarebo, Venezuela, 740
Puerto Descado, Argentina, 6,222
Puerto de Hierro, Venezuela, 1,192
Puerto la Cruz, Venezuela, 1,016
Puerto Madryn, Argentina, 6,012
Puerto Manati, Cuba, 959
Puerto Masachapa, Nicaragua, 619
Puerto Mexico, Mexico, 1,420
Puerto Montt, Chile, 3,177
Puerto Padre, Cuba, 948
Puerto Somoza, Nicaragua, 649
Puerto Sucre, Venezuela, 1,035
Puerto Tanamo, Cuba, 869
Puerto Vita, Cuba, 915
Punta Cardon, Venezuela, 674
Puntarenas, Costa Rica, 471
Quepos, Costa Rica, 415
Quequen, Argentina, 5,202
Rabaul, New Britain, 7,807
Raoul Island, Kermadec Islands, 6,125
Rio Grande, Argentina, 6,513
Rio Yateras, Cuba, 743
Rongelap, Marshall Islands, 4,843
Roosevelt Roads, Puerto Rico, 1,054
Rotoava, Tuamotu Archipelago, 4,256
Sai Gon, Vietnam, 10,017
St. Georges, Grenada, 1,161
St. John, Canada, 2,361
St. John's, Canada, 2,742
St. Louis, Marie Galante, 1,850
St. Marc, Haiti, 796
Salaverry, Peru, 1,109
Salina Cruz, Mexico, 1,170
Salvador, Brazil, 3,741
San Antonio, Chile, 2,644
San Blas, Mexico, 1,914
San Diego, California, U.S.A., 2,843
San Felix, Venezuela, 1,535
San Fernando, Trinidad, 1,202
San Francisco, California, U.S.A., 3,245
San Jose, Guatemala, 886
San Juan, Peru, 1,590
San Juan, Puerto Rico, 1,036
San Juan del Norte, Nicaragua, 289
San Juan del Sur, Nicaragua, 590
San Lorenzo, Honduras, 762
Sanchez, Dominican Republic, 1,024
Sand Bay, Alaska, U.S.A., 5,569
Santa Barbara, California, U.S.A., 2,980
Santa Barbara de Samana, Dominican Republic, 1,007
Santa Cruz del Sur, Cuba, 731
Santa Maria, Cuba, 814
Santa Rosalia, Mexico, 2,390
Santiago de Cuba, Cuba, 726
Santo Domingo, Dominican Republic, 846
Santos, Brazil, 4,609
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,606
Seattle, Washington, U.S.A., 4,020
Selwyn Bay, Solomon Islands, 7,248
Seward, Alaska, U.S.A., 4,916
Shang-hai, China (via Tsugaru Kaikyo), 8,566
Shang-hai, China (Osumi Kaikyo), 8,648
Shimonoseki, Japan (east of Honshu), 8,153
Shimonoseki, Japan (west of Honshu), 8,081
Sitka, Alaska, U.S.A., 4,524
Skagway, Alaska, U.S.A., 4,739
Surgidero de Batabano, Cuba, 970
Suva, Fiji Islands, 6,325
Swan Island, 605
Sweeper Cove, Alaska, U.S.A., 5,586
Sydney, Australia, 7,674
Taio Hae, Marquesas, 3,826
Ta-ku, China (via Tsugaru Kaikyo), 8,786
Ta-ku, China (via Osumi Kaikyo), 9,002
Talara, Peru, 826
Talcahuano, Chile, 2,805
Ta-lien, China (via Tsugaru Kaikyo), 8,627
Ta-lien, China (via Osumi Kaikyo), 8,843
Taltal, Chile, 2,225
Tampico, Mexico, 1,528
Tela, Honduras, 749
Tocopilla, Chile, 2,068
Truk, Caroline Islands, 7,685
Turiamo, Venezuela, 858
Tuxpan, Mexico, 1,498
Unalakleet, Alaska, U.S.A., 5,967
Valparaiso, Chile, 2,616
Vancouver, Canada, 4,032
Veracruz, Mexico, 1,463
Victoria, Canada, 3,962
Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 7,833
Vladivostok, U.S.S.R. (south of Aleutian Islands, and La Perouse Strait), 7,739
Vladivostok, U.S.S.R. (north of Aleuian Islands, and La Perouse Strait), 7,757
Vladivostok, U.S.S.R. (November–March), 8,340
Wake Island, 6,673
Washington, D.C., U.S.A., 1,957
Wellington, New Zealand, 6,505
Whittier, Alaska, U.S.A., 4,958
Willemstad, Curacao, 742
Wilmington, North Carolina, U.S.A., 1,656
Wonsan, Korea, 8,038
Wotho, Marshall Islands, 4,882
Yin-hsien, China (via Shih-peng Chiang), 8,604
Yokohama, Japan, 7,682
Zamboanga, Philippines, 9,431

PANSIO, FINLAND
(60°26′12″ N., 22°08′54″ E.)

Use Turku distances.

PAPEETE, TAHITI, SOCIETY ISLANDS
(17°32′00″ S., 149°34′00″ W.) to:

Junction Points*
Panama, Panama, 4,493
Punta Arenas, Chile, 4,233
Torres Strait, Australia (via Raine Island entrance), 4,043
Wilson Promontory, Australia, 3,546

Ports
Acapulco, Mexico, 3,595
Apia, Samoa, 1,301
Apra, Guam, 4,335
Auckland, New Zealand, 2,216
Avarua, Cook Islands, 618

*JUNCTION POINT.—See Preface for use of junction points.

Baie du Controleur, Marquesas, 765
Brisbane, Australia, 3,234
Butaritari, Gilbert Islands, 2,560
Callao, Peru, 4,192
Canton, Phoenix Islands, 1,581
Chimbote, Peru, 4,157
Ching-tao, China, 6,046
Christmas Island, North Pacific, 1,266
Dutch Harbor, Alaska, U.S.A., 4,400
Funafuti, Ellice Islands, 1,910
Guayquil, Ecuador, 4,237
Hai-kou, Hai-nan Tao, China, 6,327
Hakodate, Japan, 5,249
Hobart, Tasmania, 3,563
Hong Kong, B.C.C., 6,132
Honolulu, Hawaii, U.S.A., 2,381
Hsia-men, China, 6,001
Johnston Island, 2,371
Kodiak, Alaska, U.S.A., 4,532
Kuang-chou, China, 6,227
Levuka, Fiji Islands, 1,831
Los Angeles, California, U.S.A., 3,571
Manila, Philippines, 5,728
Melbourne, Australia, 3,691
Midway Island, 3,190
Nagasaki, Japan, 5,572
Noumea, New Caledonia, 2,497
Nukualofa, Tonga Islands, 1,468
Ocean Island, 2,609
Omura, Bonin Islands, 4,792
Pago Pago, American Samoa, 1,236
Palmyra Island, 1,590
Petropavlovsk, U.S.S.R., 5,009
Ponape, Caroline Islands, 3,430
Rabaul, New Britain, 3,527
Raoul Island, Kermadec Islands, 1,706
Rotoava, Tuamotu Archipelago, 244
Sai Gon, Vietnam, 6,443
San Diego, California, U.S.A., 3,554
San Francisco, California, U.S.A., 3,663
Seattle, Washington, U.S.A., 4,296
Seward, Alaska, U.S.A., 4,661
Shang-hai, China, 5,907
Sitka, Alaska, U.S.A., 4,537
Suva, Fiji Islands, 1,838
Sydney, Australia, 3,308
Taio Hae, Marquesas, 761
Ta-ku, China, 6,281
Truk, Caroline Islands, 3,788
Valparaiso, Chile, 4,254
Vladivostok, U.S.S.R., 5,663
Wake Island, 3,401
Wellington, New Zealand, 2,348
Yap Island, Caroline Islands, 4,585
Yin-hsien, China (via Shih-peng Chiang), 5,875
Yokohama, Japan, 5,140

PAPHOS, CYPRUS
(34°44'30'' N., 32°24'00'' E.) to:

Junction Points*
Port Said, U.A.R., 482
Strait of Gibraltar, 1,872

Ports
Alexandria, U.A.R., 256
Haifa, Israel, 449
Iraklion, Crete, 363

PARA, BRAZIL. See Belem.

PARAMARIBO, SURINAM
(5°49'20'' N., 55°09'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,602
Fastnet, Ireland, 3,554
Montreal, Canada (via Strait of Canso), 3,150
Panama, Panama, 1,691
Strait of Gibraltar, 3,275
Straits of Florida (via Mona Passage), 2,014
Ushant, France, 3,613

Ports
Baltimore, Maryland, U.S.A., 2,321
Belem, Brazil, 747
Boston, Massachusetts, U.S.A., 2,380
Bridgetown, Barbados, 496
Buenos Aires, Argentina, 3,813
Cayenne, French Guiana, 224
Dakar, Senegal, 2,315
Georgetown, British Guiana, 215
Hamilton, Bermuda, 1,694
La Guaira, Venezuela, 832
Natal, Brazil, 1,476
New York, New York, U.S.A., 2,334
Philadelphia, Pennsylvania, U.S.A., 2,327
Pointe a Pitre, Guadeloupe, 737
Port of Spain, Trinidad, 546
Puerto Cabello, Venezuela, 887
Rio de Janeiro, Brazil, 2,713
St. Georges, Grenada, 560
St. John's, Canada, 2,518
Willemstad, Curacao, 955
Wilmington, North Carolina, U.S.A., 2,148

PARANAGUA, BRAZIL
(25°30'00'' S., 48°31'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 3,496
Panama, Panama, 4,607
Punta Arenas, Chile, 2,001

Ports
Montevideo, Uruguay, 797
Santos, Brazil, 163

PARANAM, SURINAM
(5°36'30'' N., 55°05'12'' W.)

Add 21 miles to Paramaribo distances.

PARRSBORO, CANADA
(45°22'00'' N., 64°18'00'' W.) to:

Ports
Boston, Massachusetts, U.S.A., 349
Halifax, Canada, 330
New York, New York, U.S.A., 591
Norfolk, Virginia, U.S.A., 784
Philadelphia, Pennsylvania, U.S.A., 743
St. John, Canada, 80
Sydney, Canada, 545

PASAJES DE SAN JUAN, SPAIN. See Puerto de Pasajes.

PASO, CHINA. See Chang-kan.

PA-SO-TAN, CHINA. See Chang-kan.

PASUO, CHINA. See Chang-kan.

PATRAI, GREECE
(38°15'08'' N., 21°43'53'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 690
Port Said, U.A.R. (south of Greece), 762
Strait of Gibraltar, 1,350

Ports
Civitavecchia, Italy, 612
Constanta, Rumania (via Corinth Canal), 653
Constanta, Rumania (south of Greece), 811
Derince, Turkey (via Corinth Canal), 489
Derince, Turkey (south of Greece), 648
Iskenderun, Turkey (via Corinth Canal), 748
Iskenderun, Turkey (south of Greece), 846
Jaffa, Israel (via Corinth Canal), 752
Jaffa, Israel (south of Greece), 837

*JUNCTION POINT.—See Preface for use of junction points.

Kerch, U.S.S.R. (via Corinth Canal), 890
Kerch, U.S.S.R. (south of Greece), 1,049
Kerkira, Greece, 138
Larnaca, Cyprus (via Corinth Canal), 658
Larnaca, Cyprus (south of Greece), 750
Mersin, Turkey (via Corinth Canal), 690
Mersin, Turkey (south of Greece), 789
Napoli, Italy, 485
Nice, France, 825
Pula, Yugoslavia, 555

PATRAS, GREECE. See Patrai.

PAULILLAC, FRANCE
(45°12'00'' N., 0°43'45'' W.)

Subtract 24½ miles from Bordeau distances.

PEARL HARBOR, HAWAII, U.S.A.
(21°20'00'' N., 157°58'20'' W.) to:

Junction Points*
Panama, Panama, 4,692

Ports
Amapala, Honduras, 4,045
Christmas Island, North Pacific, 1,157
Eniwetok, Marshall Islands, 2,347
Jaluit, Marshall Islands, 2,101
Los Angeles, California, U.S.A., 2,233
Palmyra Island, Pacific, 960
San Diego, California, U.S.A., 2,285

PECHENGA, U.S.S.R.
(69°35'00'' N., 31°17'00'' E.) to:

Junction Points*
Skagens Odde, Denmark, 1,325

Ports
Kirkens, Norway, 53
Longyearbyen, Svalbard, 638
Narvik, Norway, 500
Reykjavik, Iceland, 1,460

PEDERNALES, VENEZUELA
(9°58'45'' N., 62°15'00'' W.) to:

Junction Points*
Panama, Panama, 1,224
Yucatan Channel, 1,567

Ports
Belem, Brazil, 1,191
Charlotte Amalie, Virgin Islands, 562
La Guaira, Venezuela, 359

PEDREGAL, PANAMA
(8°22'00'' N., 82°26'12'' W.) to:

Junction Points*
Panama, Panama, 308

Ports
Acapulco, Mexico, 1,184
Callao, Peru, 1,313

PEENEMUNDE, GERMANY
(54°08'00'' N., 13°46'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 185
Skagens Odde, Denmark, 272

Ports
Gdynia, Poland, 220
Kobenhavn, Denmark, 128
Rauma, Finland, 555
Stockholm, Sweden, 422

PEI-HAI, CHINA
(21°29'00'' N., 109°02'00'' E.) to:

Junction Points*
Singapore, 1,332

Ports
Cebu, Philippines, 1,220
Hong Kong, B.C.C., 391
Sai Gon, Vietnam, 837

PEI-LI, CHINA. See Chang-kan.

PELEW ISLANDS. See Malakal, Palau Islands.

PENANG, MALAYSIA
(5°25'00'' N., 100°21'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,291
Port Said, U.A.R., 4,733
Singapore, 367

Ports
Aden, Aden Protectorate, 3,344
Akyab, Burma, 1,215
Al Bahrayn, Behrain, 3,361
Al Basrah, Iraq, 3,598
Al Kuwayt, Kuwait, 3,545
Antsirana, Malayasy Republic, 3,266
Ao Phuket, Thailand, 187
Bassein, Burma, 786
Beira, Mozambique (north of Madagascar), 4,232
Berbera, Somali Republic (south of Socotra), 3,358
Bombay, India, 2,154
Bushehr, Iran, 3,417
Calcutta, India, 1,294
Calicut, India, 1,654
Chalna, Pakistan, 1,228
Chittagong, Pakistan, 1,167
Cocanada, India, 1,273
Colombo, Ceylon, 1,285
Dar es Salaam, Tanganyika, 3,754
Diego Garcia, Chagos Archipelago, 1,905
Durban, Republic of South Africa, 4,584
East London, Republic of South Africa, 4,794
Fort Dauphin, Malagasy Republic, 3,687
Karachi, Pakistan, 2,595
Lourenco Marques, Mozambique (south of Madagascar), 4,481
Madras, India, 1,283
Majunga, Malagasy Republic, 3,557
Malacca, Malaysia, 252
Masqat, Mascat and Oman, 2,844
Melbourne, Australia, 4,181
Mocambique, Mozambique, 3,792
Mombasa, Kenya, 3,699
Mosselbaai, Republic of South Africa, 5,096
Moulmein, Burma, 743
Padang, Indonesia, 931
Port Elizabeth, Republic of South Africa, 4,921
Port Louis, Mauritius, 3,042
Port Swettenham, Malaysia, 172
Rangoon, Burma, 757
Sabang, Indonesia, 313
Saint Denis, Reunion Island, 3,157
Tamatave, Malagasy Republic, 3,387
Tanga, Tanganyika (north of Pemba Island), 3,749
Victoria, Seychelles, 2,779
Zanzibar, Zanzibar, 3,772

PENARTH, WALES
(51°26'45'' N., 3°10'00'' W.)

Subtract 1 mile from Cardiff distances.

PENG-HU CHIANG, TAIWAN
(23°36'00'' N., 119°32'00'' E.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Singapore, 1,660

Ports
Hong Kong, B.C.C., 314
Manila, Philippines, 606
Sai Gon, Vietnam, 1,174
Shang-hai, China, 605

PENSACOLA, FLORIDA, U.S.A. (30°24'00'' N., 87°13'00'' W.) to:

Junction Points*
Straits of Florida, 431
Yucatan Channel, 531

Ports
Alvaro Obregon, Mexico, 776
Belize, British Honduras, 826
Campeche, Mexico, 670
Carmen, Mexico, 745
Cienfuegos, Cuba, 825
Colon, Panama, 1,344
Habana, Cuba, 515
Limon, Costa Rica, 1,265
Puerto Mexico, Mexico, 836
Tampico, Mexico, 759
Tuxpan, Mexico, 785
Veracruz, Mexico, 831

PENTLAND FIRTH, SCOTLAND* (58°42'00'' N., 3°20'00'' W.) to:

Junction Points*
Bishop Rock, England, 636
Cape of Good Hope, Republic of South Africa, 6,389
Fastnet, Ireland (west of Ireland), 578
Fastnet, Ireland (east of Ireland), 625
Inishtrahull, Ireland, 272
Kiel Canal (east end), Germany, 565
Montreal, Canada (via Strait of Belle Isle), 2,614
Montreal, Canada (tracks C and D, via Cabot Strait), 3,137
Montreal, Canada (track E, via Cabot Strait), 2,934
Montreal, Canada (track F, via Cabot Strait), 2,817
Punta Arenas, Chile, 7,563
Skagens Odde, Denmark, 450
Strait of Gibraltar, 1,598
Straits of Florida (track A, westbound), 4,100
Straits of Florida (track B, westbound), 4,075
Straits of Florida (track C, westbound), 4,012
Yucatan Channel (track A), 4,414
Yucatan Channel (track B), 4,394
Yucatan Channel (track C), 4,324

Ports
Akureyri, Iceland, 702
Amsterdam, Netherlands, 481
Angmagssalik, Greenland, 1,039
Antwerpen, Belgium, 553
Ardrossan, Scotland, 282
Arendal, Norway, 452
Argentia, Canada, 2,012
Arkhangelsk, U.S.S.R., 1,663
Avonmouth, England, 624
Baltimore, Maryland, U.S.A. (track A), 3,520
Baltimore, Maryland, U.S.A. (track B), 3,473
Baltimore, Maryland, U.S.A. (track C), 3,365
Barrow in Furness, England, 427
Belem, Brazil, 4,219
Belfast, Ireland, 341
Bergen, Norway, 296
Berlevag, Norway, 1,150
Blyth, England, 290
Boston, Massachusetts, U.S.A. (track A), 3,090
Boston, Massachusetts, U.S.A. (track B), 3,029
Boston, Massachusetts, U.S.A. (track C), 2,900
Bremerhaven, Germany, 507
Buenos Aires, Argentina, 6,491
Cairn Ryan, Scotland, 340
Camp Lloyd, Greenland, 1,828
Cardiff, Wales, 609
Castries, St. Lucia, 3,704
Charleston, South Carolina, U.S.A. (track A), 3,642
Charleston, South Carolina, U.S.A. (track B), 3,602
Charleston, South Carolina, U.S.A. (track C), 3,506
Charlotte Amalie, Virgin Islands, 3,616
Christianshaab, Greenland, 1,963
Churchill, Canada (via 75 miles off Kap Farvel), 2,820
Cienfuegos, Cuba (track A), 4,277
Cienfuegos, Cuba (track B), 4,263
Cienfuegos, Cuba (track C), 4,229
Cobh, Ireland, 578
Colon, Panama (via Mona Passage), 4,594
Colon, Panama (track C and Windward Passage), 4,534
Dakar, Senegal, 2,794
Den Helder, Netherlands, 447
Douglas, Isle of Man, 397
Dublin, Ireland, 427
Dundee, Scotland, 179
Dunkerque, France, 525
Egedesminde, Greenland, 1,925
Egersund Norway, 298
Emden, Germany, 484
Esbjerg, Denmark, 443
Faeringehavn, Greenland, 1,597
Farsund, Norway, 332
Fishguard, Wales, 497
Flekkefjord, Norway, 325
Fleetwood, England, 437
Frederiksdal, Greenland, 1,268
Fredrikstad, Norway, 531
Freetown, Sierra Leone, 3,272
Funchal, Madeira Island, 1,714
Georgetown, British Guiana, 4,001
Glasgow, Scotland (via The Minch), 384
Godthaab, Greenland, 1,630
Grimstad, Norway, 399
Gronne Dal, Greenland, 1,433
Guantanamo, Cuba (track A), 3,912
Guantanamo, Cuba (track B), 3,897
Guantanamo, Cuba (track C), 3,864
Habana, Cuba (track A), 4,106
Habana, Cuba (track B), 4,081
Habana, Cuba (track C), 4,018
Hafnarfjordhur, Iceland, 680
Hakonsvern, Norway, 287
Halifax, Canada (track A), 2,777
Halifax, Canada (track B), 2,712
Halifax, Canada (tracks C and D), 2,580
Halifax, Canada (track E), 2,422
Halifax, Canada (track F), 2,368
Hamburg, Germany, 555
Hamilton, Bermuda (track A), 2,990
Hamilton, Bermuda (track B), 2,969
Hamilton, Bermuda (track C), 2,921
Hirtshals, Norway, 429
Holsteinsborg, Greenland, 1,802
Holyhead, Wales, 422
Horta, Azores, 1,575
Hvalfjordhur, Iceland, 660
Iokanga, U.S.S.R., 1,424
Ivigtut, Greenland (direct), 1,440
Ivigtut, Greenland (via 75 miles off Kap Farvel), 1,510
Jacksonville, Florida, U.S.A. (track A), 3,809
Jacksonville, Florida, U.S.A. (track B), 3,766
Jacksonville, Florida, U.S.A. (track C), 3,677
Jakobshavn, Greenland, 1,972
Keflavik, Iceland, 671
Key West, Florida, U.S.A. (track A), 4,040
Key West, Florida, U.S.A. (track B), 4,015
Key West, Florida, U.S.A. (track C), 3,952
Kingston, Jamaica (track A), 4,075
Kingston, Jamaica (track B), 4,061

*JUNCTION POINT.—See Preface for use of junction points.

Kingston, Jamaica (track C), 4,027
Kragero, Norway, 441
Kristiansand, Norway, 371
Larvik, Norway, 461
Lillesand, Norway, 390
Limerick, Ireland, 538
Lisboa, Portugal, 1,341
Liverpool, England (north of Isle of Man), 451
Liverpool, England (south of Isle of Man), 460
Loch Ewe, Scotland, 119
London, England, 536
Londonderry, Ireland, 310
Mandal, Norway, 351
Methil, Scotland, 246
Miami, Florida, U.S.A. (track A), 3,909
Miami, Florida, U.S.A. (track B), 3,884
Miami, Florida, U.S.A. (track C), 3,821
Middlesbrough, England, 326
Molde, Norway, 412
Mosjoen, Norway, 651
Namsos, Norway, 615
Nanortalik, Greenland, 1,291
Narsarssuak, Greenland, 1,384
New London, Connecticut, U.S.A. (track A), 3,159
New London, Connecticut, U.S.A. (track B), 3,109
New London, Connecticut, U.S.A. (track C), 2,990
New York, New York, U.S.A. (track A), 3,240
New York, New York, U.S.A. (track B), 3,190
New York, New York, U.S.A. (track C), 3,071
Newcastle, England, 265
Nieuwpoort, Belgium, 531
Norfolk, Virginia, U.S.A. (track A), 3,399
Norfolk, Virginia, U.S.A. (track B), 3,352
Norfolk, Virginia, U.S.A. (track C), 3,244
Oostende, Belgium, 509
Oslo, Norway, 524
Philadelphia, Pennsylvania, U.S.A. (track A), 3,393
Philadelphia, Pennsylvania, U.S.A. (track B), 3,343
Philadelphia, Pennsylvania, U.S.A. (track C), 3,224
Port au Prince, Haiti (track A), 3,946
Port au Prince, Haiti (track B), 3,932
Port au Prince, Haiti (track C), 3,898
Port of Spain, Trinidad, 3,913
Providence, Rhode Island, U.S.A. (track A), 3,148
Providence, Rhode Island, U.S.A. (track B), 3,098
Providence, Rhode Island, U.S.A. (track C), 2,979
Qutdligssat, Greenland, 2,106
Recife, Brazil, 4,319
Reykjavik, Iceland, 687
Rio de Janeiro, Brazil, 5,391
Risor, Norway, 429
Ritenbenk, Greenland, 2,135
Rosyth, Scotland, 263
Rotterdam, Netherlands, 495
San Juan, Puerto Rico (track A), 3,645
San Juan, Puerto Rico (track B), 3,643
Sandefjord, Norway, 518
Santa Cruz de Tenerife, Canary Islands, 1,952
Santo Domingo, Dominican Republic (track A), 3,828
Santo Domingo, Dominican Republic (track B), 3,823
Savannah, Georgia, U.S.A. (track A), 3,732
Savannah, Georgia, U.S.A. (track B), 3,692
Savannah, Georgia, U.S.A. (track C), 3,594
Scoresbysund, Greenland, 871
Seaham Harbor, England, 259
Seydhisfjordhur, Iceland, 500
Shoreham By Sea, England, 633
Skien, Norway, 466
Sogndal, Norway, 123
Sondre Honningsvag, Norway, 1,099
Stornoway, Scotland, 54
Sukkertoppen, Greenland, 1,700
Sunderland, England, 304
Swansea, Wales, 578
Thule, Greenland, 2,456
Tonsberg, Norway, 532
Torshavn, Faeroe Islands, 224
Tvedestrand, Norway, 421
Upernivik, Greenland, 2,164
Vardo, Norway, 1,253
Washington, D.C., U.S.A. (track A), 3,534
Washington, D.C., U.S.A. (track B), 3,487
Washington, DC., U.S.A. (track C), 3,379
Wilhelmshaven, Germany, 501
Wilmington, North Carolina, U.S.A. (track A), 3,573
Wilmington, North Carolina, U.S.A. (track B), 3,548
Wilmington, North Carolina, U.S.A. (track C), 3,450
Zeebrugge, Belgium, 505

PERNAMBUCO, BRAZIL. See Recife.

PERTH, AUSTRALIA
(31°57'30" S., 115°51'00" E.)

Add 12 miles to Fremantle distances.

PESCARA, ITALY
(42°28'15" N., 14°13'50" E.) to:

Junction Points*
Port Said, U.A.R. (south of Greece), 1,141
Strait of Gibraltar, 1,515

Ports
Brindisi, Italy, 209
Split, Yugoslavia, 123
Venezia, Italy, 201

PETERSBURG, ALASKA, U.S.A.
(56°48'56" N., 132°57'50" W.) to:

Ports
Dutch Harbor, Alaska, U.S.A., 1,215
Seattle, Washington, U.S.A., 771
Valdez, Alaska, U.S.A., 539
Victoria, Canada, 719

PETROPAVLOVSK, U.S.S.R.
(53°00'00" N., 158°38'00" E.) to:

Junction Points*
Panama, Panama (via Unimak Pass), 6,492
Singapore (via Pervyy Kurliskiy Proliv and La Perouse Strait), 4,194
Singapore (via Tsugaru Kaikyo and Formosa Strait), 4,227
Singapore (east of Japan and via Balintang Channel), 4,241
Singapore (east of Japan, and via Osumi Kaikyo and Formosa Strait), 4,293
Sunda Strait, Indonesia (via Soya Strait), 4,574
Wetar Passage, Australia (via Dampier Strait and Selat Manipa), 4,106

Ports
Aleksandrovsk, U.S.S.R. (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 1,158
Apia, Samoa, 4,292
Apra, Guam, 2,475
Auckland, New Zealand, 5,466
Avarua, Cook Islands, 4,951

*JUNCTION POINT.—See Preface for use of junction points.

Bukhta Broutona, Kuril Islands, 451
Cebu, Philippines, 3,101
Ching-tao, China (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,215
Ching-huang-tao, China (via Proliv Chetvertyy Kurilskiy, La Perouse Strait, and Maenggol Sudo), 2,368
Chinnampo, Korea, 2,214
Djakarta, Indonesia (via La Perouse Strait), 4,555
Djakarta, Indonesia (east of Japan, and via Balintang Channel), 4,530
Dutch Harbor, Alaska, U.S.A., 1,249
Hai-kou, Hai-nan Tao, China, 3,102
Hakodate, Japan, 1,075
Hong Kong, B.C.C. (via Osumi Kaikyo), 2,938
Hong Kong, B.C.C. (via Tsugaru Kaikyo), 2,870
Hong Kong, B.C.C. (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,863
Honolulu, Hawaii, U.S.A., 2,762
Hsia-men, China (via La Perouse Strait), 2,596
Hsia-men, China (via Osumi Kaikyo), 2,684
Hsia-men, China (via Tsugaru Kaikyo), 2,617
Iloilo, Philippines, 3,123
Inchon, Korea (via Tsugaru Kaikyo), 2,138
Inchon, Korea (via La Perouse Strait and Maenggol Sudo), 2,120
Inchon, Korea (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,114
Jaluit, Marshall Islands, 2,883
Kasatka, Japan, 690
Kiska, Alaska, U.S.A., 724
Kobe, Japan, 1,705
Krung Thep, Thailand, outer bar (via La Perouse Strait), 4,252
Kuang-chou, China (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,941
Kuang-chou, China (via Tsugaru Kaikyo), 2,953
Kuang-chou, China (via Osumi Kaikyo), 3,021
Levuka, Fiji Islands, 4,518
Los Angeles, California, U.S.A., 3,615
Lo-hsing-ta Mao-ti, China (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,481
Lu-shun, China (via Proliv Chetvertyy Kurilskiy, La Perouse Strait, and Maenggol Sudo), 2,267
Lu-shun, China (via Osumi Kaikyo), 2,588
Manila, Philippines (east of Japan and via Balintang Channel), 3,112
Manila, Philippines (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 3,117
Manila, Philippines (via Tsugaru Kaikyo), 3,124
Manila, Philippines (via San Bernardino Strait), 3,256
Matsugahama, Japan, 765
Midway Island, Pacific, 1,831
Mokpo, Korea (via Myongyangdo), 1,923
Mokpo, Korea (via La Perouse Strait and Changjuk Sudo), 1,943
Nagayevo, U.S.S.R., 864
Nagasaki, Japan (via La Perouse Strait), 1,845
Nagasaki, Japan (via Tsugaru Kaikyo), 1,858
Nagasaki, Japan (via Osumi Kaikyo), 2,039
Nome, Alaska, U.S.A., 1,317
Noumea, New Caledonia, 4,587
Omura, Bonin Islands, 1,736
Osaka, Japan (via Kii Suido), 1,709
Pago Pago, American Samoa, 4,350
Papeete, Society Islands, 5,009
Ponape, Caroline Islands, 2,762
Prince Rupert, Canada (via Unimak Pass), 2,504
Pusan, Korea (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 1,731
Rabaul, New Britain, 3,555
Sai Gon, Vietnam (via Proliv Chetvertyy Kurilskiy, La Perouse Strait and Korea Strait), 3,718
San Diego, California, U.S.A., 3,707
San Francisco, California, U.S.A. (via Unimak Pass), 3,292
Seattle, Washington, U.S.A. (via Unimak Pass), 2,939
Seward, Alaska, U.S.A. (via Unimak Pass), 2,065
Shang-hai, China (via Tsugaru Kaikyo), 2,224
Shang-hai, China (via La Perouse Strait), 2,200
Shan-tou, China (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,713
Shan-tou, China (via Tsugaru Kaikyo), 2,720
Shan-tou, China (via Osumi Kaikyo), 2,788
Shimonoseki, Japan (via Tsugaru Kaikyo), 1,739
Sitka, Alaska, U.S.A., 2,314
Slavnoye, Kuril Islands, 629
Suva, Fiji Islands, 4,460
Ta-ku, China (via Tsugaru Kaikyo), 2,444
Ta-ku, China (via La Perouse Strait), 2,419
Ta-lien, China (via La Perouse Strait), 2,260
Ta-lien, China (via Tsugaru Kaikyo), 2,285
Tan-shui, Taiwan (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,437
Tan-shui, Taiwan (via Tsugaru Kaikyo), 2,444
Tan-shui, Taiwan (via Osumi Kaikyo), 2,496
Tomari, Japan, 822
Vladivostok, U.S.S.R. (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 1,348
Wei-hai-wei, China (via Maenggol Sudo), 2,192
Wei-hai-wei, China (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,215
Wonsan, Korea, 1,609
Yen-tai, China (via Maenggol Sudo), 2,226
Yen-tai, China (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,249
Yen-tai, China (via Tsugaru Kaikyo), 2,263
Yin-hsien, China (via Shih-peng Chiang), 2,237
Yokohama, Japan, 1,422

PETSAMO, U.S.S.R. See Pechenga.

PEVEK, U.S.S.R.
(69°43′40″ N., 170°28′00″ E.) to:

Ports
Ambarchik, U.S.S.R., 201
Nome, Alaska, U.S.A., 700
Provideniya, U.S.S.R., 719
Tiksi, U.S.S.R., 854

PHILADELPHIA, PENNSYLVANIA, U.S.A.
(39°57′00″ N., 75°08′00″ W.) to:

Junction Points*
Bishop Rock, England (track A), 3,197
Bishop Rock, England (track B), 3,159
Bishop Rock, England (track C), 3,092
Cape of Good Hope, Republic of South Africa, 6,874

*JUNCTION POINT.—See Preface for use of junction points.

Fastnet, Ireland (track A), 3,106
Fastnet, Ireland (track B), 3,067
Fastnet, Ireland (track C), 2,985
Inishtrahull, Ireland (track A), 3,232
Inishtrahull, Ireland (track B), 3,186
Inishtrahull, Ireland (track C), 3,083
Montreal, Canada (via Strait of Canso), 1,609
Montreal, Canada (via Cabot Strait), 1,671
Panama, Panama, 1,989
Pentland Firth, Scotland (track A), 3,446
Pentland Firth, Scotland (track B), 3,390
Pentland Firth, Scotland (track C), 3,263
Punta Arenas, Chile, 6,994
Strait of Gibraltar (track A), 3,344
Strait of Gibraltar (track B), 3,331
Strait of Gibraltar (track C), 3,320
Straits of Florida, 1,150
Yucatan Channel (outside route), 1,336

Ports

Angmagssalik, Greenland (direct), 2,428
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,442
Antilla, Cuba, 1,197
Argentia, Canada, 1,159
Arkhangelsk, U.S.S.R., 4,369
Bahia Blanca, Argentina, 6,201
Banes, Cuba (via Crooked Island Passage), 1,188
Baracoa, Cuba, 1,198
Belem, Brazil, 2,950
Bluefields, Nicaragua (via Crooked Island Passage and Windward Passage), 1,973
Bocas del Toro, Panama, 2,020
Bordeaux, France (track A), 3,492
Bordeaux, France (track B), 3,461
Bordeaux, France (track C), 3,406
Brest, France (track A), 3,279
Brest, France (track B), 3,243
Brest, France (track C), 3,183
Bridgetown, Barbados, 1,839
Buenos Aires, Argentina, 5,918
Cadiz, Spain (track A), 3,310
Cadiz, Spain (track B), 3,297
Cadiz, Spain (track C), 3,286
Cap Haitien, Haiti, 1,245
Cape Town, Republic of South Africa, 6,861
Cardenas, Cuba, 1,124
Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,825
Castries, St. Lucia, 1,753
Cayenne, French Guiana, 2,468
Charlotte Amalie, Virgin Islands, 1,434
Charlottetown, Canada, 982
Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,654
Clarence Bay, Ascension Island, 4,469
Colon, Panama (via Crooked Island Passage and Windward Passage), 1,946
Dakar, Senegal, 3,441
Elizabeth Harbor, Bahamas, 1,018
Fort de France, Martinique (via Anegada Channel), 1,724
Freetown, Sierra Leone, 3,862
Funchal, Madeira Island (track A), 2,901
Georgetown, British Guiana, 2,223
Guantanamo, Cuba, 1,284
Habana, Cuba, 1,156
Halifax, Canada, 746
Hamilton, Bermuda, 746
Ivigtut, Greenland, 2,086
Jacmel, Haiti, 1,461
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,446
Lagos, Nigeria, 4,985
La Guaira, Venezuela, 1,838
Las Piedras, Venezuela, 1,786
Les Cayes, Haiti, 1,419
Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 2,019
Lisboa, Portugal (track A), 3,145
Lisboa, Portugal (track B), 3,129
Lisboa, Portugal (track C), 3,112
Liverpool, Canada, 686
Luderitz Bay, Southwest Africa, 6,477
Maracaibo, Venezuela (via Windward Passage), 1,849
Mantanzas, Cuba, 1,147
Montecristi, Dominican Republic, 1,250
Montevideo, Uruguay, 5,804
Murmansk, U.S.S.R., 4,042
Narvik, Norway (track B), 4,031
Narvik, Norway (track C), 3,880
Nassau, Bahamas, 930
Nuevitas, Cuba, 1,243
Paramaribo, Surinam, 2,327
Parrasboro, Canada, 743
Pointe a Pitre, Guadeloupe, 1,658
Ponce, Puerto Rico, 1,454
Ponta Delgada, Azores (track A), 2,397
Ponta Delgada, Azores (track B), 2,392
Porlamar, Venezuela (via Virgin Passage), 1,878
Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,395
Port au Prince, Haiti (via Crooked Island Passage and Windward Passage), 1,343
Port of Spain, Trinidad, 1,938
Port Plata, Dominican Republic, 1,250
Porto Grande, Cape Verde Islands, 3,011
Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,774
Puerto Cabello, Venezuela (via Mona Passage), 1,845
Puerto Colombia, Colombia, 1,774
Puerto Cortes, Honduras, 1,739
Puerto la Cruz, Venezuela, 1,900
Puerto Sucre, Venezuela, 1,907
Recife, Brazil, 3,745
Reykjavik, Iceland, 2,648
Rio de Janeiro, Brazil, 4,817
St. Georges, Grenada, 1,848
St. Helena Island, 5,169
St. John, Canada (via Vineyard Sound), 673
St. John, Canada (via Nantucket Light Vessel), 698
St. John's, Canada, 1,254
Salvador, Brazil, 4,136
San Juan, Puerto Rico, 1,395
San Juan del Norte, Nicaragua (via Crooked Island Passage and Windward Passage), 2,004
San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,017
Santa Cruz Tenerife, Canary Islands, 3,062
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,755
Santander, Spain (track C), 3,272
Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 1,334
Santo Domingo, Dominican Republic, 1,480
Santos, Brazil, 5,004
Sint Nicolaas, Aruba, 1,732
Sydney, Canada, 958
Vigo, Spain (track A), 3,121
Vigo, Spain (track B), 3,098
Vigo, Spain (tracks C and D), 3,066
Vitoria, Brazil, 4,554
Walvisbaai, Southwest Africa, 6,318
Willemstad, Curacao, 1,762
Yarmouth, Canada, 616

PHILIPPEVILLE, ALGERIA. See Skikda.

*JUNCTION POINT.—See Preface for use of junction points.

PHNOM PENH, CAMBODIA
(11°36'00'' N., 104°54'00'' E.)

Via Vung Tau pilot station (10°20'30'' N., 107°04'00'' E.). Add 157½ miles to Sai Gon distances.

PHUKET, THAILAND. See Ao Phuket.

PIETERSAARI, FINLAND. See Jakobstad.

PILLAU, U.S.S.R. See Baltiysk.

PIMENTEL, PERU
(6°50'00'' S., 79°58'00'' W.) to:

Ports
Callao, Peru, 363
Salaverry, Peru, 104
Talara, Peru, 182

PINA, PANAMA
(9°20'00'' N., 80°05'00'' W.) to:

Junction Points*
Yucatan Channel, 816

Ports
Cienfuegos, Cuba, 777
Kingston, Jamaica, 558
Puerto Siboney, Cuba, 697
San Juan, Puerto Rico, 1,219

PIOMBINO, ITALY. See Porto Vecchio di Piombino.

PIRAEUS, GREECE. See Piraievs.

PIRAIEVS, GREECE
(37°56'26'' N., 23°38'08'' E.) to:

Junction Points*
Port Said, U.A.R., 599
Strait of Gibraltar (via Corinth Canal), 1,451
Strait of Gibraltar (via south of Greece), 1,508

Ports
Alexandria, U.A.R., 515
Alger, Algeria (via Corinth Canal), 1,022
Alger, Algeria (south of Greece), 1,079
Alicante, Spain (via Corinth Canal), 1,186
Alicante, Spain (south of Greece), 1,246
Ancona, Italy (Corinth Canal), 608
Ancona, Italy (south of Greece), 745
Annaba, Algeria (via Corinth Canal) 797
Annaba, Algeria (south of Greece), 854
Antalya, Turkey, 383
Banghazi, Libya, 404
Barcelona, Spain (via Corinth Canal), 1,091
Barcelona, Spain (south of Greece), 1,172
Bari, Italy (via Corinth Canal), 402
Bari, Italy (south of Greece), 538
Bayrut, Lebanon, 647
Bizerte, Tunisia (via Corinth Canal), 692
Bizerte, Tunisia (south of Greece), 749
Brindisi, Italy (via Corinth Canal), 343
Brindisi, Italy (south of Greece), 480
Cagliari, Sardinia (via Corinth Canal), 738
Cagliari, Sardinia (south of Greece), 820
Cannes, France (via Corinth Canal), 942
Cannes, France (south of Greece), 1,023
Cartagena, Spain (via Corinth Canal), 1,214
Cartagena, Spain (south of Greece), 1,271
Ceuta, Morocco (via Corinth Canal), 1,431
Ceuta, Morocco (south of Greece), 1,488
Darnah, Libya, 316
Durres, Albania, 339
Ermoupolis, Greece, 84
Famagusta, Cyprus, 604
Fethiye, Turkey, 305
Genova, Italy (via Corinth Canal), 896
Genova, Italy (south of Greece), 978
Gibraltar (via Corinth Canal), 1,433
Gibraltar (south of Greece), 1,490
Haifa, Israel, 650
Iraklion, Crete, 175
Iskenderun, Turkey, 656
Istanbul, Turkey, 364
Izmir, Turkey, 210
Kavala, Greece, 249
Khania, Crete, 148
La Spezia, Italy (via Corinth Canal), 860
La Spezia, Italy (south of Greece), 942
Larnaca, Cyprus, 566
Limin Khiou, Greece, 162
Livorno, Italy (via Corinth Canal), 825
Livorno, Italy (south of Greece), 906
Malaga, Spain (via Corinth Canal), 1,381
Malaga, Spain (south of Greece), 1,438
Marseille, France (via Corinth Canal), 988
Marseille, France (south of Greece), 1,069
Mersin, Turkey, 598
Messina, Sicily (via Corinth Canal), 414
Messina, Sicily (south of Greece), 496
Mitilini, Greece, 191
Napoli, Italy (via Corinth Canal), 586
Napoli, Italy (south of Greece), 667
Navplion, Greece, 142
Odessa, U.S.S.R., 712
Oran, Algeria (via Corinth Canal), 1,219
Oran, Algeria (south of Greece), 1,276
Palermo, Sicily (via Corinth Canal), 531
Palermo, Sicily (south of Greece), 612
Palma, Balearic Islands (via Corinth Canal), 1,049
Palma, Balearic Islands (south of Greece), 1,131
Preveza, Greece, 197
Rethimnon, Crete, 151
Rijeka, Yugoslavia (via Corinth Canal), 675
Rijeka, Yugoslavia (south of Greece), 814
Rodhos, Rodhos, 261
Sarande, Albania, 253
Savona, Italy (via Corinth Canal), 906
Savona, Italy (south of Greece), 988
Sibenik, Yugoslavia (via Corinth Canal), 548
Sibenik, Yugoslavia (south of Greece), 687
Siracusa, Sicily (via Corinth Canal), 418
Siracusa, Sicily (south of Greece), 484
Soudha, Crete, 159
Split, Yugoslavia (via Corinth Canal), 533
Split, Yugoslavia (south of Greece), 672
Tarabulus, Libya, 640
Taranto, Italy (via Corinth Canal), 363
Taranto, Italy (south of Greece), 493
Thessaloniki, Greece, 259
Toulon, France (via Corinth Canal), 956

*JUNCTION POINT.—See Preface for use of junction points.

Toulon, France (south of Greece), 1,038
Trieste, Free Territory (via Corinth Canal), 709
Trieste, Free Territory (south of Greece), 848
Tubruq, Libya, 359
Tunis, Tunisia (via Corinth Canal), 680
Tunis, Tunisia (south of Greece), 737
Valencia, Spain (via Corinth Canal), 1,174
Valencia, Spain (south of Greece), 1,244
Valletta, Malta, 524
Venezia, Italy (via Corinth Canal), 719
Venezia, Italy (south of Greece), 856
Vlores, Albania, 295
Volos, Greece, 200

PISAGUA, CHILE
(19°34'30'' S., 70°14'00'' W.) to:

Junction Points*
Panama, Panama, 1,962

Ports
San Francisco, California, U.S.A., 4,593

PISCO, PERU
(13°43'30'' S., 76°14'30'' W.) to:

Junction Points*
Panama, Panama, 1,458
Punta Arenas, Chile, 2,578

Ports
Acapulco, Mexico, 2,309
Antofagasta, Chile, 713
Arica, Chile, 492
Caldera, Chile, 880
Callao, Peru, 128
Coquimbo, Chile, 1,036
Corinto, Nicaragua, 1,718
Corral, Chile, 1,596
Esmeraldas, Ecuador, 1,021
Guayaquil, Ecuador, 788
Guaymas, Mexico, 3,227
Iquique, Chile, 560
Lota, Chile, 1,432
Mollendo, Peru, 367
Monterey, California, U.S.A., 4,017
Puntarenas, Costa Rica, 1,533
Salina Cruz, Mexico, 2,117
San Blas, Mexico, 2,771
San Diego, California, U.S.A., 3,695
San Francisco, California, U.S.A., 4,097
San Jose, Guatemala, 1,875
Santa Barbara, California, U.S.A., 3,832
Talcahuano, Chile, 1,411
Valparaiso, Chile, 1,207

PITEA, SWEDEN
(65°17'40'' N., 21°28'20'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 864
Skagens Odde, Denmark, 925

Ports
Gdynia, Poland, 687
Leningrad, U.S.S.R., 687
Stockholm, Sweden, 402

PLOCE, YUGOSLAVIA
(43°03'00'' N., 17°25'42'' E.) to:

Junction Points*
Port Said, U.A.R., 1,132
Strait of Gibraltar, 1,487

Ports
Ancona, Italy, 167
Durres, Albania, 214
Rijeka, Yugoslavia, 230

PLYMOUTH, ENGLAND
(50°21'40'' N., 4°09'10'' W.) to:

Junction Points*
Bishop Rock, England, 106
Kiel Canal (east end), Germany, 639
Skagens Odde, Denmark, 756
Ushant, France, 117

Ports
Aberdeen, Scotland, 638
Amsterdam, Netherlands, 390
Antwerpen, Belgium, 366
Bergen, Norway, 819
Bremerhaven, Germany, 573
Calais, France, 244
Dieppe, France, 206
Dover, England, 229
Dundee, Scotland, 621
Dunkerque, France, 264
Egersund, Norway, 706
Emden, Germany, 513
Esbjerg, Denmark, 599
Fecamp, France, 183
Funchal, Madeira Island, 1,234
Granville, France, 149
Hamburg, Germany, 628
Hartlepool, England, 502
Hull, England, 442
Kristiansand, Norway, 717
Las Palmas de Gran Canaria, Canary Islands, 1,432
Le Havre, France, 177
Leith, Scotland, 619
London, England, 321
Newcastle, England, 524
Oostende, Belgium, 288
Oslo, Norway, 869
Rotterdam, Netherlands, 367
Shoreham By Sea, England, 162
Southampton, England, 134
Stavanger, Norway, 746
Wilhelmshaven, Germany, 557
Zeebrugge, Belgium, 303

PLYMOUTH, MONTSERRAT
(16°42'10'' N., 62°13'30'' W.) to:

Ports
Hamilton, Bermuda, 966
New York, New York, U.S.A., 1,574
Pointe a Pitre, Guadeloupe, 84

P'OHANG, KOREA
(36°02'45'' N., 129°23'30'' E.) to:

Ports
Hakodate, Japan, 665
Inchon, Korea, 511
Maizuru, Japan, 313
Shimonoseki, Japan, 164

POINTE A PITRE, GUADELOUPE
(16°14'00'' N., 61°32'30'' W.) to:

Junction Points*
Panama, Panama, 1,211
Straits of Florida (via Virgin Passage), 1,347
Straits of Florida (via Mona Passage), 1,348
Yucatan Channel (south of Hispaniola), 1,410

Ports
Alvaro Obregon, Mexico, 1,957
Baltimore, Maryland, U.S.A., 1,653
Barranquilla, Colombia, 857
Basse-Terre, Guadeloupe, 31
Belize, British Honduras, 1,578
Boston, Massachusetts, U.S.A., 1,742
Campeche, Mexico, 1,806
Cap Haitien, Haiti (via Virgin Passage), 702
Carmen, Mexico, 1,885
Cartagena, Colombia, 941
Castries, St. Lucia, 141
Cayenne, French Guiana, 867
Charleston, South Carolina, U.S.A., 1,443
Charlotte Amalie, Virgin Islands, 267

*JUNCTION POINT.—See Preface for use of junction points.

Cienfuegos, Cuba, 1,204
Colon, Panama, 1,168
Fort de France, Martinique, 108
Georgetown, British Guiana, 606
Guantanamo, Cuba, 879
Gulfport, Mississippi, U.S.A. (via Virgin Passage), 1,822
Habana, Cuba (via Virgin Passage), 1,308
Key West, Florida, U.S.A. (via Mona Passage), 1,297
Key West, Florida, U.S.A. (via Virgin Passage), 1,296
Kingston, Jamaica, 910
La Guaira, Venezuela, 467
Miami, Florida, U.S.A., 1,247
New York, New York, U.S.A., 1,652
Norfolk, Virginia, U.S.A., 1,527
Paramaribo, Surinam, 737
Philadelphia, Pennsylvania, U.S.A., 1,658
Plymouth, Montserrat, 84
Port au Prince, Haiti (south of Hispaniola), 945
Port of Spain, Trinidad, 358
Puerto Cabello, Venezuela, 520
Roseau, Dominica Island, 60
St. Johns, Antigua (east of Guadeloupe), 107
St. Johns, Antigua (west of Guadeloupe), 110
San Juan, Puerto Rico, 333
San Juan del Norte, Nicaragua, 1,345
Santo Domingo, Dominican Republic, 520
Sint Nicolaas, Aruba, 550
Tuxpan, Mexico, 2,094
Willemstad, Curacao, 517

POINTE NOIRE, GABON
(4°47′00″ S., 11°50′00″ E.) to:

Ports
Accra, Ghana, 952
Bathurst, Gambia, 2,175
Benguela, Angola, 480
Boma, Republic of the Congo, 140
Douala, Cameroon, 613
Freetown, Sierra Leone, 1,788
Lagos, Nigeria, 851
Libreville, Gabon, 399
Lobito, Angola, 473
Lome, Togo, 910
Luanda, Angola, 266
Monrovia, Liberia, 1,525
Port Gentil, Gabon, 341
Port Harcourt, Nigeria, 677
Rio Grande, Brazil, 3,938
Sao Tome, Gulf of Guinea, 436
Sekondi, Ghana, 997
Takoradi, Ghana, 1,001

POLA, YUGOSLAVIA. See Pula.

POLLENSA, BALEARIC ISLANDS
(39°53′30″ N., 3°06′30″ E.) to:

Junction Points*
Port Said, U.A.R., 1,535
Strait of Gibraltar, 525

Ports
Barcelona, Spain, 113
Marseille, France, 234
Oran, Algeria, 346

POLYARNYY, U.S.S.R.
(69°12′10″ N., 33°29′36″ E.)

Subtract 19 miles from Murmansk distances.

PONAPE, CAROLINE ISLANDS
(6°59′15″ N., 159°13′30″ E.) to:

Junction Points*
Panama, Panama, 7,321
Punta Arenas, Chile, 7,260

Ports
Apia, Samoa, 2,189
Apra, Guam, 901
Auckland, New Zealand, 2,813
Avarua, Cook Islands, 3,001
Brisbane, Australia, 2,108
Callao, Peru, 7,515
Hakodate, Japan, 2, 298
Hobart, Tasmania, 3,130
Hong Kong, B.C.C., 2,710
Honolulu, Hawaii, U.S.A., 2,685
Jaluit, Marshall Islands, 698
Levuka, Fiji Islands, 2,024
Malakal, Palau Islands, 1,418
Melbourne, Australia, 3,078
Midway Island, Pacific, 1,882
Nagasaki, Japan, 2,256
Nonouti, Gilbert Islands, 1,082
Noumea, New Caledonia, 1,892
Nukualofa, Tonga Islands, 2,341
Omura, Bonin Islands, 1,519
Pago Pago, American Samoa, 2,266
Papeete, Society Islands, 3,430
Petropavlovsk, U.S.S.R., 2,762
Rabaul, New Britain, 853
San Francisco, California, U.S.A., 4,641
Seattle, Washington, U.S.A., 4,696
Selwyn Bay, Solomon Islands, 1,069
Shang-hai, China, 2,545
Sydney, Australia, 2,514
Truk, Caroline Islands, 383
Valparaiso, Chile, 7,631
Yokohama, Japan, 1,998

PONCE, PUERTO RICO
(17°58′30″ N., 66°37′00″ W.) to:

Junction Points*
Panama, Panama, 976
Straits of Florida, 1,020

Ports
Baltimore, Maryland, U.S.A., 1,427
Boston, Massachusetts, U.S.A., 1,563
Charleston, South Carolina, U.S.A., 1,168
Fort de France, Martinique, 381
Guantanamo, Cuba (north of Hispaniola, and via Mona Passage), 540
Habana, Cuba (via Old Bahama Channel, and Mona Passage), 981
Jacksonville, Florida, U.S.A., 1,146
Key West, Florida, U.S.A., 969
New York, New York, U.S.A., 1,462
Philadelphia, Pennsylvania, U.S.A., 1,454
Rio de Janeiro, Brazil, 3,659
Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 587
Santiago de Cuba, Cuba (south of Hispaniola), 599
Santo Domingo, Dominican Republic, 196
Savannah, Georgia, U.S.A., 1,180
Willemstad, Curacao, 399

PONTA DELGADA, AZORES
(37°44′00″ N., 25°40′00″ W.) to:

Junction Points*
Bishop Rock, England, 1,103
Montreal, Canada (tracks C and D), 2,331
Montreal, Canada (track E), 2,288
Montreal, Canada (track F), 2,289
Strait of Gibraltar, 964
Straits of Florida, 3,052
Ushant, France, 1,101

Ports
Baltimore, Maryland, U.S.A., 2,529
Bathurst, Gambia, 1,551
Belem, Brazil, 2,678
Bordeaux, France, 1,256
Boston, Massachusetts, U.S.A. (track A), 2,093
Boston, Massachusetts, U.S.A. (track B), 2,083
Boston, Massachusetts, U.S.A. (tracks C and D), 2,086
Buenos Aires, Argentina, 4,975
Cadiz, Spain, 931
Cap Haitien, Haiti, 2,646

*JUNCTION POINT.—See Preface for use of junction points.

Cape Town, Republic of South Africa, 5,040
Casablanca, Morocco, 915
Charleston, South Carolina, U.S.A., 2,644
Colon, Panama, 3,379
Dakar, Senegal, 1,459
El Ferrol del Caudillo, Spain, 870
Freetown, Sierra Leone, 1,941
Funchal, Madeira Island, 550
Halifax, Canada (direct), 1,755
Halifax, Canada (tracks C and D), 1,774
Horta, Azores, 153
Huelva, Spain, 914
Las Palmas de Gran Canaria, Canary Islands, 774
Lisboa, Portugal, 783
New York, New York, U.S.A. (direct), 2,247
New York, New York, U.S.A. (track A), 2,253
New York, New York, U.S.A. (track B), 2,253
Norfolk, Virginia, U.S.A. (track A), 2,401
Philadelphia, Pennsylvania, U.S.A. (track A), 2,392
Philadelphia, Pennsylvania, U.S.A. (track B), 2,391
Porto, Portugal, 815
Porto Grande, Cape Verde Islands, 1,253
Recife, Brazil, 2,803
Rio de Janeiro, Brazil, 3,875
St. John's, Canada, 1,326
San Juan, Puerto Rico, 2,412
Santa Cruz de Tenerife, Canary Islands, 740
Santo Domingo, Dominican Republic, 2,620
Vigo, Spain, 828

PORI, FINLAND
(61°29'30'' N., 21°48'00'' E.)

Add 13 miles to Reposaari distances.

PORKKALA, FINLAND
(59°59'06'' N., 24°28'06'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 647
Skagens Odde, Denmark, 697

Ports
Gdynia, Poland, 412
Riga, Latvia, 284
Stockholm, Sweden, 216

PORLAMAR, MARGARITA, VENEZUELA
(10°56'00'' N., 63°50'00'' W.) to:

Junction Points*
Straits of Florida (via Mona Passage), 1,454
Yucatan Channel, 1,407

Ports
Cartagena, Columbia, 785
Colon, Panama, 1,012
Great Harbor, Culebra Island, 470
Guantanamo, Cuba, 884
New York, New York, U.S.A. (via Virgin Passage), 1,879
Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,878
Santa Barbara de Samana, Dominican Republic, 610

PORT ADELAIDE, AUSTRALIA. See Adelaide.

PORT ANGELES, WASHINGTON, U.S.A.
(48°08'00'' N., 123°27'00'' W.) to:

For ocean distances, subtract 60 miles from Seattle distances.

Ports
Nanaimo, Canada, 98
New Westminster, Canada, 90
Vancouver, Canada, 93
Victoria, Canada, 20

PORT ANTONIO, JAMAICA
(18°11'35'' N., 76°27'00'' W.) to:

Junction Points*
Panama, Panama, 625
Straits of Florida, 751
Yucatan Channel, 536

Ports
Antilla, Cuba, 288
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,350
Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 1,606
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,013
Colon, Panama, 582
Gibara, Cuba, 323
New York, New York, U.S.A., 1,423
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,228
Nuevitas, Cuba, 398
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,395
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,012

PORT APRA, GUAM. See Apra.

PORT ARTHUR, CHINA. See Lushun.

PORT ARTHUR, TEXAS, U.S.A.
(29°52'00'' N., 93°56'00'' W.) to:

Junction Points*
Straits of Florida, 677
Yucatan Channel, 681

Ports
Colon, Panama, 1,485
Habana, Cuba, 749
Puerto Mexico, Mexico, 708
Tampico, Mexico, 522
Tuxpan, Mexico, 572
Veracruz, Mexico, 659

PORT AU PRINCE, HAITI
(18°33'30'' N., 72°21'30'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,725
Fastnet, Ireland (track A), 3,623
Fastnet, Ireland (track B), 3,620
Inishtrahull, Ireland (track A), 3,749
Inishtrahull, Ireland (track B), 3,739
Inishtrahull, Ireland (track C), 3,723
Panama, Panama, 817
Pentland Firth, Scotland (track A), 3,954
Pentland Firth, Scotland (track B), 3,939
Pentland Firth, Scotland (track C), 3,903
Strait of Gibraltar, 3,757
Straits of Florida, 701
Yucatan Channel, 741

Ports
Alvaro Obregon, Mexico, 1,292
Baltimore, Maryland, U.S.A., 1,301
Barranquilla, Colombia, 592

*JUNCTION POINT.—See Preface for use of junction points.

Belem, Brazil, 2,258
Belize, British Honduras (south of Jamaica), 953
Belize, British Honduras (north of Jamaica), 933
Boston, Massachusetts, U.S.A., 1,557
Bridgetown, Barbados, 1,070
Buenos Aires, Argentina, 5,322
Campeche, Mexico, 1,140
Cap Haitien, Haiti, 195
Cardenas, Cuba, 603
Carmen, Mexico, 1,219
Cartagena, Colombia, 639
Castries, St. Lucia (via Windward Passage and Mona Passage), 950
Charleston, South Carolina, U.S.A., 961
Charlotte Amalie, Virgin Islands, 628
Cienfuegos, Cuba, 534
Gonaives, Haiti, 70
Guantanamo, Cuba, 179
Gulfport, Mississippi, U.S.A. (via Windward Passage), 1,176
Habana, Cuba, 662
Halifax, Canada, 1,671
Hamilton, Bermuda, 1,016
Jacmel, Haiti, 271
Jeremie, Haiti, 100
Key West, Florida, U.S.A. (via Old Bahama Channel), 650
Kingston, Jamaica, 277
La Guaira, Venezuela, 801
Les Cayes, Haiti, 202
Manzanillo, Cuba, 372
Matanzas, Cuba, 617
Miami, Florida, U.S.A., 643
Nassau, Bahamas, 564
New York, New York, U.S.A., 1,372
Norfolk, Virginia, U.S.A., 1,178
Nuevitas, Cuba, 348
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,343
Pointe a Pitre, Guadeloupe (via Windward Passage and Mona Passage), 889
Pointe a Pitre, Guadeloupe (south of Hispaniola), 945
Port of Spain, Trinidad, 1,053
Port de Paix, Haiti, 144
Puerto Cabello, Venezuela, 769
Puerto Colombia, Colombia, 586
Rio de Janeiro, Brazil, 4,221
San Juan, Puerto Rico, 552
San Juan del Norte, Nicaragua, 840
San Pedro de Macoris, Dominican Republic, 473
Santo Domingo, Dominican Republic, 449
Tuxpan, Mexico, 1,428
Willemstad, Curacao, 647

PORT AUGUSTA, AUSTRALIA
(32°29′40″ S., 137°45′30″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,237
Singapore, 3,580

Ports
Hobart, Tasmania, 947
Lyttelton, New Zealand, 2,082
Noumea, New Caledonia, 2,179
Sydney, Australia, 1,164

PORT BLAIR, ANDAMAN ISLANDS
(11°40′00″ N., 92°46′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,075
Port Said, U.A.R., 4,353
Singapore, 929

Ports
Calcutta, India, 775
Madras, India, 758

PORT BUCHANAN, LIBERIA
(5°51′30″ N., 10°03′30″ W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,912
Ushant, France, 2,904

Ports
Dakar, Senegal, 755
Takoradi, Ghana, 197

PORT BUENAVENTURA, COLOMBIA. See Buenaventura.

PORT CASTRIES, ST. LUCIA. See Castries, St. Lucia.

PORT CHURCHILL, CANADA. See Churchill.

PORT DARWIN, AUSTRALIA. See Darwin.

PORT DE PAIX, HAITI
(19°57′15″ N., 72°50′10″ W.) to:

Ports
Kingston, Jamaica, 432
Port au Prince, Haiti, 144
San Juan, Puerto Rico, 398
Santo Domingo, Dominican Republic, 543

PORT DENISON, AUSTRALIA. See Bowen.

PORT DES GALETS, REUNION ISLAND
(20°55′15″ S., 55°17′30″ E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,241
Cape of Good Hope, Republic of South Africa, 2,120
Port Said, U.S.R., 3,747
Singapore, 3,450

Ports
Durban, Republic of South Africa, 1,418

PORT ELIZABETH, REPUBLIC OF SOUTH AFRICA
(33°57′40″ S., 25°38′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 390
Port Said, U.A.R., 4,959
Singapore 5,209

Ports
Belawan, Indonesia, 4,876
Darwin, Australia, 5,767
East London, Republic of South Africa, 131
Malacca, Malaysia, 5,094
Penang, Malaysia, 4,921
Sabang, Indonesia, 4,610
Simons Bay, Republic of South Africa, 391

PORT ETIENNE, MAURITANIA
(20°40′00″ N., 17°04′12″ W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,018
Ushant, France, 1,826

Ports
Casablanca, Morocco, 1,032
Dakar, Senegal, 394

PORT GALLEGOS, ARGENTINA
(51°36′40″ S., 69°12′10″ W.) to:

Junction Points*
Panama, Panama, 6,455
Punta Arenas, Chile, 202

Ports
Buenos Aires, Argentina, 1,231
Stanley, Falkland Islands, 460

*JUNCTION POINT.—See Preface for use of junction points.

PORT GENTIL, GABON
(0°43'00'' S., 8°47'30'' E.) to:

Ports
Boma, Republic of the Congo, 470
Cabinda, Cabinda, 393
Douala, Cameroon, 297
Kribi, Cameroon, 231
Pointe Noire, Gabon, 341

PORT HARCOURT, NIGERIA
(4°46'15'' N., 7°00'12'' E.) to:

Junction Points*
Ushant, France, 3,974

Ports
Freetown, Sierra Leone, 1,397
Horta, Azores, 3,391
Lagos, Nigeria, 318
Luanda, Angola, 941
Pointe Noire, Gabon, 677

PORT HUENEME, CALIFORNIA, U.S.A.
(34°09'00'' N., 119°12'24'' W.) to:

Junction Points*
Panama, Panama, 2,958

Ports
Ensenada, Mexico, 194
Honolulu, Hawaii, U.S.A., 2,170
Sweeper Cove, Alaska, U.S.A., 2,686
Vancouver, Canada, 1,102

PORT IBRAHIM, U.A.R. See Bur Ibrahim.

PORT KEMBLA, AUSTRALIA
(34°28'30'' S., 150°53'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 3,388
Torres Strait, Australia, 1,817

Ports
Hobart, Tasmania, 593
Nukualofa, Tonga Islands, 1,987
Wellington, New Zealand, 1,229

PORT LEGASPI, PHILIPPINES
(13°09'00'' N., 123°45'30'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,667
Singapore, 1,611

Ports
Iloilo, Philippines, 226
Manila, Philippines, 370
Sai Gon, Vietnam, 1,177

PORT LINCOLN, AUSTRALIA
(34°43'00'' S., 135°52'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,100
Torres Strait, Australia, 2,811

Ports
Albany, Australia, 953
Hobart, Tasmania, 830
Melbourne, Australia, 588

PORT LOUIS, MAURITIUS
(20°09'15'' S., 57°29'45'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,165
Cape of Good Hope, Republic of South Africa, 2,266
Singapore, 3,333
Torres Strait, Australia, 4,933

Ports
Adelaide, Australia, 4,323
Aden, Aden Protectorate, 2,341
Albany, Australia, 3,340
Beira, Mozambique, 1,448
Belawan, Indonesia, 2,997
Bombay, India, 2,517
Calcutta, India, 3,212
Colombo, Ceylon, 2,098
Darwin, Australia (south of Scott Reef), 4,246
Darwin, Australia (north of Scott Reef), 4,252
Durban, Republic of South Africa, 1,560
Fort Dauphin, Malagasy Republic, 654
Fremantle, Australia (north of Mauritius), 3,202
Fremantle, Australia (south of Mauritius), 3,217
Lourenco Marques, Mozambique, 1,448
Malacca, Malaysia, 3,215
Penang, Malaysia, 3,042
Sabang, Indonesia, 2,731
Tamatave, Malagasy Republic, 474
Victoria, Seychelles, 943
Wellington, New Zealand, 5,900
Zanzibar, Zanzibar, 1,388

PORT LYAUTEY, MOROCCO. See Kenitra.

PORT LYTTELTON, NEW ZEALAND. See Lyttelton.

PORT MAGDALENA, MEXICO. See Bahia Magdalena.

PORT MAHON, BALEARIC ISLANDS. See Mahon.

PORT MORESBY, PAPUA
(9°28'45'' S., 147°08'40'' E.) to:

Ports
Catherine Hill Bay, Australia, 1,695
Gladstone Harbor, Australia, 1,389
Koniya, Ryukyu Islands, 3,063
Lae, New Guinea, 2,635
Mackay, Australia, 1,168
Omura, Bonin Islands (via Torres Strait), 3,164
Omura, Bonin Islands (via China Strait and west of New Ireland), 2,712
Port Pirie, Australia, 2,754
Townsville, Australia, 595

PORT NATAL, REPUBLIC OF SOUTH AFRICA. See Durban.

PORT NECHES, TEXAS, U.S.A.
(29°59'35'' N., 93°56'20'' W.)

Add 13 miles to Port Arthur distances.

PORT NEWARK, NEW JERSEY, U.S.A.
(40°42'00'' N., 74°09'00'' W.)

For ocean distances, add 4½ miles to New York distances.

PORT NIEVRE, MALAGASY REPUBLIC. See Antsirana.

PORT NOLLOTH, REPUBLIC OF SOUTH AFRICA
(29°15'00'' S., 16°51'21'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 325
Ushant, France, 5,516

Ports
Cape Town, Republic of South Africa, 301
Matadi, Republic of the Congo, 1,559

*JUNCTION POINT.—See Preface for use of junction points.

PORT OF SPAIN, TRINIDAD
(10°38'45'' N., 61°31'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,603
Cape of Good Hope, Republic of South Africa, 5,393
Inishtrahull, Ireland, 3,706
Montreal, Canada (via Cabot Strait), 2,901
Panama, Panama, 1,202
Pentland Firth, Scotland, 3,913
Punta Arenas, Chile, 5,430
Strait of Gibraltar, 3,403
Straits of Florida (via Mona Passage), 1,533
Yucatan Channel, 1,517

Ports
Alvaro Obregon, Mexico, 2,060
Baltimore, Maryland, U.S.A., 1,918
Barcelona, Venezuela, 218
Basseterre, St. Christopher, 419
Belem, Brazil, 1,212
Belize, British Honduras, 1,637
Boston, Massachusetts, U.S.A., 2,022
Bridgetown, Barbados (via Boca Grande), 211
Brunswick, Georgia, U.S.A., 1,694
Campeche, Mexico, 1,913
Cap Haitien, Haiti, 888
Cape Town, Republic of South Africa, 5,387
Carmen, Mexico, 1,992
Cartagena, Colombia, 932
Carupano, Venezuela, 109
Castries, St. Lucia (east of Grenadine Islands), 231
Castries, St. Lucia (west of Grenadine Islands), 230
Catia la Mar, Venezuela, 335
Charleston, South Carolina, U.S.A., 1,682
Charlotte Amalie, Virgin Islands, 518
Cienfuegos, Cuba, 1,310
Colon, Panama, 1,159
Covenas, Colombia, 968
Dakar, Senegal, 2,628
Elizabeth Harbor, Bahamas, 1,170
Freetown, Sierra Leone, 2,896
Funchal, Madeira Island, 2,819
Georgetown, British Guiana (via Serpents Mouth), 376
Guantanamo, Cuba, 987
Habana, Cuba (via Old Bahama Channel and Mona Passage), 1,494
Halifax, Canada, 2,059
Hamilton, Bermuda, 1,346
Horta, Azores, 2,461
Isabel Segunda, Isla de Vieques, 531
Jacksonville, Florida, U.S.A., 1,685
Key West, Florida, U.S.A. (via Mona Passage and Old Bahama Channel), 1,484
Kingston, Jamaica, 1,003
La Guaira, Venezuela (south of Isla de Margarita), 329
Lagos, Nigeria, 3,950
Limon, Costa Rica, 1,313
Lisboa, Portugal, 3,287
Miami, Florida, U.S.A., 1,482
Monrovia, Liberia, 3,045
New Amsterdam, British Guiana, 437
New York, New York, U.S.A. (via Virgin Passage), 1,939
Norfolk, Virginia, U.S.A., 1,799
Oranjestad, St. Eustatius, 432
Paramaribo, Surinam, 546
Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,938
Pointe a Pitre, Guadeloupe, 358
Port au Prince, Haiti, 1,053
Portsmouth, New Hampshire, U.S.A., 2,024
Puerto Cabello, Venezuela, 395
Puerto Cortes, Honduras, 1,599
Puerto la Cruz, Venezuela, 214
Puerto Mexico, Mexico, 2,137
Puerto Sucre, Venezuela, 200
Punta Cardon, Venezuela, 574
Rio de Janeiro, Brazil, 3,271
Roosevelt Roads, Puerto Rico, 525
St. Georges, Grenada, 102
St. John, Canada, 2,113
St. Johns, Antigua, 411
St. John's, Canada, 2,288
St. Louis, Marie Galante, 368
San Juan, Puerto Rico, 574
San Juan del Norte, Nicaragua, 1,342
Santa Cruz de Tenerife, Canary Islands, 2,804
Santo Domingo, Dominican Republic, 681
Savannah, Georgia, U.S.A., 1,714
Sint Nicolaas, Aruba, 515
Sydney, Canada, 2,189
Takoradi, Ghana, 3,632
Turiamo, Venezuela, 384
Tuxpan, Mexico, 2,201
Veracruz, Mexico, 2,182
Willemstad, Curacao, 456
Wilmington, North Carolina, U.S.A., 1,703

PORT PAIX, HAITI. See Port de Paix.

PORT PIRIE, AUSTRALIA
(33°10'20'' S., 138°00'45'' E.) to:

Junction Points*
Panama, Panama, 8,467
Singapore, 3,564

Ports
Adelaide, Australia, 246
Melbourne, Australia, 689
Port Moresby, Papua, 2,754

PORT PLATA, DOMINICAN REPUBLIC
(19°49'00'' N., 70°41'30'' W.) to:

Junction Points*
Panama, Panama, 942
Straits of Florida, 764

Ports
Baltimore, Maryland, U.S.A., 1,215
Guantanamo, Cuba (via Windward Passage), 262
New York, New York, U.S.A., 1,270
Philadelphia, Pennsylvania, U.S.A., 1,250
Santiago de Cuba, Cuba, 311
Santo Domingo, Dominican Republic, 295

PORT REFUGE, COCOS ISLANDS
(12°05'20'' S., 96°51'54'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,678
Cape of Good Hope, Republic of South Africa, 4,428
Lombok Strait, Indonesia, 1,132
Sunda Strait, Indonesia, 647

Ports
Colombo, Ceylon, 1,539

PORT ROYAL, JAMAICA
(17°56'00'' N., 76°51'00'' W.)

Subtract 5 miles from Kingston distances.

PORT SAFAGA, U.A.R. See Bur Safajah.

PORT SAID, UNITED ARAB REPUBLIC*
(31°16'00'' N., 32°19'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia (October–April), 6,345
Cape Leeuwin, Australia (May–September), 6,389

*JUNCTION POINT.—See Preface for use of junction points.

Cape of Good Hope, Republic of South Africa, 5,340
Singapore (October–April), 5,018
Singapore (May–September), 5,035
Strait of Gibraltar, 1,943
Sunda Strait, Indonesia (via One and Half Degree Channel, October–April), 5,225
Sunda Strait, Indonesia (via Eight Degree Channel, May–September), 5,232
Torres Strait, Australia (via One and Half Degree Channel, October–April), 7,409
Torres Strait, Australia (via Eight Degree Channel, May–September), 7,423

Ports
Ad Damman, Saudi Arabia, 3,142
Aden, Aden Protectorate, 1,400
Ajaccio, Corsica, 1,355
Akyab, Burma, 4,672
Al Aqabah, Jordan, 380
Al Bahrayn, Bahrain, 3,132
Al Basrah, Iraq, 3,371
Al Gurdagah, U.A.R., 278
Al Hammamat, Tunisia, 1,138
Al Hudaydah, Yemen, 1,162
Al Khums, Libya, 941
Al Ladhiqiyah, Syria, 310
Al Mina Al Bayda, Syria, 314
Al Mukha, Yemen, 1,263
Alcudia, Balearic Islands, 1,536
Alexandria, U.A.R., 164
Alexandroupolis, Greece, 699
Algeciras, Spain, 1,927
Alger, Algeria, 1,514
Alicante, Spain, 1,680
Almeria, Spain, 1,780
Ancona, Italy (via Corinth Canal), 1,196
Ancona, Italy (south of Greece), 1,206
Annaba, Algeria, 1,289
Antalya, Turkey, 346
Antsirana, Malagasy Republic, 3,240
Ao Phuket, Thailand, 4,629
Arzew, Algeria, 1,692
As Sukhayrah, Tunisia, 1,156
Ashdod Yam, Israel, 126
Assab, Ethiopia, 1,258
Augusta, Sicily, 932
Bandar Abbas, Iran, 2,842
Bandar-E Shapur, 3,322
Banghazi, Libya, 673
Baniyas, Syria, 299
Barcelona, Spain, 1,600
Bari, Italy (via Corinth Canal), 989
Bari, Italy (south of Greece), 999
Barletta, Italy, 1,023
Bassein, Burma, 4,638
Bastia, Corsica, 1,337
Batumi, U.S.S.R., 1,391
Bayrut, Lebanon, 230
Beaulieu, France, 1,453
Beira, Mozambique, 3,990
Belawan, Indonesia, 4,668
Bejaia, Algeria, 1,423
Bizerte, Tunisia, 1,184
Bombay, India (October–April), 3,049
Bombay, India (May–September), 3,068
Bombay, India (low power, southwest monsoon, June–August), 3,743
Bonifacio, Corsica, 1,307
Brindisi, Italy, 941
Bunbury, Australia, 6,343
Bur Safajah, U.A.R., 310
Cagliari, Sardinia, 1,255
Calcutta, India (October–April, south of Socotra), 4,695
Calcutta, India (May–September, south of Socotra), 4,816
Calcutta, India (May–September, north of Socotra), 4,712
Calcutta, India (alternate, May–September, north of Socotra), 4,807
Calcutta, India (low power, May–September, south of Socotra), 4,876
Cannes, France, 1,472
Cartagena, Spain, 1,705
Castellamare di Stabia, Italy, 1,114
Catania, Sicily, 942
Ceuta, Morocco, 1,923
Chalna, Pakistan, 4,705
Chioggia, Italy, 1,307
Chittagong, Pakistan, 4,739
Civitavecchia, Italy, 1,243
Cochin, India, 3,237
Colombo, Ceylon (October–April), 3,481
Colombo, Ceylon (May–September), 3,494
Constanta, Rumania, 1,000
Crotone, Italy, 896
Dar es Salaam, Tanganyika, 3,238
Darnah, Libya, 514
Darwin, Australia (via One and Half Degree Channel, October–April), 6,749
Darwin, Australia (via Eight Degree Channel, May–September), 6,764
Derince, Turkey, 837
Dikili, Turkey, 596
Djakarta, Indonesia, 5,293
Djibouti, French Somaliland, 1,374
Dubrovnik, Yugoslavia (via Corinth Canal), 1,025
Dubrovnik, Yugoslavia (south of Greece), 1,038
Dumai, Indonesia, 4,943
Durban, Republic of South Africa, 4,567
Durres, Albania, 951
East London, Republic of South Africa, 4,830
Eilat, Israel, 381
Ermoupolis, Greece, 535
Famagusta, Cyprus, 257
Fethiye, Turkey, 375
Fort Dauphin, Malagasy Republic, 4,035
Fremantle, Australia, 6,310
Gaeta, Italy, 1,150
Gallipoli, Italy, 908
Genova, Italy, 1,426
Ghazaouet, Algeria, 1,784
Gibraltar, 1,925
Golfe-Juan, France, 1,462
Golfo di Oristano, Sardinia, 1,343
Haifa, Israel, 171
Hyeres, Greece, 1,474
Inhambane, Mozambique, 4,138
Iraklion, Crete, 455
Iskenderum, Turkey, 381
Istanbul, Turkey, 804
Izmir, Turkey, 608
Jaffa, Israel, 135
Jazireh-ye Khark, Iran, 3,200
Juddah, Saudi Arabia, 722
Kalamai, Greece, 644
Karachi, Pakistan, 2,865
Kavala, Greece, 714
Kerch, U.S.S.R., 1,238
Kerkira, Greece (via Corinth Canal), 826
Kerkira, Greece (south of Greece), 848
Khalkis, Greece, 630
Khania, Crete, 515
Khawr al Ama, Neutral Zone, Persian Gulf, 3,262
Kyrenia, Cyprus, 297
La Spezia, Italy, 1,391
Larnaca, Cyprus, 231
Limassol, Cyprus, 208
Limin Khiou, Greece, 540
Livorno, Italy, 1,355
Lourenco Marques, Mozambique, 4,348
Madras, India (October–April, south of Socotra), 4,048
Madras, India (May–September, north of Socotra), 4,065
Mahon, Balearic Islands, 1,484
Majunga, Malagasy Republic, 3,471
Malacca, Malaysia, 4,906
Malaga, Spain, 1,873
Manakara, Malagasy Republic, 3,842
Marsala, Sicily, 1,081
Marsaxlokk, Malta, 942
Marseille, France, 1,518
Massaua, Ethiopia, 1,041
Matruh, U.A.R., 281
Melilla, Morocco, 1,821

*JUNCTION POINT.—See Preface for use of junction points.

Mentone, France, 791
Mers El Kebir, Algeria, 1,714
Mersin, Turkey, 359
Messina, Sicily, 945
Mina Abd Allah, Kuwait, 3,283
Mina al Ahmadi, Kuwait, 3,286
Mina Su'ud, Neutral Zone, Persian Gulf, 3,264
Mitilini, Greece, 592
Mocambique, Mozambique, 3,522
Mogadiscio, Somali Republic, 2,493
Mombasa, Kenya, 3,006
Monaco, Monaco, 1,450
Monopoli, Italy, 953
Mormugao, India, 3,078
Mostaganem, Algeria, 1,678
Moulmein, Burma, 4,742
Mtwara, Tanganyika, 3,265
Napoli, Italy, 1,116
Navplion, Greece, 613
Nice, France, 1,456
Novorossiysk, U.S.S.R., 1,260
Odessa, U.S.S.R., 1,152
Okha, India, 2,887
Olbia, Sardinia, 1,278
Oran, Algeria, 1,711
Palermo, Sicily, 1,061
Palma, Balearic Islands, 1,555
Paphos, Cyprus, 482
Patrai, Greece (via Corinth Canal), 690
Patrai, Greece (via south of Greece), 762
Penang, Malaysia, 4,733
Pescara, Italy (south of Greece), 1,141
Piraievs, Greece, 599
Ploce, Yugoslavia, 1,132
Pollenza, Balearic Islands, 1,535
Port Blair, Andaman Islands, 4,353
Port des Galets, Reunion Islands, 3,747
Port Elizabeth, Republic of South Africa, 4,959
Port St. Louis du Rhone, France, 1,535
Port Sudan, 788
Port Swettenham, Malaysia, 4,817
Port Vendres, France, 1,583
Porto di Licata, Sicily, 993
Porto di Manfredonia, Italy, 1,045
Porto di Milazzo, Sicily, 973
Porto di Reggio Calabria, Sicily, 939
Porto Empedocle, Sicily, 1,017
Porto Vecchio di Piombino, Italy, 1,315
Pozzuoli, Italy, 1,118
Preveza, Greece, 806
Pula, Yugoslavia (via Corinth Canal), 1,244
Pula, Yugoslavia (south of Greece), 1,256
Qabis, Tunisia, 1,149
Quelimane, Mozambique, 3,839
Rangoon, Burma (May–September, north of Socotra), 4,723
Rangoon, Burma (October–April, south of Socotra), 4,705
Ra's al Khafji, Neutral Zone, Persian Gulf, 3,260
Ra's as Sidr, U.A.R., 112
Ra's at Tannurah, Saudi Arabia, 3,162
Ra's Gharib, U.A.R., 187
Rethimnon, Crete, 489
Rijeka, Yugoslavia (via Corinth Canal), 1,263
Rijeka, Yugoslavia (south of Greece), 1,276
Rodhos, Rodhos, 376
Rostov-na-Donu, U.S.S.R., 1,440
Sabang, Indonesia, 4,422
St. Raphael, France, 1,475
Salamis, Greece, 614
Salerno, Italy, 1,098
Sant Antioco Ponti, Sardinia, 1,282
Sarande, Albania, 863
Savona, Italy, 1,437
Sayda, Lebanon, 205
Sete, France, 1,577
Sevastopol, U.S.S.R., 1,105
Sfax, Tunisia, 1,131
Shengjin, Albania, 988
Sibenik, Yugoslavia (via Corinth Canal), 1,136
Sibenik, Yugoslavia (south of Greece), 1,148
Simons Bay, Republic of South Africa, 5,315
Siracusa, Sicily, 924
Skikda, Algeria, 1,337
Soudha, Ormos Soudhas, Crete, 507
Sousse, Tunisia, 1,133
Split, Yugoslavia (via Corinth Canal), 1,121
Split, Yugoslavia (south of Greece), 1,133
Suakin, Sudan, 813
Sur, Lebanon, 191
Tamatave, Malagasy Republic, 3,598
Tanga, Tanganyika, 3,068
Taormina, Sicily, 933
Tarabulus, Lebanon, 268
Tarabulus, Libya, 998
Taranto, Italy (via Corinth Canal), 951
Taranto, Italy (south of Greece), 954
Tarragona, Spain, 1,634
Terracina, Italy, 1,162
Thessaloniki, Greece, 741
Toulon, France, 1,486
Trapani, Sicily, 1,100
Trieste, Free Territory (via Corinth Canal), 1,297
Trieste, Free Territory (south of Greece), 1,310
Tubruq, Libya, 445
Tulear, Malagasy Republic, 3,966
Tunis, Tunisia, 1,172
Umm Said, Qatar, 3,091
Valencia, Spain, 1,679
Valletta, Malta, 946
Venezia, Italy (via Corinth Canal), 1,307
Venezia, Italy (south of Greece), 1,317
Viareggio, Italy, 1,716
Villa San Giovanni, Italy, 944
Villa Sanjurjo, Morocco, 1,868
Villefranche, France, 1,455
Vlones, Albania, 973
Volos, Greece, 683
Yumurtalik, Turkey, 372
Zadar, Yugoslavia, 1,214

PORT ST. LOUIS DU RHONE, FRANCE
(43°23'00'' N., 4°48'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,535
Strait of Gibraltar, 703

Ports
Annaba, Algeria, 419
Barcelona, Spain, 178
Genova, Italy, 221

PORT SUDAN, SUDAN
(19°37'00'' N., 37°13'45'' E.) to:

Junction Points*
Port Said, U.A.R., 788

Ports
Aden, Aden Protectorate, 668
Al Mukha, Yemen, 524
Assab, Ethiopia, 524
Bur Safajah, U.A.R., 508
Juddah, Saudi Arabia, 161
Massaua, Ethiopia, 306

PORT SWETTENHAM, MALAYA, MALAYSIA
(3°00'00'' N., 101°23'00'' E.) to:

Junction Points*
Port Said, U.A.R., 4,817
Singapore, 210

Ports
Calcutta, India, 1,444
Johore Bahru, Malaysia, 206

*JUNCTION POINT.—See Preface for use of junction points.

Madras, India, 1,384
Penang, Malaysia, 172

PORT TALBOT, WALES
(51°35'25'' N., 3°47'24'' W.) to:

Junction Points*
Bishop Rock, England, 149
Inishtrahull, Ireland, 331

Ports
Dublin, Ireland, 179
Liverpool, England, 244

PORT TAMPA, FLORIDA, U.S.A.
(21°51'40'' N., 82°33'20'' W.)

Subtract 5 miles from Tampa distances.

PORT TAUFIQ, U.A.R. See Bur Ibrahim.

PORT THEWFIK, U.A.R. See Bur Ibrahim.

PORT TOWNSEND, WASHINGTON, U.S.A.
(48°06'30'' N., 122°45'00'' W.)

Subtract 36 miles from Seattle distances.

PORT-VENDRES, FRANCE
(42°31'30'' N., 3°07'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,583
Strait of Gibraltar, 633

Ports
Barcelona, Spain, 108
Marseille, France, 109
Napoli, Italy, 521

PORTLAND, AUSTRALIA
(38°20'30'' S., 141°37'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,304
Torres Strait, Australia, 2,429

Ports
Adelaide, Australia, 321
Hobart, Tasmania, 540
Melbourne, Australia, 206

PORTLAND, ENGLAND
(50°35'00'' N., 2°26'00'' W.) to:

Junction Points*
Bishop Rock, England, 181
Kiel Canal (east end), Germany, 565
Skagens Odde, Denmark, 682

Ports
Aberdeen, Scotland, 564
Amsterdam, Netherlands, 316
Antwerpen, Belgium, 292
Bergen, Norway, 745
Bremerhaven, Germany, 499
Calais, France, 170
Dover, England, 155
Dundee, Scotland, 547
Dunkerque, France, 190
Egersund, Norway, 632
Emden, Germany, 439
Esbjerg, Denmark, 525
Hamburg, Germany, 554
Hartlepool, England, 428
Hull, England, 368
Kristiansand, Norway, 643
Leith, Scotland, 545
London, England, 247
Newcastle, England, 453
Oostende, Belgium, 214
Oslo, Norway, 795
Rotterdam, Netherlands, 293
Southampton, England, 57
Stavanger, Norway, 672
Wilhelmshaven, Germany, 483
Zeebrugge, Belgium, 229

PORTLAND, MAINE, U.S.A.
(43°39'30'' N., 70°14'45'' W.) to:

Junction Points*
Montreal, Canada, 1,206
Panama, Panama (via Crooked Island Passage and Windward Passage), 2,241
Pentland Firth, Scotland (track A), 3,123
Pentland Firth, Scotland (track B), 3,050
Pentland Firth, Scotland (track C), 2,910
Punta Arenas, Chile, 6,949
Straits of Florida, 1,450

Ports
Belize, British Honduras, 1,967
Buenos Aires, Argentina, 5,873
Cape Town, Republic of South Africa, 6,709
Charlotte Amalie, Virgin Islands, 1,557
Charlottetown, Canada (via Strait of Canso), 579
Colon, Panama, 2,198
Halifax, Canada, 338
Kingston, Jamaica, 1,679
Maracaibo, Venezuela, 2,042
Montevideo, Uruguay, 5,759
Murmansk, U.S.S.R., 3,677
Recife, Brazil, 3,700
Rio de Janeiro, Brazil, 4,772
St. John, Canada, 215
Salvador, Brazil, 4,091
San Juan, Puerto Rico, 1,531
Santos, Brazil, 4,959
Sydney, Canada, 556
Willemstad, Curacao, 1,921
Yarmouth, Canada, 185

PORTLAND, OREGON, U.S.A.
(45°33'00'' N., 122°41'45'' W.) to:

Junction Points*
Panama, Panama, 3,869
Punta Arenas, Chile, 6,813
Singapore, 7,142
Wilson Promontory, Australia, 7,121

Ports
Antofagasta, Chile, 5,383
Auckland, New Zealand, 6,075
Brisbane, Australia, 6,421
Brito, Nicaragua, 3,333
Callao, Peru, 4,611
Cebu, Philippines, 6,001
Djakarta, Indonesia (via Balintang Channel and composite), 7,415
Guayaquil, Ecuador, 4,169
Honolulu, Hawaii, U.S.A., 2,332
Kobe, Japan, 4,590
Manila, Philippines (via Babuyan Channel), 6,024
Newcastle, Australia, 6,833
Pago Pago, American Samoa, 4,525
Sydney, Australia, 6,737
Ta-lien, China, 5,240
Valparaiso, Chile, 5,764
Vancouver, Canada, 371
Vladivostok, U.S.S.R. (north of the Aleutian Islands), 4,278
Wellington, New Zealand, 6,327
Yokohama, Japan, 4,323

PORTLAND BIGHT, JAMAICA
(17°50'00'' N., 77°06'00'' W.) to:

Ports
Colon, Panama, 536

PORTO, PORTUGAL
(41°08'30'' N., 8°41'00'' W.) to:

Junction Points*
Strait of Gibraltar, 432
Ushant, France, 494

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Cadiz, Spain, 399
Dakar, Senegal, 1,682
Freetown, Sierra Leone, 2,161
Funchal, Madeira Island, 650
Lisboa, Portugal, 176
New York, New York, U.S.A., 2,923
Ponta Delgada, Azores, 815
Puerto de Pasajes, Spain, 473
Santa Cruz de Tenerife, Canary Islands, 849
Vigo, Spain, 74

PORTO ALEGRE, BRAZIL
(30°02'00'' S., 51°14'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of Africa, 3,625
Panama, Panama, 5,148
Punta Arenas, Chile, 1,686

Ports
Montevideo, Uruguay, 482
Santos, Brazil, 758

PORTO AMBOIM, ANGOLIA. See Amboim.

PORTO DE LEIXOES, PORTUGAL
(41°10'40'' N., 8°42'00'' W.) to:

Ports
Gijon, Spain, 309
Lisboa, Portugal, 180
Puerto de Pasajes, Spain, 473
Rota, Spain, 454
Tangier, Morocco, 436

PORTO DI LICATA, SICILY, ITALY
(37°05'15'' N., 13°56'30'' E.) to:

Junction Points*
Port Said, U.A.R., 993
Strait of Gibraltar, 958

Ports
Messina, Sicily, 173
Tunis, Tunisia, 187
Valletta, Malta, 78

PORTO DI MANFREDONIA, ITALY
(41°37'15'' N., 15°55'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,045
Strait of Gibraltar, 1,419

Ports
Ancona, Italy, 195
Dubrovnik, Yugoslavia, 117
Durres, Albania, 161

PORTO DI MILAZZO, SICILY, ITALY
(38°13'00'' N., 15°15'00'' E.) to:

Junction Points*
Port Said, U.A.R., 973
Strait of Gibraltar, 1,025

Ports
Napoli, Italy, 54
Palermo, Sicily, 97
Taranto, Italy, 316

PORTO DI REGGIO CALABRIA, SICILY, ITALY
(38°07'35'' N., 15°39'00'' E.) to:

Junction Points*
Port Said, U.A.R., 939
Strait of Gibraltar, 1,052

Ports
Banghazi, Libya, 425
Napoli, Italy, 179
Palermo, Sicily, 124

PORTO DI VADO, ITALY. See Vado Ligure.

PORTO EMPEDOCLE, SICILY, ITALY
(37°16'30'' N., 13°32'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,017
Strait of Gibraltar, 937

Ports
Tarabulus, Libya, 263
Tunis, Tunisia, 167
Valletta, Malta, 97

PORTO GRANDE, SAO VICENTE, CAPE VERDE ISLANDS
(16°53'00'' N., 25°00'20'' W.) to:

Junction Points*
Bishop Rock, England, 2,165
Cape of Good Hope, Republic of South Africa, 3,958
Strait of Gibraltar, 1,539
Straits of Florida, 3,308
Ushant, France, 2,137

Ports
Accra, Ghana, 1,760
Baltimore, Maryland, U.S.A., 3,095
Bathurst, Gambia, 553
Benguela, Angola, 2,101
Bissau, Portuguese Guinea, 651
Cadiz, Spain, 1,547
Casablanca, Morocco, 1,387
Colon, Panama, 3,246
Freetown, Sierra Leone, 871
Funchal, Madeira Island, 1,043
Guantanamo, Cuba, 2,853
Horta, Azores, 1,316
Huelva, Spain, 1,561
Lagos, Nigeria, 1,991
Lisboa, Portugal, 1,555
Luanda, Angola, 2,778
Mocamedes, Angola, 2,939
Monrovia, Liberia, 1,069
New York, New York, U.S.A., 2,913
Norfolk, Virginia, U.S.A., 2,971
Philadelphia, Pennsylvania, U.S.A., 3,011
Ponta Delgada, Azores, 1,253
Rio de Janerio, Brazil, 2,687
St. Louis, Senegal, 496
Santa Cruz de Tenerife, Canary Islands, 849
Sao Tome, Gulf of Guinea, 2,208
Savannah, Georgia, U.S.A., 3,169
Sidi Ifni, Ifni, 1,117
Sydney, Canada, 2,503
Takoradi, Ghana, 1,673
Tangier, Morocco, 1,536
Vigo, Spain, 1,737
Villa Cisneros, Spanish Sahara, 650
Wilmington, North Carolina, U.S.A., 3,057

PORTO NOVO, DAHOMEY. See Cotonou.

PORTO VECCHIO DI PIOMBINO, ITALY
(42°56'00'' N., 10°33'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,315
Strait of Gibraltar, 897

Ports
Genova, Italy, 116
Marseille, France, 247
Napoli, Italy, 227

PORTSMOUTH, ENGLAND
(50°48'00'' N., 1°06'40'' W.) to:

Junction Points*
Bishop Rock, England (via Needles Channel), 225
Kiel Canal (east end), Germany, 515
Skagens Odde, Denmark, 632
Ushant, France, 227

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Aberdeen, Scotland, 514
Amsterdam, Netherlands, 266
Antwerpen, Belgium, 242
Bergen, Norway, 695
Bremerhaven, Germany, 446
Dover, England, 105
Dundee, Scotland, 497
Dunkerque, France, 150
Egersund, Norway, 582
Emden, Germany, 389
Esbjerg, Denmark, 475
Hamburg, Germany, 504
Hartlepool, England, 378
Hull, England, 318
Kristiansand, Norway, 593
Leith, Scotland, 495
London, England, 197
Newcastle, England, 403
Oostende, Belgium, 174
Oslo, Norway, 745
Rotterdam, Netherlands, 243
Stavanger, Norway, 622
Wilhelmshaven, Germany, 433
Zeebrugge, Belgium, 179

PORTSMOUTH, NEW HAMPSHIRE, U.S.A.
(43°04'40'' N., 70°44'30'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 6,732
Straits of Florida, 1,461
Yucatan Channel (outside route), 1,612

Ports
Angmagssalik, Greenland (direct), 2,052
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,066
Argentia, Canada, 779
Arkhangelsk, U.S.S.R., 3,992
Belem, Brazil, 2,959
Cartagena, Colombia, 2,053
Castries, St. Lucia, 1,822
Charlotte Amalie, Virgin Islands, 1,534
Colon, Panama, 2,174
Dakar, Senegal, 3,219
Elizabeth Harbor, Bahamas, 1,252
Freetown, Sierra Leone, 3,654
Georgetown, British Guiana, 2,284
Guantanamo, Cuba (Nantucket Light Vessel, via Crooked Island Passage and Windward Passage), 1,512
Halifax, Canada, 359
Hamilton, Bermuda, 723
Ivigtut, Greenland, 1,709
Kingston, Jamaica, 1,655
Port of Spain, Trinidad, 2,024
Reykjavik, Iceland, 2,271
St. John, Canada, 248
San Juan, Puerto Rico, 1,507
Sydney, Canada, 576

POZZUOLI, ITALY
(40°49'30'' N., 14°07'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,118
Strait of Gibraltar, 995

Ports
Civitavecchia, Italy, 147
Messina, Sicily, 177
Tunis, Tunisia, 308

PRAIA, BAHIA PRAIA, TERCEIRA, AZORES
(38°43'45'' N., 27°03'10'' W.) to:

Junction Points*
Bishop Rock, England, 1,128
Strait of Gibraltar, 1,034
Straits of Florida, 3,017

Ports
Lisboa, Portugal, 850
New York, New York, U.S.A., 2,173

PRAIA, SAO TIAGO, CAPE VERDE ISLANDS
(14°54'15'' N., 23°30'30'' W.) to:

Ports
Funchal, Madeira Island, 1,128

PRAIA DA VITORIA, TERCEIRA, AZORES. See Praia, Bahia Praia.

PREVEZA, GREECE
(38°57'15'' N., 20°45'20'' E.) to:

Junction Points*
Port Said, U.A.R., 806
Strait of Gibraltar, 1,319

Ports
Durres, Albania, 181
Messina, Sicily, 274
Piraievs, Greece (via Corinth Canal), 197

PRINCE RUPERT, CANADA
(54°19'00'' N., 130°20'00'' W.) to:

Junction Points*
Panama, Panama, 4,303
Punta Arenas, Chile, 7,247
Singapore, 5,683

Ports
Apra, Guam, 4,586
Auckland, New Zealand, 6,209
Callao, Peru, 5,047
Dutch Harbor, Alaska, U.S.A., 1,274
Hakodate, Japan (south of Aleutian Islands), 3,525
Hakodate, Japan (alternate route, north of Aleutian Islands), 3,487
Hong Kong, B.C.C. (south of Aleutian Islands), 5,323
Hong Kong, B.C.C. (alternate route, north of Aleutian Islands), 5,286
Honolulu, Hawaii, U.S.A., 2,393
Juneau, Alaska, U.S.A., 322
Los Angeles, California, U.S.A., 1,432
Manila, Philippines (south of Aleutian Islands, and north of Luzon), 5,510
Manila, Philippines (alternate route, north of Aleutian Islands), 5,493
Nanaimo, Canada, 453
New Westminster, Canada, 492
Nome, Alaska, U.S.A., 1,846
Pago Pago, American Samoa, 4,652
Petropavlovsk, U.S.S.R. (via Unimak Pass), 2,504
San Francisco, California, U.S.A., 1,090
Seattle, Washington, U.S.A., 577
Seward, Alaska, U.S.A., 734
Sitka, Alaska, U.S.A., 285
Sydney, Australia, 6,671
Valparaiso, Chile, 6,199
Vancouver, Canada, 477
Victoria, Canada, 531
Yokohama, Japan (south of Aleutian Islands), 3,827
Yokohama, Japan (alternate route, north of Aleutian Islands), 3,810

PROGRESO, MEXICO
(21°21'00'' N., 89°40'00'' W.) to:

Junction Points
Panama, Panama, 1,069

Ports
Baltimore, Maryland, U.S.A., 1,530
Boston, Massachusetts, U.S.A., 1,838
Colon, Panama, 1,026
Habana, Cuba, 430
New Orleans, Louisiana, U.S.A., 556
New York, New York, U.S.A., 1,609
Tampico, Mexico, 469
Veracruz, Mexico, 401

*JUNCTION POINT.—See Preface for use of junction points.

PROVIDENCE, RHODE ISLAND, U.S.A.
(41°48'30'' N., 71°24'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 2,994
Bishop Rock, England (track B), 2,956
Bishop Rock, England (track C), 2,883
Fastnet, Ireland (track A), 2,890
Fastnet, Ireland (track B), 2,851
Fastnet, Ireland (track C), 2,769
Inishtrahull, Ireland (track A), 3,016
Inishtrahull, Ireland (track B), 2,970
Inishtrahull, Ireland (track C), 2,867
Pentland Firth, Scotland (track A), 3,230
Pentland Firth, Scotland (track B), 3,174
Pentland Firth, Scotland (track C), 3,047
Strait of Gibraltar (track A), 3,138
Strait of Gibraltar (track B), 3,128
Strait of Gibraltar (track C), 3,112

Ports
Bordeaux, France (track A), 3,276
Bordeaux, France (track B), 3,245
Bordeaux, France (track C), 3,190

PROVIDENCE BAY, U.S.S.R. See Provideniya.

PROVIDENIYA, U.S.S.R.
(64°22'00'' N., 173°17'30'' W.) to:

Ports
Ambarchik, U.S.S.R., 864
Anadyrskiy Liman, U.S.S.R., 254
Pevek, U.S.S.R., 719
Tiksi, U.S.S.R., 1,500

PUERTO ARMUELLES, PANAMA
(8°16'15'' N., 82°51'30'' W.) to:

Junction Points*
Panama, Panama, 306

Ports
Corinto, Nicaragua, 409
Los Angeles, California, U.S.A., 2,645
San Francisco, California, U.S.A., 2,973

PUERTO BANES, CUBA. See Banes.

PUERTO BARRIOS, GUATEMALA
(15°43'00'' N., 88°37'00'' W.) to:

Junction Points*
Panama, Panama, 823
Yucatan Channel, 439

Ports
Baltimore, Maryland, U.S.A., 1,725
Cartagena, Colombia, 901
Colon, Panama, 780
Galveston, Texas, U.S.A., 1,041
Habana, Cuba, 608
Kingston, Jamaica, 715
Mobile, Alabama, U.S.A., 950
New Orleans, Louisiana, U.S.A. (via South Pass), 955
New York, New York, U.S.A., 1,804
Norfolk, Virginia, U.S.A., 1,603
Philadelphia, Pennsylvania, U.S.A., 1,774
Santiago de Cuba, Cuba, 792
Savannah, Georgia, U.S.A., 1,224
Veracruz, Mexico, 985

PUERTO CABELLO, VENEZUELA
(10°29'15'' N., 68°00'30'' W.) to:

Junction Points*
Panama, Panama, 845
Straits of Florida (via Windward Passage), 1,299
Yucatan Channel, 1,203

Ports
Alvaro Obregon, Mexico, 1,745
Baltimore, Maryland, U.S.A., 1,818
Belize, British Honduras, 1,289
Boston, Massachusetts, U.S.A. (via Mona Passage), 1,976
Campeche, Mexico, 1,595
Cape Haitien, Haiti, 752
Castries, St. Lucia, 465
Charlotte Amalie, Virgin Islands, 506
Cienfuegos, Cuba, 1,015
Colon, Panama, 802
Galveston, Texas, U.S.A., 1,899
Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,260
Key West, Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 1,248
Kingston, Jamaica, 697
Paramaribo, Surinam, 887
Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,845
Pointe a Pitre, Guadeloupe, 520
Port au Prince, Haiti, 769
Port of Spain, Trinidad, 395
Santo Domingo, Dominican Republic, 492
Tuxpan, Mexico, 1,883
Veracruz, Mexico, 1,848
Willemstad, Curacao, 116

PUERTO CABEZAS, NICARAGUA
(14°01'00'' N., 83°22'30'' W.) to:

Junction Points*
Panama, Panama, 390

Ports
Kingston, Jamaica, 451
Le Ceiba, Honduras, 316
Oranjestad, St. Eustatius, 1,195

PUERTO CAYO MOA, CUBA
(20°40'00'' N., 74°54'00'' W.) to:

Junction Points*
Panama, Panama, 853
Straits of Florida, 510

Ports
Kingston, Jamaica, 301
Nuevitas, Cuba, 154
San Juan, Puerto Rico, 533

PUERTO COLOMBIA, COLOMBIA
(11°00'00'' N., 74°58'00'' W.) to:

Junction Points*
Panama, Panama, 358

Ports
Habana, Cuba (via Yucatan Channel), 1,068
Kingston, Jamaica, 438
La Guaira, Venezuela, 539
Miragoane, Haiti, 549
Philadelphia, Pennsylvania, U.S.A., 1,774
Port au Prince, Haiti, 586
Santo Domingo, Dominican Republic, 542

PUERTO CONCEPCION, ARGENTINA
(44°33'09'' S., 65°22'45'' W.) to:

Junction Points*
Panama, Panama, 6,067
Punta Arenas, Chile, 624

Ports
Buenos Aires, Argentina, 806
Stanley, Falkland Islands, 538

PUERTO CORTES, HONDURAS
(15°50'00'' N., 87°57'20'' W.) to:

Junction Points*
Panama, Panama, 776
Yucatan Channel, 399

Ports
Baltimore, Maryland, U.S.A., 1,690
Barranquilla, Colombia, 873
Bluefields, Nicaragua, 519

*JUNCTION POINT.—See Preface for use of junction points.

Buenos Aires, Argentina, 5,909
Cartagena, Colombia, 854
Castries, St. Lucia, 1,578
Charlotte Amalie, Virgin Islands, 1,343
Colon, Panama, 733
Dakar, Senegal, 4,077
Galveston, Texas, U.S.A., 1,001
Georgetown, British Guiana, 1,933
Guantanamo, Cuba, 770
Kingston, Jamaica, 671
La Guaira, Venezuela, 1,294
Limon, Costa Rica, 623
Mobile, Alabama, U.S.A., 915
New Orleans, Louisiana, U.S.A. (via South Pass), 916
New York, New York, U.S.A., 1,764
Norfolk, Virginia, U.S.A., 1,563
Philadelphia, Pennsylvania, U.S.A., 1,739
Port of Spain, Trinidad, 1,599
Recife, Brazil, 3,737
Rio de Janeiro, Brazil, 4,813
St. Johns, Antigua, 1,511
San Juan, Puerto Rico, 1,284
Savannah, Georgia, U.S.A., 1,189
Stanley, Falkland Islands, 6,585
Swan Island, 254
Tampico, Mexico, 993
Veracruz, Mexico, 948

PUERTO CUMAREBO, VENEZUELA
(11°31'20'' N., 69°20'00'' W.) to:

Junction Points*
Panama, Panama, 740
Yucatan Channel, 1,103

Ports
Barranquilla, Colombia, 386
La Guaira, Venezuela, 168

PUERTO DE LA LUZ. See Las Palmas de Gran Canaria.

PUERTO DE PASAJES, SPAIN
(43°19'30'' N., 1°55'00'' W.) to:

Junction Points*
Strait of Gibraltar, 894
Ushant, France, 340

Ports
Bordeaux, France, 178
El Ferrol del Caudillo, Spain, 300
Horta, Azores, 1,260
Porto de Leixoes, Portugal, 473

PUERTO DE HIERRO, VENEZUELA
(10°37'00'' N., 62°05'30'' W.) to:

Junction Points*
Panama, Panama, 1,192
Straits of Florida, 2,086

Ports
Barranquilla, Colombia, 838
Belem, Brazil, 1,215

PUERTO DESEADO, ARGENTINA
(47°45'20'' S., 65°55'05'' W.) to:

Junction Points*
Panama, Panama, 6,222
Punta Arenas, Chile, 440

Ports
Buenos Aires, Argentina, 965
Stanley, Falkland Islands, 409

PUERTO LA CRUZ, VENEZUELA
(10°14'50'' N., 64°35'57'' W.) to:

Junction Points*
Panama, Panama, 1,016
Yucatan Channel, 1,381

Ports
La Guaira, Venezuela, 145
Philadelphia, Pennsylvania, U.S.A., 1,900
Port of Spain, Trinidad, 214

PUERTO LIMON, COSTA RICA. See Limon.

PUERTO MADRYN, ARGENTINA
(42°45'45'' S., 65°01'35'' W.) to:

Junction Points*
Panama, Panama, 6,012
Punta Arenas, Chile, 760

Ports
Buenos Aires, Argentina, 748
Stanley, Falkland Islands, 633

PUERTO MAGDALENA, MEXICO. See Bahia Magdalena.

PUERTO MANATI, CUBA
(21°21'40'' N., 76°49'20'' W.) to:

Junction Points*
Panama, Panama, 959
Straits of Florida, 397

Ports
Habana, Cuba, 353
New York, New York, U.S.A., 1,244
San Juan, Puerto Rico, 639

PUERTO MASACHAPA, NICARAGUA
(11°44'00'' N., 86°31'30'' W.) to:

Junction Points*
Panama, Panama, 619

Ports
Acapulco, Mexico, 850
Callao, Peru, 1,583

PUERTO MEXICO, MEXICO
(18°08'00'' N., 94°24'45'' W.) to:

Junction Points*
Panama, Panama, 1,420
Straits of Florida, 757
Yucatan Channel, 625

Ports
Cartagena, Colombia, 1,484
Colon, Panama, 1,396
Galveston, Texas, U.S.A., 680
Habana, Cuba, 840
Mobile, Alabama, U.S., 834
New Orleans, Louisiana, U.S.A., 801
Norfolk, Virginia, U.S.A., 1,736
Pensacola, Florida, U.S.A., 836
Port Arthur, Texas, U.S.A., 708
Port of Spain, Trinidad, 2,137
Tampico, Mexico, 320
Veracruz, Mexico, 127

PUERTO MIRANDA, VENEZUELA
(10°45'30'' N., 71°33'15'' W.)

Subtract 8½ miles from Maracaibo distances.

PUERTO MONTT, CHILE
(41°29'00'' S., 72°57'00'' W.) to:

Junction Points*
Panama, Panama, 3,177
Punta Arenas, Chile, 992

Ports
Islas Juan Fernandez, 616
Mollendo, Peru, 1,578
Valparaiso, Chile, 623

PUERTO ORDAZ, VENEZUELA
(8°21'00'' N., 62°43'00'' W.)

Add 4 miles to San Felix distances.

PUERTO PADRE, CUBA
(21°13'00'' N., 76°34'00'' W.) to:

Junction Points*
Panama, Panama, 948
Straits of Florida, 409

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Maracaibo, Venezuela, 834
Matanzas, Cuba, 330
San Juan, Puerto Rico, 625

PUERTO PLATA, DOMINICAN REPUBLIC. See Port Plata.

PUERTO SIBONEY, CUBA
(19°57'00'' N., 75°42'00'' W.) to:

Junction Points*
Straits of Florida, 659
Yucatan Channel, 545

Ports
Habana, Cuba, 729
Montego Bay, Jamaica, 159
Pina, Panama, 697

PUERTO SOMOZA, NICARAGUA
(12°09'00'' N., 86°49'30'' W.) to:

Junction Points*
Panama, Panama, 649

Ports
Acapulco, Mexico, 825
Callao, Peru, 1,608

PUERTO SUCRE, VENEZUELA
(10°27'45'' N., 64°11'43'' W.) to:

Junction Points*
Panama, Panama, 1,035
Yucatan Channel, 1,399

Ports
La Guaira, Venezuela, 205
Philadelphia, Pennsylvania, U.S.A., 1,907
Port of Spain, Trinidad, 200

PUERTO TANAMO, CUBA
(20°42'00'' N., 75°20'00'' W.) to:

Junction Points*
Panama, Panama, 869
Straits of Florida, 489

Ports
Habana, Cuba, 444
Kingston, Jamaica, 318
San Juan, Puerto Rico, 549

PUERTO VITA, CUBA
(21°04'52'' N., 75°57'07'' W.) to:

Junction Points*
Panama, Panama, 915
Straits of Florida, 444

Ports
Habana, Cuba, 400
Kingston, Jamaica, 364
San Juan, Puerto Rico, 592

PULA, YUGOSLAVIA
(44°52'08'' N., 13°50'07'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,244
Port Said, U.A.R. (south of Greece), 1,256
Strait of Gibraltar, 1,628

Ports
Catania, Sicily, 594
Constanta, Rumania (via Corinth Canal), 1,206
Constanta, Rumania (south of Greece), 1,305
Iskenderun, Turkey (via Corinth Canal), 1,301
Iskenderun, Turkey (south of Greece), 1,341
Istanbul, Turkey, 1,124
Jaffa, Israel (via Corinth Canal), 1,306
Jaffa, Israel (south of Greece), 1,331
Kerch, U.S.S.R. (via Corinth Canal), 1,444
Kerch, U.S.S.R. (south of Greece), 1,543
Larnaca, Cyprus (via Corinth Canal), 1,212
Larnaca, Cyprus (south of Greece), 1,245
Mersin, Turkey (via Corinth Canal), 1,244
Mersin, Turkey (south of Greece), 1,260
Patrai, Greece, 555
Rostov-na-Donu, U.S.S.R. (via Corinth Canal), 1,646
Rostov-na-Donu, U.S.S.R. (south of Greece), 1,745
Sete, France, 1,216

PULUPANDAN, PHILIPPINES
(10°31'00'' N., 122°47'30'' E.) to:

Junction Points*
Singapore, 1,504
Torres Strait, Australia, 1,962

Ports
Cebu, Philippines, 225
Manila, Philippines, 363
Zamboanga, Philippines, 237

PUNTA ARENAS, CHILE*
(53°10'00'' S., 70°54'00'' W.) to:

Junction Points*
Bishop Rock, England, 7,019
Cape of Good Hope, Republic of South Africa, 4,262
Inishtrahull, Ireland, 7,315
Montreal, Canada (via Strait of Canso), 7,513
Panama, Panama, 3,932
Pentland Firth, Scotland, 7,563
Strait of Gibraltar, 6,352
Straits of Florida, 6,783
Torres Strait, Australia (via Lat. 30° S. and Raine Island entrance), 8,348
Ushant, France, 6,986
Wilson Promontory, Australia (via Lat. 30° S. and Cook Strait), 7,460
Wilson Promontory, Australia (via Lat. 60° S.), 5,305
Wilson Promontory, Australia (via Foveaux Strait and Lat. 49° S.), 5,820
Yucatan Channel, 6,794

Ports
Acapulco, Mexico, 4,582
Angra dos Reis, Brazil, 2,212
Antofagasta, Chile, 1,996
Apia, Samoa, 5,207
Apra, Guam, 8,071
Arica, Chile, 2,301
Auckland, New Zealand (via Lat. 30° S.), 6,132
Auckland, New Zealand (via Lat 49° S.), 4,814
Avarua, Cook Islands, 4,429
Bahia Blanca, Argentina, 1,004
Baltimore, Maryland, U.S.A., 7,002
Belem, Brazil, 4,363
Bordeaux, France, 7,074
Boston, Massachusetts, U.S.A., 6,910
Brisbane, Australia (via Lat. 30° S.), 7,369
Brisbane, Australia (via Lat. 49° S.), 6,063
Buenos Aires, Argentina, 1,394
Cabedelo, Cuba, 3,327
Caldera, Chile, 1,795
Caleta Olivia, Argentina, 570
Callao, Peru, 2,671
Cape Town, Republic of South Africa, 4,279
Castries, St. Lucia, 5,451
Charleston, South Carolina, U.S.A., 6,868
Charlotte Amalie, Virgin Islands, 5,714
Charlottetown, Canada, 6,907
Chimbote, Peru, 2,843
Colon, Panama, 6,451
Comodoro Rivadavia, Argentina, 585

*JUNCTION POINT.—See Preface for use of junction points.

Coquimbo, Chile, 1,623
Corinto, Nicaragua, 4,180
Corral, Chile, 1,020
Dakar, Senegal, 4,928
Dutch Harbor, Alaska, U.S.A., 8,063
Esmeraldas, Ecuador, 3,486
Fortaleza, Brazil, 3,654
Freetown, Sierra Leone, 4,731
Funchal, Madeira Island, 5,894
Georgetown, British Guiana, 5,030
Guayaquil, Ecuador, 3,307
Guaymas, Mexico, 5,401
Habana, Cuba (via Old Bahama Channel and east of South America), 6,742
Hakodate, Japan (via Lat. 30° S.), 9,672
Halifax, Canada, 6,799
Hamilton, Bermuda, 6,273
Honolulu, Hawaii, U.S.A. (via Lat. 30° S.), 6,414
Hsia-men, China, 10,537
Iquique, Chile, 2,201
Jacksonville, Florida, U.S.A., 6,879
Jaluit, Marshall Islands, 6,815
Kobe, Japan (via Lat. 30° S.), 9,872
La Libertad, Ecuador, 3,258
Levuka, Fiji Islands, 5,342
Lisboa, Portugal, 6,398
Los Angeles, California, U.S.A., 5,871
Lota, Chile, 1,191
Maceio, Brazil, 3,137
Maldonado, Uruguay, 1,321
Mar del Plata, Argentina, 1,112
Matarani, Peru, 2,380
Midway Island, 7,382
Mollendo, Peru, 2,374
Monterey, California, U.S.A., 6,113
Montevideo, Uruguay (via west of English Bank), 1,300
Nagasaki, Japan (via Lat. 30° S.), 10,126
Natal, Brazil, 3,400
New York, New York, U.S.A., 6,934
Norfolk, Virginia, U.S.A., 6,880
Noumea, New Caledonia (composite sailing with Lat. 49° S. the limiting latitude), 5,745
Noumea, New Caledonia (via Great Circle), 5,527
Omura, Bonion Islands, 8,765
Pago Pago, American Samoa, 5,181
Papeete, Society Islands, 4,233
Paranagua, Brazil, 2,001
Philadelphia, Pennsylvania, U.S.A., 6,978
Pisco, Peru, 2,578
Ponape, Caroline Islands, 7,260
Port Gallegos, Argentina, 202
Port of Spain, Trinidad, 5,350
Portland, Maine, U.S.A., 6,939
Portland, Oregon, U.S.A., 6,813
Porto Alegre, Brazil, 1,686
Porto Concepcion, Argentina, 624
Prince Rupert, Canada, 7,247
Puerto Descado, Argentina, 440
Puerto Madryn, Argentina, 760
Puerto Montt, Chile, 992
Puntarenas, Costa Rica, 4,010
Quequen, Argentina, 1,053
Rabaul, New Britain (via Lat. 30° S.), 7,980
Recife, Brazil, 3,252
Rio de Janeiro, Brazil, 2,238
Rio Grande, Argentina, 220
St. John's Canada, 6,735
Salina Cruz, Mexico, 4,478
Salvador, Brazil, 2,920
San Antonio, Chile, 1,410
San Blas, Mexico, 4,961
San Diego, California, U.S.A., 5,801
San Francisco, California, U.S.A., 6,188
San Jose, Guatemala, 4,296
San Juan, Peru, 1,660
Santa Barbara, California, U.S.A., 5,938
Santa Cruz de Tenerife, Canary Islands, 5,690
Savannah, Georgia, U.S.A., 6,898
Seattle, Washington, U.S.A., 6,964
Seward, Alaska, U.S.A., 7,859
Shang-hai, China (via Lat. 30° S.), 10,465
Shimonoseki, Japan (via Lat. 30° S.), 10,038
Sitka, Alaska, U.S.A., 7,455
Stanley, Falkland Islands, 558
Suva, Fiji Islands, 5,444
Sydney, Australia (via Lat. 30° S. and north of New Zealand), 7,301
Sydney, Australia (via Lat. 60° S.), 5,398
Ta-ku, China (north of Marshall Islands), 10,843
Talcahuano, Chile, 1,269
Ta-lien, China, 10,687
Ta-lien, China (north of Marshall Islands), 10,683
Tocopilla, Chile, 2,177
Valparaiso, Chile, 1,432
Vancouver, Canada, 6,978
Wellington, New Zealand (via Lat. 50° S.), 4,634
Wellington, New Zealand (via Lat. 30° S.), 6,141
Wilmington, North Carolina, U.S.A., 6,853
Yokohama, Japan (via Lat. 30° S.), 9,642

PUNTA CARDON, VENEZUELA
(11°37'30'' N., 70°14'30'' W.) to:

Junction Points*
Panama, Panama, 674
Yucatan Channel, 1,055

Ports
Cartagena, Colombia, 397
Kingston, Jamaica, 530
Port of Spain, Trinidad, 574

PUNTA DE PIEDRAS, VENEZUELA
(11°42'12'' N., 70°13'30'' W.)

Add 2 miles to Amuay distances.

PUNTARENAS, COSTA RICA
(9°58'00'' N., 84°50'00'' W.) to:

Junction Points*
Panama, Panama, 471
Punta Arenas, Chile, 4,010

Ports
Acapulco, Mexico, 1,011
Amapala, Honduras, 329
Antofagasta, Chile, 2,215
Arica, Chile, 1,996
Callao, Peru, 1,421
Coquimbo, Chile, 2,526
Corinto, Nicaragua, 262
Esmeraldas, Ecuador, 614
Guayaquil, Ecuador, 878
Guaymas, Mexico, 1,956
Iquique, Chile, 2,062
La Libertad, El Salvador, 383
La Libertad, Mexico, 2,120
Los Angeles, California, U.S.A., 2,499
Lota, Chile, 2,899
Mollendo, Peru, 1,871
Monterey, California, U.S.A., 2,751
Pisco, Peru, 1,533
San Blas, Mexico, 1,500
San Diego, California, U.S.A., 2,429
San Francisco, California, U.S.A., 2,831
San Jose, Guatemala, 465
San Juan del Sur, Nicaragua, 171
Santa Barbara, California, U.S.A., 2,566
Talcahuano, Chile, 2,879
Valparaiso, Chile, 2,690

PUSAN, KOREA
(35°06'00'' N., 129°03'00'' E.) to:

Junction Points*
Singapore, 2,502
Sunda Strait, Indonesia, 2,855

*JUNCTION POINT.—See Preface for use of junction points.

Wetar Passage, Indonesia (via Molucca Passage and Selat Manipa), 2,632

Ports
Aleksandrovsk, U.S.S.R., 1,118
Changjon, Korea, 268
Chinnampo, Korea (via Maenggol Sudo), 496
Chin-huang-tao, China (via Maenggol Sudo), 650
Chin-tao, China, 497
Chongjin, Korea, 417
Darwin, Australia (via Molucca Passage), 2,937
Djakarta, Indonesia, 2,836
Hakodate, Japan, 686
Higashi-Iwase, Japan, 492
Hong Kong, B.C.C., 1,144
Honolulu, Hawaii, U.S.A., 3,973
Hsia-men, China, 885
Hua-lien Chiang, Taiwan, 782
Hungnam, Korea, 328
Inchon, Korea (via Maenggol Sudo), 402
Kimchaek, Korea, 351
Kobe, Japan, 361
Krung Thep, Thailand (outer bar), 2,533
Kunsan, Japan, 376
Kushiro, Japan, 876
Lo-hsing-ta Mao-ti, China, 762
Los Angeles, California, U.S.A., 5,229
Lu-shun, China (via Maenggol Sudo), 549
Maizuru, Japan, 333
Manila, Philippines, 1,402
Moji, Japan, 123
Mokpo, Korea, 225
Nagasaki, Japan, 163
Naha, Ryukyu Islands, 550
Nakhodka, U.S.S.R., 508
Nanao, Japan, 476
Niigata, Japan, 516
Pago Pago, American Samoa (via Bungo Suido), 4,561
Petropavlovsk, U.S.S.R., 1,731
Rumoi, Japan, 793
Sai Gon, Vietnam, 1,999
Sakata, Japan, 577
San Francisco, California, U.S.A., 4,914
Shang-hai, China (north of Cheju Do, and via South Channel), 491
Shan-tou, China, 994
Sosura, Korea, 448
Tai-tung Chiang, Taiwan, 860
Ta-ku, China (via Maenggol Sudo), 702
Ta-lien, China (via Maenggol Sudo), 543
Tongyong, Korea, 63
Ube, Japan, 143
Unggi, Korea, 452
Vladivostok, U.S.S.R., 514
Wakamatsu, Japan, 120
Wei-hai-wei, China, 474
Wonsan, Korea, 308
Yen-tai, China (via Maenggol Sudo), 508
Yokohama, Japan, 665
Yosu, Korea, 97

QABIS, TUNISIA
(33°53′54″ N., 10°07′30″ E.) to:

Junction Points*
Port Said, U.A.R., 1,149
Strait of Gibraltar, 1,073

Ports
Tarabulas, Libya, 174
Tunis, Tunisia, 302
Valletta, Malta, 232

QUEENSTOWN, IRELAND. See Cobh.

QUELIMANE, MOZAMBIQUE
(17°52′52″ S., 36°53′06″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,569
Port Said, U.A.R., 3,839

Ports
Beira, Mozambique, 123
East London, Republic of South Africa, 1,062
Inhambane, Mozambique, 377
Mocambique, Mozambique, 327

QUEPOS, COSTA RICA
(9°25′00″ N., 84°10′00″ W.) to:

Junction Points*
Panama, Panama, 415

Ports
Acapulco, Mexico, 1,043
Callao, Peru, 1,387

QUEQUEN, ARGENTINA
(38°35′00″ S., 58°41′30″ W.) to:

Junction Points*
Panama, Panama, 5,202
Punta Arenas, Chile, 1,053

Ports
Buenos Aires, Argentina, 350
Santos, Brazil, 1,437

QUI NHON, VIETNAM
(13°45′00″ N., 109°15′00″ E.) to:

Junction Points*
Singapore, 856
Sunda Strait, Indonesia, 1,241

Ports
Haiphong, Vietnam, 469
Hong Kong, B.C.C., 592
Sai Gon, Vietnam, 361

QUIBERON, FRANCE
(47°28′30″ N., 3°07′15″ W.) to:

Junction Points*
Bishop Rock, England, 253
Strait of Gibraltar, 932
Ushant, France, 133

Ports
Bilbao, Spain, 249
Horta, Azores, 1,290

QUONSET POINT, RHODE ISLAND, U.S.A.
(41°35′00″ N., 71°24′00″ W.)

Subtract 13 miles from Providence distances.

QUTDLIGSSAT, GREENLAND
(70°05′00″ N., 53°00′00″ W.) to:

Junction Points*
Pentland Firth, Scotland, 2,106
Strait of Gibraltar, 2,953

Ports
Churchill, Canada, 1,666
Reykjavik, Iceland, 1,552
St. John's, Canada, 1,476

RABAT, MOROCCO
(34°02′30″ N., 6°50′30″ W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,036
Ushant, France, 954

Ports
Dakar, Senegal, 1,412
Sidi Ifni, Ifni, 357
Tangier, Morocco, 125

*JUNCTION POINT.—See Preface for use of junction points.

RABAUL, NEW BRITAIN
(4°12'30'' S., 152°12'00'' E.) to:

Junction Points*
Panama, Panama, 7,807
Punta Arenas, Chile (via Lat. 49° S.), 7,036

Ports
Apia, Samoa, 2,232
Apra, Guam, 1,187
Auckland, New Zealand, 2,345
Avarua, Cook Islands, 2,993
Brisbane, Australia, 1,434
Callao, Peru, 7,713
Ching-tao, China, 3,043
Hai-kou, Hai-nan To, China, 2,943
Hakodate, Japan, 2,894
Hong Kong, B.C.C., 2,764
Honolulu, Hawaii, U.S.A., 3,355
Hsia-men, China, 2,659
Kuang-chou, China, 2,856
Lae, New Guinea, 448
Levuka, Fiji Islands, 1,836
Mackay, Australia, 1,871
Manila, Philippines, 2,281
Melbourne, Australia, 2,408
Midway Island, 2,688
Nagasaki, Japan, 2,612
Noumea, New Caledonia, 1,383
Omura, Bonin Islands, 2,007
Papeete, Society Islands, 3,527
Petropavlovsk, U.S.S.R., 3,555
Ponape, Caroline Islands, 853
Rotoava, Tuamotu Archipelago, 3,743
San Francisco, California, U.S.A., 5,396
Seattle, Washington, U.S.A., 5,509
Selwyn Bay, Solomon Islands, 694
Sorong, New Guinea, 1,304
Sydney, Australia, 1,844
Ta-ku, China, 3,294
Talomako, New Hebrides, 1,104
Valparaiso, Chile, 7,461
Wallaroo, Australia, 2,911
Whyalla, Australia, 2,957
Yap Islands, Caroline Islands, 1,196
Yin-hsien, China (via Shih-peng Chiang), 2,746
Yokohama, Japan, 2,526

RABOCHEOSTROVSK, U.S.S.R.
(64°59'00'' N., 34°47'00'' E.)

Add 48 miles to Arkhangelsk distances.

RANDERS, DENMARK
(56°27'48'' N., 10°03'48'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 188
Skagens Odde, Denmark, 96

Ports
Gdynia, Poland, 403
Stockholm, Sweden, 604
Swinoujscie, Poland, 266

RANGOON, BURMA
(16°46'00'' N., 96°10'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia (west of Sumatra), 3,359
Cape of Good Hope, Republic of South Africa (east of Reunion Island, May–September), 5,482
Cape of Good Hope, Republic of South Africa (west of Reunion Island and east of Madagascar, November–March), 5,498
Cape of Good Hope, Republic of South Africa (west of Madagascar, April–October), 5,604
Port Said, U.A.R. (south of Socotra, October–April), 4,705
Port Said, U.A.R. (south of Socotra, May–September), 4,826
Port Said, U.A.R. (alternate route, May–September), 4,818
Port Said, U.A.R. (south of Socotra, May–September), 4,887
Singapore, 1,109

Ports
Aden, Aden Protectorate (south of Socotra, October–April), 3,318
Aden, Aden Protectorate (south of Socotra, May–September), 3,439
Aden, Aden Protectorate (north of Socotra, alternate route, May–September), 3,428
Aden, Aden Protectorate (south of Socotra, low power, May–September), 3,500
Al Bahrayn, Bahrain, 3,329
Al Basrah, Iraq, 3,603
Al Kuwayt, Kuwait, 3,513
Belawan, Indonesia, 803
Bombay, India, 2,139
Bushehr, Iran, 3,425
Calcutta, India, 787
Colombo, Ceylon, 1,268
Fremantle, Australia (west of Sumatra), 3,248
Karachi, Pakistan, 2,561
Madras, India, 1,003
Malacca, Malaysia, 986
Masqat, Mascat and Oman, 2,840
Massaua, Ethiopia (October–April), 3,705
Massaua, Ethiopia (alternate route, May–September), 3,818
Massaua, Ethiopia (low power, May–September), 3,887
Massau, Ethiopia (May-September), 3,827
Mombasa, Kenya, 3,714
Penang, Malaysia, 757
Sabang, Indonesia, 664
Zanzibar, Zanzibar, 3,787

RAOUL ISLAND, KERMADEC ISLANDS
(29°16'00'' S., 177°57'00'' W.) to:

Junction Points*
Panama, Panama, 6,125

Ports
Apia, Samoa, 1,008
Apra, Guam, 3,369
Auckland, New Zealand, 597
Brisbane, Australia (via Howe Channel and Main Channel), 1,566
Honolulu, Hawaii, U.S.A., 3,246
Noumea, New Caledonia, 957
Papeete, Society Islands, 1,706
Suva, Fiji Islands, 701
Sydney, Australia, 1,600

RAPID BAY, AUSTRALIA
(35°31'30'' S., 138°11'30'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,131
Sunda Strait, Indonesia, 2,946

Ports
Albany, Australia, 990
Hobart, Tasmania, 719
Melbourne, Australia, 458

RA'S AL HAFJI, NEUTRAL ZONE, PERSIAN GULF
(28°24'00'' N., 48°33'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,414
Cape of Good Hope, Republic of South Africa, 5,078
Port Said, U.A.R., 3,260
Singapore, 3,799

Ports
Aden, Aden Protectorate, 1,871
Bombay, India, 1,491

RA'S AS SIDR, UNITED ARAB REPUBLIC
(29°34'36'' N., 32°42'00' E.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,189
Port Said, U.A.R., 112
Singapore, 4,902

Ports
Aden, Aden Protectorate, 1,282

RA'S AT TANNURAH, SAUDI ARABIA
(26°39'00'' N., 50°10'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,316
Cape of Good Hope, Republic of South Africa, 4,980
Port Said, U.A.R., 3,162
Singapore, 3,701

Ports
Al Basrah, Iraq, 295

RA'S GHARIB, UNITED ARAB REPUBLIC
(28°20'30'' N., 33°07'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,114
Port Said, U.A.R., 187
Singapore, 4,827

Ports
Aden, Aden Protectorate, 1,207

RAS SUDR, U.A.R. See Ra's As Sidr.

RASHIN, KOREA. See Najin.

RAUMA, FINLAND
(61°07'30'' N., 21°26'15'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 678

Ports
Peenemunde, Germany, 555
Stockholm, Sweden, 230
Turku, Finland, 98
Vaasa, Finland, 160

RAUMO, FINLAND. See Rauma.

RECIFE, BRAZIL
(8°03'00'' S., 34°52'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,775
Cape of Good Hope, Republic of South Africa, 3,324
Inishtrahull, Ireland, 4,071
Montreal, Canada (via Cabot Strait), 4,283
Pentland Firth, Scotland, 4,319
Punta Arenas, Chile, 3,252
Strait of Gibraltar, 3,116
Straits of Florida (via Mona Passage), 3,540
Ushant, France, 3,743

Ports
Baltimore, Maryland, U.S.A., 3,772
Belem, Brazil, 1,084
Bordeaux, France, 3,823
Boston, Massachusetts, U.S.A., 3,669
Bridgetown, Barbados, 2,054
Brunswick, Georgia, U.S.A., 3,672
Buenos Aires, Argentina, 2,181
Cadiz, Spain, 3,125
Cape Town, Republic of South Africa, 3,318
Castries, St. Lucia, 2,151
Charleston, South Carolina, U.S.A., 3,624
Charlotte Amalie, Virgin Islands, 2,471
Charlottetown, Canada, 3,658
Clarence Bay, Ascension Island, 1,226
Colon, Panama, 3,212
Dakar, Senegal, 1,717
Fernando de Norenha, 300
Fortaleza, Brazil, 425
Freetown, Sierra Leone, 1,632
Georgetown, British Guiana, 1,781
Guiria, Venezuela, 2,208
Habana, Cuba, 3,499
Halifax, Canada, 3,558
Hamilton, Bermuda, 3,038
Jacksonville, Florida, U.S.A., 3,636
Key West, Florida, U.S.A., 3,488
Las Palmas de Gran Canaria, Canary Islands, 2,453
Lisboa, Portugal, 3,156
Miami, Florida, U.S.A., 3,456
Montevideo, Uruguay, 2,067
New York, New York, U.S.A., 3,698
Norfolk, Virginia, U.S.A., 3,651
Philadelphia, Pennsylvania, U.S.A., 3,745
Ponta Delgada, Azores, 2,803
Portland, Maine, U.S.A., 3,700
Puerto Cortes, Honduras, 3,737
St. John's, Canada, 3,491
Salvador, Brazil, 399
San Juan, Puerto Rico (outside all islands), 2,609
Savannah, Georgia, U.S.A., 3,681
Sydney, Canada, 3,553
Vigo, Spain, 3,346
Washington, D.C., U.S.A., 3,787

REFSE, FINLAND. See Reposaari.

REGGIO DI CALABRIA, ITALY. See Porto di Reggio Calabria.

REGIA DOGANA, SARDINIA. See Olbia.

REKVEDBUKTA. See Jan Mayen.

REPOSAARI, FINLAND
(61°36'30'' N., 21°28'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 654
Skagens Odde, Denmark, 715

Ports
Helsinki, Finland, 331
Riga, Latvia, 394
Stockholm, Sweden, 192

RETHIMNON, CRETE
(35°22'30'' N., 24°28'00'' E.) to:

Junction Points*
Port Said, U.A.R., 489
Strait of Gibraltar, 1,485

Ports
Izmir, Turkey, 277
Messina, Sicily, 479
Piraievs, Greece, 151

REVEL, ESTONIA. See Tallinn.

REYD URKT, SAKHALIN, U.S.S.R.
(53°34'00'' N., 143°05'00'' E.) to:

Ports
Nagayevo, U.S.S.R., 441
Nemuro, Japan, 631
Nikolayevsk, U.S.S.R. (north of Sakhalin), 209

REYKJAVIK, ICELAND
(64°09'00'' N., 21°56'00'' W.) to:

Junction Points*
Inishtrahull, Ireland, 729
Montreal, Canada (via Strait of Belle Isle), 2,130
Pentland Firth, Scotland, 687
Strait of Gibraltar, 1,905
Straits of Florida, 3,487

Ports
Alesund, Norway, 848
Angmagssalik, Greenland, 418
Argentia, Canada, 1,584

*JUNCTION POINT.—See Preface for use of junction points.

Arkhangelsk, U.S.S.R. (north of Iceland), 1,874
Arkhangelsk, U.S.S.R. (south of Iceland), 1,901
Berlevag, Norway, 1,200
Bergen, Norway, 872
Bjornoya Island (north of Iceland), 1,152
Bjornoya Island, 1,234
Boston, Massachusetts, U.S.A., 2,293
Brest, France, 1,193
Camp Lloyd, Greenland, 1,274
Christianshaab, Greenland, 1,278
Churchill, Canada (via 75 miles off Kap Farvel), 2,290
Colon, Panama, 4,098
Egedesminde, Greenland, 1,371
Faeringehavn, Greenland, 1,043
Frederiksdal, Greenland, 714
Glasgow, Scotland, 860
Godhavn, Greenland (direct), 1,396
Godhavn, Greenland (via 75 miles off Kap Farvel), 1,483
Godthaab, Greenland, 1,076
Goose Bay, Canada, 1,332
Gronne Dal, Greenland, 960
Guantanamo, Cuba, 3,434
Halifax, Canada, 1,941
Holsteinsborg, Greenland, 1,248
Iokanga, U.S.S.R., 1,646
Ivigtut, Greenland (direct), 887
Ivigtut, Greenland (via 75 miles off Kap Farvel), 980
Jakobshavn, Greenland, 1,418
Jan Mayen, 617
Julianehaab, Greenland (direct), 795
Julianehaab, Greenland (via 75 miles off Kap Farvel), 892
Kirkwall, Orkney Islands, 700
Longyearbyen, Svalbard (north of Iceland), 1,160
Longyearbyen, Svalbard (south of Iceland), 1,310
Molde, Norway, 875
Mosjoen, Norway, 1,023
Murmansk, U.S.S.R. (north of Iceland), 1,501
Murmansk, U.S.S.R. (south of Iceland), 1,529
Namsos, Norway, 1,018
Nanortalik, Greenland, 737
Narsarssuak, Greenland, 830
New York, New York, U.S.A., 2,495
Norfolk, Virginia, U.S.A., 2,677
Oslo, Norway, 1,173
Pechenga, U.S.S.R., 1,460
Philadelphia, Pennsylvania, U.S.A., 2,648
Portsmouth, New Hampshire, U.S.A., 2,271
Qutdligssat, Greenland, 1,552
Ritenbenk, Greenland, 1,581
St. John's, Canada, 1,416
Scoresbysund, Greenland, 437
Shelburne, Canada, 2,047
Sondre Honningsvag, Norway, 1,321
Stornoway, Scotland, 647
Sukkertoppen, Greenland, 1,146
Thule, Greenland, 1,898
Torshavn, Faeroe Islands, 516
Trondheim, Norway, 969
Upernivik, Greenland, 1,610

RIGA, LATVIA
(56°57'30'' N., 24°05'30'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 555
Skagens Odde, Denmark (via Store Baelt), 747
Skagens Odde, Denmark (via The Sound), 617

Ports
Gavle, Sweden, 355
Hamina, Finland, 384
Kobenhavn, Denmark, 696
Kotka, Finland, 296
Musko Island, Sweden, 250
Norrkoping, Sweden, 300
Ornskolosvik, Sweden, 461
Oslo, Norway (via Store Baelt), 871
Oslo, Norway (via The Sound), 739
Porkkala, Finland, 284
Reposaari, Finland, 394
Ruch'i, U.S.S.R., 403

RIJECKA, YUGOSLAVIA. See Rijeka.

RIJEKA, YUGOSLAVIA
(45°19'37'' N., 14°25'51'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,263
Port Said, U.A.R. (south of Greece), 1,276
Strait of Gibraltar, 1,648

Ports
Alexandria, U.A.R., 1,166
Alger, Algeria, 1,220
Alicante, Spain, 1,375
Ancona, Italy, 112
Annaba, Algeria, 1,000
Banghazi, Libya, 868
Barcelona, Spain, 1,279
Bari, Italy, 288
Bayrut, Lebanon (via Corinth Canal), 1,312
Bayrut, Lebanon (south of Greece), 1,345
Bizerte, Tunisia, 910
Brindisi, Italy, 342
Cartagena, Spain, 1,405
Ceuta, Morocco, 1,628
Chioggia, Italy, 126
Dubrovnik, Yugoslavia, 276
Genova, Italy, 1,085
Gibraltar, 1,630
Haifa, Israel (via Corinth Canal), 1,315
Haifa, Israel (south of Greece), 1,342
Iraklion, Crete, 831
Istanbul, Turkey (via Corinth Canal), 1,029
Istanbul, Turkey (south of Greece), 1,128
Izmir, Turkey (via Corinth Canal), 875
Izmir, Turkey (south of Greece), 974
La Spezia, Italy, 1,049
Livorno, Italy, 1,013
Malaga, Spain, 1,578
Marseille, France, 1,176
Messina, Sicily, 603
Napoli, Italy, 774
Odessa, U.S.S.R. (via Corinth Canal), 1,377
Odessa, U.S.S.R. (south of Greece), 1,476
Oran, Algeria, 1,417
Palermo, Sicily, 719
Palma, Balearic Islands, 1,238
Piraievs, Greece (via Corinth Canal), 675
Piraievs, Greece (south of Greece), 814
Ploce, Yugoslavia, 230
Savona, Italy, 1,095
Sibenik, Yugoslavia, 158
Siracusa, Sicily, 624
Split, Yugoslavia, 176
Tarabulus, Libya, 887
Taranto, Italy, 482
Thessaloniki, Greece (via Corinth Canal), 924
Thessaloniki, Greece (south of Greece), 1,023
Toulon, France, 1,145
Trieste, Free Territory, 120
Tunis, Tunisia, 897
Valencia, Spain, 1,363
Valletta, Malta, 701
Venezia, Italy, 132
Volos, Greece (via Corinth Canal), 865
Volos, Greece (via south of Greece), 964

*JUNCTION POINT.—See Preface for use of junction points.

RIO DE JANEIRO, BRAZIL
(22°53'30'' S., 43°11'00'' W.) to:

Junction Points*
Bishop Rock, England, 4,846
Cape of Good Hope, Republic of South Africa, 3,267
Fastnet, Ireland, 4,873
Inishtrahull, Ireland, 5,143
Montreal, Canada (via Cabot Strait), 5,215
Montreal, Canada (via Strait of Canso), 5,218
Pentland Firth, Scotland, 5,391
Punta Arenas, Chile, 2,238
Strait of Gibraltar, 4,180
Straits of Florida (via Mona Passage), 4,612
Ushant, France, 4,815
Yucatan Channel, 4,622

Ports
Baltimore, Maryland, U.S.A., 4,844
Belem, Brazil, 2,174
Bordeaux, France, 4,908
Boston, Massachusetts, U.S.A., 4,738
Brest, France, 4,841
Bridgetown, Barbadoes, 3,157
Brunswick, Georgia, U.S.A., 4,744
Buenos Aires, Argentina, 1,151
Cadiz, Spain, 4,192
Cape Town, Republic of South Africa, 3,273
Castries, St. Lucia, 3,274
Charleston, South Carolina, U.S.A., 4,696
Charlotte Amalie, Virgin Islands, 3,542
Charlottetown, Canada, 4,730
Cienfuegos, Cuba, 4,426
Clarence Bay, Ascension Island, 1,900
Colon, Panama, 4,284
Dakar, Senegal, 2,763
Freetown, Sierra Leone, 2,613
Funchal, Madeira Island, 3,722
Georgetown, British Guiana, 2,853
Guantanamo, Cuba, 4,106
Guiria, Venezuela, 3,284
Habana, Cuba, 4,570
Halifax, Canada, 4,630
Hamilton, Bermuda, 4,110
Horta, Azores, 3,897
Jacksonville, Florida, U.S.A., 4,707
Key West, Florida, U.S.A., 4,560
Kingston, Jamaica, 4,124
Lisboa, Portugal, 4,219
Maceio, Brazil, 972
Montevideo, Uruguay, 1,037
Natal, Brazil, 1,228
New York, New York, U.S.A., 4,762
Norfolk, Virginia, U.S.A., 4,723
Paramaribo, Surinam, 2,713
Philadelphia, Pennsylvania, U.S.A., 4,817
Ponce, Puerto Rico, 3,659
Ponta Delgada, Azores, 3,875
Port au Prince, Haiti, 4,157
Port of Spain, Trinidad, 3,178
Portland, Maine, U.S.A., 4,772
Porto Grande, Cape Verde Islands, 2,687
Puerto Cortes, Honduras, 4,813
Rio Grande, Brazil, 750
St. Helena Island, 2,161
St. John, Canada, 4,752
St. John's, Canada, 4,563
Salvador, Brazil, 748
San Juan, Puerto Rico, 3,613
Santa Cruz de Tenerife, Canary Islands, 3,518
Santo Domingo, Dominican Republic, 3,780
Savannah, Georgia, U.S.A., 4,726
Sydney, Canada, 4,648
Vigo, Spain, 4,418
Wilmington, North Carolina, U.S.A., 4,704

RIO GRANDE, ARGENTINA
(53°45'30'' S., 67°37'43'' W.) to:

Junction Points*
Panama, Panama, 6,513
Punta Arenas, Chile, 220

Ports
Buenos Aires, Argentina, 1,306
Stanley, Falkland Island, 398

RIO GRANDE, BRAZIL
(32°03'00'' S., 52°04'30'' W.) to:

Ports
Buenos Aires, Argentina, 440
Guiria, Venezuela, 3,984
Montevideo, Uruguay, 313
Ponte Noire, Gabon, 3,938
Rio de Janeiro, Brazil, 750
Santos, Brazil, 602

RIO YATERAS, CUBA
(19°57'30'' N., 74°56'30'' W.) to:

Junctions Points*
Panama, Panama, 743
Straits of Florida, 622

Ports
Habana, Cuba, 577
Montego Bay, Jamaica, 196
San Juan, Puerto Rico, 525

RISOR, NORWAY
(58°43'12'' N., 9°14'40'' E.) to:

Junction Points*
Pentland Firth, Scotland, 429
Skagens Odde, Denmark, 73

Ports
Bergen, Norway, 279
London, England, 572
Oslo, Norway, 106

RITENBENK, GREENLAND
(69°45'30'' N., 51°18'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 2,135
Strait of Gibraltar, 2,982

Ports
Churchill, Canada, 1,695
Reykjavik, Iceland, 1,581
St. John's, Canada, 1,504

RIVER CESS, LIBERIA
(5°26'57'' N., 9°35'02'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,874
Ushant, France, 2,940

Ports
Dakar, Senegal, 790
Takoradi, Ghana, 508

ROATAN, GULF OF HONDURAS. See Coxen Hole.

ROCHEFORT, FRANCE
(45°56'12'' N., 0°57'15'' W.)

Add 17 miles to La Pallice distances.

ROCHESTER, ENGLAND
(51°23'30'' N., 0°30'12'' E.)

Subtract 19 miles from London distances.

ROCKHAMPTON, AUSTRALIA
(23°23'00'' S., 150°32'00'' E.) to:

Junction Points*
Torres Strait, Australia, 1,034
Wilson Promontory, Australia, 1,213

Ports
Brisbane, Australia, 391
Noumea, New Caledonia, 902
Wellington, New Zealand, 1,685

*JUNCTION POINT.—See Preface for use of junction points.

RODHOS, RODHOS
(36°26'30'' N., 28°16'30'' E.) to:

Junction Points*
Port Said, U.A.R., 376
Strait of Gibraltar, 1,668

Ports
Bayrut, Lebanon, 393
Iraklion, Crete, 171
Istanbul, Turkey, 445
Izmir, Turkey, 256
Piraievs, Greece, 261
Tarabulus, Libya, 780
Thessaloniki, Greece, 388

RODI, RODHOS. See Rodhos.

ROMANA, DOMINICAN REPUBLIC
(18°25'00'' N., 68°57'10'' W.) to:

Ports
Santo Domingo, Dominican Republic, 61
San Pedro de Macoris, Dominican Republic, 21

RONGELAP, MARSHALL ISLANDS
(11°10'00'' N., 166°51'00'' E.) to:

Junction Points*
Panama, Panama, 4,843
Singapore, 3,669

Ports
Apra, Guam, 1,341
Honolulu, Hawaii, U.S.A., 1,638

RONNE, BORNHOLM, DENMARK
(55°06'00'' N., 14°41'40'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 175
Skagens Odde, Denmark (via Store Baelt), 367
Skagens, Odde, Denmark (via The Sound), 244

Ports
Oslo, Norway (via Store Baelt), 491
Oslo, Norway (via The Sound), 366

ROOSEVELT ROADS, PUERTO RICO
(18°10'00'' N., 65°34'00'' W.) to:

Junction Points*
Panama, Panama, 1,054
Straits of Florida, 1,063

Ports
New York, New York, U.S.A., 1,429
Port of Spain, Trinidad, 525
Willemstad, Curacao, 440

ROSARIO, ARGENTINA
(32°56'30'' S., 60°38'00'' W.)

Add 191 miles to Buenos Aires distances.

ROSEAU, DOMINICA
(15°17'15'' N., 61°24'00'' W.) to:

Ports
Basse-Terre, Guadeloupe, 48
Fort de France, Martinique, 50
Frederiksted, St. Croix, 252
Hamilton, Bermuda, 1,061
Pointe a Pitre, Guadeloupe, 60

ROSENEATH, SCOTLAND
(56°00'30'' N., 4°47'30'' W.)

Subtract 15 miles from Glasgow distances.

ROSTOCK, GERMANY
(54°05'52'' N., 12°09'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 92
Skagens Odde, Denmark, 254

Ports
Kobenhavn, Denmark, 231
Klaipeda, Lithuania, 347
Stockholm, Sweden, 456

ROSTOV, U.S.S.R. See Rostov-na-Donu.

ROSTOV-NA-DONU, U.S.S.R.
(47°11'30'' N., 39°40'10'' E.) to:

Junction Points*
Port Said, U.A.R., 1,440
Strait of Gibraltar (via Corinth Canal), 2,441
Strait of Gibraltar (south of Greece), 2,458

Ports
Constanta, Rumania, 572
Derince, Turkey, 685
Iskenderun, Turkey, 1,483
Istanbul, Turkey, 640
Jaffa, Israel, 1,496
Kerch, U.S.S.R., 208
Larnaca, Cyprus, 1,402
Mersin, Turkey, 1,426
Pula, Yugoslavia (via Corinth Canal), 1,646
Pula, Yugoslavia (south of Greece), 1,745
Sfax, Tunisia, 1,684

ROSYTH, SCOTLAND
(56°01'15'' N., 3°27'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 263
Skagens Odde, Denmark, 478

Ports
Hull, England, 248
Oslo, Norway, 550
Rotterdam, Netherlands, 393

ROTA, SPAIN
(36°37'15'' N., 6°20'00'' W.) to:

Junction Points*
Strait of Gibraltar, 70
Ushant, France, 885

Ports
Casablanca, Morocco, 202
Horta, Azores, 1,096
Porto de Leixoes, Portugal, 454

ROTOAVA, TUAMOTU ARCHIPELAGO
(16°02'30'' S., 145°37'00'' W.) to:

Junction Points*
Panama, Panama, 4,256

Ports
Apia, Samoa, 1,520
Apra, Guam, 4,513
Honolulu, Hawaii, U.S.A., 2,358
Levuka, Fiji Islands, 2,060
Noumea, New Caledonia, 2,737
Papeete, Society Islands, 244
Rabaul, New Britain, 3,743
San Francisco, California, U.S.A., 3,503

ROTTERDAM, NETHERLANDS
(51°54'00'' N., 4°28'00'' E.) to:

Junction Points*
Bishop Rock, England, 454
Kiel Canal (east end), Germany, 323
Pentland Firth, Scotland, 495
Skagens Odde, Denmark, 447
Ushant, France, 444

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Aberdeen, Scotland, 391
Amsterdam, Netherlands, 67
Antwerpen, Belgium (via Westkapelle), 117
Bergen, Norway, 533
Bremerhaven, Germany, 256
Brest, France, 457
Cherbourg, France, 282
Den Helder, Netherlands, 97
Dover, England, 138
Dundee, Scotland, 383
Egersund, Norway, 412
Emden, Germany, 199
Esbjerg, Denmark, 287
Fecamp, France, 228
Hamburg, Germany, 307
Hartlepool, England, 269
Hull, England, 211
Inverness, Scotland, 496
Kristiansand, Norway, 413
Le Havre, France, 250
Leith, Scotland, 381
London, England, 184
Narvik, Norway, 1,139
Newcastle, England, 285
Oostende, Belgium, 86
Oslo, Norway, 554
Plymouth, England, 367
Portland, England, 293
Portsmouth, England, 243
Rosyth, Scotland, 393
Seaham Harbor, England, 278
Southampton, England, 261
Stavanger, Norway, 455
Sunderland, England, 286
Vardo, Norway, 1,513
Wilhelmshaven, Germany, 243
Zeebrugge, Belgium, 73

RUCH'I, U.S.S.R.
(59°45'30'' N., 28°25'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 766
Skagens Odde, Denmark, 816

Ports
Gdynia, Poland, 530
Riga, Latvia, 403
Stockholm, Sweden, 344

ROUEN, FRANCE
(49°26'30'' N., 1°04'00'' E.)

Add 69 miles to Le Havre distances.

RUMOI, JAPAN
(43°57'30'' N., 141°38'00'' E.) to:

Ports
Hakodate, Japan, 248
Otaru, Japan, 57
Pusan, Korea, 793
Shimonoseki, Japan, 812
Vladivostok, U.S.S.R., 452

RYOJUN, CHINA. See Lu-Shun.

SABANG, INDONESIA
(5°53'30'' N., 95°19'15'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,711
Cape of Good Hope, Republic of South Africa, 4,980
Lombok Strait, Indonesia, 1,575
Port Said, United Arab Republic, 4,422
Singapore, 601
Sunda Strait, Indonesia, 1,103
Torres Strait, Australia, 3,072

Ports
Aden, Aden Protectorate, 3,033
Al Bahrayn, Bahrain, 3,050
Al Basrah, Iraq, 3,287
Al Kuwayt, Kuwait, 3,234
Antsirana, Malagasy Republic, 2,955
Beira, Mozambique, 3,921
Belawan, Indonesia, 268
Berbera, Somali Republic, 3,047
Bombay, India, 1,843
Bushehr, Iran, 3,106
Calcutta, India (via Duncan Passage), 1,131
Calicut, India, 1,343
Cocanada, India, 1,019
Dar es Salaam, Tanganyika, 3,443
Diego Garcia, Chagos Archipelago, 1,594
Durban, Republic of South Africa, 4,273
Fremantle, Australia, 2,601
Fort Dauphin, Malagasy Republic, 3,376
Karachi, Pakistan, 2,284
Lourenco Marques, Mozambique, 4,170
Madras, India, 994
Majunga, Malagasy Republic, 3,246
Malacca, Malaysia, 486
Mocambique, Mozambique, 3,481
Mombassa, Kenya, 3,388
Mosselbaai, Republic of South Africa, 4,785
Penang, Malaysia, 313
Port Elizabeth, Republic of South Africa, 4,610
Port Louis, Mauritius, 2,731
Rangoon, Burma, 664
St. Denis, Reunion Island, 2,846
Tamatave, Malagasy Republic, 3,076
Victoria, Seychelles, 2,468
Zanzibar, Zanzibar, 3,461

SAFI, MOROCCO
(32°18'35'' N., 9°15'15'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,870
Ushant, France, 1,023

Ports
Casablanca, Morocco, 134
Dakar, Senegal, 1,228
St. Louis, Senegal, 1,157

SAIDA, LEBANON. See Sayda.

SAI GON, VIETNAM
(10°46'00'' N., 106°42'15'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,408
Panama, Panama, 10,017
Singapore, 649
Torres Strait, Australia, 2,629

Ports
Aleksandrovsk, U.S.S.R., 3,105
Apra, Guam, 2,304
Ban Sattahip, Thailand, 598
Cebu, Philippines (north of North Danger Reef, via Mindoro Strait, and Jintotolo Channel), 1,152
Chan-Chiang, China, 838
Chang-kan, China, 708
Ching-tao, China, 1,969
Chinnampo, Korea, 2,118
Da Nang, Vietnam, 578
Djakarta, Indonesia, 1,025
Dutch Harbor, Alaska, U.S.A., 4,894
Guayaquil, Ecuador, 10,321
Hai-kou, Hai-nan Tao, 824
Haiphong, Vietnam, 802
Hong Kong, B.C.C., 917
Honolulu, Hawaii, U.S.A., 5,542
Iloilo, Philippines, 1,051
Inchon, Korea, 2,057
Iwakuni, Japan, 2,108
Kodiak, Alaska, U.S.A., 5,484
Los Angeles, California (via San Bernardino Strait), 7,403
Malakal, Palau Islands, 1,801
Manila, Philippines, 907
Midway Island, 4,421
Mokpo, Korea, 1,904
Nha Trang Bay, Vietnam, 264
Olongapo, Philippines, 872
Pago Pago, American Samoa, 5,216

*JUNCTION POINT.—See Preface for use of junction points.

Palembang, Indonesia, 869
Palmyra Island (via San Bernardino Strait), 5,480
Papeetee, Society Islands, 6,443
Pei-hai, China, 837
Peng-hu Chiang, Taiwan, 1,174
Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilsky, La Perouse Strait, and Korea Strait), 3,718
Port Legaspi, Philippines, 1,177
Pusan, Korea, 1,999
Qui Nhon, Vietnam, 361
San Diego, California, U.S.A., 7,267
San Fernando, Philippines, 927
San Francisco, California, U.S.A., 6,878
San-ya Chiang, China, 624
Seletar, Malaysia, 652
Sihanoukville, Cambodia, 419
Sitka, Alaska, U.S.A., 5,963
Surabaja, Indonesia, 1,206
Suva, Fiji Islands, 4,679
Tandjung Uban, Indonesia, 633
Teluk Kau, Halmahera, 1,520
Truk, Caroline Islands (via San Bernardino Strait), 2,799
Tso-Ying, Taiwan, 1,131
Vladivostok, U.S.S.R., 2,501
Wake Island, 3,580
Wonsan, Korea, 2,305
Yokohama, Japan, 2,419
Yu-lin Chiang, Hainan-tao, China, 619

SAIGON, VIETNAM. See Sai Gon.

ST. CHRISTOPHER ISLAND. See Basseterre.

ST. CROIX ISLAND. See Christiansted and Frederiksted.

ST. DENIS, REUNION ISLAND
(20°51'00'' S., 55°25'30'' E.) to:

Junction Points*
Singapore, 3,445

Ports
Beira, Mozambique, 1,325
Belawan, Indonesia, 3,112
Darwin, Australia, 4,343
Fremantle, Australia, 3,272
Lourenco Marques, Mozambique, 1,325
Malacca, Malaysia, 3,330
Penang, Malaysia, 3,157
Sabang, Indonesia, 2,846

ST. GEORGES, GRENADA
(12°03'00'' N., 61°45'00'' W.) to:

Junction Points*
Panama, Panama, 1,161
Straits of Florida, 1,453

Ports
Baltimore, Maryland, U.S.A., 1,843
Boston, Massachusetts, U.S.A., 1,932
Bridgetown, Barbados (north of island), 144
Colon, Panama, 1,118
Hamilton, Bermuda, 1,256
La Guaira, Venezuela, 322
New York, New York, U.S.A., 1,842
Paramaribo, Surinam, 560
Philadelphia, Pennsylvania, U.S.A., 1,848
Port of Spain, Trinidad, 102

ST. HELENA ISLAND, SOUTH ATLANTIC
(15°55'00'' S., 5°43'25'' W.) to:

Ports
Belem, Brazil, 4,329
Boma, Republic of the Congo, 1,232
Buenos Aires, Argentina, 3,052
Cape Town, Republic of South Africa, 1,697
Clarence Bay, Ascension Island, 707
Freetown, Sierra Leone, 1,564
Montevideo, Uruguay, 2,936
Philadelphia, Pennsylvania, U.S.A., 5,169
Rio de Janeiro, Brazil, 2,161
Santa Isabel, Fernando Poo, 1,472

ST. JOHN, CANADA
(45°16'00'' N., 66°04'00'' W.) to:

Junction Points*
Montreal, Canada (via Cabot Strait), 1,209
Panama, Panama, 2,361
Straits of Florida, 1,568

Ports
Baltimore, Maryland, U.S.A. (via Nantucket Light Vessel), 860
Bath, Maine, U.S.A., 206
Belem, Brazil, 2,998
Boston, Massachusetts, U.S.A., 286
Buenos Aires, Argentina, 5,853
Cape Town, Republic of South Africa, 6,667
Colon, Panama, 2,294
Habana, Cuba, 1,574
Halifax, Canada, 278
Kingston, Jamaica, 1,794
La Guaira, Venezuela, 2,086
Liverpool, Canada, 212
New York, New York, U.S.A., (via Nantucket Light Vessel), 545
New York, New York, U.S.A. (via Vineyard Sound and Long Island Sound), 486
Norfolk, Virginia, U.S.A., 731
Parrsboro, Canada, 80
Philadelphia, Pennsylvania, U.S.A. (via Vineyard Sound), 673
Philadelphia, Pennsylvania, U.S.A. (via Nantucket Light Vessel), 698
Port of Spain, Trinidad, 2,113
Portland, Maine, U.S.A., 215
Portsmouth, New Hampshire, U.S.A., 248
Rio de Janeiro, Brazil, 4,752
San Juan, Puerto Rico, 1,614
Santo Domingo, Dominican Republic, 1,733
Savannah, Georgia, U.S.A. (via Nantucket Light Vessel), 1,113
Sydney, Canada, 492

ST. JOHNS, ANTIGUA
(17°08'00'' N., 61°52'00'' W.) to:

Ports
Belem, Brazil, 1,433
Castries, St. Lucia, 204
Charlestown, Nevis, 48
Colon, Panama, 1,158
Elizabeth Harbor, Bahamas, 900
Georgetown, British Guiana, 689
Guantanamo, Cuba, 837
Kingston, Jamaica, 870
Miami, Florida, U.S.A., 1,180
New York, New York, U.S.A., 1,572
Pointe a Pitre, Guadeloupe (via east of Guadeloupe), 107
Pointe a Pitre, Guadeloupe (via west of Guadeloupe), 110
Port of Spain, Trinidad, 411
Puerto Cortes, Honduras, 1,511
Sint Nicolaas, Aruba, 549
San Juan, Puerto Rico, 265

ST. JOHN'S, CANADA
(47°34'00'' N., 52°42'00'' W.) to:

Junction Points*
Bishop Rock, England, 1,804
Inishtrahull, Ireland, 1,720
Montreal, Canada (via Cabot Strait), 1,043
Montreal, Canada (via Strait of Belle Isle), 1,146

*JUNCTION POINT.—See Preface for use of junction points.

Panama, Panama, 2,742
Pentland Firth, Scotland, 1,855
Punta Arenas, Chile, 6,735
Strait of Gibraltar, 2,182
Straits of Florida, 2,094

Ports
Akureyri, Iceland, 1,616
Angmagssalik, Greenland (direct), 1,193
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,208
Baltimore, Maryland, U.S.A., 1,400
Belem, Brazil, 2,968
Boston, Massachusetts, U.S.A., 885
Buenos Aires, Argentina, 5,663
Camp Lloyd, Greenland, 1,198
Cape Town, Republic of South Africa, 5,205
Christianshaab, Greenland, 1,333
Colon, Panama, 2,695
Dakar, Senegal, 2,646
Egedesminde, Greenland, 1,294
El Ferrol del Caudillo, Spain, 1,861
Faeringehavn, Greenland, 969
Frederiksdal, Greenland, 800
Galway, Ireland, 1,678
Godthaab, Greenland, 1,005
Goose Bay, Canada, 588
Gronne Dal, Greenland, 847
Hafnarfjordhur, Iceland, 1,413
Halifax, Canada, 531
Holsteinsborg, Greenland, 1,172
Hvalfjordhur, Iceland, 1,437
Ivigtut, Greenland, 849
Jakobshavn, Greenland, 1,341
Julianehaab, Greenland, 827
Keflavik, Iceland, 1,404
Liverpool, Canada, 212
Nanortalik, Greenland, 821
Narsarssuak, Greenland, 916
Natal, Brazil, 3,341
New York, New York, U.S.A., 1,093
Norfolk, Virginia, U.S.A., 1,277
Paramaribo, Surinam, 2,518
Philadelphia, Pennsylvania, U.S.A., 1,254
Ponta Delgada, Azores, 1,326
Port of Spain, Trinidad, 2,288
Qutdligssat, Greenland, 1,476
Recife, Brazil, 3,491
Reykjavik, Iceland, 1,416
Rio de Janeiro, Brazil, 4,563
Ritenbenk, Greenland, 1,504
Santa Cruz de Tenerife, Canary Islands, 2,053
Scoresbysund, Greenland, 1,643
Seydhisfjordhur, Iceland, 1,690
Shelburne, Canada, 621
Sukkertoppen, Greenland, 1,075
Thule, Greenland, 1,800
Upernivik, Greenland, 1,532

ST. LOUIS, MARIE GALANTE
(15°57'30'' N., 61°20'00'' W.) to:

Junction Points*
Panama, Panama, 1,850

Ports
Barranquilla, Colombia, 857
Kingston, Jamaica, 903
Port of Spain, Trinidad, 368

ST. LOUIS, SENEGAL
(16°01'30'' N., 16°32'00'' W.) to:

Junction Points*
Strait of Gibraltar, 1,436
Ushant, France, 2,075

Ports
Porto Grande, Cape Verde Islands, 496
Safi, Morocco, 1,157

ST. LUCIA ISLAND. See Castries.

ST. MALO, FRANCE
(48°38'40'' N., 2°01'38'' W.) to:

Junction Points*
Bishop Rock, England, 90
Ushant, France, 141

Ports
Brest, France, 152
Dover, England, 228
Le Havre, France, 156

ST. MARC, HAITI
(19°07'00'' N., 72°42'10'' W.) to:

Junction Points*
Panama, Panama, 796
Straits of Florida, 673

Ports
Kingston, Jamaica, 254
Nuevitas, Cuba, 306

ST. NAZAIRE, FRANCE
(47°16'00'' N., 2°12'00'' W.) to:

Junction Points*
Ushant, France, 184

Ports
Aviles, Spain, 274
Bordeaux, France, 184
Gijon, Spain, 274
La Pallice, France, 108

ST. PETERSBURG, FLORIDA, U.S.A.
(27°46'00'' N., 82°37'00'' W.)

Subtract 15 miles from Tampa distances.

ST. PIERRE, MARTINIQUE
(14°44'30'' N., 61°11'15'' W.) to:

Ports
Castries, St. Lucia, 46
Habana, Cuba, 1,339
New York, New York, U.S.A. (via Anegada Channel), 1,705
San Juan, Puerto Rico, 374

ST. RAPHAEL, FRANCE
(43°25'21'' N., 6°45'45'' E.) to:

Junction Points*
Port Said, U.A.R., 1,475
Strait of Gibraltar, 763

Ports
Barcelona, Spain, 251
Genova, Italy, 118
Palma, Balearic Islands, 347

ST. THOMAS, VIRGIN ISLANDS
See Charlotte Amalie.

ST. VINCENT. See Kingstown.

SAIPAN, MARIANA ISLANDS
(15°13'40'' N., 145°44'00'' E.) to:

Ports
Honolulu, Hawaii, U.S.A., 3,230
Jaluit, Marshall Islands, 1,545
Koniya, Ryukyu Islands, 750
Omura, Bonin Islands, 750
Sydney, Australia, 3,077
Truk, Caroline Islands, 610

SAKAIDECHO, JAPAN
(34°19'45'' N., 133°51'30'' E.) to:

Ports
Hirohata, Japan, 89
Kobe, Japan, 107
Kure, Japan, 107
Shimonoseki, Japan, 169
Yokohama, Japan (via Kii Suido), 449

*JUNCTION POINT.—See Preface for use of junction points.

SAKATA, JAPAN
(38°55'30'' N., 139°48'00'' E.) to:

Ports
Hakodate, Japan, 189
Maizuru, Japan, 314
Pusan, Korea, 577
Shimonoseki, Japan, 554
Vladivostok, U.S.S.R., 442

SALAMIS, GREECE
(37°57'30'' N., 23°29'12'' E.) to:

Junction Points*
Port Said, U.A.R., 614
Strait of Gibraltar, 1,520

Ports
Durres, Albania, 343
Iraklion, Crete, 190
Izmir, Turkey, 225

SALAVERRY, PERU
(8°14'30'' S., 78°58'00'' W.) to:

Junction Points*
Panama, Panama, 1,109

Ports
Callao, Peru, 266
Guayaquil, Ecuador, 440
Pimentel, Peru, 104
San Francisco, California, U.S.A., 3,750

SALERNO, ITALY
(40°40'15'' N., 14°45'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,098
Strait of Gibraltar, 1,018

Ports
Civitavecchia, Italy, 204
Messina, Sicily, 158
Palermo, Sicily, 167

SALINA CRUZ, MEXICO
(16°10'00'' N., 95°12'00'' W.) to:

Junction Points*
Panama, Panama, 1,170
Punta Arenas, Chile, 4,478

Ports
Acapulco, Mexico, 314
Antofagasta, Chile, 2,799
Apia, Samoa, 4,886
Arica, Chile, 2,579
Callao, Peru, 2,005
Coquimbo, Chile, 3,091
Corinto, Nicaragua, 525
Corral, Chile, 3,577
Esmeraldas, Ecuador, 1,290
Guayaquil, Ecuador, 1,495
Guaymas, Mexico, 1,260
Honolulu, Hawaii, U.S.A., 3,580
Iquique, Chile, 2,645
La Libertad, El Salvador, 391
Los Angeles, California, U.S.A., 1,803
Lota, Chile, 3,430
Mollendo, Peru, 2,454
Monterey, California, U.S.A., 2,055
Pago Pago, American Samoa, 4,839
Pisco, Peru, 2,117
San Blas, Mexico, 804
San Diego, California, U.S.A., 1,733
San Francisco, California, U.S.A., 2,135
San Juan del Sur, Nicaragua, 619
Santa Barbara, California, U.S.A., 1,870
Talcahuano, Chile, 3,414
Valparaiso, Chile, 3,247

SALINAS, ECUADOR
(2°12'00'' S., 80°59'00 W.)

Use La Libertad, distances.

SALONIKA, GREECE. See Thessaloniki.

SALVADOR, BRAZIL
(12°58'00'' S., 38°31'00'' W.) to:

Junction Points*
Montreal, Canada (via Cabot Strait), 4,673
Montreal, Canada (via Strait of Canso), 4,676
Panama, Panama, 3,741
Punta Arenas, Chile, 2,920
Strait of Gibraltar, 3,516
Straits of Florida, 3,931
Ushant, France, 4,134

Ports
Angra dos Reis, Brazil, 902
Baltimore, Maryland, U.S.A., 4,163
Boston, Massachusetts, U.S.A., 4,060
Bridgetown, Barbados, 2,476
Brunswick, Georgia, U.S.A., 4,063
Buenos Aires, Argentina, 1,849
Cabedelo, Brazil, 468
Castries, St. Lucia, 2,593
Charleston, South Carolina, U.S.A., 4,040
Charlotte Amalie, Virgin Islands, 2,907
Charlottetown, Canada, 4,049
Colon, Panama, 3,608
Georgetown, British Guiana, 2,172
Halifax, Canada, 3,949
Maceio, Brazil, 285
Montevideo, Uruguay, 1,735
New York, New York, U.S.A., 4,089
Norfolk, Virginia, U.S.A., 4,042
Philadelphia, Pennsylvania, U.S.A., 4,136
Portland, Maine, U.S.A., 4,091
Recife, Brazil, 399
Rio de Janeiro, Brazil, 748
Savannah, Georgia, U.S.A., 4,072
Sydney, Canada, 3,967
Vitoria, Brazil, 477
Wilmington, North Carolina, 4,023

SAMBO, INDONESIA. See Sambu.

SAMBU, INDONESIA
(1°10'00'' N., 103°54'00'' E.)

Use Singapore distances.

SAMSUN, TURKEY
(41°19'36'' N., 36'22'00'' E.)

Add 370 miles to Istanbul distances for ports outside the Black Sea.

SAN ANTONIO, CHILE
(33°35'00'' S., 71°39'00'' W.) to:

Junction Points*
Panama, Panama, 2,644
Punta Arenas, Chile, 1,410

Ports
Antofagasta, Chile, 600
Callao, Peru, 1,328
Tocopilla, Chile, 692

SAN BLAS, MEXICO
(21°32'00'' N., 105°19'00'' W.) to:

Junction Points*
Panama, Panama., 1,914
Punta Arenas, Chile, 4,961

Ports
Acapulco, Mexico, 502
Antofagasta, Chile, 3,438
Arica, Chile, 3,225
Callao, Peru, 2,661
Coquimbo, Chile, 3,697
Corinto, Nicaragua, 1,282
Esmeraldas, Ecuador, 2,011
Guayaquil, Ecuador, 2,184
Guaymas, Mexico, 501

*JUNCTION POINT.—See Preface for use of junction points.

Iquique, Chile, 3,294
La Libertad, Mexico, 660
Lota, Chile, 3,990
Mollendo, Peru, 3,100
Monterey, California, U.S.A., 1,337
Pisco, Peru, 2,771
Puntarenas, Costa Rica, 1,500
Salina Cruz, Mexico, 804
San Diego, California, U.S.A., 1,015
San Francisco, California, U.S.A., 1,417
San Jose, Guatemala, 1,064
Santa Barbara, California, U.S.A., 1,152
Talcahuano, Chile, 3,977
Valparaiso, Chile, 3,835

SAN DIEGO, CALIFORNIA, U.S.A.
(32°43'00'' N., 117°10'30'' W.) to:

Junction Points*
Panama, Panama, 2,843
Punta Arenas, Chile, 5,801
Singapore, 7,736
Wilson Promontory, Australia (south of Fiji Islands), 6,873

Ports
Acapulco, Mexico, 1,431
Aleksandrovsk, U.S.S.R., 4,779
Amapala, Honduras, 2,181
Antofagasta, Chile, 4,360
Apia, Samoa, 4,195
Apra, Guam, 5,379
Archipielago de Colon, 2,594
Arica, Chile, 4,149
Auckland, New Zealand, 5,655
Bahia Magdalena, Mexico, 600
Baie du Controleur, Marquesas, 2,828
Brisbane, Australia, 6,306
Brito, Nicaragua, 2,307
Caldera, Chile, 4,492
Callao, Peru, 3,585
Canton, Phoenix Islands, 3,755
Chimbote, Peru, 3,402
Chin-tao, China, 5,805
Coquimbo, Chile, 4,605
Corinto, Nicaragua, 2,211
Corral, Chile, 5,007
Darwin, Australia (north of New Guinea), 7,297
Djakarta, Indonesia, 7,985
Dutch Harbor, Alaska, U.S.A., 2,465
Esmeraldas, Ecuador, 2,940
Guayaquil, Ecuador, 3,112
Guaymas, Mexico, 1,088
Hai-kou, Hai-nan Tao, 6,696
Hilo, Hawaii, U.S.A., 2,175
Hong Kong, B.C.C. (via Tsugaru Kaikyo), 6,439
Honolulu, Hawaii, U.S.A., 2,278
Iquique, Chile, 4,218
Kobe, Japan, 5,204
Kodiak, Alaska, 2,121
Kwajalein, Marshall Islands, 4,394
La Libertad, Mexico, 1,246
Lota, Chile, 4,881
Manila, Philippines (via Balintang Channel), 6,604
Manzanillo, Mexico, 1,136
Mazatlan, Mexico, 939
Midway Island, 3,097
Mollendo, Peru, 4,024
Naknek, Alaska, U.S.A., 2,788
Noumea, New Caledonia, 5,491
Omura, Bonin Islands, 5,063
Pago Pago, American Samoa, 4,176
Palmyra Island, 2,983
Papeete, Society Islands, 3,554
Pearl Harbor, Hawaii, U.S.A., 2,285
Petropavlovsk, U.S.S.R., 3,707
Pisco, Peru, 3,695
Puntarenas, Costa Rica, 2,429
Sai Gon, Vietnam, 7,267
Salina Cruz, Mexico, 1,733
San Blas, Mexico, 1,015
San Jose, Guatemala, 1,993
Shang-hai, China (via Tsugaru Kaikyo), 5,793
Sitka, Alaska, 1,725
Surabaja, Indonesia, 7,691
Suva, Fiji Islands, 4,804
Sydney, Australia (north of Fiji Islands), 6,530
Talcahuano, Chile, 4,869
Truk, Caroline Islands, 5,216
Unalakleet, Alaska, U.S.A., 2,791
Valparaiso, Chile, 4,738
Vladivostok, U.S.S.R., 5,062
Wake Island, 4,112
Yokohama, Japan, 4,923

SAN FELIX, VENEZUELA
(8°22'30'' N., 62°40'00'' W.) to:

Junction Points*
Panama, Panama, 1,535
Yucatan Channel, 1,861

Ports
Belen, Brazil, 1,222
La Guaira, Venezuela, 673

SAN FERNANDO, PHILIPPINES
(16°38'00'' N., 120°18'00'' E.) to:

Junction Points*
Singapore, 1,379

Ports
Hong Kong, B.C.C., 489
Kao-hsiung Chiang, Taiwan, 356
Manila, Philippines, 207
Sai Gon, Vietnam, 927

SAN FERNANDO, TRINIDAD
(10°17'06'' N., 61°32'57'' W.) to:

Junction Points*
Panama, Panama, 1,202
Yucatan Channel, 1,548

Ports
Belen, Brazil, 1,215
La Guaira, Venezuela, 340

SAN FRANCISCO, CALIFORNIA, U.S.A.
(37°48'30'' N., 122°24'00'' W.) to:

Junction Points*
Panama, Panama, 3,245
Punta Arenas, Chile, 6,188
Singapore (via Balintang Channel), 7,353
Singapore (via Tawitawi Island), 7,735
Torres Strait, Australia, 6,249
Wilson Promontory, Australia, 6,817

Ports
Acajutla, El Salvador, 2,446
Acapulco, Mexico, 1,833
Aleksandrovsk, U.S.S.R., 4,372
Amapala, Honduras, 2,586
Anchorage, Alaska, U.S.A., 1,872
Antofagasta, Chile, 4,762
Apia, Samoa, 4,161
Apra, Guam, 5,053
Archipielago de Colon, 2,994
Arica, Chile, 4,551
Attu Island, Alaska, U.S.A. (via Amukta Pass), 2,765
Auckland, New Zealand, 5,680
Avarua, Cook Islands, 4,124
Bahia Magdalena, Mexico, 1,002
Baie du Controleur, Marquesas, 2,986
Barbers Point, Hawaii, U.S.A., 2,100
Brisbane, Australia (west of D'Entrecasteaux Reefs, and south of Bellona Reefs), 6,193
Brito, Nicaragua, 2,709
Buenaventura, Colombia, 3,383
Butaritari, Gilbert Islands, 4,122
Caldera, Chile, 4,894
Callao, Peru, 3,989
Canton, Phoenix Islands, 3,663
Chimbote, Peru, 3,804

*JUNCTION POINT.—See Preface for use of junction points.

Ching-tao, China, 5,403
Christmas Island, North Pacific, 2,895
Coquimbo, Chile, 5,007
Corinto, Nicaragua, 2,613
Corral, Chile, 5,407
Darwin, Australia, 6,984
Dutch Harbor, Alaska, U.S.A., 2,051
Djakarta, Indonesia (via Balintang Channel), 7,642
Eniwetok, Marshall Islands, 4,282
Esmeraldas, Ecuador, 3,342
Funafuti, Ellice Islands, 4,295
Guaymas, Mexico, 1,490
Hakodate, Japan, 4,246
Hong Kong, B.C.C., 6,044
Honolulu, Hawaii, U.S.A., 2,091
Hsia-men, China (via Osumi Kaikyo), 5,797
Hsia-men, China (via Tsugaru Kaikyo), 5,788
Iloilo, Philippines, 6,168
Iquique, Chile, 4,620
Jaluit, Marshall Islands, 4,150
Johnston Island, 2,779
Juneau, Alaska, U.S.A., 1,371
Kiska, Alaska, U.S.A., 2,629
Kobe, Japan, 4,819
Kodiak, Alaska, U.S.A., 1,693
Kwajalein, Marshall Islands, 4,124
La Union, El Salvador, 2,586
Lele, Caroline Islands, 4,478
Levuka, Fiji Islands, 4,705
La Libertad, Mexico, 1,648
Lota, Chile, 5,282
Lu-shun, China (via Tsugaru Kaikyo), 5,477
Manila, Philippines (via Balintang Channel), 6,221
Manila, Philippines (via San Bernardino Strait), 6,299
Manzanillo, Mexico, 1,538
Mazatlan, Mexico, 1,337
Melbourne, Australia (via South Channel), 6,970
Midway Island, 2,792
Mokpo, Korea, 5,125
Mollendo, Peru, 4,426
Nagasaki, Japan, 5,029
Newcastle, Australia, 6,467
Nikolayevsk, U.S.S.R. (via Unimak Pass), 4,099
Nome, Alaska, U.S.A., 2,636
Noumea, New Caledonia, 5,410
Ocean Island, 4,406
Omura, Bonin Islands, 4,688
Pago Pago, American Samoa, 4,150
Palmyra Island, 2,892
Papeete, Society Islands, 3,663
Petropavlovsk, U.S.S.R. (via Unimak Pass), 3,292
Pisagua, Chile, 4,593
Pisco, Peru, 4,097
Ponape, Caroline Islands, 4,641
Prince Rupert, Canada, 1,090
Puerto Armuelles, Panama, 2,973
Puntarenas, Costa Rica, 2,831
Pusan, Korea, 4,914
Rabaul, New Britain, 5,396
Rotoava, Tuamotu Archipelago, 3,503
Sai Gon, Vietnam, 6,878
Salaverry, Peru, 3,750
Salina Cruz, Mexico, 2,135
San Blas, Mexico, 1,417
San Jose, Guatemala, 2,395
Sasebo, Japan (via Osumi Kaikyo), 5,185
Seward, Alaska, U.S.A., 1,701
Shang-hai, China (via Tsugaru Kaikyo), 5,395
Shang-hai, China (low power, November–March), 5,966
Shang-hai, China (via Osumi Kaikyo), 5,502
Shang-hai, China (alternate low power, November–March), 6,087
Shang-hai, China (low power, April, May and October), 5,812
Shan-tou, China (via Osumi Kaikyo), 5,900
Shimonoseki, Japan (via Tsugaru Kaikyo), 4,910
Sitka, Alaska, U.S.A., 1,302
Surabaja, Indonesia, 7,343
Suva, Fiji Islands, 4,749
Sydney, Australia, 6,448
Taio Hae, Marquesas, 2,987
Ta-ku, China (via Tsugaru Kaikyo), 5,615
Ta-ku, China (via Osumi Kaikyo), 5,856
Talara, Peru, 3,494
Talcahuano, Chile, 5,270
Ta-lien, China (via Tsugaru Kaikyo), 5,456
Ta-lien, China (south of Honshu), 5,697
Ta-lien, China (low power, April, May and October), 6,007
Ta-lien, China (low power, November–March), 6,282
Taltal, Chile, 4,838
Tan-shui, Taiwan (via Osumi Kaikyo), 5,611
Tan-shui, Taiwan (via Tsugaru Kaikyo), 5,617
Tocopilla, Chile, 4,699
Truk, Caroline Islands, 4,931
Valparaiso, Chile, 5,140
Vancouver, Canada (via Active Pass), 812
Vancouver, Canada (via Haro Strait), 823
Victoria, Canada, 745
Vladivostok, U.S.S.R. (via La Perouse Strait and Proliv Kruzenshterna), 4,563
Vladivostok, U.S.S.R. (via La Perouse Strait, Proliv Chetvertyy Kurilskiy, and Unimak Pass), 4,570
Wake Island, 3,821
Wei-hai-wei, China (via Tsugaru Kaikyo), 5,402
Wellington, New Zealand, 5,900
Wonsan, Korea, 4,866
Yokohama, Japan, 4,536

SAN JOSE, GUATEMALA
(13°55′00″ N., 70°49′45″ W.) to:

Junction Points*
Panama, Panama, 886
Punta Arenas, Chile, 4,296

Ports
Acapulco, Mexico, 574
Amapala, Honduras, 204
Antofagasta, Chile, 2,557
Arica, Chile, 2,338
Callao, Peru, 1,763
Coquimbo, Chile, 2,864
Corinto, Nicaragua, 238
Esmeraldas, Ecuador, 1,016
Guayaquil, Ecuador, 1,242
Guaymas, Mexico, 1,520
Hilo, Hawaii, U.S.A., 3,690
Iquique, Chile, 2,404
La Libertad, Mexico, 1,684
Los Angeles, California, U.S.A., 2,054
Lota, Chile, 3,220
Manzanillo, Mexico, 840
Mazatlan, Mexico, 1,149
Mollendo, Peru, 2,213
Monterey, California, U.S.A., 2,315
Pisco, Peru, 1,875
Puntarenas, Costa Rica, 465
San Blas, Mexico, 1,064
San Diego, California, U.S.A., 1,993
San Francisco, California, U.S.A., 2,395
Santa Barbara, California, U.S.A., 2,130
Talcahuano, Chile, 3,202
Valparaiso, Chile, 3,024

SAN JUAN, PERU
(15°20′36″ S., 75°09′36″ W.) to:

Junction Points*
Panama, Panama, 1,590
Punta Arenas, Chile, 1,660

Ports
Antofagasta, Chile, 575
Callao, Peru, 248

*JUNCTION POINT.—See Preface for use of junction points.

SAN JUAN, PUERTO RICO
(18°27'50'' N., 66°06'40'' W.) to:

Junction Points*
Bishop Rock, England, 3,390
Fastnet, Ireland (via Mona Passage), 3,299
Inishtrahull, Ireland, 3,436
Panama, Panama, 1,036
Pentland Firth, Scotland (track A), 3,642
Pentland Firth, Scotland (track B), 3,638
Strait of Gibraltar, 3,336
Straits of Florida, 1,017
Yucatan Channel, 1,111

Ports
Abraham Bay, Bahamas, 476
Angmagssalik, Greenland (direct), 3,061
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,075
Argentia, Canada, 1,840
Arkhangelsk, U.S.S.R., 5,001
Bahila de Samana, Dominican Republic, 185
Baltimore, Maryland, U.S.A., 1,374
Barahona, Dominican Republic, 294
Barranquilla, Colombia, 705
Basse-Terre, Guadeloupe, 314
Basseterre, St. Christopher, 214
Belem, Brazil, 1,692
Boston, Massachusetts, U.S.A., 1,486
Bridgetown, Barbados (west of St. Croix and via Virgin Passage), 517
Brunswick, Georgia, U.S.A., 1,132
Buenos Aires, Argentina, 4,753
Cadiz, Spain, 3,312
Caldera Bay, Dominican Republic, 273
Cape Haitien, Haiti, 372
Cape Town, Republic of South Africa, 5,772
Cardenas, Cuba, 917
Cartagena, Colombia, 782
Castries, St. Lucia (via Virgin Passage and west of St. Croix), 418
Catia la Mar, Venezuela, 556
Charleston, South Carolina, U.S.A., 1,138
Christiansted, St. Croix, 104
Cienfuegos, Cuba (north of Hispaniola), 903
Cienfuegos, Cuba (south of Hispaniola), 930
Cockburn Town, Bahamas, 611
Colon, Panama, 993
Dakar, Senegal, 2,812
Elizabeth Harbor, Bahamas, 642
Exuma Harbor, Bahamas, 647
Fernandina, Florida, U.S.A., 1,115
Fort de France, Martinique, 385
Fort Liberte, Haiti, 373
Freetown, Sierra Leone, 3,141
Funchal, Maderia Island, 2,773
Georgetown, British Guiana, 876
Great Harbor, Culebra Island, 58
Guantanamo, Cuba (via north of Hispaniola), 537
Habana, Cuba, 978
Haina, Dominican Republic, 249
Halifax, Canada, 1,580
Hamilton, Bermuda, 856
Hopetown, Bahamas, 802
Horta, Azores, 2,294
Ivigtut, Greenland, 2,720
Jacksonville, Florida, U.S.A., 1,121
Key West, Florida, U.S.A., 966
Kingston, Jamaica (north of Hispaniola), 685
Kingston, Jamaica (south of Hispaniola), 643
La Coruna, Spain, 3,255
La Guaira, Venezuela, 506
La Romana, Dominican Republic, 191
Limon, Costa Rica, 1,119
Lisboa, Portugal, 3,185
Liverpool, Canada, 1,540
Manzanillo, Cuba, 738
Mariel, Cuba, 999
Matanzas, Cuba, 931
Miami, Florida, U.S.A., 960
Miller Anchorage, Bahamas, 714
Miragoane, Haiti, 526
Nassau, Bahamas, 799
New York, New York, U.S.A., 1,399
Nicaro Lengua de Pajaro, Cuba, 561
Norfolk, Virginia, U.S.A., 1,252
Nuevitas, Cuba, 663
Oranjestad, St. Eustatius, 195
Philadelphia, Pennsylvania, U.S.A., 1,395
Pina, Panama, 1,219
Pointe a Pitre, Guadeloupe, 333
Ponce, Puerto Rico, 1,180
Ponta Delgada, Azores, 2,412
Port au Prince, Haiti, 552
Port de Paix, Haiti, 398
Port of Spain, Trinidad, 574
Portland, Maine, U.S.A., 1,531
Portsmouth, New Hampshire, U.S.A., 1,507
Puerto Cayo Moa, Cuba, 533
Puerto Cortes, Honduras, 1,284
Puerto Manati, Cuba, 639
Puerto Padre, Cuba, 625
Puerto Tanamo, Cuba, 549
Puerto Vita, Cuba, 592
Recife, Brazil (via outside all islands), 2,609
Rio de Janeiro, Brazil, 3,652
Rio Yateras, Cuba, 525
St. John, Canada, 1,614
St. Johns, Antigua, 265
St. Pierre, Martinque, 374
San Pedro de Macoris, Dominican Republic, 199
Santa Barbara de Samana, Dominican Republic, 190
Santa Cruz de Tenerife, Canary Islands, 2,820
Santa Lucia, Cuba, 1,079
Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 584
Santiago de Cuba, Cuba (south of Hispaniola), 637
Santo Domingo, Dominican Republic, 232
Savannah, Georgia, U.S.A., 1,153
Sydney, Canada, 1,728
Tela, Honduras, 1,258
Veracruz, Mexico, 1,780
Vigo, Spain, 3,228
Willemstad, Curacao, 485
Wilmington, North Carolina, U.S.A., 1,153
Yarmouth, Canada, 1,527

SAN JUAN, BAUTISTA BAY. See Islas Juan Fernandez.

SAN JUAN DEL NORTE, NICARAGUA
(10°57'00'' N., 83°43'00'' W.) to:

Junction Points*
Montreal, Canada (via Crooked Island Passage and Strait of Canso), 3,220
Panama, Panama, 289
Yucatan Channel, 681

Ports
Alvaro Obregon, Mexico, 1,165
Belize, British Honduras, 619
Cartagena, Colombia, 495
Castries, St. Lucia, 1,344
Charlotte Amalie, Virgin Islands, 1,199
Galveston, Texas, U.S.A., 1,344
Gulfport, Mississippi, U.S.A., 1,237
Habana, Cuba, 871
La Guaira, Venezuela, 1,026
Mobile, Alabama, U.S.A., 1,240
New Orleans, Louisiana, U.S.A., 1,262
New York, New York, U.S.A. (via Crooked Island Passage and Windward Passage), 2,032
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,837
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,004

*JUNCTION POINT.—See Preface for use of junction points.

Pointe a Pitre, Guadeloupe, 1,345
Port au Prince, Haiti, 840
Port of Spain, Trinidad, 1,342
Santo Domingo, Dominican Republic, 924
Tampico, Mexico, 1,336
Veracruz, Mexico, 1,271
Willemstad, Curacao, 882

SAN JUAN DEL SUR, NICARAGUA
(11°15'15'' N., 85°53'10'' W.) to:

Junction Points*
Panama, Panama, 590

Ports
La Libertad, El Salvador, 239
La Libertad, Mexico, 2,000
Puntarenas, Costa Rica, 171
Salina Cruz, Mexico, 619

SAN LORENZO, HONDURAS
(13°25'00'' N., 87°25'00'' W.) to:

Junction Points*
Panama, Panama, 762

Ports
Acapulco, Mexico, 791
Callao, Peru, 1,701

SAN PEDRO, CALIFORNIA, U.S.A.
See Los Angeles.

SAN PEDRO DE MACORIS, DOMINICAN REPUBLIC
(18°26'45'' N., 69°18'20'' W.) to:

Ports
Kingston, Jamaica, 461
Port au Prince, Haiti, 473
Romana, Dominican Republic, 21
San Juan, Puerto Rico, 199
Sanchez, Dominican Republic, 184

SAN SEBASTIAN, SPAIN
(43°19'00'' N., 1°59'30'' W.) to:

Junction Points*
Strait of Gibraltar, 892
Ushant, France, 353

Ports
Bordeaux, France, 210
El Ferrol del Caudillo, Spain, 302
Horta, Azores- 957

SANCHEZ, DOMINICAN REPUBLIC
(19°13'00'' N., 69°36'00'' W.) to:

Junction Points*
Panama, Panama, 1,024
Straits of Florida, 873

Ports
Colon, Panama, 980
New York, New York, U.S.A., 1,350
Port Plata, Dominican Republic, 128
San Pedro de Macoris, Dominican Republic, 184
Santo Domingo, Dominican Republic, 220

SAND BAY, GREAT SITKIN ISLAND, ALASKA, U.S.A.
(51°59'40'' N., 176°06'00'' W.) to:

Junction Points*
Panama, Panama, 5,569

Ports
Dutch Harbor, Alaska, U.S.A., 397
Honolulu, Hawaii, U.S.A., 1,928
Victoria, Canada, 2,027

SANDAKAN, NORTH BORNEO
(5°50''00'' N., 118°07'00'' E.) to:

Junction Points*
Singapore, 1,071

Ports
Honolulu, Hawaii, U.S.A., 5,044
Jolo, Philippines, 180
Victoria, North Borneo, 412
Zamboanaga, Philippines, 251

SANDEFJORD, NORWAY
(59°07'25'' N., 10°13'50'' E.) to:

Junction Points*
Pentland Firth, Scotland, 518

Ports
Bergen, Norway, 317
Bremerhaven, Germany, 373
London, England, 610

SANDNES, NORWAY
(58°51'12'' N., 5°44'50'' E.)

Add 8 miles to Stavanger distances.

SANGLEY POINT, CAVITE HARBOR, MANILA BAY, PHILIPPINES
(14°30'00'' N., 120°55'00'' E.)

Subtract 5 miles from Manila distances.

SAN-MEN WAN, CHINA
(29°03'00'' N., 121°45'00'' E.) to:

Ports
Chi-lung Chiang, Taiwan, 248
Ching-tao, China, 528
Hong Kong, B.C.C., 650
Inchon, Korea, 628
Nagoya, Japan, 143
Shang-hai, China, 270

SANT ANTIOCO PONTI, SARDINIA
(39°03'12'' N., 8°28'12'' E.) to:

Junction Points*
Port Said, U.A.R., 1,282
Strait of Gibraltar, 715

Ports
Bizerte, Tunisia, 132
Nice, France, 310
Palma, Balearic Islands, 298

SAN ANNA BAY, CURACAO. See Willemstad.

SANTA BARBARA, CALIFORNIA, U.S.A.
(34°24'00'' N., 119°41'00'' W.) to:

Junction Points*
Panama, Panama, 2,980
Punta Arenas, Chile, 5,938

Ports
Acapulco, Mexico, 1,568
Antofagasta, Chile, 4,497
Arica, Chile, 4,286
Callao, Peru, 3,722
Coquimbo, Chile, 4,742
Corinto, Nicaragua, 2,348
Corral, Chile, 5,144
Esmeraldas, Ecuador, 3,077
Guayaquil, Ecuador, 3,249
Guaymas, Mexico, 1,225
Iquique, Chile, 4,355
Lota, Chile, 5,018
Mollendo, Peru, 4,161
Pisco, Peru, 3,832
Puntarenas, Costa Rica, 2,566
Salina Cruz, Mexico, 1,870
San Blas, Mexico, 1,152
San Jose, Guatemala, 2,130
Talcahuano, Chile, 5,006
Valparaiso, Chile, 4,875

*JUNCTION POINT.—See Preface for use of junction points.

SAN BARBARA DE SAMANA, DOMINICAN REPUBLIC
(19°12'15'' N., 69°19'30'' W.) to:

Junction Points*
Panama, Panama, 1,007
Straits of Florida, 867

Ports
Bridgetown, Barbados, 675
Charlotte Amalie, Virgin Islands, 261
Christiansted, St. Croix, 289
Great Harbor, Culebra Island, 242
Key West, Florida, U.S.A. (via Old Bahama Channel), 811
New York, New York, U.S.A., 1,334
Porlamar, Venezuela, 610
San Juan, Puerto Rico, 190

SANTA CRUZ DE TENERIFE, CANARY ISLANDS
(28°38'00'' N., 16°14'00'' W.) to:

Junction Points*
Bishop Rock, England, 1,356
Cape of Good Hope, Republic of South Africa, 4,453
Inishtrahull, Ireland, 1,704
Montreal, Canada (direct), 3,011
Montreal, Canada (tracks C and D), 3,035
Montreal, Canada (track E), 3,015
Pentland Firth, Scotland, 1,952
Punta Arenas, Chile, 5,690
Strait of Gibraltar, 697
Straits of Florida, 3,614
Ushant, France, 1,320

Ports
Belem, Brazil, 2,599
Bordeaux, France, 1,406
Boston, Massachusetts, U.S.A., 2,777
Buenos Aires, Argentina, 4,619
Cadiz, Spain, 702
Cape Town, Republic of South Africa, 4,435
Casablanca, Morocco, 548
Charleston, South Carolina, U.S.A., 3,275
Charlotte Amalie, Virgin Islands, 2,764
Colon, Panama, 3,776
Dakar, Senegal, 846
Freetown, Sierra Leone, 1,342
Funchal, Maderia Island, 258
Guantanamo, Cuba, 3,265
Halifax, Canada (direct) 2,462
Halifax, Canada (tracks C and D), 2,478
Horta, Azores, 881
Huelva, Spain, 715
Lisboa, Portugal, 714
Miami, Florida, U.S.A., 3,427
New York, New York, U.S.A., 2,936
Norfolk, Virginia, U.S.A., 3,057
Philadelphia, Pennsylvania, U.S.A., 3,062
Port of Spain, Trinidad, 2,804
Porto, Portugal, 849
Porto Grande, Sao Vincente, Cape Verde Islands, 849
Rio de Janeiro, Brazil, 3,518
St. John's, Canada, 2,053
San Juan, Puerto Rico, 2,820
Takoradi, Ghana, 2,119
Vigo, Spain, 909

SANTA CRUZ DEL SUR, CUBA
(20°40'00'' N., 77°59'00'' W.) to:

Junction Points*
Panama, Panama, 731
Yucatan Channel, 416

Ports
Guantanamo, Cuba, 222
Habana, Cuba, 542
Montego Bay, Jamaica, 134

SANTA FE, ARGENTINA
(31°39'00'' S., 60°42'00'' W.)

Add 258 miles to Buenos Aires distances.

SANTA ISABEL, FERNANDO POO
(3°45'30'' N., 8°46'30'' E.) to:

Ports
Boma, Republic of the Congo, 689
Clarence Bay, Ascension Island, 1,561
Kribi, Cameroon, 106
Lagos, Nigeria, 384
Lome, Togo, 480
St. Helena Island, 1,472

SANTA LUCIA, CUBA
(22°42'00'' N., 83°58'30'' W.) to:

Junction Points*
Straits of Florida, 120
Yucatan Channel, 99

Ports
Kingston, Jamaica, 651
Nuevitas, Cuba, 447
San Juan, Puerto Rico, 1,079

SANTA MARIA, CUBA
(21°17'00'' N., 78°34'00'' W.) to:

Junction Points*
Panama, Panama, 814
Yucatan Channel, 381
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,755
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,372
Santo Domingo, Dominican Republic, 504
Veracruz, Mexico, 1,537

SANTA ROSALIA, MEXICO
(27°20'00'' N., 112°16'00'' W.) to:

Junction Points*
Panama, Panama, 2,390

Ports
Acapulco, Mexico, 976
Los Angeles, California, U.S.A., 1,192

SANTANDER, SPAIN
(43°27'30'' N., 3°48'00'' W.) to:

Junction Points*
Ushant, France. 323

Ports
Barranquilla, Colombia, 753
Cienfuegos, Cuba, 149
Santiago de Cuba, Cuba, 300

SANTA MARTA, COLOMBIA
(11°15'00'' N., 74°13'00'' W.) to:

Junction Points*
Yucatan Channel, 892

Ports
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,710
Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 1,966
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,373
Colon, Panama, 365
Galveston, Texas, U.S.A., 1,588
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 1,783

*JUNCTION POINT.—See Preface for use of junction points.

Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,588

Ports
Cadiz, Spain, 789
Horta, Azores, 1,090
La Coruna, Spain, 224
La Pallice, France, 201

SANTIAGO, CUBA. See Santiago de Cuba.

SANTIAGO DE CUBA, CUBA
(20°01'00'' N., 75°50'15'' W.) to:

Junction Points*
Panama, Panama, 726
Straits of Florida (via Windward Passage), 676
Yucatan Channel, 548

Ports
Amuay, Venezuela, 600
Baltimore, Maryland, U.S.A., 1,289
Barcelona, Venezuela, 936
Barranquilla, Colombia, 549
Boston, Massachusetts, U.S.A. (via Nantucket Light Vessel), 1,545
Brunswick, Georgia, U.S.A., 926
Carupano, Venezuela, 1,009
Casilda, Cuba, 288
Charleston, South Carolina, U.S.A. (via Crooked Island Passage and Windward Passage), 952
Cinefuegos, Cuba, 334
Colon, Panama, 683
Fort de France, Martinique, 951
Guanica, Puerto Rico (via north of Hispaniola), 572
Guanica, Puerto Rico (via south of Hispaniola), 584
Habana, Cuba, 650
Halifax, Canada, 1,683
Hamilton, Bermuda, 1,031
Jacksonville, Florida, U.S.A. (via Windward Passage), 904
Key West, Florida, U.S.A. (via Windward Passage), 637
Kingston, Jamaica, 176
Manzanillo, Cuba, 168
Miami, Florida, U.S.A., 630
Montego Bay, Jamaica, 154
Nassau, Bahamas, 566
New York, New York, U.S.A., 1,362
Norfolk, Virginia, U.S.A., 1,167
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,334
Ponce, Puerto Rico, 587
Port Plata, Dominican Republic, 311
Puerto Barrios, Guatemala, 792
San Juan, Puerto Rico, 584
Santa Maria, Cuba, 300
Santo Domingo, Dominican Republic, 429
Savannah, Georgia, U.S.A. (via Crooked Island Passage and Windward Passage), 951
Surgidero de Batabano, Cuba, 580
Willemstad, Curacao, 627
Wilmington, North Carolina, U.S.A., 1,003

SANTO DOMINGO, DOMINICAN REPUBLIC
(18°28'00'' N., 69°52'30'' W.) to:

Junction Points*
Bishop Rock, England, 3,585
Fastnet, Ireland, 3,491
Inishtrahull, Ireland (track A), 3,621
Montreal, Canada (via Cabot Strait), 2,579
Panama, Panama, 846
Pentland Firth, Scotland (track A), 3,827
Pentland Firth, Scotland (track B), 3,820
Strait of Gibraltar, 3,549
Straits of Florida (via Windward Passage), 986
Straits of Florida (via Mona Passage), 1,036
Yucatan Channel, 929

Ports
Alvaro Obregon, Mexico, 1,472
Baltimore, Maryland, U.S.A., 1,451
Barranquilla, Colombia, 538
Belem, Brazil, 1,866
Belize, British Honduras, 1,088
Boston, Massachusetts, U.S.A., 1,599
Brunswick, Georgia, U.S.A., 1,179
Buenos Aires, Argentina, 4,929
Campeche, Mexico, 1,364
Cap Haitien, Haiti, 392
Cape Town, Republic of South Africa, 5,948
Cardenas, Cuba, 887
Carmen, Mexico, 1,437
Cartagena, Colombia, 610
Castries, St. Lucia, 578
Charleston, South Carolina, U.S.A., 1,190
Charlotte Amalie, Virgin Islands, 300
Cienfuegos, Cuba, 716
Colon, Panama, 802
Dakar, Senegal, 3,036
Great Harbor, Culebra Island, 290
Guantanamo, Cuba, 397
Habana, Cuba (via Windward Passage), 946
Halifax, Canada, 1,709
Hamilton, Bermuda, 992
Jacksonville, Florida, U.S.A., 1,166
Jeremie, Haiti, 343
Key West Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 936
Kingston, Jamaica, 430
La Guaira, Venezuela, 502
Manzanillo, Cuba, 558
Maracaibo, Venezuela, 496
Matanzas, Cuba, 901
Miami, Florida, 930
Miragoane, Haiti, 407
Nassau, Bahamas, 851
New York, New York, U.S.A., 1,489
Norfolk, Virginia, U.S.A., 1,329
Nuevitas, Cuba, 632
Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,480
Pointe a Pitre, Gaudeloupe, 520
Ponce, Puerto Rico, 196
Ponta Delgada, Azores, 2,620
Port au Prince, Haiti, 453
Port of Spain, Trinidad, 681
Port Plata, Dominican Republic, 295
Puerto Cabello, Venezuela, 492
Puerto Colombia, Colombia, 542
Rio de Janeiro, Brazil, 3,829
Romana, Dominican Republic, 61
St. John, Canada, 1,733
San Juan, Puerto Rico, 232
San Juan del Norte, Nicaragua, 924
Sanchez, Dominican Republic, 220
Santa Marta, Colombia, 504
Santiago de Cuba, Cuba, 429
Savannah, Georgia, U.S.A., 1,204
Sydney, Canada, 1,867
Tuxpan, Mexico, 1,624
Veracruz, Mexico, 1,596
Willemstad, Curacao, 397
Wilmington, North Carolina, U.S.A., 1,210

SANTOS, BRAZIL
(23°56'00'' S., 46°19'00'' W.) to:

Junction Points*
Montreal, Canada, 5,544
Panama, Panama, 4,609
Strait of Gibraltar, 4,378
Straits of Florida, 4,799
Ushant, France, 5,002

Ports
Bahia Blanca, Argentina, 1,292
Baltimore, Maryland, U.S.A., 5,031

*JUNCTION POINT.—See Preface for use of junction points.

Boston, Massachusetts, U.S.A., 4,928
Buenos Aires, Argentina, 1,006
Cape Town, Republic of South Africa, 3,409
Charleston, South Carolina, U.S.A., 4,908
Colon, Panama, 4,476
Fernando de Noronha, 2,405
Guiria, Venezuela, 3,467
Maldonado, Uruguay, 1,172
Mar del Plata, Argentina, 1,363
Montevideo, Uruguay, 893
New York, New York, U.S.A., 4,957
Norfolk, Virginia, U.S.A., 4,910
Paranagua, Brazil, 163
Philadelphia, Pennsylvania, U.S.A., 5,004
Portland, Maine, U.S.A., 4,959
Porto Alegre, Brazil, 758
Quequen, Argentina, 1,437
Rio Grande, Brazil, 586
Savannah, Georgia, U.S.A., 4,940

SAN-YA CHIANG, CHINA
(18°14'00'' N., 109°26'00'' E.) to:

Ports
Haiphong, Vietnam, 253
Hong Kong, B.C.C., 391
Kao-hsiung Chiang, Taiwan, 682
Manila, Philippines, 714
Sai Gon, Vietnam, 624

SAO LUIZ, BRAZIL
(2°30'00'' S., 44°20'00'' W.) to:

Ports
Baltimore, Maryland, U.S.A., 3,117
Belem, Brazil, 372
Fortaleza, Brazil, 392
New York, New York, U.S.A., 3,076

SAO SALVADOR, BRAZIL. See Salvador.

SAO TOME, SAO TOME, GULF OF GUINEA
(0°21'00'' N., 6°45'00'' E.) to:

Ports
Boma, Republic of the Congo, 563
Douala, Cameroon, 285
Lagos, Nigeria, 422
Pointe Noire, Gabon, 436
Porto Grande, Cape Verde Islands, 2,208

SARANDE, ALBANIA
(39°52'00'' N., 20°00'30'' E.) to:

Junction Points*
Port Said, U.A.R., 863
Strait of Gibraltar, 1,311

Ports
Piraievs, Greece (via Corinth Canal), 253
Split, Yugoslavia, 293
Taranto, Italy, 154

SARAWAK. See Kuching.

SASEBO, JAPAN
(33°09'00'' N., 129°43'00'' E.) to:

Ports
Acapulco, Mexico (via Osumi Kaikyo), 6,918
Dutch Harbor, Alaska, U.S.A. (via Osumi Kaikyo), 3,207
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,009
Itozaki, Japan, 271
Kunsan, Japan, 343
Manila, Philippines, 1,349
Nome, Alaska, U.S.A. (via Osumi Kaikyo), 3,373
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,185
Valparaiso, Chile (via Osumi Kaikyo), 9,836
Wakamatsu, Japan, 136

SASSANDRA, IVORY COAST
(4°57'00'' N., 6°04'00'' W.) to:

Ports
Dakar, Senegal, 1,080
Douala, Cameroon, 930
Freetown, Sierra Leone, 582
Lagos, Nigeria, 577
Monrovia, Liberia, 342
Takoradi, Ghana, 262

SASSNITZ, GERMANY
(54°30'00'' N., 13°38'15'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 143
Skagens Odde, Denmark, 239

Ports
Gdynia, Poland, 203
Kohenhavn, Denmark, 95
Stockholm, Sweden, 390

SAVANNAH, GEORGIA, U.S.A.
(32°05'00'' N., 81°06'00'' W.) to:

Junction Points*
Montreal, Canada (via Strait of Canso), 2,013
Panama, Panama, 1,606
Pentland Firth, Scotland (track A), 3,760
Pentland Firth, Scotland (track B), 3,714
Pentland Firth, Scotland (track C), 3,613
Punta Arenas, Chile, 6,930
Straits of Florida, 603

Ports
Banes, Cuba (via Crooked Island Passage and Windward Passage), 801
Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 1,637
Bridgetown, Bardados, 1,646
Buenos Aires, Argentina (via north of English Bank), 5,854
Cape Town, Republic of South Africa, 6,864
Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,442
Castries, St. Lucia, 1,548
Charlotte Amalie, Virgin Islands, 1,210
Charlottetown, Canada, 1,386
Colon, Panama, 1,563
Habana, Cuba, 606
Halifax, Canada, 1,164
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,063
La Guaira, Venezuela (via Mona Passage), 1,575
Las Palmas de Gran Canaria, Canary Islands, 3,409
Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 1,636
Maracaibo, Venezuela, 1,466
Montevideo, Uruguay, 5,740
Nassau, Bahamas, 503
Ponce, Puerto Rico, 1,180
Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,012
Port of Spain, Trinidad, 1,714
Porto Grande, Cape Verde Islands, 3,169
Puerto Barrios, Guatemala (via Straits of Florida), 1,224
Puerto Cortes, Honduras (via Straits of Florida), 1,189
Recife, Brazil, 3,681
Rio de Janeiro, Brazil, 4,753

*JUNCTION POINT.—See Preface for use of junction points.

St. John, Canada (via Nantucket Light Vessel), 1,113
Salvador, Brazil, 4,072
San Juan, Puerto Rico, 1,153
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,372
Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 951
Santo Domingo, Dominican Republic, 1,204
Santos, Brazil, 4,940
Tampico, Mexico, 1,432
Willemstad, Curacao, 1,444

SAVONA, ITALY
(44°18'44'' N., 8°29'29'' E.) to:

Junction Points*
Port Said, U.A.R., 1,437
Strait of Gibraltar, 852

Ports
Alexandria, U.A.R., 1,326
Alger, Algeria, 518
Alicante, Spain, 549
Ancona, Italy, 1,028
Annaba, Algeria, 451
Banghazi, Libya, 922
Barcelona, Spain, 341
Bari, Italy, 820
Bayrut, Lebanon, 1,519
Bizerte, Tunisia, 440
Brindisi, Italy, 762
Cagliari, Sardinia, 362
Cartagena, Spain, 601
Ceuta, Morocco, 834
Gibraltar, 835
Haifa, Israel, 1,515
Iraklion, Crete, 1,002
Istanbul, Turkey (via Corinth Canal), 1,260
Istanbul, Turkey (south of Greece), 1,301
Izmir, Turkey (via Corinth Canal), 1,106
Izmir, Turkey (south of Greece), 1,147
Malaga, Spain, 783
Marseille, France, 189
Messina, Sicily, 496
Napoli, Italy, 350
Odessa, U.S.S.R. (via Corinth Canal), 1,608
Odessa, U.S.S.R. (south of Greece), 1,650
Oran, Algeria, 672
Palermo, Sicily, 434
Palma, Balearic Islands, 433
Piraievs, Greece (via Corinth Canal), 906
Piraievs, Greece (south of Greece), 988
Rijeka, Yugoslavia, 1,095
Sibenik, Yugoslavia, 969
Siracusa, Sicily, 567
Split, Yugoslavia, 954
Tarabulus, Libya, 722
Taranto, Italy, 715
Thessaloniki, Greece (via Corinth Canal), 1,154
Thessaloniki, Greece (south of Greece), 1,196
Toulon, France, 156
Trieste, Free Territory, 1,128
Tunis, Tunisia, 475
Valencia, Spain, 497
Valletta, Malta, 588
Venezia, Italy, 1,138
Volos, Greece (via Corinth Canal), 1,096
Volos, Greece (south of Greece), 1,137

SAWARIN, SUDAN. See Suakin.

SAYDA, LEBANON
(33°32'02'' N., 35°19'49'' E.) to:

Junction Points*
Port Said, U.A.R., 205
Strait of Gibraltar, 2,035

Ports
Haifa, Israel, 49
Marseille, France, 1,596
Sete, France, 1,655
Venezia, Italy (via Corinth Canal), 1,354
Venezia, Italy (south of Greece), 1,382

SCORESBYSUND, GREENLAND
(70°28'30'' N., 21°58'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 871
Strait of Gibraltar, 2,271

Ports
Murmansk, U.S.S.R., 1,163
Reykjavik, Iceland, 437
St. John's, Canada, 1,643

SEAHAM HARBOR, ENGLAND
(54°50'14'' N., 1°19'10'' W.) to:

Junction Points*
Bishop Rock, England, 625
Pentland Firth, Scotland, 259

Ports
Leith, Scotland, 117
London, England, 308
Rotterdam, Netherlands, 278

SEATTLE, WASHINGTON, U.S.A.
(47°36'00'' N., 122°22'00'' W.) to:

Junction Points*
Panama, Panama, 4,020
Punta Arenas, Chile, 6,964
Singapore, 7,062
Wilson Promontory, Australia, 7,185

Ports
Aleksandrovsk, U.S.S.R. (via La Perouse Strait and Proliv Kruzenshterna), 4,108
Amapala, Honduras, 3,361
Anchorage, Alaska, U.S.A. (via inside route), 1,639
Anchorage, Alaska, U.S.A. (via outside route), 1,420
Apia, Samoa, 4,613
Apra, Guam, 4,948
Archipielago de Colon, 3,774
Attu Island, Alaska, U.S.A. (via Unimak Pass), 2,422
Auckland, New Zealand, 6,170
Avarua, Cook Islands, 4,700
Baie du Controleur, Marquesas, 3,666
Barrow, Alaska, U.S.A., 2,799
Brisbane, Australia, 6,471
Callao, Peru, 4,764
Canton, Phoenix Islands, 4,049
Cordova, Alaska, U.S.A., 1,216
Darwin, Australia, 6,892
Dutch Harbor, Alaska, U.S.A., 1,707
Enderbury Island, Phoenix Islands, 4,047
Funafuti, Ellice Islands, 4,640
Guayaquil, Ecuador, 5,326
Hakodate, Japan (south of Aleutian Islands), 3,952
Hakodate, Japan (north of Aleutian Islands), 3,922
Hilo, Hawaii, U.S.A., 2,388
Hong Kong, B.C.C., 5,768
Hong Kong, B.C.C. (low power route for April, May and October), 6,447
Hong Kong, B.C.C. (low power route for November–March), 6,835
Hong Kong, B.C.C. (alternate, low power route for November–March), 6,941
Hot Springs Bay, Alaska, U.S.A., 2,139
Hsia-men, China (via La Perouse Strait and north of Aleutians), 5,463
Hsia-men, China (via Tsugaru Kaikyo and north of Aleutians), 5,464

*JUNCTION POINT.—See Preface for use of junction points.

Hsia-men, China (via Tsugaru Kaikyo and south of Aleutians), 5,494
Hsia-men, China (via Osumi Kaikyo and south of Aleutians), 5,515
Jaluit, Marshall Islands, 4,296
Johnston Island, 3,018
Juneau, Alaska, U.S.A., 873
Kahului, Hawaii, U.S.A., 2,364
Kaneohe Bay, Hawaii, U.S.A., 2,388
Kaunakakai, Hawaii, U.S.A., 2,398
Ketchikan, Alaska, U.S.A., 634
Kobe, Japan (south of Aleutian Islands), 4,537
Kobe, Japan (north of Aleutian Islands), 4,527
Kobe, Japan (low power, April, May, and October), 5,184
Kobe, Japan (low power for November–March), 5,614
Kobe, Japan (alternate low power for November–March), 5,767
Kodiak, Alaska, U.S.A., 1,257
Levuka, Fiji Islands, 5,120
Manila, Philippines, 5,937
Manila, Philippines (low power for April, May and October via San Bernardino Strait), 6,470
Manila, Philippines (low power route for November–March) 6,828
Manila, Philippines (alternate route, low power for November–March), 6,903
Melbourne, Australia, 7,332
Midway Island, 2,817
Nagasaki, Japan (via Tsugaru Kaikyo and south of Aleutian Islands), 4,735
Nagasaki, Japan (via Tsugaru Kaikyo and north of Aleutian Islands), 4,705
Naknek, Alaska, U.S.A., 2,020
Nanaimo, Canada, 132
New Westminister, Canada, 126
Nikolayevsk, U.S.S.R. (south of Aleutian Islands), 3,823
Nikolayevsk, U.S.S.R. (via Unimak Pass), 3,748
Nome, Alaska, U.S.A., 2,288
Noumea, New Caledonia, 5,760
Ocean Island, 4,611
Omura, Bonin Islands, 4,466
Pago Pago, American Samoa, 4,611
Palmyra Island, 3,307
Papeete, Society Islands, 4,296
Petersburg, Alaska, U.S.A., 771
Petropavlovsk, U.S.S.R. (via Unimak Pass), 2,939
Ponape, Caroline Islands, 4,696
Prince Rupert, Canada, 577
Rabaul, New Britain, 5,509
Seward, Alaska, U.S.A. (via Strait of Juan de Fuca), 1,232
Shang-hai, China (via La Perouse Strait and north of Aleutian Islands), 5,067
Shang-hai, China (low power route for April, May, and October), 5,870
Shang-hai, China (low power route for November–March), 6,270
Shang-hai, China (alternate route, low power for November–March), 6,401
Shang-hai, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,071
Shang-hai, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,101
Shang-hai, China (via Osumi Kaikyo and south of Aleutian Islands), 5,220
Shimonoseki, Japan (via Tsugaru Kaikyo and south of Aleutian Islands), 4,616
Shimonoseki, Japan (via Tsugaru Kaikyo and north of Aleutian Islands), 4,586
Sitka, Alaska, U.S.A., 806
Skagway, Alaska, U.S.A., 934
Surabaja, Indonesia, 7,162
Suva, Fiji Islands, 5,162
Sydney, Australia, 6,810
Ta-ku, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,290
Ta-ku, China (via La Perouse Strait and north of Aleutian Islands), 5,286
Ta-ku, China (via Osumi Kaikyo and south of Aleutian Islands), 5,574
Ta-ku, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,321
Ta-lien, China (via south of Aleutian Islands and Osumi Kaikyo), 5,415
Ta-lien, China (via La Perouse Strait and north of Aleutian Islands), 5,127
Ta-lien, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,131
Ta-lien, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,162
Truk, Caroline Islands, 4,929
Unalakleet, Alaska, U.S.A., 2,023
Valdez, Alaska, U.S.A., 1,229
Valparaiso, Chile, 5,916
Vancouver, Canada (via Active Pass), 126
Vancouver, Canada (via Boundary Pass), 132
Victoria, Canada, 70
Vladivostok, U.S.S.R. (via Tsugaru Kaikyo and composite sailing), 4,366
Vladivostok, U.S.S.R. (north of Aleutian Islands), 4,210
Wake Island, 3,820
Wei-hai-wei, China (via La Perouse Strait, north of Aleutian Islands and via Unimak Pass), 5,054
Wei-hai-wei, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,059
Wei-hai-wei, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,089
Wellington, New Zealand, 6,433
Whittier, Alaska, U.S.A., 1,241
Wrangell, Alaska, U.S.A., 713
Yakutat, Alaska, U.S.A. (via outside route), 1,003
Yakutat, Alaska, U.S.A. (via inside route), 1,133
Yokohama, Japan (composite sailing), 4,254
Yokohama, Japan (north of Aleutian Islands), 4,245
Yokohama, Japan (low power route for April, May and October), 4,901
Yokohama, Japan (low power route for November–March), 5,370
Yokohama, Japan (alternate route, low power for November–March), 5,545

SEKONDI, GHANA
(4°56′20″ N., 1°42′00″ W.) to:

Junction Points*
Ushant, France, 3,424

Ports
Horta, Azores, 2,838
Lagos, Nigeria, 317
Monrovia, Liberia, 599
Pointe Noire, Gabon, 997

SELETAR, MALAYSIA
(1°26′00″ N., 103°52′00″ E.) to:

Junction Points*
Singapore, 32
Sunda Strait, Indonesia, 533

Ports
Makasar, Celebes, 1,071
Manila, Philippines, 1,333
Sai Gon, Vietnam, 652

*JUNCTION POINT.—See Preface for use of junction points.

SELWYN BAY, SOLOMON ISLANDS
(10°15'00'' S., 161°43'00'' E.) to:

Junction Points*
Panama, Panama, 7,248

Ports
Apia, Samoa, 1,582
Apra, Guam, 1,762
Brisbane, Australia, 1,193
Honolulu, Hawaii, U.S.A., 3,047
Levuka, Fiji Islands, 1,154
Noumea, New Caledonia, 850
Ponape, Caroline Islands, 1,069
Rabaul, New Britain, 694
Sydney, Australia, 1,567
Yokohama, Japan, 3,022

SEMARANG, INDONESIA
(6°56'00'' S., 110°25'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 416
Sunda Strait, Indonesia, 267
Wetar Passage, Indonesia, 1,067

Ports
Apra, Guam, 2,464
Djakarta, Indonesia, 236
Makasar, Celebes, 596
Surabaja, Indonesia, 196

SETE, FRANCE
(43°24'05'' N., 3°42'07'' E.) to:

Junction Points*
Port Said, U.A.R., 1,577
Strait of Gibraltar, 684

Ports
Augusta, Sicily, 703
Cagliari, Sardinia, 402
Cannes, France, 171
Genova, Italy, 266
Iskenderun, Turkey, 1,675
Istanbul, Turkey (via Corinth Canal), 1,401
Instanbul, Turkey (south of Greece), 1,442
Jaffa, Israel, 1,662
Kerch, U.S.S.R. (via Corinth Canal), 1,836
Kerch, U.S.S.R. (south of Greece), 1,877
Larnaca, Cyprus, 1,579
Livarno, Italy, 298
Messina, Sicily, 636
Napoli, Italy, 515
Pula, Yugoslavia, 1,216
Sayda, Lebanon, 1,655
Skikda, Algeria, 422
Tarabulus, Lebanon, 1,672
Valletta, Malta, 694

SETUBAL, PORTUGAL
(38°31'00'' N., 8°59'00'' E.) to:

Junction Points*
Strait of Gibraltar, 287
Ushant, France, 672

Ports
Bilbao, Spain, 612
Casablanca, Morocco, 313
Horta, Azores, 939

SEVASTOPOL, U.S.S.R.
(44°36'46'' N., 33°31'58'' E.) to:

Junction Points*
Port Said, U.A.R., 1,105
Strait of Gibraltar (via Corinth Canal), 2,105
Strait of Gibraltar (south of Greece), 2,122

Ports
Constanta, Rumania, 212
Istanbul, Turkey, 305
Izmir, Turkey, 594
Odessa, U.S.S.R., 167
Split, Yugoslavia (via Corinth Canal), 1,188
Split, Yugoslavia (south of Greece), 1,287

SEVEROMORSK, U.S.S.R.
(69°05'30'' N., 33°25'00'' E.)

Subtract 13 miles from Murmansk distances.

SEVERODVINSK, U.S.S.R.
(64°35'00'' N., 39°50'00'' E.)

Add 2¼ miles to Arkhangelsk distances.

SEWARD, ALASKA, U.S.A.
(60°06'00'' N., 149°26'00'' W.) to:

Junction Points*
Panama, Panama, 4,916
Punta Arenas, Chile, 7,859

Ports
Apra, Guam, 4,079
Auckland, New Zealand, 6,093
Callao, Peru, 5,660
Hakodate, Japan (south of Aleutian Islands), 3,010
Hong Kong, B.C.C. (south of Aleutian Islands), 4,809
Honolulu, Hawaii, U.S.A., 2,373
Los Angeles, California, U.S.A., 2,045
Manila, Philippines (south of Aleutian Islands), 4,996
Pago Pago, American Samoa, 4,589
Papeete, Society Islands, 4,661
Petropavlovsk, U.S.S.R. (via Unimak Pass), 2,065
Prince Rupert, Canada, 734
San Francisco, California, U.S.A., 1,701
Seattle, Washington, U.S.A. (via Strait of Juan de Fuca), 1,232
Seattle, Washington, U.S.A. (via inside route), 1,428
Suva, Fiji Islands, 5,003
Sydney, Australia, 6,373
Valdez, Alaska, U.S.A., 145
Valparaiso, Chile, 6,812
Vancouver, Canada, 1,249
Yakutat, Alaska, U.S.A., 312
Yokohama, Japan (south of Aleutian Islands), 3,313

SEYDHISFJORDHUR, ICELAND
(65°15'06'' N., 14°00'12'' W.) to:

Junction Points*
Pentland Firth, Scotland, 500
Strait of Gibraltar, 1,899

Ports
Bergen, Norway, 634
Murmansk, U.S.S.R., 1,173
St. John's, Canada, 1,690

SFAX, TUNISIA
(34°43'39'' N., 10°46'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,131
Strait of Gibraltar, 1,043

Ports
Almeria, Spain, 881
Civitavecchia, Italy, 520
Derince, Turkey, 1,081
Gibraltar, 1,026
Iskenderun, Turkey, 1,282
Larnaca, Cyprus, 1,163
Rostov-na-Donu, U.S.S.R., 1,684

SHANA, JAPAN. See Jana.

*JUNCTION POINT.—See Preface for use of junction points.

SHANG-HAI, CHINA
(31°14′00″ N., 121°29′30″ E.) to:

Junction Points*
Lombok Strait (via Pai-chieh Hsia, Steep Island Pass, east of Taiwan, Mindoro Strait and Sibutu Passage), 2,577
Panama, Panama (via Tsugaru Kaikyo), 8,566
Panama, Panama (via Osumi Kaikyo), 8,648
Punta Arenas, Chile, 9,827
Singapore, 2,207
Sunda Strait (via Pai-chieh Hsia, Steep Island Pass, West of Macclesfield Bank, east of South Natuna Island, and through Selat Gaspar), 2,535
Wetar Passage, Indonesia, 2,553

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 1,597
Apia, Samoa, 4,715
Apra, Guam, 1,687
Auckland, New Zealand (via west of New Ireland), 5,148
Avarua, Cook Islands, 5,533
Brisbane, Australia, 4,243
Cebu, Philippines (via South Channel, Pai-chieh Hsia, Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,322
Chimu Wan, Ryukyu Islands, 527
Ching-tao, China (via outside islands), 401
Chin-huang-tao, China (via outside islands), 668
Chi-lung Chiang, Taiwan, 447
Chinnampo, Korea, 561
Darwin, Australia, 2,804
Djakarta, Indonesia, 2,522
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 3,377
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,375
Guayaquil, Ecuador, 8,872
Hai-kou, Hai-nan Tao (north of Taiwan), 1,132
Haiphong, Vietnam (via Pai-chieh Hsia, Steep Island Pass and Hainan Strait), 1,285
Hakodate, Japan, 1,166
Han-kou, China, 592
Higashi-Iwase, Japan, 966
Hong Kong, B.C.C. (via Pai-chieh Hsia, Steep Island Pass, and Formosa Strait), 831
Honolulu, Hawaii, U.S.A., 4,336
Hsia-men, China (via outside islands), 603
Hua-lien Chiang, Taiwan, 533
Hu-lu Tao, China, 685
Iloilo, Philippines (via South Channel, Pai-chieh Hsia, Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,343
Inchon, Korea (via South Channel), 503
Jaluit, Marshall Islands, 3,138
Kobe, Japan (via Osumi Kaikyo), 826
Kobe, Japan (via Inland Sea), 789
Kodiak, Alaska, U.S.A., 3,967
Kunsan, Japan, 457
Kuang-chou, China (via Steep Island Pass), 923
Levuka, Fiji Islands, 4,528
Lien-yun, China, 414
Lo-hsing-ta Mao-ti, China (via South Channel Pai-chieh Hsia, Steep Island Pass), 440
Los Angeles, California, U.S.A. (via Tsugaru Kaikyo), 5,699
Los Angeles, California, U.S.A. (via Osumi Kaikyo), 5,810
Lu-shun, China (via South Channel), 558
Macau, China, 903
Maizuru, Japan, 800
Manila, Philippines (east of Taiwan), 1,156
Manila, Philippines (via Formosa Strait), 1,166
Midway Island, 3,184
Misumi, Japan, 490
Mokpo, Korea, 369
Nagasaki, Japan, 463
Naha, Ryukyu Islands, 479
Nakagusuku, Ryukyu Islands, 515
Nakhodka, U.S.S.R., 991
Nikolayevsk, U.S.S.R., 1,742
Noumea, New Caledonia (via Passe de Dunbea), 4,185
Omura, Bonin Islands, 1,130
Otaru, Japan, 1,233
Pago Pago, American Samoa, 4,794
Palmyra Island, 4,540
Papeete, Society Islands, 5,907
Peng-hu Chiang, Taiwan, 605
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,200
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,224
Ponape, Caroline Islands, 2,545
Pusan, Korea (north of Cheju Do and via South Channel), 491
Rabaul, New Britain, 2,812
Sai Gon, Vietnam (via Bonham Strait), 1,679
San Diego, California, U.S.A. (via Tsugaru Kaikyo), 5,396
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,396
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,502
San-men Wan, China, 270
Seattle, Washington (via La Perouse Strait and north of Aleutian Islands), 5,067
Seattle, Washington (via Tsugaru Kaikyo and north of Aleutian Islands), 5,071
Seattle, Washington (via Tsugaru Kaikyo and south of Aleutian Islands), 5,131
Seattle, Washington (via Osumi Kaikyo and south of Aleutian Islands), 5,242
Shan-tou, China, 708
Shimonoseki, Japan, 548
Sitka, Alaska, U.S.A., 4,446
Su-ao Chiang, Taiwan, 498
Surabaja, Indonesia, 2,626
Suva, Fiji Islands, 4,467
Sydney, Australia (via Vitiaz Strait), 4,636
Sydney, Australia (via west of New Ireland), 4,642
Tai-tung Chiang, Taiwan, 612
Ta-ku, China (via outside islands), 720
Ta-lien, China, 560
Tan-shui, China, 446
Tasa Do, Korea, 597
Teluk Kau, Halmahera, 1,914
Tien-ching, China (via Chang-shan Shui-tao), 740
Truk, Caroline Islands, 2,261
Tsuruga, Japan, 823
Valparaiso, Chile (via Tokara Kaikyo), 10,148
Vinh Cam Ranh, Vietnam, 1,520
Vladivostok, U.S.S.R. (via south of Cheju Do), 997
Vladivostok, U.S.S.R. (via north of Cheju Do), 998
Wakamatsu, Japan, 541
Wake Island, 2,550
Wei-hai-wei, China (via South Channel), 483
Wonsan, Korea (via north of Cheju Do and South Channel), 797
Yen-tai, China (via outside islands), 523
Ying-kou, China, 713
Yokohama, Japan (via Naikai), 1,117
Yung-chia, China, 365

SHAN-TOU, CHINA
(23°21′00″ N., 116°41′00″ E.) to:

Junction Points*
Singapore, 1,560

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Aleksandrovsk, U.S.S.R., 2,100
Apra, Guam (via Bashee Channel), 1,702
Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 952
Cebu, Philippines (via San Bernardino Strait), 969
Chinnampo, Korea, 1,113
Djakarta, Indonesia, 1,880
Hakodate, Japan, 1,660
Honolulu, Hawaii, U.S.A., 4,688
Hsia-men, China, 146
Iloilo, Philippines (via Verde Island Passage), 921
Iloilo, Philippines (via San Bernardino Strait), 991
Inchon, Korea, 1,052
Kobe, Japan (via Osumi Kaikyo), 1,222)
Kuang-chou, China, 266
Lo-hsing-ta Mao-ti, China, 309
Lu-shun, China, 1,115
Manila, Philippines, 623
Mokpo, Korea, 899
Nagasaki, Japan, 919
Petropavlovsk, U.S.S.R., 2,713
Pusan, Korea, 994
San Francsico, California, U.S.A. (via Osumi Kaikyo), 5,900
Shang-hai, China, 708
Shimonoseki, Japan, 1,029
Ta-ku, China, 1,274
Ta-lien, China, 1,113
Tan-shui, China, 295
Vladivostok, U.S.S.R., 1,496
Wei-hai-wei, China, 1,040
Wonsan, Korea, 1,300
Yen-tai, China, 1,074
Yokohama, Japan, 1,435

SHARPNESS, ENGLAND
(51°43'00'' N., 2°29'00'' W.)

Add 17 miles to Avonmouth distances.

SHEERNESS, ENGLAND
(51°26'30'' N., 0°44'00'' E.)

Subtract 31 miles from London distances.

SHELBURNE, CANADA
(43°45'00'' N., 65°19'00'' W.) to:

Junction Points
Montreal, Canada, 1,050

Ports
Churchill, Canada, 2,467
Reykjavik, Iceland, 2,047
St. John's, Canada, 621

SHELEKHOVO, KURIL ISLANDS
(50°23'00'' N., 155°37'00'' E.) to:

Ports
Aleksandrovsk, U.S.S.R., 934
Aomori, Honshu, Japan, 899
Attu Island, Alaska, U.S.A., 675
Dutch Harbor, Alaska, U.S.A. 1,411
Hakodate, Japan, 865
Kholmsk, U.S.S.R., 709
Kiska, Alaska, U.S.A., 867
Korsakov, U.S.S.R., 616
Muroran, Japan, 858
Nemuro, Japan, 597
Nikolayevsk, U.S.S.R. (north of Sakhalin), 676
Otaru, Japan, 788
Petropavlovsk, U.S.S.R., 224
Vladivostok, U.S.S.R., 1,122
Wakkanai, Japan, 643
Zaliv Chikhacheva, U.S.S.R., 971

SHENGJIN, ALBANIA
(41°47'30'' N., 19°35'00'' E.) to:

Junction Points*
Port Said, U.A.R., 988
Strait of Gibraltar, 1,382

Ports
Ancona, Italy, 297
Brindisi, Italy, 103
Split, Yugoslavia, 207

SHIBETORO, KURIL ISLANDS. See Slavnoye.

SHIKUKA, SAKHALIN. See Poronaysk.

SHIMIZU, HONSHU, JAPAN
(35°01'00'' N., 138°31'00'' E.) to:

Ports
Apra, Guam, 1,351
Kobe, Japan, 279
Nagoya, Japan, 143
Shimonoseki, Japan, 469
Yokohama, Japan, 116

SHIMIZU, SHIKOKU, JAPAN
(32°45'00'' N., 132°57'00'' E.) to:

Ports
Kagoshima, Japan, 208
Kure, Japan, 141
Shimonoseki, Japan, 123
Yokkaichi, Japan, 286
Yokohama, Japan, 411

SHIMONOSEKI, JAPAN
(33°57'00'' N., 130°56'35'' E.) to:

Junction Points*
Panama, Panama (east of Honshu), 8,153
Panama, Panama (west of Honshu), 8,081
Punta Arenas, Chile, 9,545
Singapore (via Formosa Strait), 2,527

Ports
Akita, Japan, 586
Apra, Guam, 1,451
Auckland, New Zealand, 4,944
Cebu, Philippines, 1,547
Changjon, Korea, 337
Chongjin, Korea, 480
Darwin, Australia (via Selat Sele), 2,883
Djakarta, Indonesia, 2,838
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 2,892
Hakodate, Japan, 683
Higashi-Iwase, Japan, 466
Hong Kong, B.C.C., 1,179
Honolulu, Hawaii, U.S.A., 3,854
Hsia-men, China, 920
Hu-lu Tao, China, 781
Hungnam, Korea, 397
Iloilo, Philippines, 1,569
Imabari, Japan, 123
Inchon, Korea, 489
Itozaki, Japan, 133
Iwakuni, Japan, 93
Kagoshima, Japan (via Bungo Suido), 295
Kagoshima, Japan (west of Kyushu), 306
Kimchaek, Korea, 421
Kobe, Japan, 241
Kuang-chou, China, 1,262
Kure, Japan, 116
Lo-hsing-ta Mao-ti, China, 799
Lu-shun, China, 637
Maizuru, Japan, 302
Manila, Philippines, 1,424
Masan, Korea, 146
Miike, Japan, 222

*JUNCTION POINT.—See Preface for use of junction points.

Nagasaki, Japan, 159
Nagoya, Japan, 434
Naha, Ryukyu Islands, 530
Nakhodka, U.S.S.R., 552
Nanao, Japan, 453
Niigata, Japan, 492
Niihama, Japan, 136
Pago Pago, American Samoa, 4,440
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 1,739
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 1,732
Pohang, Korea, 164
Rumoi, Japan, 812
Sakaidecho, Japan, 169
Sakata, Japan, 554
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 4,912
San Francisco, California, U.S.A. (south of Honshu), 5,007
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 4,586
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo, and south of Aleutian Islands), 4,646
Shang-hai, China, 548
Shan-tou, China, 1,029
Shimizu, Honshu, Japan, 469
Shimizu, Shikoku, Japan, 123
Shimotsui, Japan, 152
Shiogama, Japan, 756
Sosura, Korea, 507
Sydney, Australia, 4, 453
Ta-ku, China, 790
Tan-shui, Taiwan, 753
Tasa Do, Korea, 639
Tokuyama, Japan, 50
Tsuruga, Japan, 325
Unggi, Korea, 511
Uno, Japan, 177
Valparaiso, Chile, 9,709
Vladivostok, U.S.S.R., 565
Wei-hai-wei, China, 562
Yen-tai, China, 596
Yokohama, Japan (via Bungo Suido), 545
Yosu, Korea, 182

SHIMOTSUI, JAPAN
(34°26'00'' N., 133°49'00'' E.) to:

Ports
Hirohata, Japan, 88
Osaka, Japan, 116
Shimonoseki, Japan, 152
Yokohama, Japan, 449

SHIOGAMA, JAPAN
(38°19'00'' N., 141°03'00'' E.) to:

Ports
Aomori, Japan, 311
Hakodate, Japan, 281
Itozaki, Japan, 662
Shimonoseki, Japan, 756
Yokohama, Japan, 284

SHOREHAM BY SEA, ENGLAND
(50°49'48'' N., 0°16'00'' W.) to:

Junction Points*
Bishop Rock, England, 249
Pentland Firth, Scotland, 633
Ushant, France, 245

Ports
Le Havre, France, 90
London, England, 161
Plymouth, England, 162

SIBENIK, YUGOSLAVIA
(43°44'03'' N., 15°53'17'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,136
Port Said, U.A.R. (south of Greece), 1,148
Strait of Gibraltar, 1,522

Ports
Alexandria, U.A.R., 1,039
Alger, Algeria, 1,094
Alicante, Spain, 1,249
Ancona, Italy, 115
Annaba, Algeria, 874
Banghazi, Libya, 741
Barcelona, Spain, 1,153
Bari, Italy, 167
Bayrut, Lebanon (via Corinth Canal), 1,184
Bayrut, Lebanon (south of Greece), 1,218
Bizerte, Tunisia, 783
Brindisi, Italy, 217
Cartagena, Spain, 1,279
Ceuta, Morocco, 1,502
Dubrovnik, Yugoslavia, 144
Genova, Italy, 958
Gibraltar, 1,504
Haifa, Israel (via Corinth Canal), 1,187
Haifa, Israel (south of Greece), 1,214
Iraklion, Crete, 704
Istanbul, Turkey (via Corinth Canal), 902
Istanbul, Turkey (south of Greece), 1,001
Izmir, Turkey (via Corinth Canal), 747
Izmir, Turkey (south of Greece), 846
La Spezia, Italy, 923
Livorno, Italy, 887
Malaga, Spain, 1,452
Marseille, France, 1,050
Messina, Sicily, 477
Napoli, Italy, 648
Odessa, U.S.S.R. (via Corinth Canal), 1,250
Odessa, U.S.S.R. (south of Greece), 1,349
Oran, Algeria, 1,290
Palermo, Sicily, 593
Palma, Balearic Islands, 1,112
Piraievs, Greece (via Corinth Canal), 548
Piraievs, Greece (south of Greece), 687
Rijeka, Yugoslavia, 158
Savona, Italy, 969
Siracusa, Sicily, 498
Tarabulus, Libya, 761
Taranto, Italy, 356
Thessaloniki, Greece (via Corinth Canal), 796
Thessaloniki, Greece (south of Greece), 895
Toulon, France, 1,018
Trieste, Free Territory, 192
Tunis, Tunisia, 771
Valencia, Spain, 1,237
Valletta, Malta, 575
Venezia, Italy, 204
Volos, Greece (via Corinth Canal), 737
Volos, Greece (south of Greece), 836

SIBONEY, CUBA. See Puerto Siboney.

SIDI IFNI, IFNI
(29°25'00'' N., 10°09'00'' W.) to:

Junction Points*
Strait of Gibraltar, 472
Ushant, France, 1,197

Ports
Porto Grande, Cape Verde Islands, 1,117
Rabat, Morocco, 357

SIDON, LEBANON. See Sayda.

*JUNCTION POINT.—See Preface for use of junction points.

SIHANOUKVILLE, CAMBODIA
(10°39'00'' N., 103°30'00'' E.) to:

Junction Points*
Singapore, 638
Sunda Strait, Indonesia, 1,096

Ports
Krung Thep, Thailand, 300
Makasar, Celebes, 1,584
Sai Gon, Vietnam, 419

SIMONS BAY, REPUBLIC OF SOUTH AFRICA
(34°11'22'' S., 18°26'29'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 4,572
Cape of Good Hope, Republic of South Africa, 23
Port Said, U.A.R., 5,315
Sunda Strait, Indonesia, 5,085

Ports
Port Elizabeth, Republic of South Africa, 391

SINGAPORE*
(1°16'00'' N., 103°50'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,579
Lombok Strait, 963
Panama, Panama (via San Bernardino Strait), 10,505
Port Said, U.A.R. (October–April), 5,018
Port Said, U.A.R. (May–September), 5,139
Sunda Strait, Indonesia (via Selat Bangka and Selat Berhala), 532
Wetar Passage, Indonesia (via Selat Riouw and Selat Karimata), 1,587

Ports
Ad Dammam, Saudi Arabia, 3,681
Aden, Aden Protectorate, 3,631
Aden, Aden Protectorate (May–September), 3,752
Akyab, Burma, 1,365
Al Bahrayn, Bahrain, 3,652
Albany, Australia, 2,525
Al Basrah, Iraq, 3,916
Al Gurdagah, U.A.R., 4,754
Al Hudaydah, Yemen, 3,864
Al Kuwayt, Kuwait, 3,833
Al Mukha, Yemen, 3,756
Aleksandrovsk, U.S.S.R., 3,608
Antsirana, Malagasy Republic, 3,554
Ao Phuket, Thailand, 538
Apra, Guam (via Sulu Sea), 2,585
Assab, Ethiopia, 3,769
Balikpapan, Borneo (via Selat Riouw), 1,053
Bandar Abbas, Iran, 3,381
Bandar-e Shahpur, Iran, 3,872
Ban Sattahip, Thailand, 414
Bandjermasin, Borneo, 830
Barbers Point, Hawaii, U.S.A. (via Sulu Sea), 5866
Bassein, Burma, 1,137
Beira, Mozambique, 4,520
Belawan, Indonesia, 368
Berbera, Somali Republic, 3,646
Bikini, Marshall Islands, 3,591
Bombay, India, 2,441
Bur Safajah, U.A.R., 4,729
Bushehr, Iran, 3,737
Calcutta, India, 1,649
Calicut, India, 1,942
Cebu, Philippines, 1,355
Chalna, Pakistan, 1,578
Chan Chiang, China, 1,333
Ching-tao, China, 2,466
Chimu Wan, Ryukyu Islands, 2,046
Chinnampo, Korea, 2,621
Chittagong, Pakistan, 1,517
Cocanada, India, 1,593
Cochin, India, 1,853
Colombo, Ceylon, 1,581
Dar es Salaam, Tanganyika, 4,042
Davao, Philippines, 1,532
Diego Garcia, Chagos Archipelago (via Strait of Malacca), 2,227
Djakarta, Indonesia (via Selat Durian and Selat Bangka), 525
Djakarta, Indonesia (via Selat Riouw and Selat Bangka), 526
Djibouti, French Somaliland, 3,769
Dumai, Indonesia, 200
Durban, Republic of South Africa, 4,872
Dutch Harbor, Alaska, U.S.A., 5,364
East London, Republic of South Africa, 5,082
Eilat, Israel, 4,868
Fort Dauphin, Malagasy Republic, 3,975
Galle, Ceylon, 1,502
Guayaquil, Ecuador (via Surigao Strait), 10,726
Hai-kou, Hai-nan Tao, 1,338
Hakodate, Japan (via Sea of Japan), 3,160
Hong Kong, B.C.C., 1,454
Honolulu, Hawaii, U.S.A. (via Sulu Sea), 5,881
Hsia-men, China, 1,649
Iloilo, Philippines (via Lumbucan Channel), 1,268
Inchon, Korea, 2,560
Jazireh-ye Khark, Iran, 3,739
Jesselton, North Borneo, 832
Jahore Bahru, Malaya, 31
Karachi, Pakistan, 2,882
Khawr al Ama, Neutral Zone, Persian Gulf, 3,801
Kobe, Japan, 2,689
Kodiak, Alaska, U.S.A., 6,020
Krung Thep, Thailand, 842
Kuang-chou, China, 1,518
Kuching, Sarawak, 443
Lo-hsing-ta Mao-ti, China, 1,817
Los Angeles, California, U.S.A. (via San Bernardino Strait), 7,867
Lourenco Marques, Mozambique, 4,769
Lu-shun, China, 2,623
Madras, India, 1,583
Majunga, Malagasy Republic, 3,845
Makasar, Celebes, 1,070
Malacca, Malaysia, 117
Malakal, Palau Islands (via Basilan Strait), 2,006
Manila, Philippines (north of North Danger Reef), 1,330
Masqat, Mascat and Oman, 3,153
Massaua, Ethiopia, 4,018
Massaua, Ethiopia (May–September), 4,139
Midway Island, 4,828
Mina Abd Allah, Kuwait, 3,822
Mina al Ahmadi, Kuwait, 3,825
Mina Su'ud, Neutral Zone, Persian Gulf, 3,803
Mocambique, Mozambique, 4,080
Mogadiscio, Somali Republic, 3,611
Mombasa, Kenya, 3,987
Mormugao, India, 2,217
Mosselbaai, Republic of South Africa, 5,384
Moulmein, Burma, 1,094
Mtwara, Tanganyika, 4,042
Nagasaki, Japan (via Formosa Strait), 2,427
Nagasaki, Japan (east of Taiwan), 2,413
Negapatam, India, 1,568
Nha Trang Bay, Vietnam, 769
Olongapo, Philippines, 1,335
Padang, Indonesia, 1,011
Palembang, Indonesia, 304
Palmyra Island, 5,741
Pei-hai, China, 1,332
Penang, Malaysia, 367
Peng-hu Chiang, Taiwan, 1,660
Petropavlovsk, U.S.S.R. (via La Perouse Strait and Pervyy Kurilskiy Proliv), 4,194
Port Augusta, Australia, 3,580
Port Blair, Andaman Islands, 929

*JUNCTION POINT.—See Preface for use of junction points.

Port Elizabeth, Republic of South Africa, 5,209
Port des Galets, Reunion Island, 3,450
Port Legaspi, Philippines, 1,611
Port Louis, Mauritius, 3,333
Port Pirie, Australia, 3,564
Port Swettenham, Malaysia, 210
Portland, Oregon, U.S.A., 7,142
Prince Rupert, Canada, 5,683
Pulupandan, Philippines, 1,504
Pusan, Korea, 2,502
Qui Nhon, Vietnam, 856
Rangoon, Burma, 1,109
Rongelap, Marshall Islands, 3,669
Ra's al Khafji, Neutral Zone, Persian Gulf, 3,799
Ra's as Sidr, U.A.R., 4,902
Ra's at Tannurah, Saudi Arabia, 3,701
Ra's Gharib, U.A.R., 4,827
Sabang, Indonesia, 601
Sai Gon, Vietnam, 649
St. Denis, Reunion Island, 3,445
San Diego, California, U.S.A., 7,736
San Fernando, Philippines, 1,379
San Francisco, California, U.S.A. (via Balintang Channel), 7,353
San Francisco, California, U.S.A.(via Tawitawi Island), 7,735
Sandakan, North Borneo (via Banggi South Channel), 1,071
Seattle, Washington, U.S.A., 7,062
Seletar, Malaysia, 32
Shang-hai, China, 2,207
Shan-tou, China, 1,560
Shimonoseki, Japan, 2,527
Sihanoukville, Cambodia, 638
Sitka, Alaska, U.S.A., 6,433
Sorido, Indonesia, 2,202
Sorong, New Guinea, 1,894
Suakin, Sudan, 4,251
Sukarnapura, Indonesia, 2,510
Surabaja, Indonesia, 763
Tjirebon, Indonesia, 624
Ta-ku, China, 2,770
Ta-lien, China, 2,612
Tamatave, Malagasy Republic, 3,675
Tanga, Tanganyika, 4,037
Tandjung Uban, Indonesia, 27
Tan-shui, Taiwan, 1,800
Tarakan, Indonesia, 1,286
Teluk Kau, Halmahera (south of Celebes and Borneo), 1,997
Truk, Caroline Islands, 3,052
Umm Said, Qatar, 3,630
Vancouver, Canada, 7,078
Victoria, Seychelles, 3,067
Victoria, North Borneo, 762
Vinh Cam Ranh, Vietnam, 786
Vladivostok, U.S.S.R., 3,004
Wake Island (via Surigao Strait), 3,885
Wallaroo, Australia, 3,500
Wai-hai-wei, China, 2,548
Whyalla, Australia, 3,546
Wonsan, Korea, 2,808
Wotho, Marshall Islands, 3,614
Yen-tai, China, 2,582
Yin-hsien, China (via Shih-peng Ching, Steep Island Pass, Pai-chieh Hsia), 2,091
Yokohama, Japan, 2,889
Zamboanga, Philippines (via Balabac Strait), 1,197
Zanzibar, Zanzibar, 4,060

SINT NICOLAAS, ARUBA
(12°25'45'' N., 69°54'30'' W.) to:

Junction Points*
Yucatan Channel, 1,036

Ports
Boston, Massachusetts, U.S.A., 1,853
Castries, St. Lucia, 532
Colon, Panama, 633
Georgetown, British Guiana, 856
Guantanamo, Cuba, 544
Hamilton, Bermuda, 1,263
Kingston, Jamaica, 528
La Guaira, Venezuela, 207
New York, New York, U.S.A. (via Windward Passage), 1,805
New York, New York, U.S.A. (via Mona Passage), 1,761
Norfolk, Virginia, U.S.A. (via Mona Passage), 1,600
Norfolk, Virginia, U.S.A. (via Windward Passage), 1,611
Philadelphia, Pennsylvania, U.S.A., 1,732
Pointe a Pitre, Guadeloupe, 550
Port of Spain, Trinidad, 515
St. Johns, Antigua, 549

SIRACUSA, SICILY, ITALY
(37°03'29'' N., 15°17'21'' E.) to:

Junction Points*
Port Said, U.A.R., 924
Strait of Gibraltar, 1,054

Ports
Alexandria, U.A.R., 809
Alger, Algeria, 626
Alicante, Spain, 792
Ancona, Italy, 557
Annaba, Algeria, 401
Banghazi, Libya, 381
Barcelona, Spain, 752
Bari, Italy, 350
Bayrut, Lebanon, 1,013
Bizerte, Tunisia, 296
Brindisi, Italy, 292
Cartagena, Spain, 817
Ceuta, Morocco, 1,035
Civitavecchia, Italy, 373
Genova, Italy, 557
Gibraltar, 1,037
Haifa, Israel, 1,013
Iraklion, Crete, 495
Izmir, Turkey (via corinth Canal), 772
Istanbul, Turkey (via south of Greece), 798
Izzmir, Turkey (via Corinth Canal), 618
Izmir, Turkey (south of Greece), 644
Kavala, Greece (via Corinth Canal), 656
Kavala, Greece (south of Greece), 682
La Spezia, Italy, 521
Livorno, Italy, 486
Malaga, Spain, 985
Marseille, France, 649
Messina, Sicily, 75
Napoli, Italy, 247
Odessa, U.S.S.R. (via Corinth Canal), 1,120
Odessa, U.S.S.R. (south of Greece), 1,146
Oran, Algeria, 823
Palermo, Sicily, 192
Palma, Balearic Islands, 668
Piraievs, Greece (via Corinth Canal), 418
Piraievs, Greece (south of Greece), 484
Rijeka, Yugoslavia, 624
Savona, Italy, 567
Sibenik, Yugoslavia, 498
Split, Yugoslavia, 483
Tarabulus, Libya, 276
Taranto, Italy, 245
Tarragona, Spain, 746
Thessaloniki, Greece (via Corinth Canal), 667
Thessaloniki, Greece (south of Greece), 692
Toulon, France, 617
Trieste, Free Territory, 658
Tunis, Tunisia, 283
Valencia, Spain, 790
Valletta, Malta, 88
Venezia, Italy, 668
Volos, Greece (via Corinth Canal), 608
Volos, Greece (south of Greece), 634

*JUNCTION POINT.—See Preface for use of junction points.

SIROS, GREECE. See Ermoupolis.

SITKA, ALASKA, U.S.A.
(57°03'00'' N., 135°20'30'' W.) to:

Junction Points*
Panama, Panama, 4,524
Punta Arenas, Chile, 7,455
Singapore, 6,433

Ports
Apra, Guam, 4,407
Auckland, New Zealand, 6,176
Callao, Peru, 5,255
Ching-tao, China, 4,454
Darwin, Australia, 6,338
Guayaquil, Ecuador, 4,817
Hai-kou, Hai-nan Tao, 5,345
Hakodate, Japan (south of Aleutian Islands), 3,338
Hong Kong, B.C.C. (south of Aleutian Islands), 5,136
Hong Kong, B.C.C. (alternate route north of Aleutian Islands), 5,095
Honolulu, Hawaii, U.S.A., 2,386
Ketchikan, Alaska, U.S.A., 224
Los Angeles, California, U.S.A., 1,640
Manila, Philippines (south of Aleutian Islands), 5,323
Manila, Philippines (alternate route north of Aleutian Islands), 5,302
Midway Island, 2,473
Noumea, New Caledonia, 5,613
Pago Pago, American Samoa, 4,635
Palmyra Island, 3,323
Papeete, Society Islands, 4,537
Petropavlovsk, U.S.S.R., 2,314
Prince Rupert, Canada, 285
Sai Gon, Vietnam, 5,963
San Diego, California, U.S.A., 1,725
San Francisco, California, U.S.A., 1,302
Seattle, Washington, U.S.A., 806
Shang-hai, China, 4,446
Skagway, Alaska, U.S.A., 181
Surabaja, Indonesia, 6,564
Suva, Fiji Islands, 5,112
Sydney, Australia, 6,595
Truk, Caroline Islands, 4,473
Valdez, Alaska, U.S.A., 478
Valparaiso, Chile, 6,407
Vancouver, Canada, 823
Vladivostok, U.S.S.R., 3,585
Wake Island, 3,405
Wrangell, Alaska, U.S.A., 170
Yakutat, Alaska, U.S.A., 231
Yokohama, Japan (south of Aleutian Islands), 3,640
Yokohama, Japan (alternate route north of Aleutian Islands), 3,620

SITRAH ANCHORAGE, BAHRAIN ISLAND
(26°10'00'' N., 50°41'00'' E.)

Use Al Bahrayn distances.

SKAGENS ODDE, DENMARK*
(57°48'00'' N., 10°44'00'' E.) to:

Junction Points*
Bishop Rock, England, 851
Pentland Firth, Scotland, 450
Ushant, France, 833

Ports
Aalborg, Denmark, 87
Aarhus, Denmark, 127
Abenra, Denmark, 229
Aberdeen, Scotland, 416
Alesund, Norway, 450
Amsterdam, Netherlands, 422
Antwerpen, Belgium, 528
Assens, Denmark, 187
Baltiysk, U.S.S.R. (via Store Baelt), 544
Baltiysk, U.S.S.R. (via The Sound), 429
Bergen, Norway, 305
Berlevag, Norway, 1,243
Bremerhaven, Germany, 320
Cherbourg, France, 671
Dover, England, 527
Dundee, Scotland, 455
Dunkerque, France, 511
Egersund, Norway, 165
Emden, Germany, 344
Esbjerg, Denmark, 234
Faborg, Denmark, 234
Farsund, Norway, 132
Flekkefjord, Norway, 155
Flensburg, Germany, 260
Fredericia, Denmark, 169
Frederikshavn, Denmark, 24
Gavle, Sweden, 676
Gdansk, Poland (via Store Baelt), 556
Gdansk, Poland (via The Sound), 418
Gdynia, Poland (via Store Baelt), 552
Goteborg, Sweden, 42
Grena, Denmark, 115
Haderslev, Denmark, 216
Hakonsvern, Norway, 296
Halmstad, Sweden, 101
Halsingborg, Sweden, 128
Hamburg, Germany, 360
Hamina, Finland, 797
Hango, Finland, 625
Harstad, Norway, 911
Hartlepool, England, 438
Harwich, England, 487
Helsinger, Denmark, 127
Helsinki, Finland (via Store Baelt), 841
Helsinki, Finland (via The Sound), 687
Hirtshals, Denmark, 30
Hobro, Denmark, 101
Horsens, Denmark, 170
Hull, England, 462
Inverness, England, 481
Iokanga, U.S.S.R, 1,517
Kalmar, Sweden (via Store Baelt), 496
Kalmar, Sweden (via The Sound), 342
Kalundborg, Denmark, 141
Karlskrona, Sweden, 295
Kobenhavn, Denmark, 150
Koge, Denmark, 161
Kolding, Denmark, 289
Korsor, Denmark, 162
Klaipeda, Lithuania (via Store Baelt), 612
Klaipeda, Lithuania (via The Sound and north of Bornholm), 462
Kotka, Finland, 755
Kristiansand, Norway, 92
Kyndbyvaerkets, Denmark, 136
Landskrona, Sweden, 137
Le Havre, France, 639
Leith, Scotland, 472
Leningrad, U.S.S.R. (via Store Baelt), 992
Leningrad, U.S.S.R. (via The Sound), 841
Liepaja, Lativa (via The Sound), 467
Liepaja, Latvia (via Store Baelt), 619
Lillesand, Norway, 80
Limhamn, Sweden, 159
London, England, 556
Lubeck, Germany, 263
Lulea, Sweden (via Store Baelt), 1,101
Lulea, Sweden (via The Sound), 941
Malmo, Sweden, 155
Mandal, Norway, 110
Masnedsund, Denmark, 122
Middlefart, Denmark, 186
Molde, Norway, 492
Mosjoen, Norway, 732
Musko Island, Sweden, 524
Naestved, Denmark, 212
Nakskov, Denmark, 213
Namsos, Norway, 696
Newcastle, England, 445
Norrkoping, Sweden, 520
Odense, Denmark, 126
Oostende, Belgium, 489
Ornskolosvik, Sweden, 798
Oslo, Norway, 131
Oulu, Finland, 979
Oxelosund, Sweden, 481
Pechenga, U.S.S.R., 1,325
Peenemunde, Germany, 272

*JUNCTION POINT.—See Preface for use of junction points.

Pitea, Sweden, 925
Plymouth, England, 756
Porkkala, Finland, 697
Portland, England, 682
Portsmouth, England, 632
Randers, Denmark, 96
Reposaari, Finland, 715
Riga, Latvia (via Store Baelt), 771
Riga, Latvia (via The Sound), 617
Risor, Norway, 73
Ronne, Denmark (via The Sound), 244
Ronne, Denmark (via Store Baelt), 389
Rostock, Germany, 254
Rosyth, Scotland, 478
Rotterdam, Netherlands, 448
Ruch'i, U.S.S.R., 816
Sassnitz, Germany, 239
Sogndal, Norway, 154
Sonderborg, Denmark, 251
Sondre Honningsvag, Norway, 1,192
Southampton, England, 650
Stavanger, Norway, 221
Stockholm, Sweden (via The Sound), 567
Stockholm, Sweden (via Sandhamnsleden and Store Baelt), 719
Stralsund, Germany, 226
Sundsvall, Sweden, 745
Swinoujscie, Poland (via Store Baelt), 402
Swinoujscie, Poland (via The Sound), 275
Szczecin, Poland, 410
Tallinn, Estonia, 661
Tornio, Finland (via The Sound), 973
Tornio, Finland (via Store Baelt), 1,137
Torshavn, Faeroe Islands, 624
Travemunde, Germany (via Store Baelt), 304
Trelleborg, Sweden (via Store Baelt), 357
Trelleborg, Sweden (via The Sound), 192
Turku, Finland (via Store Baelt), 795
Turku, Finland (via The Sound), 642
Tvedestrand, Norway, 76
Umea, Sweden, 812
Uusikaupunki, Finland (via Store Baelt), 847
Vaasa, Finland, 805
Vardo, Norway, 1,287
Vejle, Denmark, 189
Ventspils, Latvia, 502
Vysotsk, U.S.S.R. (via Store Baelt), 923
Vysotsk, U.S.S.R. (via The Sound), 803
Wilhelmshaven, Germany, 314
Wismar, Germany, 281
Zeebrugge, Belgium, 479

SKAGWAY, ALASKA, U.S.A.
(59°27'00'' N., 135°20'00'' W.) to:

Junction Points*
Panama, Panama, 4,739

Ports
Seattle, Washington, U.S.A., 934
Sitka, Alaska, U.S.A., 187
Vancouver, Canada, 1,021
Wrangell, Alaska, U.S.A., 231

SKARAMANGAS, GREECE
(37°59'25'' N., 23°34'00'' E.)

Add 4 miles to Piraievs distances.

SKIEN, NORWAY
(59°12'15'' N., 9°36'50'' E.) to:

Junction Points*
Pentland Firth, Scotland, 466

Ports
Bergen, Norway, 317
Bremerhaven, Germany, 372
London, England, 609

SKIKDA, ALGERIA
(36°53'24'' N., 6°54'25'' E.) to:

Junction Points*
Port Said, U.A.R., 1,337
Strait of Gibraltar, 629

Ports
Alger, Algeria, 200
Barcelona, Spain, 354
Cartagena, Spain, 395
Marseille, France, 398
Oran, Algeria, 398
Sete, France, 422
Toulon, France, 381

SLAVNOYE, KURIL ISLANDS
(45°30'30'' N., 148°36'30'' E.) to:

Ports
Aleksandrovsk, U.S.S.R., 592
Aomori, Japan, 501
Attu Island, Alaska, U.S.A., 1,053
Dutch Harbor, Alaska, U.S.A., 1,792
Hakodate, Japan, 467
Kholmsk, U.S.S.R., 364
Kiska, Alaska, U.S.A., 1,227
Korsakov, U.S.S.R., 276
Muroran, Japan, 462
Nemuro, Japan, 199
Nikolayevsk, U.S.S.R. (south of Sakhalin), 743
Otaru, Japan, 442
Petropavlovsk, U.S.S.R., 629
Sovetskaya Gaven, U.S.S.R., 484
Vladivostok, U.S.S.R., 780
Wakkanai, Japan, 301
Zaliv Chikhacheva, U.S.S.R., 628

SMALKALDEN, SURINAM
(5°37'10'' N., 55°05'27'' W.)

Add 20 miles to Paramaribo distances.

SMYRNA, TURKEY. See Izmir.

SOERABAJA, INDONESIA. See Surabaja.

SOGNDAL, NORWAY
(58°19'17'' N., 6°17'12'' E.) to:

Junction Points*
Pentland Firth, Scotland, 123
Skagens Odde, Denmark, 154

Ports
Bergen, Norway, 152
London, England, 641
Oslo, Norway, 228

SONDERBORG, DENMARK
(54°54'36'' N., 9°47'15'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 46
Skagens Odde, Denmark, 251

Ports
Gdynia, Poland, 360
Goteborg, Sweden, 239
Swinoujscie, Poland, 215

SONDRE HONNINGSVAG, NORWAY
(70°59'00'' N., 25°58'00'' E.) to:

Junction Points*
Pentland Firth, Scotland, 1,099
Skagens Odde, Denmark, 1,192

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Arkhangelsk, U.S.S.R., 612
Dikson Harbor, U.S.S.R., 1,133
Reykjavik, Iceland, 1,321

SONGJIN, KOREA, See Kimchaek.

SORIDO, INDONESIA
(1°10'00'' S., 136°02'00'' E.) to:

Junction Points*
Singapore, 2,202
Torres Strait, Australia, 1,329

Ports
Djakarta, Indonesia, 1,879
Makasar, Celebes, 1,180
Sukarnapura, Indonesia, 311

SORONG, INDONESIA
(0°53'00'' S., 131°14'00'' E.) to:

Junction Points*
Singapore, 1,894
Torres Strait, Australia, 1,021

Ports
Apra, Guam, 1,171
Davao, Philippines, 601
Makasar, Celebes, 872
Rabaul, New Britain, 1,304
Sukarnapura, Indonesia, 637

SOSURA, KOREA
(42°15'20'' N., 130°36'00'' E.) to:

Ports
Hakodate, Japan, 482
Maizuru, Japan, 469
Pusan, Korea, 448
Shimonoseki, Japan, 507

SOSURA-RI, KOREA. See Sosura.

SOUDA, CRETE. See Soudha.

SOUDHA, CRETE
(35°29'30'' N., 24°04'45'' E.) to:

Junction Points*
Port Said, U.A.R., 507
Strait of Gibraltar, 1,479

Ports
Alexandria, U.A.R., 425
Izmir, Turkey, 281
Messina, Sicily, 473
Piraievs, Greece, 159

SOUR, LEBANON. See Sur.

SOUSSE, TUNISIA
(35°49'30'' N., 10°39'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,133
Strait of Gibraltar, 909

Ports
Annaba, Algeria, 255
Tarabulus, Libya, 231
Valletta, Malta, 197

SOUTHAMPTON, ENGLAND
(50°53'00'' N., 1°23'30'' W.) to:

Junction Points*
Bishop Rock, England (via Needles Channel), 232
Kiel Canal (east end), Germany, 533
Skagens Odde, Denmark, 650
Ushant, France, 223

Ports
Aberdeen, Scotland, 532
Amsterdam, Netherlands, 284
Antwerpen, Belgium, 260
Barrow in Furness, England, 485
Bergen, Norway, 713
Boulogne, France, 120
Caen, France, 119
Cardiff, Wales, 346
Dartmouth, England, 100
Dover, England, 123
Dundee, Scotland, 515
Dunkerque, France, 168
Egersund, Norway, 600
Emden, Germany, 407
Esbjerg, Denmark, 493
Fishguard, Wales, 343
Fleetwood, England, 485
Hamburg, Germany, 522
Hartlepool, England, 396
Holyhead, Wales, 414
Hull, England, 336
Kristiansand, Norway, 611
Leith, Scotland, 513
Liverpool, England, 479
London, England, 215
Newcastle, England, 421
Nieuwpoort, Belgium, 176
Oostende, Belgium, 192
Oslo, Norway, 763
Plymouth, England, 134
Portland, England, 57
Rotterdam, Netherlands, 261
Stavanger, Norway, 640
Sunderland, England, 400
Wilhelmshaven, Germany, 451
Zeebrugge, Belgium, 197

SOVETSKAYA GAVEN, U.S.S.R.
(48°59'00'' N., 140°16'00'' E.) to:

Ports
Korsakov, U.S.S.R., 264
Nikolayevsk, U.S.S.R. (via south channel), 276
Slavnoye, Kuril Islands, 484
Vladivostok, U.S.S.R., 593

SPEZIA, ITALY. See La Spezia.

SPLIT, YUGOSLAVIA
(43°30'16'' N., 16°26'10'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,121
Port Said, U.A.R. (south of Greece), 1,133
Strait of Gibraltar, 1,507

Ports
Alexandria, U.A.R., 1,024
Alger, Algeria, 1,079
Alicante, Spain, 1,234
Ancona, Italy, 132
Annaba, Algeria, 859
Banghazi, Libya, 726
Barcelona, Spain, 1,138
Bari, Italy, 155
Bayrut, Lebanon (via Corinth Canal), 1,169
Bayrut, Lebanon (south of Greece), 1,203
Bizerte, Tunisia, 768
Brindisi, Italy, 202
Cartagena, Spain, 1,264
Ceuta, Morocco, 1,487
Durres, Albania, 216
Genova, Italy, 943
Gibraltar, 1,489
Haifa, Israel (via Corinth Canal), 1,172
Haifa, Israel (south of Greece), 1,199
Iraklion, Crete, 689
Istanbul, Turkey (via Corinth Canal), 887
Istanbul, Turkey (south of Greece), 986
Izmir, Turkey (via Corinth Canal), 732

*JUNCTION POINT.—See Preface for use of junction points.

Izmir, Turkey (south of Greece), 831
La Spezia, Italy, 908
Livorno, Italy, 872
Malaga, Spain, 1,436
Marseille, France, 1,035
Messina, Sicily, 462
Monopoli, Italy, 173
Napoli, Italy, 633
Odessa, U.S.S.R. (via Corinth Canal), 1,235
Odessa, U.S.S.R. (south of Greece), 1,334
Oran, Algeria, 1,275
Palermo, Sicily, 578
Palma, Balearic Islands, 1,096
Pescara, Italy, 123
Piraievs, Greece (via Corinth Canal), 533
Piraievs, Greece (south of Greece), 672
Rijeka, Yugoslavia, 176
Sarande, Albania, 293
Savona, Italy, 954
Sevastopol, U.S.S.R. (via Corinth Canal), 1,188
Sevastopol, U.S.S.R. (south of Greece), 1,287
Shengjin, Albania, 207
Siracusa, Sicily, 483
Tarabulus, Libya, 746
Taranto, Italy, 341
Thessaloniki, Greece (via Corinth Canal), 781
Thessaloniki, Greece (south of Greece), 880
Toulon, France, 1,003
Trieste, Free Territory, 210
Tunis, Tunisia, 756
Valencia, Spain, 1,222
Valletta, Malta, 560
Venezia, Italy, 221
Vlores, Albania, 252
Volos, Greece (via Corinth Canal), 722
Volos, Greece (south of Greece), 821

STANLEY, FALKLAND ISLANDS
(51°41'30'' S., 57°51'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,141
Punta Arenas, Chile, 558

Ports
Caleta Olivia, Argentina, 516
Comodoro Rivadavia, Argentina, 531
Maldonado, Uruguay, 1,023
Montevideo, Uruguay, 1,013
New York, New York, U.S.A., 6,547
Port Gallegos, Argentina, 460
Puerto Concepcion, Argentina, 538
Puerto Cortes, Honduras, 6,585
Puerto Descado, Argentina, 409
Puerto Madryn, Argentina, 633
Rio Gande, Argentina, 398
Ushuaia, Argentina, 468

STAPLETON, NEW YORK, U.S.A.
(40°38'00'' N., 74°04'00'' W.)

For ocean distances, substract 4½ miles from New York distances.

STAVANGER, NORWAY
(58°58'30'' N., 5°44'00'' E.) to:

Junction Points*
Bishop Rock, England (via English Channel), 836
Pentland Firth, Scotland, 290
Skagens Odde, Denmark, 221
Ushant, France, 823

Ports
Aberdeen, Scotland, 278
Amsterdam, Netherlands, 424
Antwerpen, Belgium, 525
Bergen, Norway (outer lead), 115
Bergen, Norway (inner lead), 111
Bremerhaven, Germany, 366
Calais, France, 515
Cherbourg, France, 661
Dover, England, 517
Dunkerque, France, 510
Emden, Germany, 376
Esbjerg, Denmark, 278
Hamburg, Germany, 403
Hull, England, 408
Kristiansand, Norway, 142
Kristiansund, Norway, 332
Le Havre, France, 629
Leith, Scotland, 346
London, England, 539
Newcastle, England, 349
Oostende, Belgium, 488
Oslo, Norway, 294
Plymouth, England, 746
Portland, England, 672
Portsmouth, England, 622
Rotterdam, England, 455
Southampton, England, 640
Tromso, Norway, 810
Wilhelmshaven, Germany, 360
Zeebrugge, Belgium, 481

STENHOUSE BAY, AUSTRALIA
(35°17'00'' S., 136°57'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,077
Sunda Strait, Indonesia, 2,892

Ports
Albany, Australia, 936
Hobart, Tasmania, 766
Melbourne, Australia, 505

STETTIN, POLAND. See Szczecin.

STOCKHOLM, SWEDEN
(59°19'30'' N., 18°05'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 503
Skagens Odde, Denmark (via Sandhamnsleden and Store Baelt), 695
Skagens Odde, Denmark (via The Sound), 567

Ports
Gavle, Sweden, 153
Halmstad, Sweden, 481
Halsingborg, Sweden, 436
Hamina, Finland, 325
Hango, Finland, 178
Helsingor, Denmark (via Store Baelt), 629
Helsingor, Denmark (via The Sound), 445
Helsinki, Finland, 239
Hobro, Denmark, 610
Horsens, Denmark, 567
Kalundborg, Denmark, 531
Karlskrona, Sweden, 290
Kobenhavn, Denmark (via Store Baelt and Dalaro Kanal), 603
Kobenhavn, Denmark (via Store Baelt and Sandofjarden), 646
Korsor, Denmark, 524
Kotka, Finland, 311
Kyndbyvaerkets, Denmark, 493
Landskrona, Sweden, 424
Leningrad, U.S.S.R., 386
Limhamn, Sweden, 427
London, England, 1,251
Lubeck, Germany, 491
Malmo, Sweden (via Drogden), 435
Malmo, Sweden (via Flintrannan), 422
Masnedsund, Denmark, 531
Narvik, Norway, 1,612
Norrkoping, Sweden, 143
Odense, Denmark, 609
Ornskolosvik, Sweden, 274
Oslo, Norway (via Store Baelt), 819
Oslo, Norway (via The Sound), 683
Oulu, Finland, 456
Peenemunde, Germany, 422
Pitea, Sweden, 402
Porkkala, Finland, 216
Randers, Denmark, 604
Rauma, Finland, 230

*JUNCTION POINT.—See Preface for use of junction points.

Reposaari, Finland, 192
Rostock, Germany, 456
Ruch'i, U.S.S.R., 344
Sassnitz, Germany, 390
Stralsund, Germany, 423
Sundsvall, Sweden, 222
Tallinn, Estonia (via Sandofjarden), 220
Uusikaupunki, Finland, 164
Umea, Sweden, 289
Vaasa, Finland, 282
Ventspils, Latvia, 174
Wismar, Germany, 101

STORNOWAY, SCOTLAND
(58°12'00'' N., 6°23'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 54

Ports
Belfast, Ireland, 234
Glasgow, Scotland, 283
Reykjavik, Iceland, 647

STRAHAN, AUSTRALIA
(42°10'00'' S., 145°20'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,492
Wilson Promontory, Australia, 254

Ports
Adelaide, Australia, 595
Albany, Australia, 1,356
Melbourne, Australia, 303

STRAIT OF GIBRALTAR*
(35°57'00'' N., 5°45'00'' W.) to:

Junction Points*
Bishop Rock, England, 969
Cape of Good Hope, Republic of South Africa, 5,082
Inishtrahull, Ireland, 1,350
Montreal, Canada (tracks C and D), 3,243
Montreal, Canada (track E), 3,163
Montreal, Canada (track F), 3,161
Panama, Panama (via Anegada Passpage), 4,351
Pentland Firth, Scotland, 1,598
Port Said, U.A.R., 1,943
Punta Arenas, Chile, 6,352
Straits of Florida, 4,009
Straits of Florida (low power, May-September), 4,013
Straits of Florida (low power, October-April), 4,038
Ushant, France, 918
Yucatan Channel, 4,185

Ports
Abidjan, Ivory Coast, 2,656
Ajaccio, Corsica, 778
Akureyri, Iceland, 2,102
Al Hammamat, Tunisia, 888
Al Khums, Libya, 1,130
Al Ladhiqiyah, Syria, 2,029
Alcudia, Balearic Islands, 526
Alexandria, U.A.R., 1,822
Alexandroupolis, Greece, 1,716
Algeciras, Spain, 25
Alger, Algeria, 437
Alicante, Spain, 317
Almeria, Spain, 171
Almina, Al Bayda, Syria, 2,028
Amboin, Angola, 4,099
Ancona, Italy, 1,580
Angmagssalik, Greenland, 2,162
Annaba, Algeria, 675
Antalya, Turkey, 1,822
Argentia, Canada (track F), 2,302
Arkhangelsk, U.S.S.R., 3,225
Arzew, Algeria, 275
As Sukhayrah, Tunisia, 1,072
Ashdod Yam, Israel, 2,031
Augusta, Sicily, 1,065
Aviles, Spain, 722
Baltimore, Maryland, U.S.A. (track A), 3,461
Baltimore, Maryland, U.S.A. (track B), 3,458
Banghazi, Libya, 1,356
Baniyas, Syria, 2,045
Barcelona, Spain, 534
Bari, Italy, 1,374
Barletta, Italy, 1,398
Bastia, Corsica, 868
Bathurst, Gambia, 1,575
Batumi, U.S.S.R. (via Corinth Canal), 2,392
Batumi, U.S.S.R. (south of Greece), 2,408
Bayonne, France, 912
Bayrut, Lebanon, 2,034
Beaulieu, France, 792
Bejaia, Algeria, 545
Belem, Brazil, 3,285
Bilbao, Spain, 854
Bizerte, Tunisia, 769
Bonifacio, Corsica, 779
Bordeaux, France, 1,010
Boston, Massachusetts, U.S.A. (track A), 3,031
Boston, Massachusetts, U.S.A. (track B), 3,014
Boston, Massachusetts, U.S.A. (track C), 2,998
Brindisi, Italy, 1,315
Buenos Aires, Argentina, 5,280
Cadiz, Spain, 50
Cagliari, Sardinia, 750
Calabar, Nigeria, 3,420
Camp Lloyd, Greenland, 2,676
Cannes, France, 773
Cape Town, Republic of South Africa, 5,064
Cartegna, Colombia, 4,087
Cartagena, Spain, 259
Casablanca, Morocco, 166
Castellamare di Stabia, Italy, 1,006
Castries, St. Lucia, 3,236
Catania, Sicily, 1,081
Ceuta, Morocco, 23
Charleston, South Carolina, U.S.A. (track A), 3,593
Charlotte Amalie, Virgin Islands, 3,323
Chioggia, Italy, 1,682
Christianshaab, Greenland, 2,679
Cienfuegos, Cuba, 4,102
Civitavecchia, Italy, 907
Colon, Panama (via Mona Passage), 4,308
Constanta, Rumania (via Corinth Canal), 2,001
Constanta, Rumania (south of Greece), 2,018
Crotone, Italy, 1,412
Dakar, Senegal, 1,487
Darnah, Libya, 1,450
Derince, Turkey (via Corinth Canal), 1,838
Derince, Turkey (south of Greece), 1,855
Dikili, Turkey, 1,532
Dubrovnik, Yugoslavia, 1,420
Durres, Albania, 1,349
Egedesminde, Greenland, 2,772
Elizabeth Harbor, Bahamas, 3,651
Ermoupolis, Greece, 1,524
Faeringehavn, Greenland, 2,444
Famagusta, Cyprus, 1,991
Fethiye, Turkey, 1,712
Frederiksdal, Greenland, 2,115
Freetown, Sierra Leone, 1,966
Funchal, Madeira Island, 589
Gaeta, Italy, 986
Gallipoli, Italy, 1,246
Galway, Ireland, 1,184
Genova, Italy, 868
Georgetown, British Guiana, 3,358
Ghazaouet, Algeria, 199
Gibraltar, 24
Godthaab, Greenland, 2,477
Golfe-Juan, France, 780
Golfo di Oristano, Spain, 716
Goose Bay, Canada, 2,538
Gronne Dal, Greenland, 2,309
Guantanamo, Cuba, 3,737
Guiria, Venezuela, 3,430
Habana, Cuba, 4,013

*JUNCTION POINT.—See Preface for use of junction points.

Hafnarfjordhur, Iceland, 1,956
Haifa, Israel, 2,031
Halifax, Canada (track A), 2,728
Halifax, Canada (track B), 2,705
Halifax, Canada (tracks C and D), 2,686
Halifax, Canada (track E), 2,653
Halifax, Canada (track F), 2,658
Halifax, Canada (direct), 2,650
Hamilton, Bermuda, 2,903
Holsteinsborg, Greenland, 2,649
Horta, Azores, 1,102
Hyeres, France, 725
Huelva, Spain, 102
Hvalfjordhur, Iceland, 1,944
Iraklion, Crete, 1,516
Iskenderun, Turkey, 2,054
Istanbul, Turkey (via Corinth Canal), 1,804
Istanbul, Turkey (south of Greece), 1,821
Ivigtut, Greenland (direct), 2,283
Ivigtut, Greenland (via 75 miles off Kap Farvel), 2,304
Izmir, Turkey (via Corinth Canal), 1,650
Izmir, Turkey (south of Greece), 1,667
Jacksonville, Florida, U.S.A., 3,740
Jaffa, Israel, 2,030
Jakobshavn, Greenland, 2,819
Kalamai, Greece, 1,370
Kavala, Greece (via Corinth Canal), 1,689
Kavala, Greece (south of Greece), 1,706
Keflavik, Iceland, 1,947
Kerch, U.S.S.R. (via Corinth Canal), 2,239
Kerch, U.S.S.R. (south of Greece), 2,256
Kerkira, Greece, 1,324
Key West, Florida, U.S.A., 3,949
Khalkis, Greece (via Corinth Canal), 1,545
Khalkis, Greece (south of Greece), 1,562
Khania, Crete, 1,459
Kingston, Jamaica, 3,891
Kyrenia, Cyprus, 1,910
La Guaira, Venezuela, 3,634
La Pallice, France, 950
La Spezia, Italy, 891
Lagos, Nigeria, 3,100
Larnaca, Cyprus, 1,953
Las Palmas de Gran Canaria, Canary Islands, 681
Limassol, Cyprus, 1,914
Limin Khiou, Greece, 1,603
Lisboa, Portugal, 286
Livorno, Italy, 887
Mahon, Balearic Islands, 552
Malaga, Spain, 78
Marin, Spain, 517
Marsala, Sicily, 881
Marsaxlokk, Malta, 1,017
Marseille, France, 711
Marshall, Liberia, 2,197
Matruh, U.A.R., 1,695
Melilla, Morocco, 154
Mentone, France, 791
Mers el Kebir, Algeria, 252
Mersin, Turkey, 1,996
Messina, Sicily, 1,049
Mitilini, Greece (via Corinth Canal), 1,631
Mitilini, Greece (south of Greece), 1,528
Monaco, Monaco, 762
Monopoli, Italy, 1,346
Montevideo, Uruguay, 5,178
Mostaganem, Algeria, 283
Nanortalik, Greenland, 2,138
Narsarssuak, Greenland, 2,257
Natal, Brazil, 3,003
Navplion, Greece, 1,484
New Haven, Connecticut, U.S.A., 3,161
New London, Connecticut, U.S.A. (track A), 3,102
New London, Connecticut, U.S.A. (track B), 3,096
New London, Connecticut, U.S.A. (track C), 3,087
New York, New York, U.S.A. (track A), 3,191
New York, New York, U.S.A. (track B), 3,184
New York, New York, U.S.A. (tracks C and D), 3,176
New York, New York, U.S.A. (low power, October–April), 3,667
New York, New York, U.S.A. (low power, May–September), 3,392
Nice, France, 788
Norfolk, Virginia, U.S.A. (direct), 3,335
Norfolk, Virginia, U.S.A. (track A), 3,339
Norfolk, Virginia, U.S.A. (track B), 3,336
Norfolk, Virginia, U.S.A. (track C), 3,339
Novorossiysk, U.S.S.R. (via Corinth Canal), 2,260
Novorossiysk, U.S.S.R. (south of Greece), 2,277
Odessa, U.S.S.R. (via Corinth Canal), 2,152
Odessa, U.S.S.R. (south of Greece), 2,169
Olbia, Sardinia, 828
Oran, Algeria, 252
Palermo, Sicily, 940
Palma, Balearic Islands, 471
Paphos, Cyprus, 1,872
Paramaribo, Surinam, 3,275
Patrai, Greece, 1,350
Pescara, Italy, 1,515
Philadelphia, Pennsylvania, U.S.A. (track A), 3,330
Philadelphia, Pennsylvania, U.S.A. (track B), 3,323
Philadelphia, Pennsylvania, U.S.A. (track C), 3,319
Piraievs, Greece (via Corinth Canal), 1,451
Piraievs, Greece (south of Greece), 1,508
Ploce, Yugoslavia, 1,487
Pollenza, Balearic Islands, 525
Ponta Delgada, Azores, 964
Port au Prince, Haiti, 3,757
Port of Spain, Trinidad, 3,403
Port St. Louis du Rhone, France, 703
Port Vendres, France, 633
Porto di Licata, Sicily, 958
Porto di Manfredonia, Italy, 1,419
Porto di Milazzo, Sicily, 1,025
Porto di Reggio Calabria, Sicily, 1,052
Porto Empedocle, Sicily, 937
Porto, Portugal, 432
Porto Grande, Cape Verde Islands, 1,539
Porto Vecchio di Piombino, Italy, 897
Pozzuoli, Italy, 997
Praia, Bahia Praia, Tereira, Azores, 1,034
Preveza, Greece, 1,319
Providence, Rhode Island (tract A), 3,096
Providence, Rhode Island (track B), 3,090
Providence, Rhode Island, U.S.A. (track C), 3,081
Pula, Yugoslavia, 1,628
Puerto de Pasajes, Spain, 894
Qabis, Tunisia, 1,073
Quiberon, France, 932
Qutdligssat, Greenland, 2,953
Recife, Brazil, 3,116
Rethimnon, Crete, 1,485
Reykjavik, Iceland, 1,905
Rijeka, Yugoslavia, 1,648
Rio de Janeiro, Brazil, 4,180
Ritenbenk, Greenland, 2,982
Rodhos, Rodhos, 1,668
Rostov-na-Donu, U.S.S.R. (via Corinth Canal), 2,441
Rostov-na-Donu, U.S.S.R. (south of Greece), 2,458
Rota, Spain, 70
St. John's, Canada, 2,182
St. Louis, Senegal, 1,436

*JUNCTION POINT.—See Preface for use of junction points.

St. Raphael, France, 763
Salamis, Greece, 1,520
Salerno, Italy, 1,018
Salvador, Brazil, 3,516
San Juan, Puerto Rico, 3,336
San Sebastian, Spain, 892
Sant Antioco Ponti, Sardinia, 715
Santa Cruz de Tenerife, Canary Islands, 697
Santo Domingo, Dominican Republic, 3,549
Santos, Brazil, 4,378
Sarande, Albania, 1,311
Savona, Italy, 852
Sayda, Lebanon, 2,035
Scoresbysund, Greenland, 2,271
Sete, France, 684
Setubal, Portugal, 287
Sevastopol, U.S.S.R. (via Corinth Canal), 2,105
Sevastopol, U.S.S.R. (south of Greece) 2,122
Seydhisfjordhur, Iceland, 1,899
Sfax, Tunisia, 1,043
Shengjin, Albania, 1,382
Sibenik, Yugoslavia, 1,522
Sidi Ifni, Ifni, 472
Siracusa, Sicily, 1,054
Skikda, Algeria, 629
Soudha, Ormos Soudhas, Crete, 1,479
Sousse, Tunisa, 909
Split, Yugoslavia, 1,507
Sukkertoppen, Greenland, 2,547
Sud, Lebanon, 2,032
Taormina, Turkey, 1,075
Tarabulus, Lebanon, 2,047
Tarabulus, Libya, 1,093
Taranto, Italy, 1,268
Tarragona, Spain, 501
Terracina, Italy, 974
Thessaloniki, Greece (via Corinth Canal), 1,699
Thessaloniki, Greece (south of Greece), 1,716
Thule, Greenland, 3,299
Toulon, France, 722
Trapani, Sicily, 896
Trieste, Free Territory, 1,682
Tubruq, Libya, 1,534
Tunis, Tunisia, 820
Upernivik, Greenland, 3,011
Valencia, Spain, 403
Valletta, Malta, 1,005
Venezia, Italy, 1,691
Viana do Castello, Portugal, 472
Viareggio, Italy, 898
Vigo, Spain, 504
Vila Rial de Santo Antonio, Portugal, 113
Villa Cisneros, Spanish Sahara, 923
Villa do Porto, Azores, 963
Villa San Giovanni, Italy, 1,047
Villa Sanjurjo, Morocco, 106
Villagarcia, Spain, 526
Villefranche, France, 789
Vlores, Albania, 1,311
Volos, Greece (via Corinth Canal), 1,640
Volos, Greece (south of Greece), 1,657
Washington, D.C., U.S.A. (track A), 3,475
Washington, D.C., U.S.A. (track B), 3,472
Washington, D.C., U.S.A. (direct), 3,471
Willemstad, Curacao, 3,685
Wilmington, North Carolina, U.S.A. (track A), 3,524
Yumurtalik, Turkey, 1,672
Zadar, Yugoslavia, 1,590

STRAITS OF FLORIDA*
(24°25'00'' N., 83°00'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,887
Bishop Rock, England (track B), 3,870
Bishop Rock, England (track C), 3,842
Cape of Good Hope, Republic of South Africa, 6,784
Fastnet, Ireland (track A), 3,880
Fastnet, Ireland (track B), 3,851
Fastnet, Ireland (track C), 3,795
Inishtrahull, Ireland (track A), 3,911
Inishtrahull, Ireland (track B), 3,884
Inishtrahull, Ireland (track C), 3,825
Montreal, Canada (via Cabot Strait), 2,563
Montreal, Canada (via Strait of Canso), 2,467
Pentland Firth, Scotland (track A), 4,220
Pentland Firth, Scotland (track B), 4,174
Pentland Firth, Scotland (track C), 4,073
Punta Arenas, Chile (east of South America), 6,829
Strait of Gibraltar, 4,024

Ports
Abraham Bay, Bahamas, 593
Accra, Ghana (via Northwest Providence Channel), 5,016
Alvaro Obregon, Mexico, 678
Angmagssalik, Greenland (direct), 3,311
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,325
Antilla, Cuba, 491
Argentia, Canada, 2,050
Arkhangelsk, U.S.S.R., 5,208
Bahia de Samana, Dominican Republic, 864
Baltimore, Maryland, U.S.A., 1,115
Banes, Cuba, 483
Baracoa, Cuba, 540
Basse-Terre, Guadeloupe, 1,317
Belem, Brazil, 2,694
Bordeaux, France (track A), 4,284
Bordeaux, France (track B), 4,264
Bordeaux, France (tracks C and D), 4,234
Boston, Massachusetts, U.S.A., 1,440
Brest, France (track A), 3,968
Brest, France (track B), 3,955
Brest, France (track C), 3,933
Bridgetown, Barbados, 1,511
Brunswick, Georgia, U.S.A., 548
Buenos Aires, Argentina, 5,763
Cadiz, Spain, 3,992
Caibarien, Cuba, 252
Cap Haitien, Haiti, 604
Cape Town, Republic of South Africa, 6,778
Cardenas, Cuba, 140
Castries, St. Lucia, 1,409
Cayenne, French Guiana (via Mona Passage), 2,177
Charleston, South Carolina, U.S.A., 644
Charlotte Amalie, Virgin Islands, 1,087
Cockburn Town, Bahamas, 615
Corpus Christi, Texas, U.S.A., 803
Dakar, Senegal (via Northwest Providence Channel), 3,768
Douala, Cameroon, 5,526
Elizabeth Harbor, Bahamas, 544
Exuma Harbor, Bahamas, 637
Fort de France, Martinique, 1,389
Fort Liberte, Haiti, 692
Freetown, Sierra Leone, 4,137
Funchal, Madeira Island, 3,532
Galveston, Texas, U.S.A., 698
Georgetown, British Guiana (via Mona Passage), 1,869
Gibara, Cuba, 447
Grand Turk, Grand Turk Island, 721
Great Harbor, Culebra Island, 1,068
Guantanamo, Cuba (via Windward Passage), 638
Guiria, Venezuela, 2,099
Gulfport, Mississippi, U.S.A., 494
Habana, Cuba, 87
Halifax, Canada, 1,642
Hamilton, Bermuda, 1,166
Hopetown, Bahamas, 415
Horta, Azores, 2,913
Isabela, Cuba, 195
Isabel Segunda, Isla de Vieques, 1,064

*JUNCTION POINT.—See Preface for use of junction points.

Ivigtut, Greenland, 2,969
Jacksonville, Florida, U.S.A., 523
Jacmel, Haiti, 802
Key West, Florida, U.S.A., 73
Kingston, Jamaica (via Windward Passage), 802
La Guaira, Venezuela (via Windward Passage), 1,331
Lagos, Nigeria, 5,225
Lake Charles, Louisiana, U.S.A., 677
Las Palmas de Gran Canaria, Canary Islands, 3,713
Les Cayes, Haiti, 738
Lisboa, Portugal, 3,831
Maracaibo, Venezuela (via Windward Passage), 1,205
Mariel, Cuba, 86
Marshall, Liberia (via Providence Channel), 4,349
Matagorda Bay, Texas, U.S.A., 754
Matanzas, Cuba, 119
Miami, Florida, U.S.A., 217
Miller Anchorage, Bahamas, 495
Mobile, Alabama, U.S.A., 471
Montego Bay, Jamaica, 642
Montecristi, Dominican Republic, 711
Montevideo, Uruguay, 5,644
Nassau, Bahamas, 393
New Orleans, Louisiana, U.S.A. (via South Pass), 524
New York, New York, U.S.A., 1,197
Nicaro, Cuba, 488
Norfolk, Virginia, U.S.A., 997
Nuevitas, Cuba, 386
Oranjestad, St. Eustatius, 1,207
Paramaribo, Surinam (via Mona Passage), 2,014
Pensacola, Florida, U.S.A., 431
Philadelphia, Pennsylvania, U.S.A., 1,168
Pointe A pitre, Guadeloupe (via Virgin Passage), 1,347
Pointe A pitre, Guadeloupe (via Mona Passage), 1,348
Ponce, Puerto Rico, 1,020
Ponta Delgada, Azores, 3,052
Porlamar, Venezuela, 1,450
Port Antonio, Jamaica, 751
Port Arthur, Texas, U.S.A., 677
Port au Prince, Haiti, 701
Port of Spain, Trinidad (via Mona Passage), 1,533
Port Plata, Dominican Republic, 764
Portland, Maine, U.S.A., 1,485
Porto Grande, Cape Verde Islands, 3,314
Portsmouth, New Hampshire, U.S.A., 1,461
Praia, Bahia Praia, Terceira, Azores, 3,017
Puerto Cabello, Venezuela, 1,299
Puerto Cayo Moa, Cuba, 510
Puerto de Hierro, Venezuela, 2,086
Puerto Manati, Cuba, 397
Puerto Mexico, Mexico, 757
Puerto Padre, Cuba, 409
Puerto Siboney, Cuba, 659
Puerto Tanamo, Cuba, 489
Puerto Vita, Cuba, 444
Recife, Brazil, 3,590
Reykjavik, Iceland, 3,530
Rio de Janeiro, Brazil, 4,662
Rio Yateras, Cuba, 622
Roosevelt Roads, Puerto Rico, 1,063
St. Georges, Grenada, 1,453
St. John, Canada, 1,611
St. John's Canada, 2,128
St. Marc, Haiti, 673
Salvador, Brazil, 3,981
San Juan, Puerto Rico, 1,017
Sanchez, Dominican Republic, 893
Santa Barbara de Samana, Dominican Republic, 867
Santa Cruz de Tenerife, Canary Islands, 3,614
Santa Lucia, Cuba, 120
Santiago de Cuba, Cuba (via Windward Passage), 676
Santo Domingo, Dominican Republic (via Mona Passage), 1,036
Santo Domingo, Dominican Republic (via Windward Passage), 986
Santos, Brazil, 4,849
Savannah, Georgia, U.S.A., 603
Tampa, Florida, U.S.A., 232
Tampico, Mexico, 832
Tuxpan, Mexico, 792
Vigo, Spain (track A), 3,811
Vigo, Spain (track B), 3,809
Willemstad, Curacao, 1,184
Wilmington, North Carolina, U.S.A., 735

STRALSUND, GERMANY
(54°18'30'' N., 13°05'45'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 104
Skagens Odde, Denmark, 226

Ports
Gdynia, Poland, 245
Kobenhavn, Denmark, 81
Stockholm, Sweden, 423

SUAKIN, SUDAN
(19°06'47'' N., 37°20'21'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 4,538
Port Said, U.A.R., 813
Singapore, 4,251

Ports
Aden, Aden Protectorate, 631

SU-AO CHIANG, TAIWAN
(24°36'00'' N., 121°52'00'' E.) to:

Ports
Ching-tao, China, 756
Hong Kong, B.C.C., 554
Inchon, Korea, 823
Manila, Philippines, 684
Shang-hai, China, 498

SUBIC BAY, PHILIPPINES
(14°43'11'' N., 120°11'46'' E.)

Subtract 8½ miles from Olongapo distances.

SUEZ, U.A.R. See Bur Ibrahim.

SUKARNAPURA, INDONESIA
(2°32'30'' N., 140°42'30'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,702
Singapore, 2,510
Sunda Strait, Indonesia, 2,242

Ports
Apra, Guam, 1,010
Djakarta, Indonesia, 2,187
Honolulu, Hawaii, U.S.A., 3,878
Sorido, Indonesia, 311
Sorong, New Guinea, 637

SUKKERTOPPEN, GREENLAND
(65°24'36'' N., 52°54'12'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,700
Strait of Gibraltar, 2,547

Ports
Churchill, Canada, 1,341
Reykjavik, Iceland, 1,146
St. John's, Canada, 1,075

SULIMA, SIERRA LEONE
(6°57'00'' N., 12°35'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 3,060
Ushant, France, 2,739

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Dakar, Senegal, 589
Takoradi, Ghana, 703

SUNDA STRAIT, INDONESIA*
(6°04'00'' S., 105°50'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,815
Cape of Good Hope, Republic of South Africa, 5,100
Lombok Strait, Indonesia (north of Java), 677
Port Said, U.A.R. (via One and Half Degree Channel, May–September), 5,322
Port Said, U.A.R. (via Eight Degree Channel, October–April), 5,211
Singapore (via Selat Bangka and Selat Berhala), 532
Wetar Passage, Indonesia, 1,330

Ports
Adelaide, Australia, 2,980
Aden, Aden Protectorate (via Eight Degree Channel, October–April), 3,824
Aden, Aden Protectorate (via One and Half Degree Channel, May–September), 3,935
Aleksandrovsk, U.S.S.R., 3,961
Antsirana, Malagasy Republic, 3,366
Balikpapan, Borneo, 837
Bandjermasin, Borneo, 775
Belawan, Indonesia, 870
Bombay, India, 2,664
Calcutta, India, 2,140
Chan Chiang, China, 1,710
Chang-kan, China, 1,588
Chinnampo, Korea, 2,974
Colombo, Ceylon, 1,781
Darwin, Australia (south of Java), 1,623
Djakarta, Indonesia, 77
Flying Fish Cove, Christmas Island, Indian Ocean, 281
Fremantle, Australia, 1,691
Geraldton, Australia, 1,494
Hong Kong, B.C.C., 1,807
Inchon, Korea, 2,913
Krung Thep, Thailand, 1,292
Los Angeles, California, U.S.A. (via Makassar Strait), 7,976
Makasar, Celebes, 861
Malacca, Malaysia, 619
Manila, Philippines, 1,578
Mokpo, Korea, 2,760
Padang, Indonesia, 488
Palembang, Indonesia, 362
Petropavlovsk, U.S.S.R., 4,574
Port Refuge, Cocos Island, 647
Pusan, Korea, 2,855
Qui Nhon, Vietnam, 1,241
Rapid Bay, Australia, 2,946
Sabang, Indonesia, 1,103
Seletar, Malaya, 533
Semarang, Indonesia, 297
Shang-hai, China (via Pai-chieh Hsia, Steep Island Pass, west of Macclesfield Bank, east of South Natura Island and through Selat Gaspar), 2,535
Sihanoukville, Cambodia, 1,096
Simons Bay, Republic of South Africa, 5,058
Stenhouse Bay, Australia, 2,892
Sukarnapura, Indonesia, 2,242
Surabaja, Indonesia, 450
Tarakan, Indonesia, 1,191
Tangjung Uban, Indonesia, 502
Tjilatjap, Indonesia, 345
Tjirebon, Indonesia, 211
Victoria, North Borneo, 948
Vladivostok, U.S.S.R., 3,357
Wonsan, Korea, 3,161

SUNDERLAND, ENGLAND
(54°54'45'' N., 1°22'00'' W.) to:

Junction Points*
Bishop Rock, England, 605
Pentland Firth, Scotland, 304

Ports
London, England, 312
Rotterdam, Netherlands, 286
Southampton, England, 400

SUNDSVALL, SWEDEN
(62°23'12'' N., 17°21'30'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 684
Skagens Odde, Denmark, 745

Ports
Gdynia, Poland, 507
Leningrad, U.S.S.R., 507
Stockholm, Sweden, 222

SUR, LEBANON
(33°18'00'' N., 35°12'00'' E.) to:

Junction Points*
Port Said, U.A.R., 191
Strait of Gibraltar, 2,032

Ports
Alexandria, U.A.R., 309
Haifa, Israel, 33
Iskenderun, Turkey, 218

SURABAJA, INDONESIA
(7°12'00'' S., 112°44'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia (north of Madura), 275
Lombok Strait, Indonesia (south of Madura), 232
Singapore, 763
Sunda Strait, Indonesia, 450
Torres Strait, Australia (north of Madura and via Wetar Passage), 1,814
Wetar Passage, Indonesia (north of Madura), 928
Wetar Passage, Indonesia (south of Madura), 880

Ports
Ambon, Indonesia, 980
Apra, Guam, 2,334
Belawan, Indonesia, 1,132
Ching-tao, China, 2,864
Dutch Harbor, Alaska, U.S.A., 5,555
Fremantle, Australia (north of Madura and via Bali Strait), 1,674
Fremantle, Australia (south of Madura and via Bali Strait), 1,627
Hai-kou, Hai-nan Tao, China, 1,835
Hong Kong, B.C.C., 1,925
Honolulu, Hawaii, U.S.A., 5,598
Hsia-men, China, 2,121
Kodiak, Alaska, U.S.A., 6,086
Kuang-chou, China, 1,977
Los Angeles, California, U.S.A., 7,622
Malacca, Malaysia, 881
Malakal, Palau Islands, 1,656
Manila, Philippines, 1,540
Midway Island, 4,632
Palembang, Indonesia, 638
Palmyra Island, 5,263
Sai Gon, Vietnam, 1,206
San Diego, California, U.S.A., 7,691
San Francisco, California, U.S.A., 7,343
Seattle, Washington, U.S.A., 7,162
Semarang, Indonesia, 196
Shang-hai, China, 2,626
Sitka, Alaska, U.S.A., 6,564
Ta-ku, China, 3,174
Teluk Kau, Halmahera, 1,604
Truk, Caroline Islands, 2,623
Vinh Cam Ranh, Vietnam, 1,251
Vladivostok, U.S.S.R., 3,357
Wake Island, 3,641
Yin-hsien, China (via Shih-peng Chiang), 2,492
Yokohama, Japan, 3,092

*JUNCTION POINT.—See Preface for use of junction points.

SURGIDERO DE BATABANO, CUBA
(22°40'00'' N., 82°17'00'' W.) to:

Junction Points*
Panama, Panama, 970
Yucatan Channel, 229

Ports
Barranquilla, Colombia, 944
Kingston, Jamaica, 595
Santiago de Cuba, Cuba, 580

SUSAH, TUNISIA. See Sousse.

SUVA, FIJI ISLANDS
(18°08'00'' S., 178°25'00'' E.) to:

Junction Points*
Panama, Panama, 6,325
Punta Arenas, Chile, 5,444
Torres Strait, Australia (north of Cumberland and Maewo to Kandavu Passage, Raine Island entrance), 2,212
Wilson Promontory, Australia, 2,088

Ports
Apia, Samoa, 647
Apra, Guam, 2,784
Auckland, New Zealand, 1,149
Avarua, Cook Islands, 1,256
Baie du Controleur, Marquesas, 2,496
Baker Island, 1,202
Brisbane, Australia, 1,548
Butaritari, Gilbert Islands, 1,462
Callao, Peru, 5,995
Ching-tao, China, 4,662
Dutch Harbor, Alaska, U.S.A., 4,493
Guayaquil, Ecuador, 6,067
Hai-kou, Hai-nan Tao, 4,694
Hobart, Tasmania, 2,198
Hong Kong, B.C.C., 4,541
Honolulu, Hawaii, U.S.A., 2,776
Hsia-men, China, 4,389
Kowiak, Alaska, U.S.A., 4,853
Kuang-chou, China, 4,596
Los Angeles, California, U.S.A., 4,788
Malakal, Palau Islands, 3,041
Manila, Philippines, 4,048
Midway Island, Pacific, 2,872
Noumea, New Caledonia, 734
Nukualofa, Tonga Islands, 416
Ocean Island, 1,207
Pago Pago, American Samoa, 688
Palmyra Island, 1,864
Papeete, Society Islands, 1,838
Petropavlovsk, U.S.S.R., 4,460
Raoul Island, Kermadec Islands, 701
Sai Gon, Vietnam, 4,679
San Diego, California, U.S.A., 4,804
San Francisco, California, U.S.A., 4,749
Seattle, Washington, U.S.A., 5,162
Seward, Alaska, U.S.A., 5,003
Shang-hai, China, 4,467
Sitka, Alaska, U.S.A., 5,112
Sydney, Australia, 1,738
Ta-ku, China, 4,898
Teluk Kau, Halmahera, 3,251
Truk, Caroline Islands, 2,231
Valparaiso, Chile, 5,759
Vladivostok, U.S.S.R., 4,626
Wake Island, 2,501
Wellington, New Zealand, 1,476
Wotje Island, Marshall Islands, 1,880
Yap, Caroline Islands, 2,933
Yin-hsien, China (via Shih-peng Chiang), 4,408
Yokohama, Japan, 3,967

SVENDBORG, DENMARK
(55°03'45'' N., 10°37'30'' E.)

Add 12 miles to Faborg distances.

SWAKOPMUND, REPUBLIC OF SOUTH AFRICA
(22°41'00'' S., 14°30'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 743
Ushant, France, 5,156

Ports
Cape Town, Republic of South Africa, 719
Matadi, Republic of the Congo, 1,144

SWAN ISLAND
(17°24'30'' N., 83°57'00'' W.) to:

Junction Points*
Panama, Panama, 605
Yucatan Channel, 273

Ports
Mariel, Cuba, 437
Puerto Cortes, Honduras, 254

SWANSEA, WALES
(51°37'00'' N., 3°55'00'' W.) to:

Junction Points*
Bishop Rock, England, 155
Fastnet, Ireland, 217
Pentland Firth, Scotland, 578

Ports
Barrow in Furness, England, 242
Cardiff, Wales, 46
Fishguard, Wales, 100
Holyhead, Wales, 171
Liverpool, England, 236

SWATOW, CHINA. See Shan-tou.

SWEEPER COVE, ALASKA, U.S.A.
(51°51'30'' N., 176°38'00'' W.) to:

Junction Points*
Panama, Panama, 5,586

Ports
Dutch Harbor, Alaska, U.S.A., 407
Honolulu, Hawaii, U.S.A., 1,945
Port Hueneme, California, U.S.A., 2,686
Victoria, Canada, 2,044

SWINEMUNDE, POLAND. See Swinoujscie.

SWINOUJSCIE, POLAND
(53°55'00'' N., 14°17'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 186
Skagens Odde, Denmark (via Store Baelt), 379
Skagens Odde, Denmark (via The Sound), 275

Ports
Horsens, Denmark, 268
Kalundborg, Denmark, 175
Koge, Denmark, 156
Kolding, Denmark, 253
Korsor, Denmark, 239
Kyndbyvaerkets, Denmark, 195
Limhamn, Sweden, 128
Masnedsund, Denmark, 193
Nakskov, Denmark, 190
Odense, Denmark, 293
Oslo, Norway (via Store Baelt), 503
Oslo, Norway (via The Sound), 397
Randers, Denmark, 266
Sonderborg, Denmark, 215

SYDNEY, AUSTRALIA
(33°51'30'' S., 151°13'00'' E.) to:

Junction Points*
Panama, Panama, 7,674
Punta Arenas, Chile (via Lat. 60° S.), 5,398

*JUNCTION POINT.—See Preface for use of junction points.

Punta Arenas, Chile (via Lat. 49° S.), 5,848
Wilson Promontory, Australia, 440

Ports
Apia, Samoa, 2,355
Apra, Guam, 3,006
Auckland, New Zealand, 1,280
Avarua, Cook Islands, 2,690
Baker Island, 2,752
Brisbane, Australia, 529
Burnie Harbor, Australia, 525
Ching-tao, China, 4,871
Dutch Harbor, Alaska, U.S.A., 5,761
Guayaquil, Ecuador, 7,268
Hakodate, Japan, 4,688
Hobart, Tasmania, 638
Honolulu, Hawaii, U.S.A., 4,420
Hsia-men, China (via Vitiaz Strait), 4,437
Jaluit, Marshall Islands, 2,623
Kobe, Japan, 4,384
Kodiak, Alaska, U.S.A., 6,222
Launceston, Tasmania, 514
Lautoka Harbor, Fiji Islands, 1,732
Lele, Caroline Islands, 2,503
Levuka, Fiji Islands, 1,779
Los Angeles, California, U.S.A., 6,511
Lyttelton, New Zealand, 1,419
Midway Island, 4,138
Nagasaki, Japan, 4,439
Nelson, New Zealand, 1,166
Nome, Alaska, U.S.A., 6,280
Noumea, New Caledonia, 1,069
Ocean Island, 2,233
Omura, Bonin Islands, 3,860
Pago Pago, American Samoa, 2,377
Palmyra Island, 3,561
Papeete, Society Islands, 3,308
Ponape, Caroline Islands, 2,514
Port Augusta, Australia, 1,164
Portland, Oregon, U.S.A., 6,737
Prince Rupert, Canada, 6,671
Rabaul, New Britain, 1,844
Raoul Island, Kermadec Islands, 1,600
Saipan, Mariana Islands, 3,077
San Diego, California, U.S.A., 6,530
San Francisco, California, U.S.A., 6,448
Seattle, Washington, U.S.A., 6,810
Selwyn Bay, Solomon Islands, 1,567
Seward, Alaska, U.S.A., 6,373
Shang-hai, China (west of New Ireland), 4,642
Shang-hai, China (via Vitiaz Strait), 4,636
Shimonoseki, Japan, 4,453
Sitka, Alaska, U.S.A., 6,595
Suva, Fiji Islands, 1,738
Ta-ku, China, 5,135
Ta-lien, China (via Vitiaz Strait), 4,976
Ta-lien, China (west of New Ireland), 5,015
Talomako, New Hebrides, 1,471
Tinian, Mariana Islands, 3,064
Truk, Caroline Islands, 2,543
Valparaiso, Chile (via Lat. 49°S.), 6,294
Vladivostok, U.S.S.R., 5,105
Wake Island, 3,346
Wallaroo, Australia, 1,084
Wellington, New Zealand, 1,234
Yin-hsien, China (via Shih-peng Chiang), 4,574
Yokohama, Japan, 4,330

SYDNEY, CANADA
(46°08'30" N., 60°12'00" W.) to:

Ports
Boston, Massachusetts, U.S.A., 597
Buenos Aires, Argentina, 5,749
Cape Town, Republic of South Africa, 6,425
Castries, St. Lucia, 1,967
Colon, Panama, 2,482
Kingston, Jamaica, 1,982
La Guaira, Venezuela, 2,215
Liverpool, Canada, 293
New York, New York, U.S.A., 808
Norfolk, Virginia, U.S.A., 996
Parrsboro, Canada, 545
Philadelphia, Pennsylvania, U.S.A., 958
Port of Spain, Trinidad, 2,189
Portland, Maine, U.S.A., 556
Porto Grande, Cape Verde Islands, 2,503
Portsmouth, New Hampshire, U.S.A., 576
Rio de Janeiro, Brazil, 4,648
St. John, Canada, 492
Salvador, Brazil, 3,967
San Juan, Puerto Rico, 1,728
Santo Domingo, Dominican Republic, 1,867
Recife, Brazil, 3,553
Yarmouth, Canada, 416

SYRACUSE, SICILY. See Siracusa.

SZCZECIN, POLAND
(53°26'00" N., 14°34'30" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 222
Skagens Odde, Denmark (via Store Baelt), 410

Ports
Aarhus, Denmark, 268
Gdansk, Poland, 240
Halmstad, Sweden, 227
Landskrona, Sweden, 170
Oslo, Norway (via The Sound), 431

TABOU, IVORY COAST. See Tabu.

TABU, IVORY COAST.
(4°24'35" N., 7°21'00" W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,751
Ushant, France, 3,097

Ports
Dakar, Senegal, 947
Takoradi, Ghana, 346

TACLOBAN, PHILIPPINES
(11°15'30" N., 125°00'00" E.) to:

Ports
Batangas, Philippines, 293
Jolo, Philippines, 442
Yap, Caroline Islands, 790
Zamboanga, Philippines, 385

TACOMA, WASHINGTON, U.S.A.
(47°16'00" N., 122°26'00" W.)

Add 21 miles to Seattle distances.

TAHITI, SOCIETY ISLANDS. See Papeete.

TAIO HAE, MARQUESAS
(8°56'00" S., 140°05'00" W.) to:

Junction Points*
Panama, Panama, 3,826

Ports
Apia, Samoa, 1,886
Apra, Guam, 4,698
Honolulu, Hawaii, U.S.A., 2,102
Los Angeles, California, U.S.A., 2,858
Noumea, New Caledonia, 3,183
Palmyra Island, 1,596
Papeete, Society Islands, 761
San Francisco, California, U.S.A., 2,987

*JUNCTION POINT.—See Preface for use of junction points.

TAIO HAE BAIE, MARQUESAS. See Taio Hae.

TAI-TUNG CHIANG, TAIWAN
(22°44'50'' N., 121°09'12'' E.) to:

Ports
Ching-tao, China, 870
Hong Kong, B.C.C., 440
Inchon, Korea, 937
Pusan, Korea, 860
Shang-hai, China, 612

TAKAO KO, TAIWAN. See Kao-Hsiung Chiang.

TAKORADI, GHANA
(4°53'00'' N., 1°44'30'' W.) to:

Ports
Bolama, Portuguese Guinea, 1,100
Freetown, Sierra Leone, 859
Greenville, Liberia, 461
Kribi, Cameroon, 704
Lome, Togo, 200
Monrovia, Liberia, 597
Norfolk, Virginia, U.S.A., 4,620
Pointe Noire, Gabon, 1,001
Port Buchanan, Liberia, 197
Port of Spain, Trinidad, 3,632
Porto Grande, Cape Verde Islands, 1,673
River Cess, Liberia, 508
Santa Cruz de Tenerife, Canary Islands, 2,119
Sassandra, Ivory Coast, 262
Sulima, Sierra Leone, 703
Tabu, Ivory Coast, 346
Tema, Ghana, 117
Willemstad, Curacao, 4,040

TA-KU, CHINA
(38°59'15'' N., 117°40'45'' E.) to:

Junction Points*
Panama, Panama (via Tsugaru Kaikyo), 8,786
Panama, Panama (via Osumi Kaikyo), 9,002
Punta Arenas, Chile, 10,280
Singapore, 2,770

Ports
Aleksandrovsk, U.S.S.R. (via Maenggol Sudo), 1,807
Apra, Guam, 2,133
Auckland, New Zealand (via Vitiaz Strait), 5,648
Cebu, Philippines (via San Bernardino Strait), 1,907
Chi-lung Chiang, Taiwan, 1,013
Ching-tao, China, 436
Chin-huang-tao, China, 131
Chinnampo, Korea, 369
Darwin, Australia, 3,363
Djakarta, Indonesia, 3,088
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,594
Esutoru, U.S.S.R., 1,708
Hakodate, Japan, 1,385
Hong Kong, B.C.C., 1,418
Honolulu, Hawaii, U.S.A. (via Shimonoseki Kaikyo), 4,628
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,677
Hsia-men, China, 1,169
Hu-lu Tao, China, 214
Iloilo, Philippines (via San Bernardino Strait), 1,929
Inchon, Korea, 465
Kobe, Japan, 1,034
Kuang-chou, China, 1,501
Lo-hsing-ta Mao-ti, China, 1,029
Lu-shun, China, 175
Manila, Philippines (east of Taiwan), 1,722
Manila, Philippines (via Formosa Strait), 1,732
Mokpo, Korea (south of Kasa Do), 536
Nagasaki, Japan, 754
Nakagusuku, Ryukyu Islands, 1,026
Nikolayevsk, U.S.S.R., 1,961
Noumea, New Caledonia, 4,667
Pago Pago, American Samoa, 5,194
Papeete, Society Islands, 6,281
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,419
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,444
Pusan, Korea (via Maenggol Sudo), 702
Rabaul, New Britain, 3,294
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,615
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,856
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 5,290
Seattle, Washington, U.S.A. (via La Perouse Strait, and north of Aleutian Islands), 5,286
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and south of Aleutian Islands), 5,351
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,596
Shang-hai, China, 720
Shan-tou, China, 1,274
Shimonoseki, Japan, 790
Surabaja, Indonesia, 3,174
Suva, Fiji Islands, 4,898
Sydney, Australia (via Vitiaz Strait), 5,135
Ta-lien, China, 207
Tan-shui, Taiwan, 1,012
Tien-ching, China, 48
Valparaiso, Chile (via Shimonoseki Kaikyo), 10,482
Vladivostok, U.S.S.R., 1,212
Wonsan, Korea, 1,007
Yen-tai, China, 205
Ying-kou, China, 251
Yokohama, Japan (via Osumi Kaikyo), 1,394

TALARA, PERU
(4°34'30'' S., 81°17'15'' W.) to:

Junction Points*
Panama, Panama, 828

Ports
Acapulco, Mexico, 1,696
Arica, Chile, 1,103
Callao, Peru, 534
Guayaquil, Ecuador, 180
Honolulu, Hawaii, U.S.A., 4,806
Pimentel, Peru, 182
San Francisco, California, U.S.A., 3,494

TALCAHUANO, CHILE
(36°42'00'' S., 73°06'00'' W.) to:

Junction Points*
Panama, Panama, 2,805
Punta Arenas, Chile, 1,225

Ports
Acapulco, Mexico, 3,558
Antofagasta, Chile, 802
Arica, Chile, 1,108
Caldera, Chile, 602
Callao, Peru, 1,508
Coquimbo, Chile, 428
Corinto, Nicaragua, 3,062
Corral, Chile, 229
Esmeraldas, Ecuador, 2,368
Guayaquil, Ecuador, 2,135
Guaymas, Mexico, 4,428
Iquique, Chile, 1,008
Lota, Chile, 50
Mollendo, Peru, 1,184
Monterey, California, U.S.A., 5,190
Pisco, Peru, 1,411
Puntarenas, Costa Rica, 2,879
Salina Cruz, Mexico, 3,414

*JUNCTION POINT.—See Preface for use of junction points.

San Blas, Mexico, 3,977
San Diego, California, U.S.A., 4,869
San Francisco, California, U.S.A., 5,270
San Jose, Guatemala, 3,202
Santa Barbara, California, U.S.A., 5,006
Valparaiso, Chile, 241

TA-LIEN, China
(38°56'00'' N., 121°39'00'' E.) to:

Junction Points*
Panama, Panama (via Osumi Kaikyo), 8,843
Panama, Panama (via Tsugaru Kaikyo), 8,627
Punta Arenas, Chile, 10,121
Singapore, 2,612

Ports
Aleksandrovsk, U.S.S.R., 1,648
Apra, Guam, 1,974
Auckland, New Zealand (west of New Ireland), 5,469
Auckland, New Zealand (via Vitiaz Strait), 5,489
Ching-tao, China, 277
Chin-huang-tao, China, 145
Chi-lung Chiang, Taiwan, 852
Chinnampo, Korea, 180
Darwin, Australia, 3,204
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,435
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 3,437
Hakodate, Japan, 1,226
Honolulu, Hawaii, U.S.A., 4,531
Honolulu, Hawaii, U.S.A. (via Shimonoseki Kaikyo), 4,470
Hsia-men, China, 1,008
Inchon, Korea, 290
Kobe, Japan, 877
Kunsan, Japan, 94
Lien-yun, China, 348
Lo-hsing-ta Mao-ti, China, 871
Manila, Philippines (east of Taiwan), 1,561
Manila, Philippines (via Formosa Strait), 1,571
Masan, Korea, 546
Moji, Japan, 633
Mokpo, Korea (via south of Kasa Do), 377
Pago Pago, American Samoa, 5,035
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,260
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,285
Portland, Oregon, U.S.A., 5,240
Pusan, Korea (via Maenggol Sudo), 543
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,697
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,456
Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,127
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 5,131
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and south of Aleutian Islands), 5,192
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,437
Shang-hai, China, 560
Shan-tou, China, 1,113
Sydney, Australia (via Vitiaz Strait), 4,976
Sydney, Australia (via west of New Ireland), 5,015
Ta-ku, China, 207
Tasa Do, Korea, 149
Valparaiso, Chile (via Tokara Kaikyo), 10,366
Valparaiso, Chile (via Shimonoseki Kaikyo), 10,324
Vladivostok, U.S.S.R., 1,057
Wonsan, Korea, 848
Yokohama, Japan (via Osumi Kaikyo), 1,235

TALLINN, ESTONIA
(59°27'00'' N., 24°46'30'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 603
Skagens Odde, Denmark, 661

Ports
Gdynia, Poland, 392
Leningrad, U.S.S.R., 189
Stockholm, Sweden, 220

TALOMACO, NEW HEBRIDES. See Talomako.

TALOMAKO, NEW HEBRIDES
(15°11'30'' S., 166°50'00'' E.) to:

Ports
Apia, Samoa, 1,255
Apra, Guam, 2,177
Auckland, New Zealand, 1,420
Brisbane, Australia, 1,132
Honolulu, Hawaii, U.S.A., 3,014
Noumea, New Caledonia (west of Malekula and via Bougainville Strait), 524
Rabaul, New Britain, 1,104
Sydney, Australia, 1,471

TALTAL, CHILE
(25°24'00'' S., 70°29'00'' W.) to:

Junction Points*
Panama, Panama, 2,225

Ports
San Francisco, California, U.S.A., 4,838

TAMATAVE, MALAGASY REPUBLIC
(18°09'00'' S., 49°25'30'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,055
Port Said, U.A.R., 3,598
Singapore, 3,675

Ports
Beira, Mozambique, 1,239
Belawan, Indonesia, 3,342
Bombay, India, 2,621
Colombo, Ceylon, 2,351
Darwin, Australia, 4,702
Fremantle, Australia, 3,650
Karachi, Pakistan, 2,788
Lourenco Marques, Mozambique, 1,242
Malacca, Malaysia, 3,560
Penang, Malaysia, 3,387
Port Louis, Mauritius, 474
Sabang, Indonesia, 3,076
Zanzibar, Zanzibar, 1,116

TAMPA, FLORIDA, U.S.A.
(27°56'30'' N., 82°26'40'' W.) to:

Junction Points*
Straits of Florida, 232
Yucatan Channel, 404

Ports
Cartagena, Colombia, 1,295
Colon, Panama, 1,216
Habana, Cuba, 307
Matanzas, Cuba (via Northwest Channel), 325
Tampico, Mexico, 921
Veracruz, Mexico, 925

*JUNCTION POINT.—See Preface for use of junction points.

TAMPICO, MEXICO
(22°12'30'' N., 97°53'30'' W.) to:

Junction Points*
Panama, Panama, 1,528
Straits of Florida, 832
Yucatan Channel, 716

Ports
Alvaro Obregon, Mexico, 372
Apalachicola, Florida, U.S.A., 825
Belize, British Honduras, 927
Brunswick, Georgia, U.S.A., 1,387
Campeche, Mexico, 430
Carmen, Mexico, 401
Cartagena, Colombia, 1,575
Cienfuegos, Cuba, 1,009
Colon, Panama, 1,485
Corpus Christi, Texas, U.S.A., 366
Galveston, Texas, U.S.A., 473
Guantanamo, Cuba, 1,293
Gulfport, Mississippi, U.S.A., 725
Habana, Cuba, 864
Jacksonville, Florida, U.S.A., 1,361
Key West, Florida, U.S.A., 907
Kingston, Jamaica, 1,252
Matagorda Bay, Texas, U.S.A., 380
Matanzas, Cuba, 914
Mobile, Alabama, U.S.A., 750
New Orleans, Louisiana, U.S.A. (via Southwest Pass), 711
Pensacola, Florida, U.S.A., 759
Port Arthur, Texas, U.S.A., 522
Progreso, Mexico, 469
Puerto Cortes, Honduras, 993
Puerto Mexico, Mexico, 320
San Juan del Norte, Nicaragua, 1,336
Savannah, Georgia, U.S.A., 1,432
Tampa, Florida, U.S.A., 921
Tela, Honduras, 974
Veracruz, Mexico, 218

TANAMO, CUBA. See Puerto Tanamo.

TANDJUNG UBAN, INDONESIA
(1°04'00'' N., 104°13'00'' E.) to:

Junction Points*
Singapore, 27
Sunda Strait, Indonesia, 502

Ports
Makasar, Celebes, 1,075
Manila, Philippines, 1,328
Sai Gon, Vietnam, 633

TANDJUNGPRIOK, INDONESIA. See Djakarta.

TANGA, TANGANYIKA
(5°04'00'' S., 39°07'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,425
Port Said, U.A.R., 3,068
Singapore, 4,037

Ports
Aden, Aden Protectorate, 1,681
Belawan, Indonesia, 3,704
Darwin, Australia, 5,466
Fremantle, Australia, 4,583
Mombasa, Kenya, 69
Penang, Malaysia, 3,749
Zanzibar, Zanzibar, 75

TANGIER, MOROCCO
(35°47'00'' N., 5°48'00'' W.) to:

Ports
Casablanca, Morocco, 166
Ceuta, Morocco, 29
Dakar, Senegal, 1,483
El Jadida, Morocco, 207
Fedala, Morocco, 158
Funchal, Madeira Island, 588
Kenitra, Morocco, 115
Larache, Morocco, 48
Porto de Leixoes, Portugal, 436
Porto Grande, Cape Verde Islands, 1,536
Rabat, Morocco, 125
Vigo, Spain, 516

TANG-KU, CHINA. See Ta-ku.

TAN-SHUI, TAIWAN
(25°11'00'' N., 121°23'30'' E.) to:

Junction Points*
Singapore, 1,800

Ports
Apra, Guam, 1,505
Cebu, Philippines (via Pen-hu Shieh-tao and Balintang Channel), 1,006
Djakarta, Indonesia, 2,094
Hakodate, Japan, 1,384
Hong Kong, B.C.C., 445
Honolulu, Hawaii, U.S.A., 4,398
Hsia-men, China, 194
Iloilo, Philippines (via Peng-hu Shieh-tao and Balintang Channel), 1,028
Inchon, Korea, 788
Kobe, Japan (via Osumi Kaikyo), 933
Kuang-chou, China, 528
Lo-hsing-ta Mao-ti, China, 127
Lu-shun, China, 859
Manila, Philippines, 742
Nagasaki, Japan, 636
Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,437
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,611
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,617
Shang-hai, China, 446
Shan-tou, China, 295
Shimonoseki, Japan, 753
Ta-ku, China, 1,012
Vladivostok, U.S.S.R., 1,225
Wei-hai-wei, China, 784
Yen-tai, China, 818
Yokohama, Japan (via Osumi Kaikyo), 1,146

TANSUI, TAIWAN. See Tan-Shui.

TAONGI, MARSHALL ISLANDS. See Pokak.

TAORMINA, SICILY
(37°50'00'' N., 15°17'00'' E.) to:

Junction Points*
Port Said, U.A.R., 933
Strait of Gibraltar, 1,075

Ports
Napoli, Italy, 202
Palermo, Sicily, 147
Taranto, Italy, 211

TARABULUS, LEBANON
(34°29'37'' N., 35°51'55'' E.) to:

Junction Points*
Port Said, U.A.R., 268
Strait of Gibraltar, 2,047

Ports
Haifa, Israel, 118
Marseille, France, 1,613
Sete, France, 1,672
Venezia, Italy (via Corinth Canal), 1,369
Venezia, Italy (south of Greece), 1,399

TARABULUS, LIBYA
(32°54'10'' N., 13°11' 36'' E.) to:

Junction Points*
Port Said, U.A.R., 998
Strait of Gibraltar, 1,093

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Al Hammamat, Tunisia, 246
Alexandria, U.A.R., 866
Alger, Algeria, 665
Alicante, Spain, 832
Ancona, Italy, 820
Annaba, Algeria, 440
Banghazi, Libya, 354
Barcelona, Spain, 762
Bari, Italy, 613
Batumi, U.S.S.R., 1,540
Bayrut, Lebanon, 1,129
Bizerte, Libya, 335
Brindisi, Italy, 555
Cartagena, Spain, 856
Ceuta, Morocco, 1,074
Genova, Italy, 719
Gibraltar, 1,076
Haifa, Israel, 1,109
Iraklion, Crete, 630
Iskenderun, Turkey, 1,167
Istanbul, Turkey, 453
Izmir, Turkey, 799
La Spezia, Italy, 790
Larnaca, Cyprus, 1,050
Livorno, Italy, 754
Malaga, Spain, 1,024
Marsaxlokk, Malta, 191
Marseille, France, 745
Mersin, Turkey, 1,109
Messina, Sicily, 344
Napoli, Italy, 516
Odessa, U.S.S.R., 1,301
Oran, Algeria, 862
Palermo, Sicily, 460
Palma, Balearic Islands, 708
Piraievs, Greece, 640
Porto Empedocle, Sicily, 263
Qabis, Tunisia, 174
Rijeka, Yugoslavia, 887
Rodhos, Rodhos, 780
Savona, Italy, 722
Sibenik, Yugoslavia, 761
Siracusa, Sicily, 276
Sousse, Tunisia, 231
Split, Yugoslavia, 746
Taranto, Italy, 509
Thessaloniki, Greece, 848
Toulon, France, 722
Trieste, Free Territory, 921
Tubruq, Libya, 574
Tunis, Tunisia, 322
Valencia, Spain, 831
Valletta, Malta, 201
Venezia, Italy, 931
Volos, Greece, 789

TARAKAN, INDONESIA
(3°17′00″ N., 117°35′00″ E.) to:

Junction Points*
Lombok Strait, Indonesia, 830
Singapore, 1,286
Sunda Strait, Indonesia, 1,191

Ports
Manila, Philippines, 785
Tjilatjap, Indonesia, 1,217

TARANTO, ITALY
(40°28′46″ N., 17°14′53″ E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 951
Port Said, U.A.R. (south of Greece), 954
Strait of Gibraltar, 1,268

Ports
Alexandria, U.A.R., 844
Alger, Algeria, 841
Alicante, Spain, 995
Ancona, Italy, 415
Annaba, Algeria, 620
Augusta, Sicily, 243
Banghazi, Libya, 523
Barcelona, Spain, 900
Bari, Italy, 208
Barletta, Italy, 232
Bayrut, Lebanon (via Corinth Canal), 1,000
Bayrut, Lebanon (south of Greece), 1,023
Bizerte, Tunisia, 530
Brindisi, Italy, 150
Cartagena, Spain, 1,025
Ceuta, Morocco, 1,249
Cortone, Italy, 87
Durres, Albania, 183
Genova, Italy, 705
Gibraltar, 1,250
Haifa, Israel (via Corinth Canal), 1,003
Haifa, Israel (south of Greece), 1,020
Iraklion, Crete, 509
Istanbul, Turkey (via Corinth Canal), 717
Istanbul, Turkey (south of Greece), 806
Izmir, Turkey (via Corinth Canal), 563
Izmir, Turkey (south of Greece), 652
Kalamai, Greece, 351
Kerkira, Greece, 167
La Spezia, Italy, 669
Livorno, Italy, 634
Malaga, Spain, 1,198
Marseille, France, 797
Messina, Sicily, 223
Napoli, Italy, 395
Odessa, U.S.S.R. (via Corinth Canal), 1,065
Odessa, U.S.S.R. (south of Greece), 1,154
Oran, Algeria, 1,037
Palermo, Sicily, 339
Palma, Balearic Islands, 858
Piraievs, Greece (via Corinth Canal), 363
Piraievs, Greece (south of Greece), 493
Porto di Milazzo, Sicily, 316
Rijeka, Yugoslavia, 482
Sarande, Albania, 154
Savona, Italy, 715
Sibenik, Yugoslavia, 356
Siracusa, Sicily, 245
Split, Yugoslavia, 341
Taormina, Sicily, 211
Tarabulus, Libya, 509
Thessaloniki, Greece (via Corinth Canal), 612
Thessaloniki, Greece (south of Greece), 701
Toulon, France, 765
Trieste, Free Territory, 516
Tunis, Tunisia, 518
Valencia, Spain, 983
Valletta, Malta, 322
Venezia, Italy, 526
Villa San Giovanni, Italy, 287
Vlores, Albania, 146
Volos, Greece (via Corinth Canal), 553
Volos, Greece (south of Greece), 642

TARRAGONA, SPAIN
(41°06′25″ N., 1°14′30″ E.) to:

Junction Points*
Port Said, U.A.R., 1,634
Strait of Gibraltar, 501

Ports
Bayrut, Lebanon, 1,738
Malaga, Spain, 431
Oran, Algeria, 336
Palma, Balearic Islands, 134
Siracusa, Sicily, 746
Toulon, France, 251
Valencia, Spain, 124

TASA-DO, KOREA
(39°47′30″ N., 124°25′00″ E.) to:

Ports
Ching-tao, China, 339
Inchon, Korea, 266
Shang-hai, China, 597
Shimonoseki, Japan, 639
Ta-lien, China, 149

*JUNCTION POINT.—See Preface for use of junction points.

TELA, HONDURAS
(15°46'30'' N., 87°27'00'' W.) to:

Junction Points*
Panama, Panama, 749

Ports
Colon, Panama, 706
New Orleans, Louisiana, U.S.A., 915
San Juan, Puerto Rico, 1,258
Tampico, Mexico, 974

TEL AVIV, ISRAEL. See Jaffa.

TELUKBAJUR, INDONESIA. See Padang.

TELUK KAU, HALMAHERA
(1°16'00'' N., 128°00'00'' E.) to:

Junction Points*
Singapore (south of Celebes and Borneo), 1,997
Torres Strait, Australia, 1,204

Ports
Apra, Guam, 1,231
Darwin, Australia, 995
Hong Kong, B.C.C., 1,581
Honolulu, Hawaii, U.S.A., 4,490
Manila, Philippines, 1,049
Pago Pago, American Samoa, 3,819
Sai Gon, Vietnam, 1,520
Shang-hai, China, 1,914
Surabaja, Indonesia, 1,604
Suva, Fiji Islands, 3,251
Yokohama, Japan, 2,163

TEMA, GHANA
(5°37'33'' N., 0°00'45'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,619
Ushant, France, 3,597

Ports
Lagos, Nigeria, 216
Takoradi, Ghana, 117

TERNEUZEN, NETHERLANDS
(51°20'00'' N., 3°49'00'' E.)

Substract 36 miles from Antwerpen distances.

TERRACINA, ITALY
(41°17'00'' N., 13°16'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,162
Strait of Gilbraltar, 974

Ports
Livorno, Italy, 212
Napoli, Italy, 65
Palermo, Sicily, 191

TEXAS CITY, TEXAS, U.S.A.
(29°22'30'' N., 94°53'15'' W.)

Add 5 miles to Galveston distances.

THAMES HAVEN, ENGLAND
(51°30'00'' N., 0°30'30'' E.)

Subtract 23 miles from London distances.

THE SKAW, DENMARK. See Skagens Odde.

THESSALONIKI, GREECE
(40°37'56'' N., 22°55'48'' E.) to:

Junction Points*
Port Said, U.A.R., 741
Strait of Gibraltar (via Corinth Canal), 1,699
Strait of Gibraltar (via south of Greece), 1,716

Ports
Alexandria, U.A.R., 678
Alexandroupolis, Greece, 191
Alger, Algeria (via Corinth Canal), 1,270
Alger, Algeria (south of Greece), 1,287
Alicante, Spain (via Corinth Canal), 1,435
Alicante, Spain (south of Greece), 1,454
Ancona, Italy (via Corinth Canal), 857
Ancona, Italy (south of Greece), 953
Annaba, Algeria (via Corinth Canal), 1,046
Annaba, Algeria (south of Greece), 1,063
Banghazi, Libya, 611
Baniyas, Syria, 792
Barcelona, Spain (via Corinth Canal), 1,339
Barcelona, Spain (south of Greece), 1,380
Bari, Italy (via Corinth Canal), 650
Bari, Italy (south of Greece), 746
Batumi, U.S.S.R., 926
Bayrut, Lebanon, 783
Bizerte, Tunisia (via Corinth Canal), 941
Bizerte, Tunisia (south of Greece), 958
Brindisi, Italy (via Corinth Canal), 592
Brindisi, Italy (south of Greece), 688
Cartagena, Spain (via Corinth Canal), 1,462
Cartagena, Spain (south of Greece), 1,479
Ceuta, Morocco (via Corinth Canal), 1,679
Ceuta, Morocco (south of Greece), 1,696
Derince, Turkey, 372
Dikili, Turkey, 236
Ermoupolis, Greece, 227
Genova, Italy (via Corinth Canal), 1,144
Genova, Italy (south of Greece), 1,186
Gibraltar (via Corinth Canal), 1,682
Gibraltar (south of Greece), 1,698
Haifa, Israel, 786
Iraklion, Crete, 351
Iskenderun, Turkey, 784
Istanbul, Turkey, 338
Izmir, Turkey, 259
Kavala, Greece, 160
La Spezia, Italy (via Corinth Canal), 1,109
La Spezia, Italy (south of Greece), 1,150
Larnaca, Cyprus, 703
Livorno, Italy (via Corinth Canal), 1,073
Livorno, Italy (south of Greece), 1,114
Malaga, Spain (via Corinth Canal), 1,629
Malaga, Spain (south of Greece), 1,646
Marseille, France (via Corinth Canal), 1,236
Marseille, France (south of Greece), 1,278
Mersin, Turkey, 726
Messina, Sicily (via Corinth Canal), 663
Messina, Sicily (south of Greece), 704
Mitilini, Greece, 232
Napoli, Italy (via Corinth Canal), 834
Napoli, Italy (south of Greece), 876

*JUNCTION POINT.—See Preface for use of junction points.

Novorossiysk, U.S.S.R., 794
Odessa, U.S.S.R., 686
Oran, Algeria (via Corinth Canal), 1,467
Oran, Algeria (south of Greece), 1,484
Palermo, Sicily (via Corinth Canal), 779
Palermo, Sicily (south of Greece), 820
Palma, Balearic Islands (via Corinth Canal), 1,297
Palma, Balearic Islands (south of Greece), 1,339
Piraievs, Greece, 259
Rijeka, Yugoslavia (via Corinth Canal), 924
Rijeka, Yugoslavia (south of Greece), 1,023
Rodhos, Rodhos, 388
Savona, Italy (via Corinth Canal), 1,154
Savona, Italy (south of Greece), 1,196
Canal), 796
Sibenik, Yugoslavia (via Corinth Canal), 796
Sibenik Yugoslavia (south of Greece), 895
Siracusa, Sicily (via Corinth Canal), 667
Siracusa, Sicily (south of Greece), 692
Split, Yugoslavia (via Corinth Canal), 781
Split, Yugoslavia (south of Greece), 880
Tarabulus, Libya, 848
Taranto, Italy (via Corinth Canal), 612
Taranto, Italy (south of Greece), 701
Toulon, France (via Corinth Canal), 1,204
Toulon, France (south of Greece), 1,246
Trieste, Free Territory (via Corinth Canal), 957
Trieste, Free Territory (south of Greece), 1,056
Tunis, Tunisia (via Corinth Canal), 928
Tunis, Tunisia (south of Greece), 945
Valencia, Spain (via Corinth Canal), 1,422
Valencia, Spain (south of Greece), 1,452
Valletta, Malta, 732
Venezia, Italy (via Corinth Canal), 968
Venezia, Italy (south of Greece), 1,064
Volos, Greece, 132

THORSHAVN, FAEROE ISLANDS. See Torshavn.

THULE, GREENLAND
(76°32'52'' N., 68°52'30'' W.) to:

Junction Points*
Pentland Firth, Scotland, 2,456
Strait of Gibraltar, 3,299

Ports
Churchill, Canada, 1,909
Reykjavik, Iceland, 1,898
St. John's, Canada, 1,800

TIEN-CHING, CHINA
(39°07'30'' N., 117°11'45'' E.) to:

Ports
Moji, Japan, 840
Shang-hai, China (via Chang-shan Shui-tao), 740
Ta-ku, China, 48
Yokohama, Japan (via Naikai), 1,465

TIENTSIN, CHINA. See Tien-ching.

TIKSI, U.S.S.R.
(71°39'30'' N., 128°59'00'' E.) to:

Ports
Ambarchik, U.S.S.R., 745
Mys Chelyuskin, U.S.S.R., 579
Pevek, U.S.S.R., 854
Provideniya, U.S.S.R., 1,500

TINIAN, MARIANA ISLANDS
(14°57'55'' N., 145°37'20'' E.) to:

Ports
Apra, Guam, 127
Honolulu, Hawaii, U.S.A., 3,230
Jaluit, Marshall Islands, 1,536
Sydney, Australia, 3,064
Truk, Caroline Islands, 597

TJILATJAP, INDONESIA
(7°44'00'' S., 108°59'24'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,616
Lombok Strait, Indonesia, 413
Sunda Strait, Indonesia, 345

Ports
Darwin, Australia, 1,321
Fremantle, Australia, 1,519
Padang, Indonesia, 738
Tarakan, Indonesia, 1,217

TJIREBON, INDONESIA
(6°42'00'' S., 108°36'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 503
Singapore, 624
Sunda Strait, Indonesia, 211

Ports
Djakarta, Indonesia, 156
Makasar, Celebes, 681

TOBRUCH, LIBYA. Se Tubruq.

TOCOPILLA, CHILE
(22°05'20'' S., 70°14'00'' W.) to:

Junction Points*
Panama, Panama, 2,068
Punta Arenas, Chile, 2,177

Ports
San Antonio, Chile, 692
San Francisco, California, U.S.A., 4,699
Valparaiso, Chile, 663

TOEI, KOREA. See Tongyong.

TOKUYAMA, JAPAN
(34°00'00'' N., 131°46'00'' E.) to:

Ports
Apra, Guam, 1,427
Kagoshima, Japan, 263
Kure, Japan, 76
Shimonoseki, Japan, 50
Yokohama, Japan, 510

TOKYO, JAPAN
(35°38'00'' N., 139°46'00'' E.)

Add 10 miles to Yokohama distances.

TOMARI, JAPAN
(43°42'00'' N., 145°30'00'' E.) to:

Ports
Aleksandrovsk, U.S.S.R., 542
Aomori, Japan, 335
Attu Island, Alaska, U.S.A., 1,238
Dutch Harbor, Alaska, U.S.A., 1,978
Hakodate, Japan, 301
Kholmsk, U.S.S.R., 314
Kiska, Alaska, U.S.A., 1,406
Korsakov, U.S.S.R., 239

*JUNCTION POINT.—See Preface for use of junction points.

Muroran, Japan, 295
Nemuro, Japan, 22
Nikolayevsk, U.S.S.R., 694
Otaru, Japan, 387
Petropavlovsk, U.S.S.R., 822
Vladivostok, U.S.S.R., 724
Wakkanai, Japan, 246
Zaliv Chikhacheva, U.S.S.R., 578

TOMIL HARBOR, CAROLINE ISLANDS. See Yap.

TOMPKINSVILLE, NEW YORK, U.S.A.
(40°38′00″ N., 74°04′00″ W.)

For ocean distances, subtract 4½ miles from New York distances.

TONGATABU, TONGA ISLANDS. See Nukualofa.

TONGYONG, KOREA
(34°50′00″ N., 128°27′00″ E.) to:

Ports
Chinnampo, Korea, 446
Mokpo, Korea, 189
Najin, Korea, 501
Pusan, Korea, 63
Wonsan, Korea, 358

TONSBERG, NORWAY
(59°15′42″ N., 10°24′50″ E.) to:

Junction Points*
Pentland Firth, Scotland, 532

Ports
Bergen, Norway, 329
London, England, 624

TORNIO, FINLAND
(65°45′30″ N., 24°08°30″ E.) to:

Junction Points*
Skagens Odde, Denmark (via Store Baelt), 1,103
Skagens Odde, Denmark (via The Sound), 973

TORRES STRAIT, AUSTRALIA*
(10°33′00″ S., 142°08′00″ E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 6,934
Panama, Panama, 8,451
Port Said, U.A.R. (via Eight Degree Channel, October–April), 7,403
Port Said, U.A.R. (via One and Half Degree Channel, May–September), 7,505
Punta Arenas, Chile (via Raine Island entrance and Lat. 49° S.), 7,217
Wetar Passage, Indonesia, 881
Wilson Promontory, Australia (via Cape Capricorn and inner route), 2,183

Ports
Aden, Aden Protectorate (via Eight Degree Channel, October–April), 6,016
Aden, Aden Protectorate (via One and Half Degree Channel, May–September), 6,118
Ambon, Indonesia, 964
Apia, Samoa (via Raine Island entrance), 2,763
Auckland, New Zealand (via Raine Island entrance), 2,485
Bandjermasin, Borneo, 1,785
Belawan, Indonesia, 2,839
Bluff Harbor, New Zealand (via Raine Island entrance), 2,797
Bombay, India (south of Java and Timor), 4,849
Bowen, Australia, 760
Brisbane, Australia (via Cape Capricorn and inner route), 1,348
Burketown, Australia, 432
Cairns Harbor, Australia, 505
Callao, Peru (via Raine Island entrance), 8,152
Catherine Hill Bay, Australia, 1,738
Colombo, Ceylon (south of Java and Timor), 3,978
Darwin, Australia (via Clarence Strait and Dundas Strait), 735
Davao, Philippines, 1,628
Djakarta, Indonesia (via Wetar Passage and north of Madura), 2,175
Dunedin, New Zealand, 2,872
Fremantle, Australia, 2,531
Gladstone Harbor, Australia, 1,085
Guayaquil, Ecuador (via Raine Island entrance), 8,270
Hai-kou, Hai-nan Tao, China, 2,801
Hobart, Tasmania, 2,271
Hong Kong, B.C.C., 2,725
Honolulu, Hawaii, U.S.A. (via Raine Island entrance, China Strait and Bougainville Strait), 4,191
Hsia-men, China 2,655
Jesselton, North Borneo, 2,041
Karachi, Pakistan (south of Java and Timor), 5,298
Kiama Harbor, Australia, 1,760
Kuang-chou, China, 2,803
Launceston, Tasmania, 2,278
Lautoka Harbor, Fiji Islands, 2,204
Levuka, Fiji Islands (via Raine Island entrance), 2,268
Lucinda, Australia, 634
Lyttelton, New Zealand, 2,849
Mackay, Australia, 864
Malacca, Malaysia, 2,588
Manila, Philippines (via Basilan Strait and Mindoro Strait), 2,193
Massaua, Ethiopia (via Eight Degree Channel, October–April), 6,403
Massaua, Ethiopia (via One and Half Degree Channel, May–September) 6,506
Nelson, New Zealand, 2,646
Noumea, New Caledonia (via Raine Island entrance), 1,622
Pago Pago, American Samona (via Raine Island entrance), 2,848
Palmyra Island (via Raine Island entrance), 3,593
Papeete, Society Islands (via Raine Island entrance), 4,043
Port Kembla, Australia, 1,817
Port Lincoln, Australia, 2,811
Port Louis, Mauritius, 4,933
Portland, Australia, 2,429
Pulupandan, Philippines, 1,962
Rockhampton, Australia, 1,034
Sabang, Indonesia, 3,072
Sai Gon, Vietnam, 2,629
San Francisco, California, U.S.A. (via Raine Island entrance), 6,249
Sorido, Indonesia, 1,329
Sorong, New Guinea, 1,021
Surabaja, Indonesia (via Wetar Passage and south of Madura), 1,784
Surabaja, Inodnesia via Wetar Passage and north of Madura), 1,814
Suva, Fiji Islands (via Raine Island entrance, north of Cape Cumberland and Maewo to Kandavu Passage), 2,212
Sydney, Australia, 1,754
Teluk Kau, Halmahera, 1,204
Townsville, Australia, 662
Urangan, Australia, 1,198
Valparaiso, Chile (via Lat. 49° S.), 7,670
Victoria, North Borneo, 2,192
Wellington, New Zealand (via Raine Island entrance), 2,652

TORSHAVN, FAEROE ISLANDS
(62°00′20″ N., 6°45′30″ W.) to:

Junction Points*
Pentland Firth, Scotland, 224
Skagens Odde, Denmark, 624

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Aberdeen, Scotland, 365
Bergen, Norway, 372
Reykjavik, Iceland, 516

TOSHIMOYE, JAPAN. See Kasatka.

TOULON, FRANCE
(43°06'45'' N., 5°55'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,486
Strait of Gibraltar, 722

Ports
Ajaccio, Corsica, 155
Alexandria, U.A.R., 1,376
Alger, Algeria, 406
Alicante, Spain, 418
Ancona, Italy, 1,077
Annaba, Algeria, 390
Banghazi, Libya, 972
Barcelona, Spain, 205
Bari, Italy, 870
Bayrut, Lebanon, 1,568
Bizerte, Tunisia, 405
Brindisi, Italy, 812
Cagliari, Sardinia, 337
Cartagena, Spain, 471
Castellamare di Stabia, Italy, 430
Ceuta, Morocco, 704
Genova, Italy, 171
Gibraltar, 705
Haifa, Israel, 1,565
Iraklion, Crete, 1,051
Istanbul, Turkey (via Corinth Canal), 1,310
Istanbul, Turkey (south of Greece), 1,351
Izmir, Turkey (via Corinth Canal), 1,155
Izmir, Turkey (south of Greece), 1,197
La Spezia, Italy, 199
Livorno, Italy, 204
Malaga, Spain, 652
Messina, Sicily, 546
Napoli, Italy, 424
Odessa, U.S.S.R. (via Corinth Canal), 1,658
Odessa, U.S.S.R. (south of Greece), 1,699
Oran, Algeria, 545
Palermo, Sicily, 464
Palma, Balearic Islands, 308
Piraievs, Greece (via Corinth Canal), 956
Piraievs, Greece (south of Greece), 1,038
Rijeka, Yugoslavia, 1,145
Savona, Italy, 156
Sibenik, Yugoslavia, 1,018
Siracusa, Sicily, 617
Skikda, Algeria, 381
Split, Yugoslavia, 1,003
Tarabulus, Libya, 722
Taranto, Italy, 765
Tarragona, Spain, 251
Thessaloniki, Greece (via Corinth Canal), 1,204
Thassaloniki, Greece (south of Greece), 1,246
Trieste, Free Territory, 1,178
Tunis, Tunisia, 453
Valencia, Spain, 363
Valletta, Malta, 605
Venezia, Italy, 1,188
Volos, Greece (via Corinth Canal), 1,145
Volos, Greece (via south of Greece), 1,187

TOURANE, VIETNAM. See Da Nang.

TOWNSVILLE, AUSTRALIA
(19°15'00'' S., 146°50'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,023
Torres Strait, Australia, 662
Wilson Promontory, Australia, 1,499

Ports
Brisbane, Australia, 677
Noumea, New Caledonia, 1,155
Port Moresby, Papua, 595

TOYAMA, JAPAN. See Higashi-Iwase.

TRABZON, TURKEY
(41°01'00'' N., 39°46'30'' E.)

Add 511 miles to Istanbul distances for ports outside the Black Sea.

TRALLEBORG, SWEDEN. See Trelleborg.

TRAPANI, SICILY
(38°00'15'' N., 12°30'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,100
Strait of Gibraltar, 896

Ports
Messina, Sicily, 177
Napoli, Italy, 198
Tunis, Tunisia, 138

TRAVEMUNDE, GERMANY
(53°57'35'' N., 10°53'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 88
Sakgens Odde, Denmark (via Store Baelt), 282

Ports
Gdynia, Poland, 307
Kobenhavn, Denmark (via Store Baelt), 234
Kobenhavn, Denmark (via The Sound), 139
Oslo, Norway (via Store Baelt), 389
Oslo, Norway (via The Sound), 410

TRELLEBORG, SWEDEN
(55°22'00'' N., 13°09'25'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 141
Skagens Odde, Denmark (via Store Baelt), 333
Skagens Odde, Denmark (via The Sound), 192

Ports
Kristiansand, Norway, 425
Oslo, Norway (via Store Baelt), 467
Oslo, Norway (via The Sound), 314

TRENTON, NEW JERSEY, U.S.A.
(40°11'24'' N., 74°45'24'' W.)

Add 28 miles to Philadelphia distances.

TRIESTE, FREE TERRITORY
(45°39'13'' N., 13°44'49'' E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,297
Port Said, U.A.R. (south of Greece), 1,310
Strait of Gibraltar, 1,682

Ports
Al Ladhiqiyah, Syria (via Corinth Canal), 1,337
Al Ladhiqiyah, Syria (south of Greece), 1,370

*JUNCTION POINT.—See Preface for use of junction points.

Alexandria, U.A.R., 1,200
Alger, Algeria, 1,254
Alicante, Spain, 1,409
Ancona, Italy, 130
Annaba, Algeria, 1,034
Banghazi, Libya, 901
Barcelona, Spain, 1,313
Bari, Italy, 321
Batumi, U.S.S.R. (via Corinth Canal), 1,650
Batumi, U.S.S.R. (south of Greece), 1,749
Bayrut, Lebanon (via Corinth Canal), 1,346
Bayrut, Lebanon (south of Greece), 1,379
Bizerte, Tunisia, 943
Brindisi, Italy, 376
Cartagena, Spain, 1,439
Ceuta, Morocco, 1,662
Genova Italy, 1,118
Gibraltar, 1,664
Haifa, Israel (via Corinth Canal), 1,348
Haifa, Israel (south of Greece), 1,375
Iraklion, Crete, 865
Istanbul, Turkey (via Corinth Canal), 1,063
Istanbul, Turkey (south of Greece), 1,162
Izmir, Turkey (via Corinth Canal), 908
Izmir, Turkey (south of Greece), 1,007
La Spezia, Italy, 1,083
Livorno, Italy, 1,047
Malaga, Spain, 1,611
Marseille, France, 1,210
Messina, Sicily, 637
Napoli, Italy, 808
Odessa, U.S.S.R. (via Corinth Canal), 1,411
Odessa, U.S.S.R. (south of Greece), 1,510
Oran, Algeria, 1,450
Palermo, Sicily, 753
Palma, Balearic Islands, 1,271
Piraievs, Greece (via Corinth Canal), 709
Piraievs, Greece (south of Greece), 848
Rijeka, Yugoslavia, 120
Savona, Italy, 1,128
Sibenik, Yugoslavia, 192
Siracusa, Sicily, 658
Split, Yugoslavia, 210
Tarabulus, Libya, 921
Taranto, Italy, 516
Thessaloniki, Greece (via Corinth Canal), 957
Thessaloniki, Greece (south of Greece), 1,056
Toulon, France, 1,178
Tunis, Tunisia, 930
Valencia, Spain, 1,396
Valletta, Malta, 735
Volos, Greece (via Corinth Canal), 898
Volos, Greece (south of Greece), 997
Zadar, Yugoslavia, 142

TRINCOMALEE, CEYLON
(8°33'30'' N., 81°12'45'' E.) to:

Ports
Bombay, India, 1,218
Colombo, Ceylon, 347
Galle, Ceylon, 255
Karachi, Pakistan, 1,667
Padang, Indonesia, 1,301

TRIPOLI, LEBANON. See Tarabulus.

TRIPOLI, LIBYA. See Tarabulus.

TROMSO, NORWAY
(69°39'00'' N., 18°58'30'' E.) to:

Junction Points*
Bishop Rock, England (via English Channel), 1,597

Ports
Bjornoya, Svalbard, 306
Bergen, Norway, 705
Galway, Ireland, 1,352
Hammerfest, Norway, 124
Jan Mayen, 567
Longyearbyen, Svalbard, 556
Oslo, Norway, 1,069
Stavanger, Norway, 810

TRONDHEIM, NORWAY
(63°26'00'' N., 10°23'00'' E.) to:

Junction Points*
Bishop Rock, England (via English Channel), 1,202

Ports
Bergen, Norway, 321
Hull, England, 752
Kristiansand, Norway, 436
Longyearbyen, Svalbard, 943
Oslo, Norway, 688
Reykjavik, Iceland, 969

TRUK, CAROLINE ISLANDS
(7°22'00'' N., 151°54'00'' E.) to:

Junction Points*
Panama, Panama, 7,685
Singapore, 3,052

Ports
Apra, Guam, 590
Auckland, New Zealand, 3,000
Baie du Controleur, Marquesas, 4,199
Ching-tao, China, 2,459
Darwin, Australia (via Selat Sele), 2,142
Dutch Harbor, Alaska, U.S.A., 3,493
Guayaquil, Ecuador, 7,752
Hai-kou, Hai-nan Tao, China, 2,565
Hong Kong, B.C.C., 2,376
Honolulu, Hawaii, U.S.A., 3,028
Jaluit, Marshall Islands, 1,078
Kodiak, Alaska, U.S.A., 4,008
Manila, Philippines, 1,994
Midway Island, Pacific, 2,146
Noumea, New Caledonia, 2,068
Pago Pago, American Samoa, 2,603
Palmyra Island, 2,747
Papette, Society Islands, 3,788
Ponape, Caroline Islands, 383
Sai Gon, Vietnam, 2,799
Saipan, Mariana Islands, 610
San Diego, California, U.S.A., 5,216
San Francisco, California, U.S.A., 4,931
Seattle, Washington, U.S.A., 4,929
Shang-hai, China, 2,261
Sitka, Alaska, U.S.A., 4,473
Surabaja, Indonesia, 2,623
Suva, Fiji Islands, 2,231
Sydney, Australia, 2,543
Tinian, Mariana Islands, 597
Valparaiso, Chile, 7,952
Vladivostok, U.S.S.R., 2,593
Wake Island, 1,117
Yap, Caroline Islands, 851
Yokohama, Japan, 1,832

TSAM KONG, CHINA. See Chan Chiang.

TSINGTAO, CHINA. See Ching-tao.

TSO-YING, TAIWAN
(22°42'00'' N., 120°15'00'' E.) to:

Ports
Hong Kong, B.C.C., 343
Inchon, Korea, 975
Makasar, Celebes, 1,757
Manila, Philippines, 552
Sai Gon, Vietnam, 1,131

*JUNCTION POINT.—See Preface for use of junction points.

TSUCHIZAKI, JAPAN. See Akita.

TSURUGA, JAPAN
(35°39'30'' N., 136°04'00'' E.) to:

Ports
Hakodate, Japan, 447
Masan, Korea, 385
Shang-hai, China, 823
Shimonoseki, Japan, 325
Vladisvostok, U.S.S.R., 490

TUBRUQ, LIBYA
(32°04'39'' N., 23°59'00'' E.) to:

Junction Points*
Port Said, U.A.R., 445
Strait of Gibraltar, 1,534

Ports
Alexandria, U.A.R., 308
Banghazi, Libya, 248
Bayrut, Lebanon, 595
Genova, Italy, 1,048
Iskenderun, Turkey, 667
Piraievs, Greece, 359
Tarabulus, Libya, 574
Venezia, Italy, 980

TULEAR, MALAGASY REPUBLIC
(23°21'42'' S., 43°39'42'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,509
Port Said, U.A.R., 3,966

Ports
Beira, Mozambique, 539
Majunga, Malagasy Republic, 625
Manakara, Malagasy Republic, 467
Mocambique, Mozambique, 532

TUNG-HAI-TAN, CHINA. See Chang-kan.

TUNIS, TUNISIA
(36°47'54'' N., 10°11'51'' E.) to:

Junction Points*
Port Said, U.A.R., 1,172
Strait of Gibraltar, 820

Ports
Al Khums, Libya, 357
Al Ladhiqiyah, Syria, 1,258
Alexandria, U.A.R., 1,051
Alger, Algeria, 392
Alicante, Spain, 558
Ancona, Italy, 830
Annaba, Algeria, 167
As Sukhayrah, Tunisia, 301
Banghazi, Libya, 585
Baniyas, Syria, 1,275
Barcelona, Spain, 492
Bari, Italy, 622
Bayrut, Lebanon, 1,263
Brindisi, Italy, 564
Cagliari, Sardinia, 169
Cartagena, Spain, 583
Ceuta, Morocco, 801
Gaeta, Italy, 315
Genova, Italy, 472
Gibraltar, 803
Haifa, Israel, 1,260
Iraklion, Crete, 745
Istanbul, Turkey (via Corinth Canal), 1,033
Istanbul, Turkey (south of Greece), 1,050
Izmir, Turkey (via Corinth Canal), 879
Izmir, Turkey (south of Greece), 896
Kalamai, Greece, 599
La Spezia, Italy, 448
Livorno, Italy, 417
Marsala, Sicily, 124
Marsaxlokk, Malta, 246
Marseille, France, 476
Messina, Sicily, 302
Napoli, Italy, 313
Odessa, U.S.S.R. (via Corinth Canal), 1,382
Odessa, U.S.S.R. (south of Greece), 1,399
Oran, Algeria, 589
Palermo, Sicily, 193
Palma, Balearic Islands, 435
Piraievs, Greece (via Corinth Canal), 680
Piraievs, Greece (south of Greece), 737
Porto di Licata, Sicily, 187
Porto Empedocle, Sicily, 167
Pozzuoli, Italy, 308
Qabis, Tunisia, 302
Rijeka, Yugoslavia, 897
Savona, Italy, 475
Sibenik, Yugoslavia, 771
Siracusa, Sicily, 283
Split, Yugoslavia, 756
Tarabulus, Libya, 322
Taranto, Italy, 518
Thessaloniki, Greece (via Corinth Canal), 928
Thessaloniki, Greece (south of Greece), 945
Toulon, France, 453
Trapani, Sicily, 138
Trieste, Free Territory, 930
Valencia, Spain, 560
Valletta, Malta, 234
Venezia, Italy, 940
Viareggio, Italy, 778
Volos, Greece (via Corinth Canal), 869
Volos, Greece (south of Greece), 886

TURIAMO, VENEZUELA
(10°26'30'' N., 67°50'30'' W.) to:

Junction Points*
Panama, Panama, 858
Yucatan Channel, 1,221

Ports
Barranquilla, Colombia, 504
Port of Spain, Trinidad, 384
Willemstad, Curacao, 124

TURKU, FINLAND
(60°26'00'' N., 22°13'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 576
Skagens Odde, Denmark (via Store Baelt), 768
Skagens Odde, Denmark (via The Sound), 642

Ports
Oslo, Norway (via Store Baelt), 892
Oslo, Norway (via The Sound), 764
Rauma, Finland, 98

TUXPAM, MEXICO. See Tuxpan.

TUXPAN, MEXICO
(20°58'00'' N., 97°25'00'' W.) to:

Junction Points*
Panama, Panama, 1,498
Straits of Florida, 817
Yucatan Channel, 689

Ports
Alvaro Obregon, Mexico, 307
Apalachicola, Florida, U.S.A., 843
Belize, British Honduras, 897
Campeche, Mexico, 375
Carmen, Mexico, 333
Cartagena, Colombia, 1,545
Castries, St. Lucia, 2,136
Charlotte Amalie, Virgin Islands (via Yucatan Channel and Windward Passage), 1,867

*JUNCTION POINT.—See Preface for use of junction points.

Charlotte Amalie, Virgin Islands (via Yucatan Channel and south of Hispaniola), 1,884
Charlotte Amalie, Virgin Islands (via Old Bahama Channel), 1,890
Cienfuegos, Cuba, 979
Colon, Panama, 1,455
Galveston, Texas, U.S.A., 530
Gulfport, Mississippi, U.S.A., 751
Habana, Cuba, 847
Key West, Florida, U.S.A., 891
Kingston, Jamaica, 1,243
La Guaira, Venezuela, 1,923
Matagorda Bay, Texas, U.S.A., 445
Mobile, Alabama, U.S.A., 776
New Orleans, Louisiana, U.S.A., 739
Pensacola, Florida, U.S.A., 785
Pointe a Pitre, Guadeloupe, 2,094
Port Arthur, Texas, U.S.A., 572
Port au Prince, Haiti, 1,428
Port of Spain, Trinidad, 2,201
Puerto Cabello, Venezuela, 1,883
Santo Domingo, Dominican Republic, 1,624
Veracruz, Mexico, 134
Willemstad, Curacao, 1,786

TVEDESTRAND, NORWAY
(58°37'10'' N., 8°56'20'' E.) to:

Junction Points*
Pentland Firth, Scotland, 421
Skagens Odde, Denmark, 76

Ports
Bergen, Norway, 272
London, England, 565
Oslo, Norway, 121

TYRE, LEBANON. See Sur.

UBE, JAPAN
(33°55'00'' N., 131°13'30'' E.) to:

Ports
Hagata, Japan, 84
Kagoshima, Japan, 280
Nagoya, Japan, 419
Pusan, Korea, 143
Yokohama, Japan, 536

UGLEGORSK, U.S.S.R. See Esutoru.

ULEABORG, FINLAND. See Oulu.

ULSAN, KOREA
(35°28'00'' N., 129°24'00'' E.) to:

Ports
Hakodate, Japan, 661
Inchon, Korea, 435
Maizuru, Japan, 315
Najin, Korea, 418
Vladivostok, U.S.S.R., 486

UMEA, SWEDEN
(63°49'12'' N., 20°16'20'' E.) to:

Junction Points*
Kiel Canal, Germany, 751
Skagens Odde, Denmark, 812

Ports
Gdynia, Poland, 574
Leningrad, U.S.S.R., 574
Stockholm, Sweden, 289

UMM SAID, QATAR
(24°53'30'' N., 51°34'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 5,245
Cape of Good Hope, Republic of South Africa, 4,909
Port Said, U.A.R., 3,091
Singapore, 3,630

Ports
Al Basrah, Iraq, 444

UNALAKLEET, ALASKA, U.S.A.
(63°52'15'' N., 160°47'15'' W.) to:

Junction Points*
Panama, Panama, 5,967

Ports
Dutch Harbor, Alaska, U.S.A., 752
Honolulu, Hawaii, U.S.A., 2,407
Kodiak, Alaska, U.S.A., 884
San Diego, California, U.S.A., 2,791
Seattle, Washington, U.S.A., 2,023

UNGGI, KOREA
(42°19'00'' N., 130°24'45'' E.) to:

Ports
Hakodate, Japan, 486
Maizuru, Japan, 474
Otaru, Japan, 488
Pusan, Korea, 452
Shimonoseki, Japan, 511

UNO, JAPAN
(34°29'00'' N., 133°57'30'' E.) to:

Ports
Chi-lung Chiang, Taiwan, 903
Kobe, Japan, 71
Kure, Japan, 117
Shimonoseki, Japan, 177
Yokohama, Japan, 405

UPERNIVIK, GREENLAND
(72°46'30'' N., 56°12'00'' W.) to:

Junction Points*
Pentland Firth, Scotland, 2,164
Strait of Gibraltar, 3,011

Ports
Churchill, Canada, 1,669
Reykjavik, Iceland, 1,610
St. John's, Canada, 1,532

URANGAN, AUSTRALIA
(25°17'00'' S., 152°55'00'' E.) to:

Junction Points*
Torres Strait, Australia, 1,198
Wilson Promontory, Australia, 1,100

Ports
Brisbane, Australia, 282
Wellington, New Zealand, 1,581

URKT ROAD, SAKHALIN. See Reyd Urkt.

USHANT, FRANCE*
(48°40'00'' N., 5°30'00'' W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,746
Kiel Canal (east end), Germany, 716
Punta Arenas, Chile, 6,986
Skagens Odde, Denmark, 833
Strait of Gibraltar, 918

Ports
Aberdeen, Scotland, 715
Agadir, Morocco, 1,136
Amboim, Angola, 4,739
Amsterdam, Netherlands, 465
Anecho, Togo, 3,704
Antwerpen, Belgium, 441
Aviles, Spain, 307
Bata, Spanish Guiana, 4,173
Bayonne, France, 345
Belem, Brazil, 3,748

*JUNCTION POINT.—See Preface for use of junction points.

Bergen, Norway, 894
Bilbao, Spain, 346
Bissau, Portuguese Guinea, 2,401
Bolama, Portuguese Guiana, 2,422
Bordeaux, France, 321
Bremerhaven, Germany, 647
Brest, France, 55
Buenos Aires, Argentina, 5,916
Cadiz, Spain, 894
Caen, France, 240
Calabar, Nigeria, 4,054
Calais, France, 321
Cape Town, Republic of South Africa, 5,743
Casablanca, Morocco, 960
Cotonou, Dahomey, 3,747
Dakar, Senegal, 2,152
Dartmouth, England, 135
Dieppe, France, 270
Dover, England, 306
Dundee, Scotland, 698
Dunkerque, France, 351
Egersund, Norway, 783
El Ferrol del Caudillo, Spain, 343
El Jadida, Morocco, 998
Emden, Germany, 590
Esbjerg, Denmark, 676
Falmouth, England, 100
Fecamp, France, 246
Fedala, Morocco, 944
Freetown, Sierra Leone, 2,630
Funchal, Madeira Island, 1,098
Gijon, France, 294
Granville, France, 158
Greenville, Liberia, 2,981
Hamburg, Germany, 703
Hartlepool, England, 579
Hull, England, 523
Kenitra, Morocco, 954
Kristiansand, Norway, 794
La Coruna, Spain, 331
La Pallice, France, 245
Lagos, Nigeria, 3,746
Larache, Morocco, 926
Le Havre, France, 243
Leith, Scotland, 696
Lisboa, Portugal, 666
Lobito, Angola, 4,670
London, England, 398
Longji, Cameroon, 4,179
Lorient, France, 107
Marin, Ponte Vedra Bay, Spain, 437
Mayumba, Gabon, 4,437
Mocamedes, Angola, 4,697
Montevideo, Uruguay, 5,802
Narvik, Norway, 1,498
Natal, Brazil, 3,619
Newcastle, England, 604
Oostende, Belgium, 365
Oslo, Norway, 944
Paramaribo, Surinam, 3,613
Plymouth, England, 117
Ponta Delgada, Azores, 1,101
Port Buchanan, Liberia, 2,904
Port Etienne, Mauritania, 1,826
Port Harcourt, Nigeria, 3,974
Port Nolloth, Republic of South Africa, 5,516
Porto, Portugal, 494
Porto Grande, Cape Verde Islands, 2,137
Portsmouth, England, 227
Puerto de Pasajes, Spain, 340
Quiberon, France, 133
Rabat, Morocco, 954
Recife, Brazil, 3,743
Rio de Janeiro, Brazil, 4,815
River Cess, Liberia, 2,940
Rota, Spain, 885
Rotterdam, Netherlands, 444
Safi, Morocco, 1,023
St. Helena Island, 4,120
St. Louis, Senegal, 2,075
St. Malo, France, 141
St. Nazaire, France, 184
Salvador, Brazil, 4,134
San Sebastian, Spain, 353
Santa Cruz de Tenerife, Canary Islands, 1,320
Santander, Spain, 323
Santos, Brazil, 5,002
Sekondi, Ghana, 3,424
Setubal, Portugal, 672
Shoreham By Sea, England, 245
Sidi Ifni, Ifni, 1,196
Southampton, England, 223
Stavanger, Norway, 823
Sulima, Sierra Leone, 2,739
Swakopmund, Republic of South Africa, 5,156
Tabu, Ivory Coast, 3,097
Tema, Ghana, 3,597
Viana do Castello, Portugal, 467
Victoria, Cameroon, 4,126
Vigo, Spain, 439
Vila Rial de Santo Antonio, Portugal, 836
Villagarcia, Spain, 433
Wilhelmsaven, Germany, 639
Willemstad, Curacao, 3,821
Zeebrugge, Belgium, 380

USHUAIA, ARGENTINA
(54°59'00" S., 68°18'10" W.) to:

Ports
Buenos Aires, Argentina, 1,447
Stanley, Falkland Islands, 468

USKUDAR, TURKEY
(41°01'15" N., 29°00'00" E.)

Use Istanbul distances.

UUSIKAUPUNKI, FINLAND
(60°47'30" N., 21°22'30" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 624
Skagens Odde, Denmark (via Store Baelt), 825

Ports
Helsinki, Finland, 293
Oslo, Norway (via Store Baelt), 939
Oslo, Norway (via The Sound), 808
Stockholm, Sweden, 164

VAASA, FINLAND
(63°05'15" N., 21°33'00" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 744
Skagens Odde, Denmark, 805

Ports
Jakobstad, Finland, 99
Rauma, Finland, 160
Stockholm, Sweden, 282

VADO LIGURE, ITALY
(44°16'00" N., 8°27'00" E.)

Use Savona distances.

VADSO, NORWAY
(70°04'30" N., 29°44'00" E.) to:

Ports
Bjornoya, Svalbard, 373

VALDEZ, ALASKA, U.S.A.
(61°06'00" N., 146°17'00" W.) to:

Ports
Petersburg, Alaska, U.S.A., 539
Seattle, Washington, U.S.A., 1,229
Seward, Alaska, U.S.A., 145
Sitka, Alaska, U.S.A., 473
Yakutat, Alaska, U.S.A., 287

VALDIVIA, CHILE
(39°49'00" S., 73°17'20" W.)

And 11 miles to Corral distances.

VALENCIA, SPAIN
(39°27'14" N., 0°19'12" W.) to:

Junction Points*
Port Said, U.A.R., 1,679
Strait of Gibraltar, 403

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Al Ladhiqiyah, Syria, 1,765
Alexandria, U.A.R., 1,559
Alger, Algeria, 230
Alicante, Spain, 98
Ancona, Italy, 1,295
Annaba, Algeria, 426
Augusta, Sicily, 801
Banghazi, Libya, 1,094
Barcelona, Spain, 165
Bari, Italy, 1,088
Bayrut, Lebanon, 1,770
Bizerte, Tunisia, 506
Brindisi, Italy, 1,048
Cagliari, Sardinia, 461
Cartagena, Spain, 152
Ceuta, Morocco, 385
Genova, Italy, 512
Gibraltar, 386
Haifa, Israel, 1,767
Iraklion, Crete, 1,252
Istanbul, Turkey (via Corinth Canal), 1,528
Istanbul, Turkey (south of Greece), 1,558
Izmir, Turkey (via Corinth Canal), 1,374
Izmir, Turkey (south of Greece), 1,403
La Spezia, Italy, 538
Livorno, Italy, 539
Malaga, Spain, 334
Marseille, France, 347
Messina, Sicily, 764
Napoli, Italy, 690
Odessa, U.S.S.R. (via Corinth Canal), 1,876
Odessa, U.S.S.R. (south of Greece), 1,906
Oran, Algeria, 238
Palermo, Sicily, 656
Palma, Balearic Islands, 146
Piraievs, Greece (via Corinth Canal), 1,174
Piraievs, Greece (south of Greece), 1,244
Rijeka, Yugoslavia, 1,363
Savona, Italy, 497
Sibenik, Yugoslavia, 1,237
Siracusa, Sicily, 790
Split, Yugoslavia, 1,222
Tarabulus, Libya, 831
Taranto, Italy, 983
Tarragona, Spain, 124
Thessaloniki, Greece (via Corinth Canal), 1,422
Thessaloniki, Greece (south of Greece), 1,452
Toulon, France, 363
Trieste, Free Territory, 1,396
Tunis, Tunisia, 560
Valletta, Malta, 743
Venezia, Italy, 1,406
Volos, Greece (via Corinth Canal), 1,364
Volos, Greece (south of Greece), 1,393

VALLETTA, MALTA
(35°53′30″ N., 14°30′52″ E.) to:

Junction Points*
Port Said, U.A.R., 946
Strait of Gibraltar, 1,005

Ports
Al Hammamat, Tunisia, 198
Alexandria, U.A.R., 823
Alger, Algeria, 576
Alicante, Spain, 743
Ancona, Italy, 634
Annaba, Algeria, 352
Augusta, Sicily, 98
Banghazi, Libya, 359
Barcelona, Spain, 671
Bari, Italy, 427
Bayrut, Lebanon, 1,049
Bizerte, Tunisia, 247
Brindisi, Italy, 369
Cagliari, Sardinia, 331
Cartagena, Spain, 768
Ceuta, Morocco, 986
Civitavecchia, Italy, 421
Darnah, Libya, 450
Genova, Italy, 584
Gibraltar, 988
Haifa, Israel, 1,038
Iraklion, Crete, 528
Istanbul, Turkey, 837
Izmir, Turkey, 683
Jaffa, Israel, 1,037
La Spezia, Italy, 554
Livorno, Italy, 519
Malaga, Spain, 928
Marsala, Sicily, 157
Marseille, France, 637
Messina, Sicily, 156
Napoli, Italy, 327
Nice, France, 592
Odessa, U.S.S.R., 1,185
Oran, U.S.S.R., 774
Palermo, Sicily, 242
Palma, Balearic Islands, 619
Piraievs, Greece, 524
Porto di Licata, Sicily, 78
Porto Empedocle, Sicily, 97
Qabis, Tunisia, 232
Rijeka, Yugoslavia, 701
Savona, Italy, 588
Sete, France, 694
Sibenik, Yugoslavia, 575
Siracusa, Sicily, 88
Sousse, France, 197
Split, Yugoslavia, 560
Tarabulus, Libya, 201
Taranto, Italy, 322
Thessaloniki, Greece, 732
Toulon, France, 605
Trieste, Free Territory, 735
Tunis, Tunisia, 234
Valencia, Spain, 743
Venezia, Italy, 745
Volos, Greece, 672

VALONA, ALBANIA. See Vlores.

VALPARAISO, CHILE
(33°02′00″ S., 71°38′00″ W.) to:

Junction Points*
Panama, Panama, 2,616
Punta Arenas, Chile, 1,432
Torres Strait, Australia (via Raine Island entrance and Lat. 30° S.), 8,015
Wilson Promontory, Australia (via Lat. 60° S.), 6,031

Ports
Acapulco, Mexico, 3,406
Antofagasta, Chile, 576
Apia, Samoa, 5,453
Apra, Guam, 8,510
Arica, Chile, 882
Auckland, New Zealand, 5,247
Avarua, Cook Islands, 4,632
Baie du Controleur, Marquesas, 4,029
Caldera, Chile, 376
Callao, Peru, 1,306
Chanaral, Chile, 417
Chimbote, Peru, 1,490
Ching-tao, China, 10,274
Coquimbo, Chile, 203
Corinto, Nicaragua, 2,875
Corral, Chile, 442
Dutch Harbor, Alaska, U.S.A., 7,140
Esmeraldas, Ecuador, 2,179
Guayaquil, Ecuador, 1,980
Guaymas, Mexico, 4,291
Hai-Kou, Hai-nan Tao, 10,365
Hakodate, Japan, 9,197
Hong Kong, B.C.C. (direct), 10,218
Honolulu, Hawaii, U.S.A., 5,919
Hsia-men, China (via Cook Strait), 10,216
Iquique, Chile, 782
Islas Juan Fernandez, 364
Jaluit, Marshall Islands, 7,034
Kobe, Japan, 9,534
Kodiak, Alaska, U.S.A., 6,803
Levuka, Fiji Islands, 5,753
Los Angeles, California, U.S.A., 4,808
Lota, Chile, 268
Manila, Philippines (direct), 9,710

*JUNCTION POINT.—See Preface for use of junction points.

Midway Island, Pacific, 7,042
Mollendo, Peru, 962
Monterey, California, U.S.A., 5,060
Montevideo, Uruguay, 2,740
Nagasaki, Japan, 9,806
Nome, Alaska, U.S.A., 7,728
Noumea, New Caledonia, 6,115
Omura, Bonin Islands, 9,023
Pago Pago, American Samoa, 5,378
Palmyra Island, 5,621
Papeete, Society Islands, 4,254
Pisco, Peru, 1,207
Ponape, Caroline Islands, 7,631
Portland, Oregon, U.S.A., 5,764
Prince Rupert, Canada, 6,199
Puerto Montt, Chile, 623
Puntarenas, Costa Rica, 2,690
Rabaul, New Britain, 7,461
Salina Cruz, Mexico, 3,247
San Blas, Mexico, 3,835
San Diego, California, U.S.A., 4,738
San Francisco, California, U.S.A., 5,140
San Jose, Guatemala, 3,024
Santa Barbara, California, U.S.A., 4,875
Sasebo, Japan (via Osumi Kaikyo), 9,836
Seattle, Washington, U.S.A., 5,916
Seward, Alaska, U.S.A., 6,812
Shang-hai, China, 10,148
Shimonoseki, Japan, 9,709
Sitka, Alaska, U.S.A., 6,407
Suva, Fiji Islands, 5,759
Sydney, Australia (via Lat. 30° S.), 6,986
Sydney, Australia (via Lat. 49° S.), 6,294
Ta-ku, China (via Shimonoseki Kaikyo), 10,482
Talcahuano, Chile, 241
Ta-lien, China (via Shimonoseki Kaikyo), 10,324
Ta-lien, China (via Tokara Kaikyo), 10,366
Tocopilla, Chile, 663
Truk, Caroline Islands (direct), 7,952
Vladivostok, U.S.S.R., 9,606
Wake Island, Pacific, 7,601
Wellington, New Zealand, 5,036
Yokohama, Japan, 9,280

VANCOUVER, CANADA
(49°18'00" N., 123°06'00" W.) to:

Junction Points*
Panama, Panama, 4,032
Punta Arenas, Chile, 6,978
Singapore, 7,078

Ports
Apia, Samoa, 4,675
Auckland, New Zealand, 6,191
Bellingham, Washington, U.S.A., 70
Dutch Harbor, Alaska, 1,724
Honolulu, Hawaii, U.S.A., 2,423
Juneau, Alaska, U.S.A., 761
Kobe, Japan, 4,541
Nanaimo, Canada, 35
Nome, Alaska, U.S.A., 2,304
Pago Pago, American Samoa, 4,637
Port Angeles, Washington, U.S.A., 93
Port Hueneme, California, U.S.A., 1,102
Portland, Oregon, U.S.A., 371
Prince Rupert, Canada, 477
San Francisco, California, U.S.A., 812
Seattle, Washington, U.S.A. (via Haro Strait and Boundary Pass), 132
Seattle, Washington, U.S.A. (via Haro Strait and Active Pass), 126
Seward, Alaska, U.S.A., 1,249
Sitka, Alaska, U.S.A., 823
Skagway, Alaska, U.S.A., 1,021
Yokohama, Japan, 4,262

VARDO, NORWAY
(70°22'30" N., 31°07'00" E.) to:

Junction Points*
Pentland Firth, Scotland, 1,253
Skagens Odde, Denmark, 1,287

Ports
Bjornoya, Svalbard, 328
Longyearbyen, Svalbard, 586
Rotterdam, Netherlands, 1,513

VEJLE, DENMARK
(55°42'15" N., 9°34'00" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 106
Skagens Odde, Denmark, 189

Ports
Goteborg, Sweden, 176
Kobenhavn, Denmark, 149
Lubeck, Germany, 173

VENEZIA, ITALY
(45°25'54" N., 12°18'27" E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,307
Port Said, U.A.R. (south of Greece), 1,317
Strait of Gibraltar, 1,691

Ports
Ajaccio, Corsica, 1,507
Alexandria, U.A.R., 1,208
Alger, Algeria, 1,264
Alicante, Spain, 1,418
Ancona, Italy, 124
Annaba, Algeria, 1,044
Banghazi, Libya, 911
Barcelona, Spain, 1,323
Bari, Italy, 329
Bayrut, Lebanon (via Corinth Canal), 1,356
Bayrut, Lebanon (south of Greece), 1,387
Bizerte, Tunisia, 953
Brindisi, Italy, 386
Cagliari, Sardinia, 970
Cartagena, Spain, 1,449
Ceuta, Morocco, 1,672
Dubrovnik, Yugoslavia, 320
Genova, Italy, 1,128
Gibraltar, 1,674
Haifa, Israel (via Corinth Canal), 1,359
Haifa, Israel (south of Greece), 1,383
Iraklion, Crete, 872
Istanbul, Turkey (via Corinth Canal), 1,073
Istanbul, Turkey (south of Greece), 1,169
Izmir, Turkey (via Corinth Canal), 919
Izmir, Turkey (south of Greece), 1,015
La Spezia, Italy, 1,093
Livorno, Italy, 1,057
Malaga, Spain, 1,621
Marseille, France, 1,220
Messina, Sicily, 647
Napoli, Italy, 818
Odessa, U.S.S.R. (via Corinth Canal), 1,421
Odessa, U.S.S.R. (south of Greece), 1,518
Oran, Algeria, 1,460
Palermo, Sicily, 763
Palma, Balearic Islands, 1,281
Pescara, Italy, 201
Piraievs, Greece (via Corinth Canal), 719
Piraievs, Greece (south of Greece), 856
Rijeka, Yugoslavia, 132
Savona, Italy, 1,138
Sayda, Lebanon (via Corinth Canal), 1,354
Sayda, Lebanon (south of Greece), 1,382
Sibenik, Yugoslavia, 204
Siracusa, Sicily, 668
Split, Yugoslavia, 221

*JUNCTION POINT.—See Preface for use of junction points.

Tarabulus, Lebanon (via Corinth Canal), 1,369
Tarabulus, Lebanon (south of Greece), 1,399
Tarabulus, Libya, 931
Taranto, Italy, 526
Thessaloniki, Greece (via Corinth Canal), 968
Thessaloniki, Greece (south of Greece), 1,064
Toulon, France, 1,188
Tubruq, Libya, 980
Tunis, Tunisia, 940
Valencia, Spain, 1,406
Valletta, Malta, 745
Volos, Greece (via Corinth Canal), 909
Volos, Greece (south of Greece), 1,005

VENICE, ITALY. See Venezia.

VENTSPILS, LATVIA
(57°24'00'' N., 21°34'00'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 434
Skagens Odde, Denmark, 502

Ports
Gdynia, Poland, 204
Leningrad, U.S.S.R., 374
Stockholm, Sweden, 174

VERACRUZ, MEXICO
(19°12'00'' N., 96°08'00'' W.) to:

Junction Points*
Panama, Panama, 1,463
Straits of Florida, 792
Yucatan Channel, 654

Ports
Alvaro Obregon, Mexico, 202
Apalachicola, Florida, U.S.A., 872
Barranquilla, Colombia, 1,525
Belize, British Honduras, 862
Bluefields, Nicaragua, 1,237
Brunswick, Georgia, U.S.A., 1,351
Campeche, Mexico, 307
Carmen, Mexico, 242
Cartagena, Colombia, 1,510
Cienfuegos, Cuba, 944
Colon, Panama, 1,420
Galveston, Texas, U.S.A., 623
Guantanamo, Cuba, 1,228
Gulfport, Mississippi, U.S.A., 800
Habana, Cuba, 814
Key West, Florida, U.S.A., 869
Kingston, Jamaica, 1,210
La Guaira, Venezuela, 1,888
Lake Charles, Louisiana, U.S.A., 688
Limon, Costa Rica, 1,338
Matagorda Bay, Texas, U.S.A., (entrance), 549
Mobile, Alabama, U.S.A., 825
New Orleans, Louisiana, U.S.A., 789
Pensacola, Florida, U.S.A., 831
Port Arthur, Texas, U.S.A., 659
Port of Spain, Trinidad, 2,182
Progreso, Mexico, 401
Puerto Barrios, Guatemala, 985
Puerto Cabello, Venezuela, 1,848
Puerto Cortes, Honduras, 948
Puerto Mexico, Mexico, 127
San Juan, Puerto Rico, 1,780
San Juan del Norte, Nicaragua (via inside route), 1,271
Santa Marta, Colombia, 1,537
Santo Domingo, Dominican Republic, 1,596
Tampa, Florida, U.S.A., 925
Tampico, Mexico, 218
Tuxpan, Mexico, 134
Willemstad, Curacao, 1,756

VGLEGORSK, U.S.S.R. See Esutoru.

VIANA DO CASTELLO, PORTUGAL
(41°41'15'' N., 8°49'30'' W.) to:

Junction Points*
Strait of Gibraltar, 472
Ushant, France, 467

Ports
El Ferrol del Caudillo, Spain, 155
Horta, Azores, 935
Lisboa, Portugal, 210

VIAREGGIO, ITALY
(43°51'45'' N., 10°14'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,716
Strait of Gibraltar, 898

Ports
Civitavecchia, Italy, 480
Marseille, France, 238
Tunis, Tunisia, 778

VIBORG, U.S.S.R. See Vyborg.

VICTORIA, CANADA
(48°25'00'' N., 123°23'30'' W.) to:

Junction Points*
Panama, Panama, 3,962

Ports
Bellingham, Washington, U.S.A., 52
Honolulu, Hawaii, U.S.A., 2,349
Los Angeles, California, U.S.A., 1,091
Nanaimo, Canada, 86
Pago Pago, American Somoa, 4,563
Petersburg, Alaska, U.S.A., 719
Port Angeles, Washington, U.S.A., 20
Prince Rupert, Canada, 531
San Francisco, California, U.S.A., 745
Sand Bay, Alaska, U.S.A., 2,027
Seattle, Washington, U.S.A., 70
Sweeper Cove, Alaska, U.S.A., 2,044
Wrangell, Alaska, U.S.A., 697
Yokohama, Japan, 4,194

VICTORIA, CAMEROON
(4°00'12'' N., 9°11'33'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,399
Ushant, France, 4,126

Ports
Lagos, Nigeria, 410
Matadi, Republic of the Congo, 770

VICTORIA, SEYCHELLES
(4°36'40'' S., 55°29'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa (east of Madagascar), 3,007
Singapore, 3,067

Ports
Aden, Aden Protectorate, 1,416
Belawan, Indonesia, 2,734
Bombay, India, 1,749
Colombo, Ceylon, 1,652
Darwin, Australia, 4,494
Diego Garcia, Chagos Archipelago, 1,032
Fremantle, Australia, 3,752
Malacca, Malaysia, 2,952
Mocambique, Mozambique, 1,085
Penang, Malaysia, 2,779
Port Louis, Mauritius, 943
Sabang, Indonesia, 2,468
Zanzibar, Zanzibar, 1,011

VICTORIA, NORTH BORNEO
(5°16'30'' N., 115°14'30'' E.) to:

Junction Points*
Singapore, 757
Sunda Strait, Indonesia, 948
Torres Strait, Australia, 2,192

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Sandakan, North Borneo, 412
Zamboanga, Philippines, 563

VIGO, SPAIN
(42°14'30'' N., 8°44'00'' W.) to:

Junction Points*
Bishop Rock, England, 484
Montreal, Canada (tracks C and D), 2,979
Montreal, Canada (track E), 2,870
Montreal, Canada (track F), 2,860
Strait of Gibraltar, 504
Straits of Florida, 3,811
Ushant, France, 439

Ports
Bathurst, Gambia, 1,832
Belem, Brazil, 3,398
Boston, Massachusetts, U.S.A. (track A), 2,799
Boston, Massachusetts, U.S.A. (track B), 2,770
Boston, Massachusetts, U.S.A. (tracks C and D), 2,734
Buenos Aires, Argentina, 5,518
Cadiz, Spain, 463
Cape Town, Republic of South Africa, 5,322
Casablanca, Morocco, 545
Colon, Panama, 4,194
Dakar, Senegal, 1,744
Freetown, Sierra Leone, 2,223
Funchal, Madeira Island, 702
Halifax, Canada (tracks C and D), 2,422
Halifax, Canada (track E), 2,359
Halifax, Canada (track F), 2,358
Horta, Azores, 938
Huelva, Spain, 453
Lisboa, Portugal, 247
New York, New York, U.S.A. (track A), 2,958
New York, New York, U.S.A. (track B), 2,940
New York, New York, U.S.A. (tracks C and D), 2,912
Norfolk, Virginia, U.S.A. (track A), 3,106
Norfolk, Virginia, U.S.A., (track B), 3,091
Norfolk, Virginia, U.S.A., (tracks C and D), 3,075
Philadelphia, Pennsylvania, U.S.A. (track A), 3,098
Philadelphia, Pennsylvania, U.S.A. (track B), 3,078
Philadelphia, Pennsylvania, U.S.A., (tracks C and D), 3,055
Ponta Delgada, Azores, 828
Porto, Portugal, 74
Porto Grande, Cape Verde Islands, 1,737
Recife, Brazil, 3,346
Rio de Janeiro, Brazil, 4,418
San Juan, Puerto Rico, 3,228
Santa Cruz de Tenerife, Canary Islands, 909
Tangier, Morocco, 516

VIIPURI, U.S.S.R. See Vyborg.

VILA RIAL DE SANTO ANTONIO, PORTUGAL
(37°12'00'' N., 7°24'30'' W.) to:

Junction Points*
Strait of Gibraltar, 113
Ushant, France, 836

Ports
Casablanca, Morocco, 218
Horta, Azores, 1,046

VILLA CISNEROS, SPANISH SAHARA
(23°37'00'' N., 16°00'00'' W.) to:

Junction Points*
Strait of Gibraltar, 923

Ports
Casablanca, Morocco, 769
Dakar, Senegal, 578
Porto Grande, Cape Verde Islands, 650

VILLA DO PORTO, AZORES
(36°56'00'' N., 25°09'00'' W.) to

Junction Points*
Bishop Rock, England, 1,128
Strait of Gibraltar, 963

Ports
Lisboa, Portugal, 771
New York, New York, U.S.A., 2,279

VILLA SAN GIOVANNI, ITALY
(38°13'00'' N., 15°37'55'' E.) to:

Junction Points*
Port Said, U.A.R., 944
Strait of Gibraltar, 1,047

Ports
Napoli, Italy, 173
Palermo, Sicily, 118
Taranto, Italy, 287

VILLA SANJURJO, MOROCCO
(35°14'55'' N., 3°55'08'' W.) to:

Junction Points*
Port Said, U.A.R., 1,868
Strait of Gibraltar, 106

Ports
Alicante, Spain, 260
Malaga, Spain, 93
Melilla, Morocco, 64

VILLAGARCIA, SPAIN
(42°36'00'' N., 8°47'45'' W.) to:

Junction Points*
Strait of Gibraltar, 526
Ushant, France, 433

Ports
Bilbao, Spain, 357
Horta, Azores, 946
Lisboa, Portugal, 264

VILLEFRANCHE, FRANCE
(43°42'00'' N., 7°18'45'' E.) to:

Junction Points*
Port Said, U.A.R., 1,455
Strait of Gibraltar, 789

Ports
Ajaccio, Corsica, 138
Barcelona, Spain, 277
Genova, Italy, 88
Livorno, Italy, 133
Napoli, Italy, 369

VINH CAM RANH, VIETNAM
(11°53'00'' N., 109°09'00'' E.) to:

Junction Points*
Singapore, 786
Wetar Passage, Indonesia (via Selat Karimata and Selat Sapudi), 2,106

Ports
Apra, Guam, 2,112
Darwin, Australia, 2,169
Djakarta, Indonesia, 1,103
Hai-kou, Hai-nan Tao, 610
Haiphong, Vietnam, 597
Hong Kong, B.C.C., 707
Kao-hsiung Chiang, Taiwan, 915
Kobe, Japan, 2,013
Krung Thep, Thailand, 817
Manila, Philippines, 710
Shang-hai, China, 1,520
Surabaja, Indonesia, 1,251

*JUNCTION POINT.—See Preface for use of junction points.

VISAKHAPATNAM, INDIA
(17°41'00'' N., 83°17'00'' E.) to:

Ports
Calcutta, India, 458
Colombo, Ceylon, 880
Madras, India, 332

VITORIA, BRAZIL
(20°19'20'' S., 40°20'30'' W.) to:

Ports
Baltimore, Maryland, U.S.A., 4,581
New York, New York, U.S.A., 4,507
4,554
Philadelphia, Pennsylvania, U.S.A.,
Salvador, Brazil, 477

VIZAGAPATAM. See VISAKHAPATNAM, INDIA.

VLADIVOSTOK, U.S.S.R.
(43°06'30'' N., 131°53'00'' E.) to:

Junction Points*
Panama, Panama (via La Perouse Strait and south of Aleutian Islands), 7,741
Panama, Panama (via La Perouse Strait and north of Aleutian Islands), 7,757
Panama, Panama (via Tsugaru Kaikyo), 7,833
Singapore, 3,004
Sunda Strait, Indonesia, 3,357
Wetar Passage, Indonesia (via Selat Manipa), 3,133

Ports
Aleksandrovsk, Sakhalin, 713
Apra, Guam (via Shimonoseki Kaikyo), 2,019
Apra, Guam (via Tsugaru Kaikyo), 2,155
Auckland, New Zealand, 5,516
Bukhta Broutona, Kuril Islands, 934
Cebu, Philippines, 2,026
Changjon, Korea, 319
Ching-tao, China, 998
Chin-huang-tao, China (via Meanggol Sudo), 1,151
Chinnampo, Korea (via Changjuk Sudo), 997
Chongjin, Korea, 135
Darwin, Australia, 3,426
De-Kastri, U.S.S.R., 737
Djakarta, Indonesia, 3,338
Dutch Horbor, Alaska, U.S.A., 2,518
Guayaquil, Ecuador, 8,044
Hai-kou, Hai-nan Tao (north of Taiwan), 1,899
Hakodate, Japan, 437
Higashi-Iwase, Japan, 471
Hong Kong, B.C.C., 1,646
Honolulu, Hawaii, U.S.A. (via Tsugaru Kaikyo), 3,725
Hsia-men, China, 1,393
Hungnam, Korea, 298
Iloilo, Philippines, 2,048
Inchon, Korea (via Maemut Sudo), 911
Kasatka, Japan, 779
Kimchaek, Korea, 206
Kobe, Japan, 805
Kodiak, Alaska, U.S.A., 3,105
Krung Thep, Thailand (outer bar), 3,035
Kuang-chou, China, 1,728
Kushiro, Japan, 624
Lo-hsing-ta Mao-ti, China, 1,264
Los Angeles, California, U.S.A., 4,981
Lu-shun, China (via Maenggol Sudo), 1,050
Maizuru, Japan, 485
Manila, Philippines, 1,912
Masan, Korea, 542
Matsugahama, Japan (via Tsugaru Kaikyo), 730
Midway Island, Pacific, 2,612
Mokpo, Korea, 726
Nagasaki, Japan, 657
Nanao, Japan, 460
Niigata, Japan, 453
Noumea, New Caledonia, 4,590
Omura, Bonin Islands (via Shimonoseki Kaikyo), 1,292
Osaka, Japan, 815
Pago Pago, American Samoa, 4,739
Palmyra Island, 4,136
Papeete, Society Islands, 5,663
Petropavlovsk, U.S.S.R., 1,348
Portland, Oregon, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 4,278
Pusan, Korea, 514
Rumoi, Japan, 452
Sai Gon, Vietnam, 2,501
Sakata, Japan, 442
San Diego, California, U.S.A., 5,062
San Francisco, California, U.S.A. (via La Perouse Strait and Proliv Kruzenshterna), 4,563
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 4,664
San Francisco, California, U.S.A. (via La Perouse Strait and Unimak Pass), 4,570
Seattle, Washington, U.S.A., (via Tsugaru Kaikyo and south of Aleutian Islands), 4,396
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,210
Shang-hai, China (north of Cheju Do), 998
Shang-hai, China (south of Cheju Do), 997
Shan-tou, China, 1,496
Shimonoseki, Japan, 565
Shelekhovo, Kuril Islands, 1,121
Sitka, Alaska, U.S.A., 3,585
Slavnoye, Kuril Islands, 780
Sovetskaya Gaven, U.S.S.R., 593
Surabaja, Indonesia, 3,357
Suva, Fiji Islands, 4,626
Sydney, Australia, 5,105
Ta-ku, China, 1,212
Ta-lien, China, 1,057
Tan-shui, Taiwan, 1,225
Tomari, Japan, 724
Truk, Caroline Islands, 2,593
Tsuruga, Japan, 490
Ulsan, Korea, 486
Valparaiso, Chile, 9,606
Wake Island, Pacific, 2,305
Wei-hai-wei, China (via Maenggol Sudo), 975
Wonsan, Korea, 324
Wotje Island, Marshall Islands, 2,928
Yen-tai, China (via Maenggol Sudo), 1,009
Yokohama, Japan, 952

VLISSINGEN, NETHERLANDS
(51°26'30'' N., 3°36'00'' E.)

Subtract 47 miles from Antwerpen, Belgium distances.

VLONES, ALBANIA. See Vlores.

VLORES, ALBANIA
(40°26'30'' N., 19°28'30'' E.) to:

Junction Points*
Port Said, U.A.R., 973
Strait of Gibraltar, 1,311

Ports
Piraievs, Greece (via Corinth Canal), 295
Split, Yugoslavia, 252
Taranto, Italy, 146

VOLO, GREECE. See Volos.

*JUNCTION POINT.—See Preface for use of junction points.

VOLOS, GREECE
(39°21'25'' N., 22°56'37'' E.) to:

Junction Points*
Port Said, U.A.R., 683
Strait of Gibraltar (via Corinth Canal), 1,640
Strait of Gibraltar (south of Greece), 1,657

Ports
Ajaccio, Corsica (via Corinth Canal), 1,014
Ajaccio, Corsica (south of Greece), 1,056
Alexandria, U.A.R., 620
Alexandroupolis, Greece, 205
Alger, Algeria (via Corinth Canal), 1,211
Alger, Algeria (south of Greece), 1,228
Alicante, Spain (via Corinth Canal), 1,376
Alicante, Spain (south of Greece), 1,395
Ancona, Italy (via Corinth Canal), 798
Ancona, Italy (south of Greece), 894
Annaba, Algeria (via Corinth Canal), 987
Annaba, Algeria (south of Greece), 1,004
Banghazi, Libya, 552
Barcelona, Spain (via Corinth Canal), 1,280
Barcelona, Spain (south of Greece), 1,322
Bari, Italy (via Corinth Canal), 591
Bari, Italy (south of Greece), 687
Bayrut, Lebanon, 725
Bizerte, Tunisia (via Corinth Canal), 882
Bizerte, Tunisia (south of Greece), 899
Brindisi, Italy (via Corinth Canal), 533
Brindisi, Italy (south of Greece), 629
Cagliari, Sardinia (via Corinth Canal), 927
Cagliari, Sardinia (south of Greece), 969
Cartagena, Spain (via Corinth Canal), 1,403
Cartagena, Spain (south of Greece), 1,420
Ceuta, Morocco (via Corinth Canal), 1,620
Ceuta, Morocco (south of Greece), 1,637
Genova, Italy (via Corinth Canal), 1,085
Genova, Italy (south of Greece), 1,127
Gibraltar (via Corinth Canal), 1,623
Gibraltar (south of Greece), 1,640
Haifa, Israel, 728
Iraklion, Crete, 292
Istanbul, Turkey, 329
Izmir, Turkey, 226
Kavala, Greece, 162
Khalkis, Greece, 88
La Spezia, Italy (via Corinth Canal), 1,050
La Spezia, Italy (south of Greece), 1,091
Limin Khiou, Greece, 193
Livorno, Italy (via Corinth Canal), 1,014
Livorno, Italy (south of Greece), 1,056
Malaga, Spain (via Corinth Canal), 1,570
Malaga, Spain (south of Greece), 1,587
Marseille, France (via Corinth Canal), 1,177
Marseille, France (south of Greece), 1,219
Messina, Sicily (via Corinth Canal), 604
Messina, Sicily (south of Greece), 645
Napoli, Italy (via Corinth Canal), 775
Napoli, Italy (south of Greece), 817
Odessa, U.S.S.R., 677
Oran, Algeria (via Corinth Canal), 1,408
Oran, Algeria (south of Greece), 1,426
Palermo, Sicily (via Corinth Canal), 720
Palermo, Sicily (south of Greece), 761
Palma, Balearic Islands (via Corinth Canal), 1,238
Palma, Balearic Islands (south of Greece), 1,280
Piraievs, Greece, 200
Rijeka, Yugoslavia (via Corinth Canal), 865
Rijeka, Yugoslavia (south of Greece), 964
Savona, Italy (via Corinth Canal), 1,096
Savona, Italy (south of Greece), 1,137
Sibenik, Yugoslavia (via Corinth Canal), 737
Sibenik, Yugoslavia (south of Greece), 836
Siracusa, Sicily (via Corinth Canal), 608
Siracusa, Sicily (south of Greece), 634
Split, Yugoslavia (via Corinth Canal), 722
Split, Yugoslavia (south of Greece), 821
Tarabulus, Libya, 789
Taranto, Italy (via Corinth Canal), 553
Taranto, Italy (south of Greece), 642
Thessaloniki, Greece, 132
Toulon, France (via Corinth Canal), 1,145
Toulon, France (south of Greece), 1,187
Trieste, Free Territory (via Corinth Canal), 898
Trieste, Free Territory (south of Greece), 997
Tunis, Tunisia (via Corinth Canal), 869
Tunis, Tunisia (south of Greece), 886
Valencia, Spain (via Corinth Canal), 1,364
Valencia, Spain (south of Greece), 1,393
Valletta, Malta, 672
Venezia, Italy (via Corinth Canal), 909
Venezia, Italy (south of Greece), 1,005

VUNG TAU, VIETNAM
(10°20'30'' N., 107°04'00'' E.)

Subtract 45½ miles from Sai Gon distances.

VYBORG, U.S.S.R.
(60°42'30'' N., 28°44'00'' E.)

Add 6¾ miles to Vysotsk distances.

VYSOTSK, U.S.S.R.
(60°38'00'' N., 28°34'00'' E.) to:

Junction Points*
Skagens Odde (via Store Baelt), 923
Skagens Odde (via The Sound), 803

Ports
Kotka, Finland, 69
Oslo, Norway (via Store Baelt), 1,047
Oslo, Norway (via The Sound), 925

WAKAMATSU, JAPAN
(33°55'00'' N., 130°49'00'' E.) to:

Ports
Kure, Japan, 125
Maizuru, Japan, 299
Pusan, Korea, 120

*JUNCTION POINT.—See Preface for use of junction points.

Sasebo, Japan, 136
Shang-hai, China, 541

WAKE ISLAND, PACIFIC
(19°18'00'' N., 166°35'00'' E.) to:

Junction Points*
Panama, Panama, 6,673
Singapore, 3,885

Ports
Apra, Guam, 1,334
Auckland, New Zealand, 3,409
Baie du Controleur, Marquesas, 3,589
Canton, Phoenix Islands, 1,843
Ching-tao, China, 2,674
Darwin, Australia, 3,187
Dutch Harbor, Alaska, U.S.A., 2,463
Guayaquil, Ecuador, 6,843
Hai-kou, Hai-nan Tao, 3,168
Hong Kong, B.C.C., 2,940
Honolulu, Hawaii, U.S.A., 2,004
Howland Island, 1,485
Jaluit, Marshall Islands, 831
Kodiak, Alaska, U.S.A., 2,961
Koniya, Ryukyu Islands, 2,107
Manila, Philippines, 2,772
Midway Island, 1,034
Noumea, New Caledonia, 2,551
Omura, Bonin Islands, 1,426
Pago Pago, American Samoa, 2,436
Palmyra Island, 1,996
Papeete, Society Islands, 3,401
Sai Gon, Vietnam (via San Bernardino Strait), 3,580
San Diego, California, U.S.A., 4,112
San Francisco, California, U.S.A., 3,821
Seattle, Washington, U.S.A., 3,820
Shang-hai, China, 2,550
Sitka, Alaska, U.S.A., 3,405
Surabaja, Indonesia, 3,641
Suva, Fiji Islands, 2,501
Sydney, Australia, 3,346
Truk, Caroline Islands, 1,117
Valparaiso, Chile, 7,601
Vladivostok, U.S.S.R., 2,305
Yokohama, Japan, 1,740

WAKKANAI, JAPAN
(45°25'00'' N., 141°41'20'' E.) to:

Ports
Bukhta Broutona, Kuril Islands, 456
Kasatka, Japan, 310
Matsugahama, Japan, 294
Shelekhovo, Kuril Islands, 643
Slavnoye, Kuril Islands, 301
Tomari, Japan, 246

WALLAROO, AUSTRALIA
(33°55'00'' S., 137°36'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,153
Singapore, 3,500

Ports
Noumea, New Caledonia, 2,099
Rabaul, New Britain, 2,911
Sydney, Australia, 1,084

WALVISBAAI, SOUTHWEST AFRICA
(22°57'00'' S., 14°29'45'' E.) to:

Ports
Baltimore, Maryland, U.S.A., 6,385
Boston, Massachusetts, U.S.A., 6,131
Luderitz Bay, Southwest Africa, 240
Mocamedes, Angola, 518
New York, New York, U.S.A., 6,228
Philadelphia, Pennsylvania, U.S.A., 6,318

WALVIS BAY, SOUTHWEST AFRICA, See Walvisbaai.

WARNEMUNDE, GERMANY
(54°11'00'' N., 12°05'30'' E.)

Subtract 7 miles from Rostock distances.

WASHINGTON, DISTRICT OF COLUMBIA, U.S.A.
(38°52'30'' N., 77°01'30'' W.) to:

Junction Points*
Bishop Rock, England(track A), 3,338
Bishop Rock, England (track B), 3,304
Bishop Rock, England (track C), 3,243
Fastnet, Ireland (track A), 3,244
Fastnet, Ireland (track B), 3,207
Fastnet, Ireland (track C), 3,137
Inishtrahull, Ireland (track A), 3,362
Inishtrahull, Ireland (track B), 3,326
Inishtrahull, Ireland (track C), 3,235
Panama, Panama, 1,957
Pentland Firth, Scotland (track A), 3,584
Pentland Firth, Scotland (track B), 3,530
Pentland Firth, Scotland (track C), 3,415
Strait of Gibraltar (track A), 3,492
Strait of Gibraltar (track B), 3,484
Strait of Gibraltar (direct), 3,471

Ports
Bordeaux, France (track A), 3,630
Bordeaux, France (track B), 3,601
Bordeaux, France (track C), 3,558
Cartagena, Colombia (via Windward Passage and Crooked Island Passage), 1,794
Hamilton, Bermuda, 806
Recife, Brazil, 3,787

WATERFORD, IRELAND
(52°15'50'' N., 7°07'00'' W.) to:

Junction Points*
Bishop Rock, England, 137
Fastnet, Ireland, 110
Inishtrahull, Ireland, 276

Ports
Dublin, Ireland, 113
Liverpool, England, 189

WEI-HAI-WEI, CHINA
(37°30'00'' N., 122°08'30'' E.) to:

Junction Points*
Singapore, 2,548

Ports
Aleksandrovsk, Sakhalin, 1,579
Apra, Guam (via Tokara Kaikyo), 1,901
Cebu, Philippines, 1,679
Ching-tao, China, 205
Chin-Huang-tao, China, 191
Chinnampo, Korea, 172
Djakarta, Indonesia, 2,860
Hakodate, Japan, 1,169
Hong Kong, B.C.C., 1,190
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,449
Hsia-men, China, 931
Iloilo, Philippines, 1,701
Inchon, Korea, 238
Kobe, Japan, 806
Kuang-chou, China, 1,273
Lo-hsing-ta Mao-ti, China, 801
Manila, Philippines (east of Taiwan), 1,498
Manila, Philippines (via Formosa Strait), 1,508
Mokpo, Korea (via south of Kasa Do), 308
Nagasaki, Japan, 526
Petropavlovsk, U.S.S.R., 2,192
Pusan, Korea, 474
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,625
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,402

*JUNCTION POINT.—See Preface for use of junction points.

Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and composite route), 5,119
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and Unimak Pass), 5,059
Seattle, Washington, U.S.A. (via La Perouse Strait, Proliv Chetvertyy Kurilskiy and Unimak Pass), 5,054
Shang-hai, China (via South Channel), 483
Shan-tou, China, 1,040
Shimonoseki, Japan, 562
Ta-ku, China, 237
Tan-shui, Taiwan, 784
Vladivostok, U.S.S.R., 975
Wonsan, Korea (via Maenggol Sudo), 779
Yokohama, Japan (via Bungo Suido and Shimonoseki Kaikyo), 1,106

WELLINGTON, NEW ZEALAND (41°17'00'' S., 174°47'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,863
Panama, Panama, 6,505
Punta Arenas, Chile (via Lat. 49° S.), 4,639
Punta Arenas, Chile (via Lat. 50° S.), 4,634
Torres Strait, Australia (via Raine Island entrance), 2,652
Wilson Promontory, Australia, 1,338

Ports
Aden, Aden Protectorate (south of Chagos Archipelago and Tasmania), 7,814
Albany, Australia (via south of Tasmania), 2,729
Apia, Samoa, 1,872
Auckland, New Zealand, 563
Avarua, Cook Islands, 1,804
Bluff Harbor, New Zealand, 455
Brisbane, Australia, 1,453
Cairns Harbor, Australia, 2,122
Callao, Peru, 5,721
Chimbote, Peru, 5,781
Fanning Island, 3,114
Gladstone Harbor, Australia, 1,678
Hobart, Tasmania, 1,288
Honolulu, Hawaii, U.S.A., 4,113
Kiama Harbor, Australia, 1,213
Lae, New Guinea, 2,635
Launceston, Tasmania, 1,326
Lautoka Harbor, Fiji Islands, 1,554
Los Angeles, California, U.S.A., 5,857
Lucinda, Australia, 2,102
Lyttelton, New Zealand, 174
Pago Pago, American Samoa, 1,848
Papeete, Society Islands, 2,348
Port Kembla, Australia, 1,229
Port Louis, Mauritius, 5,900
Portland, Oregon, U.S.A., 6,327
Rockhampton, Australia, 1,685
Salina Cruz, Mexico, 6,061
San Francisco, California U.S.A., 5,905
Seattle, Washington, U.S.A., 6,433
Suva, Fiji Islands, 1,476
Sydney, Australia, 1,234
Urangan, Australia, 1,581
Valparaiso, Chile (via Lat. 49° S.), 5,066
Yokohama, Japan, 5,041

WENCHOW, CHINA. See Yungchia.

WETAR PASSAGE, INDONESIA* (8°19'00'' S., 127°27'00'' E.) to:

Junction Points*
Singapore (via Selat Riouw and Selat Karimata), 1,587
Sunda Strait, Indonesia, 1,330
Torres Strait, Australia, 881

Ports
Balikpapan, Borneo, 870
Chinnampo, Korea (via Selat Manipa and Molucca Passage), 2,861
Darwin, Australia (west of Bathurst Island), 326
Djakarta, Indonesia, 1,266
Inchon, Korea (via Selat Manipa and Molucca Passage), 2,767
Lingkas, Indonesia, 1,161
Makasar, Celebes, 614
Mokpo, Korea (via Molucca Passage), 2,632
Petropavlovsk, U.S.S.R. (via Selat Manipa and Dampier Strait), 4,106
Pusan, Korea (via Selat Manipa and Molucca Passage), 2,632
Semarang, Indonesia, 1,067
Shang-hai, China (via Basilan Strait, Mindoro Strait, east of Taiwan, and Pai-chieh Hsia), 2,553
Surabaja, Indonesia (north of Madura), 928
Surabaja, Indonesia (south of Madura), 880
Vinh Cam Ranh, Vietnam, 2,106
Vladivostok, U.S.S.R. (via Selat Manipa), 3,133
Wonsan, Korea (via Selat Manipa and Molucca Passage), 3,100
Wyndham, Australia, 431
Zamboanga, Philippines (via Selat Manipa and Selat Bangka), 995

WETAR STRAIT, INDONESIA. See Wetar Passage.

WEYMOUTH, ENGLAND. See Portland.

WHAMPOA, CHINA. See Huangpu.

WHITTIER, ALASKA, U.S.A. (60°46'48'' N., 148°39'36'' W.) to:

Junction Points*
Panama, Panama, 4,958

Ports
Barrow, Alaska, U.S.A., 1,897
Dutch Harbor, Alaska, U.S.A., 817
Honolulu, Hawaii, U.S.A., 2,474
Ketchikan, Alaska, U.S.A., 1,839
Seattle, Washington, U.S.A., 1,241
Wrangell, Alaska, U.S.A., 642
Yakutat, Alaska, U.S.A., 295

WHYALLA, AUSTRALIA (33°01'15'' S., 137°36'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,782
Singapore, 3,546

Ports
Adelaide, Australia, 245
Melbourne, Australia, 665
Rabaul, New Britain, 2,957

WILHELMSHAVEN, GERMANY (53°31'00'' N., 8°08'30'' E.) to:

Junction Points*
Bishop Rock, England, 651
Kiel Canal (east end), Germany, 126
Pentland, Firth, Scotland, 501
Skagens Odde, Denmark, 314
Ushant, France, 639

Ports
Aberdeen, Scotland, 419
Amsterdam, Netherlands, 210
Antwerpen, Belgium, 324
Bergen, Norway, 441
Cherbourg, France, 472
Dover, England, 328
Dundee, Scotland, 430
Dunkerque, France, 308
Egersund, Norway, 306

*JUNCTION POINT.—See Preface for use of junction points.

Emden, Germany, 120
Esbjerg, Denmark, 129
Hamburg, Germany, 111
Hartlepool, England, 348
Harwich, England, 296
Hull, England, 323
Inverness, Scotland, 508
Kristiansand, Norway, 286
Le Havre, France, 440
Leith, Scotland, 435
London, England, 362
Newcastle, England, 367
Oostende, Belgium, 286
Oslo, Norway, 421
Plymouth, England, 557
Portland, England, 483
Portsmouth, England, 433
Rotterdam, Netherlands, 243
Southampton, England, 451
Stavanger, Norway, 360
Zeebrugge, Belgium, 274

WILLEMSTAD, CURACAO
(12°07'00'' N., 68°56'00'' W.) to:

Junction Points*
Bishop Rock, England, 3,797
Fastnet, Ireland, 3,708
Montreal, Canada (via Cabot Strait), 2,866
Panama, Panama, 742
Strait of Gibraltar, 3,685
Straits of Florida (via Windward Passage), 1,184
Ushant, France, 3,821
Yucatan Channel, 1,094

Ports
Alvaro Obregon, Mexico, 1,635
Baltimore, Maryland, U.S.A., 1,733
Barahona, Dominican Republic, 395
Barranquilla, Colombia, 389
Belize, British Honduras, 1,178
Boston, Massachusetts, U.S.A. (via Mona Passage), 1,881
Caldera Bay, Dominican Republic, 392
Campeche, Mexico, 1,527
Cap Haitien, Haiti (via Windward Passage), 697
Cap Haitien, Haiti (via Mona Passage), 674
Cape Town, Republic of South Africa, 5,811
Carmen, Mexico, 1,599
Cartagena, Colombia, 471
Castries, St. Lucia, 489
Charleston, South Carolina, U.S.A. (via Windward Passage), 1,446
Charleston, South Carolina, U.S.A. (via Mona Passage), 1,472
Charlotte Amalie, Virgin Islands, 457
Cienfuegos, Cuba, 900
Colon, Panama, 698
Fort de France, Martinique, 495
Guantanamo, Cuba, 595
Habana, Cuba, 1,144
Haina, Dominican Republic, 394
Horta, Azores, 2,683
Isabel Segunda, Isla de Vieques, 446
Key West, Florida, U.S.A. (via Old Bahama Channel), 1,134
La Guaira, Venezuela, 150
La Romana, Dominican Republic, 391
Lagos, Nigeria, 4,359
Manzanillo, Cuba, 746
Maracaibo, Venezuela, 222
New York, New York, U.S.A., 1,771
Norfolk, Virginia, U.S.A., 1,611
Paramaribo, Surinam, 955
Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,762
Pointe a Pitre, Guadeloupe, 517
Ponce, Puerto Rico, 399
Port au Prince, Haiti, 647
Port of Spain, Trinidad, 456
Portland, Maine, U.S.A., 1,921
Puerto Cabello, Venezuela, 116
Roosevelt Roads, Puerto Rico, 440
San Juan, Puerto Rico (west end of Curacao, and via Mona Passage), 486
San Juan del Norte, Nicaragua, 882
Santiago de Cuba, Cuba, 627
Santo Domingo, Dominican Republic, 397
Savannah, Georgia, U.S.A., 1,444
Takoradi, Ghana, 4,040
Turiamo, Venezuela, 124
Tuxpan, Mexico, 1,786
Veracruz, Mexico, 1,756

WILMINGTON, DELAWARE, U.S.A.
(39°43'12'' N., 75°31'30'' W.)

Substract 26 miles from Philadelphia distances.

WILMINGTON, NORTH CAROLINA, U.S.A.
(34°14'00'' N., 77°57'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 3,379
Bishop Rock, England (track B), 3,352
Bishop Rock, England (track C), 3,304
Fastnet, Ireland (track A), 3,288
Fastnet, Ireland (track B), 3,256
Fastnet, Ireland (track C), 3,195
Inishtrahull, Ireland (track A), 3,414
Inishtrahull, Ireland (track B), 3,375
Inishtrahull, Ireland (track C), 3,293
Panama, Panama (via Crooked Island Passage and Windward Passage), 1,656
Pentland Firth, Scotland (track A), 3,608
Pentland Firth, Scotland (track B), 3,579
Pentland Firth, Scotland (track C), 3,473
Punta Arenas, Chile (via east of South America), 6,881
Strait of Gibraltar (track A), 3,536
Strait of Gibraltar (track B), 3,533
Strait of Gibraltar (track C), 3,538
Straits of Florida, 761

Ports
Bordeaux, France (track A), 3,674
Bordeaux, France (track B), 3,650
Bordeaux, France (track C), 3,616
Buenos Aires, Argentina, 5,805
Cape Town, Republic of South Africa, 6,804
Cartagena, Colombia, 1,494
Colon, Panama (via Crooked Island Passage and Windward Passage), 1,613
Georgetown, British Guiana, 2,011
Habana, Cuba, 767
Halifax, Canada, 1,016
Hamilton, Bermuda, 746
Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,115
Limon, Costa Rica, 1,688
Montevideo, Uruguay, 5,691
Nassau, Bahamas, 561
Paramaribo, Surinam, 2,148
Port of Spain, Trinidad, 1,703
Porto Grande, Cape Verde Islands, 3,057
Rio de Janeiro, Brazil, 4,704
Salvador, Brazil, 4,023
San Juan, Puerto Rico, 1,153
Santiago de Cuba, Cuba, 1,003
Santo Domingo, Dominican Republic, 1,210

WILSON PROMONTORY, AUSTRALIA*
(39°10'00'' S., 146°26'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,524
Panama, Panama (via Cook Strait), 7,818
Panama, Panama (via Foveaux Strait), 7,770
Punta Arenas, Chile (via Foveaux Strait and Lat. 49° S.), 5,820

*JUNCTION POINT.—See Preface for use of junction points.

Punta Arenas, Chile (via Lat. 60° S. and south of Steward Island), 5,305
Torres Strait, Australia (via Capricon Channel and inner route), 2,193

Ports
Adeliade, Australia, 537
Auckland, New Zealand, 1,503
Bluff Harbor, New Zealand, 1,133
Brisbane, Australia, 931
Burnie Harbor, Australia, 116
Cairns Harbor, Australia, 1,649
Callao, Peru (via Lat. 49° S.), 6,939
Catherine Hill Bay, Australia, 467
Honolulu, Hawaii, U.S.A., 4,792
Kiama Harbor, Australia, 379
Lautoka Harbor, Fiji Islands, 2,070
Los Angeles, California, U.S.A., 6,879
Lucinda, Australia, 1,621
Melbourne, Australia, 154
Pago Pago, American Samoa, 2,707
Papeete, Society Islands, 3,546
Portland, Oregon, U.S.A., 7,121
Rockhampton, Australia, 1,213
San Diego, California, U.S.A., 6,873
San Francisco, California, U.S.A., 6,820
Seattle, Washington, U.S.A., 7,185
Strahan, Australia, 254
Suva, Fiji Islands, 2,088
Sydney, Australia, 440
Townsville, Australia, 1,499
Urangan, Australia, 1,100
Valparaiso, Chile (via Lat. 60° S.), 6,031
Wellington, New Zealand, 1,338

WISMAR, GERMANY
(53°54'30'' N., 11°26'30'' E.) to:

Junction Points*
Kiel Canal (east end), Germany, 84
Skagens Odde, Denmark, 281

Ports
Kobenhavn, Denmark, 132
Liepaja, Latvia, 379
Stockholm, Sweden, 101

WOMENS BAY, ALASKA, U.S.A.
(57°42'30'' N., 152°31'30'' W.)

Via north of Woody Island. Add 6 miles to Kodiak distances.

WONSAN, KOREA
(39°10'00'' N., 127°26'30'' E.) to:

Junction Points*
Panama, Panama, 8,038
Singapore, 2,808
Sunda Strait, Indonesia, 3,161
Wetar Passage, Indonesia (via Molucca Passage and Selat Manipa), 3,100

Ports
Aleksandrovsk, U.S.S.R., 972
Ching-tao, China, 802
Ching-huang-tao, China, 955
Chinnampo, Korea (via Maenggol Sudo), 801
Darwin, Australia (via Molucca Passage), 3,242
Djakarta, Indonesia, 3,142
Hakodate, Japan, 638
Hong Kong, B.C.C., 1,450
Honolulu, Hawaii, U.S.A. (via Tsugaru Kaikyo), 3,933
Hsia-men, China, 1,191
Inchon, Korea (via Maenggol Sudo), 707
Krung Thep, Thailand (outer bar), 2,885
Lo-hsing-ta Mao-ti, China, 1,068
Los Angeles, California, U.S.A., 5,181
Lu-shun, China (via Maenggol Sudo), 854
Manila, Philippines, 1,708
Mokpo, Korea (via Maenggol Sudo), 530
Nagasaki, Japan, 452
Osaka, Japan, 627
Pago Pago, American Samoa (via Bungo Suido), 4,816
Petropavlovsk, U.S.S.R., 1,609
Pusan, Korea, 308
Sai Gon, Vietnam, 2,305
San Francisco, California, U.S.A., 4,866
Seattle Washington, U.S.A. (via Tsugaru Kaikyo and Lat. 50° N.), 4,601
Shang-hai, China (north of Cheju Do and via South Channel), 797
Shan-tou, China, 1,300
Ta-ku, China, 1,007
Ta-lien, China (via Maenggol Sudo), 848
Tongyong, Korea, 358
Vladivostok, U.S.S.R., 324
Wei-hai-wei, China (via Maenggol Sudo), 779
Yen-tai, China, 813
Yokohama, Japan (via Bungo Suido), 921

WORKINGTON, ENGLAND
(54°39'00'' N., 3°34'00'' W.) to:

Junction Points*
Bishop Rock, England, 308
Fastnet, Ireland, 310
Inishtrahull, Ireland, 148

Ports
Belfast, Ireland, 87
Cardiff, Wales, 299

WOTHO, MARSHALL ISLANDS
(10°09'00'' N., 165°56'00'' E.) to:

Junction Points*
Panama, Panama, 4,882
Singapore, 3,614

Ports
Apra, Guam, 1,294
Honolulu, Hawaii, U.S.A., 1,470

WOTJE ISLAND, MARSHALL ISLANDS
(9°27'00'' N., 170°14'00'' E.) to:

Ports
Apra, Guam, 1,547
Honolulu, Hawaii, U.S.A., 1,992
Manila, Philippines, 3,027
Noumea, New Caledonia, 1,972
Pago Pago, American Samoa, 1,856
Suva, Fiji Islands, 1,880
Vladivostok, U.S.S.R., 2,928
Yokohama, Japan, 2,318

WRANGELL, ALASKA, U.S.A.
(56°28'00'' N., 132°25'00'' W.) to:

Ports
Seattle, Washington, U.S.A., 713
Sitka, Alaska, U.S.A., 170
Skagway, Alaska, U.S.A., 231
Victoria, Canada, 697
Whittier, Alaska, U.S.A., 642

WRECK BAY. See Archipielago de Colon.

WU-HU, CHINA
(31°20'00'' N., 118°21'00'' E.)

Add 227 miles to Shang-hai distances for ports outside the Chang Chiang (Yangtze River).

WU-SUNG, CHINA
(31°33'30'' N., 121°30'30'' E.)

Subtract 14 miles from Shang-hai distances.

*JUNCTION POINT.—See Preface for use of junction points.

WYNDHAM, AUSTRALIA
(15°27'30'' S., 128°06'00'' E.) to:

Junction Points*
Wetar Passage, Indonesia, 431

Ports
Darwin, Australia, 274
Fremantle, Australia, 1,780

YAKUTAT, ALASKA, U.S.A.
(59°33'00'' N., 139°45'00'' W.) to:

Ports
Seattle, Washington, U.S.A., 998
Seward, Alaska, U.S.A., 312
Sitka, Alaska, U.S.A., 231
Valdez, Alaska, U.S.A., 287
Whittier, Alaska, U.S.A., 295

YAMPI SOUND, AUSTRALIA
(16°08'00'' S., 123°38'00'' E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,588
Torres Strait, Australia, 1,283

Ports
Darwin, Australia, 1,457
Fremantle, Australia, 586

YAP, CAROLINE ISLANDS
(9°30'30'' N., 138°08'00'' E.) to:

Ports
Apra, Guam, 458
Honolulu, Hawaii, U.S.A., 3,757
Manila, Philippines, 1,154
Noumea, New Caledonia, 2,568
Papeete, Society Islands, 4,585
Rabaul, New Britain, 1,196
Suva, Fiji Islands, 2,933
Tacloban, Philippines, 790
Truk, Caroline Islands, 851
Yokohama, Japan, 1,571

YARMOUTH, CANADA
(43°50'00'' N., 66°07'30'' W.) to:

Ports
Boston, Massachusetts, U.S.A., 237
Colon, Panama, 2,210
Kingston, Jamaica, 1,710
New York, New York, U.S.A. (Nantucket Light Vessel), 464
New York, New York, U.S.A. (via Pollock Rip Channel), 440
Norfolk, Virginia, U.S.A., 656
Philadelphia, Pennsylvania, U.S.A., 616
Portland, Maine, U.S.A., 185
San Juan, Puerto Rico, 1,527
Sydney, Canada, 416

YEN-TAI, CHINA
(37°33'15'' N., 121°23'30'' E.) to:

Junction Points*
Singapore, 2,582

Ports
Aleksandrovsk, U.S.S.R. (via Maenggol Sudo), 1,613
Apra, Guam (via Tokara Kaikyo), 1,935
Cebu, Philippines, 1,713
Ching-tao, China, 239
Ching-huang-tao, China, 168
Chinnampo, Korea, 205
Djakarta, Indonesia, 2,894
Hakodate, Japan, 1,203
Hong Kong, B.C.C., 1,224
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,483
Hsia-men, China, 978
Iloilo, Philippines, 1,735
Inchon, Korea, 273
Kobe, Japan, 840
Kuang-chou, China, 1,307
Lo-hsing-ta Mao-ti, China (via Steep Island Pass), 835
Manila, Philippines (east of Taiwan), 1,532
Manila, Philipines (via Formosa Strait), 1,542
Moji, Japan, 600
Mokpo, Korea (via south of Kasa Do), 342
Nagasaki, Japan, 560
Petropavlovsk, U.S.S.R., 2,226
Pusan, Korea (via Maenggol Sudo), 508
Shang-hai, China, 523
Shan-tou, China, 1,074
Shimonoseki, Japan, 596
Ta-ku, China, 205
Tan-shui, Taiwan, 818
Vladivostok, U.S.S.R. (via Maenggol Sudo), 1009
Wonsan, Korea, 813
Yokohama, Japan, 1,140

YING-KOU, CHINA
(40°40'40'' N., 122°14'00'' E.) to:

Ports
Hsia-men, China, 1,161
Shang-hai, China, 713
Ta-ku, China, 251
Yokohama, Japan, 1,362

YIN-HSIEN, CHINA
(29°52'30'' N., 121°33'15'' E.) to:

Junction Points*
Panama, Panama (via Shih-peng Chiang), 8,604
Singapore (via Shih-peng Chiang, Steep Island Pass, Pai-chieh Hsia), 2,091

Ports
Auckland, New Zealand (via Shih-peng Chiang), 5,077
Darwin, Australia (via Shih-peng Chiang), 2,672
Dutch Harbor, Alaska, U.S.A. (via Shih-peng Chiang), 3,414
Honolulu, Hawaii, U.S.A. (via Shih-peng Chiang), 4,334
Nikolayevsk, U.S.S.R. (via Shih-peng Chiang and South Channel), 1,779
Noumea, New Caledonia (via Shih-peng Chiang), 4,118
Pago Pago, American Samoa (via Shih-peng Chiang), 4,757
Papeete, Society Islands (via Shih-peng Chiang), 5,875
Petropavlovsk, U.S.S.R. (via Shih-peng Chiang), 2,237
Rabaul, New Britain (via Shih-peng Chiang), 2,746
Surabaja, Indonesia (via Shih-peng Chiang), 2,492
Suva, Fiji Islands (via Shih-peng Chiang), 4,408
Sydney, Australia (via Shih-peng Chiang), 4,574

YOKKAICHI, JAPAN
(34°57'00'' N., 136°40'00'' E.) to:

Ports
Apra, Guam, 1,364
Kagoshima, Japan, 476
Osaka, Japan, 236
Shimizu, Shikoku, Japan, 286
Yokohama, Japan, 203

YOKOHAMA, JAPAN
(35°27'00'' N., 139°39'00'' E.) to:

Junction Points*
Panama, Panama, 7,682
Punta Arenas, Chile, 9,275
Singapore (via Balintang Channel), 2,889

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Aleksandrovsk, U.S.S.R., 1,143
Apia, Samoa, 4,057
Apra, Guam, 1,352
Auckland, New Zealand, 4,789
Avarau, Cook Islands, 4,849
Barbers Point, Hawaii, U.S.A. (via great circle), 3,382
Bellingham, Washington, U.S.A., 4,245
Brisbane, Australia, 3,925
Cebu, Philippines (via San Bernardino Strait), 1,762
Chim Wan, Ryukyu Islands, 830
Ching-tao, China, 1,160
Chinnampo, Korea, 1,109
Darwin, Australia (via Selat Sele), 2,989
De-Kastri, U.S.S.R., 1,176
Djakarta, Indonesia (east of Direction Island and via Selat Gaspar), 3,194
Dutch Harbor, Alaska, U.S.A., 2,551
Guayaquil, Ecuador, 7,987
Hachinohe, Japan, 436
Hagata, Japan, 608
Hai-kou, Hai-nan Tao (south of Taiwan), 1,910
Hakodate, Japan, 533
Hirohata, Japan, 368
Hiroshima, Japan, 519
Hong Kong, B.C.C., 1,585
Honolulu, Hawaii, U.S.A., 3,397
Hsia-men, China (via Osumi Kaikyo), 1,335
Iloilo, Philippines (via San Bernardino Strait), 1,784
Imabari, Japan, 454
Inchon, Korea (via Naikai), 1,070
Inchon, Korea (via Bungo Suido and Maemul Sudo), 1,016
Iquique, Chile, 9,026
Itozaki, Japan, 446
Iwakuni, Japan, 497
Jaluit, Marshall Islands, 2,442
Kagoshima, Japan, 594
Kahului, Hawaii, U.S.A., 3,496
Kamaishi, Japan, 348
Kaneohe Bay, Hawaii, U.S.A., 3,406
Kaunakakai, Hawaii, U.S.A., 3,454
Kiska, Alaska, U.S.A., 1,977
Kobe, Japan, 357
Kochi, Japan, 372
Kodiak, Alaska, U.S.A., 3,141
Komatsushima, Japan, 320
Kuang-chou, China, 1,668
Kure, Japan, 515
Kushiro, Japan, 594
Levuka, Fiji Islands, 4,015
Lo-hsing-ta Mao-ti, China (via Osumi Kaikyo), 1,217
Los Angeles, California, U.S.A., 4,839
Lu-shun, China (via Bungo Suido and Shimononseki Kaikyo), 1,181
Lu-shun, China (via Naikai), 1,218
Malakal, Palau Islands, 1,731
Manila, Philippines (via Balintang Channel), 1,758
Mazatlan, Mexico, 5,782
Midway Island, Pacific, 2,250
Miike, Japan (via Osumi Kaikyo), 725
Miike, Japan (via Bungo Suido), 766
Mokpo, Korea, 838
Moskalvo, U.S.S.R., 1,453
Nagasaki, Japan (via Osumi Kaikyo), 691
Nagoya, Japan, 214
Nakagusuku, Ryukyu Islands, 839
Nase, Japan, 686
Nemuro, Japan, 653
Nome, Alaska, U.S.A., 2,696
Nonouti, Gilbert Islands, 2,931
Noumea, New Caledonia (via Bougainville Strait), 3,837
Ocean Island, 2,761
Omura, Bonin Islands, 523
Osaka, Japan (via Kii Suido), 359
Pago Pago, American Samoa, 4,135
Palmyra Island, 3,680
Papeete, Society Islands, 5,140
Petropavlovsk, U.S.S.R., 1,422
Ponape, Caroline Islands, 1,998
Portland, Oregon, U.S.A., 4,328
Prince Rupert, Canada (south of Aleutian Islands), 3,863
Prince Rupert, Canada (north of Aleutian Islands), 3,810
Pusan, Korea, 665
Rabaul, New Britain, 2,526
Sai Gon, Vietnam, 2,419
Saipan, Mariana Islands, 1,262
Sakaidecho, Japan (via Kii Suido), 449
San Diego, California, U.S.A., 4,923
San Francisco, California, U.S.A., 4,536
Seattle, Washington, U.S.A. (south of Aleutian Islands), 4,276
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,245
Selwyn Bay, Solomon Islands, 3,022
Seward, Alaska, U.S.A. (south of Aleutian Islands), 3,363
Shang-hai, China (via Naikai), 1,117
Shang-hai, China (via Osumi Kaikyo), 1,040
Shan-tou, China, 1,435
Shimizu, Honshu, Japan, 116
Shimizu, Shikoku, Japan, 411
Shimonoseki, Japan (via Bungo Suido), 545
Shimonoseki, Japan (via Naikai), 581
Shimotsui, Japan, 449
Shiogama, Japan, 284
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,687
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 3,620
Surabaja, Indonesia, 3,092
Suva, Fiji Islands, 3,967
Sydney, Australia, 4,330
Ta-ku, China (via Osumi Kaikyo), 1,394
Ta-lien, China (via Osumi Kaikyo), 1,235
Tan-shui, Taiwan (via Osumi Kaikyo), 1,146
Teluk Kau, Halmahera, 2,163
Tien-ching, China (via Naikai and south of Cheju Do), 1,465
Tokuyama, Japan, 510
Truk, Caroline Islands, 1,832
Ube, Japan, 536
Uno, Japan, 405
Valparaiso, Chile, 9,280
Vancouver, Canada (via composite sailing and Active Pass), 4,262
Victoria, Canada (via composite sailing), 4,194
Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 952
Wake Island, Pacific, 1,740
Wei-hai-wei, China (via Naikai), 1,143
Wei-hai-wei, China (via Bungo Suido and Shimonoseki Kaikyo), 1,106
Wellington, New Zealand, 5,041
Wonsan, Korea, 921
Wotje Island, Marshall Islands, 2,318
Yap, Caroline Islands, 1,571
Yen-tai, China (via Bungo Suido and Shimonoseki Kaikyo, 1,140
Yen-tai, China (via Osumi Kaikyo), 1,194
Yen-tai, China (via Naikai), 1,177
Ying-kou, China, 1,362
Yokkaichi, Japan, 203

YOKOSUKA, JAPAN
(35°17'30" N., 139°39'30" E.)

Subtract 6 miles from Yokohama distances.

YORKTOWN, VIRGINIA, U.S.A.
(37°14'24" N., 76°30'30" W.)

Subtract 116 miles from Baltimore distances.

*JUNCTION POINT.—See Preface for use of junction points.

YOSU, KOREA
(34°45'00'' N., 127°45'30'' E.) to:

Ports
Kimchaek, Korea, 439
Kunsan, Korea, 245
Mokpo, Korea, 151
Najin, Korea, 535
Pusan, Korea, 97
Shimonoseki, Japan, 182

YUCATAN CHANNEL*
(21°50'00'' N., 85°03'00'' W.) to:

Junction Points*
Bishop Rock, England (track A), 4,177
Bishop Rock, England (track B), 4,150
Bishop Rock, England (track C), 4,103
Fastnet, Ireland (track A), 4,075
Fastnet, Ireland (track B), 4,045
Fastnet, Ireland (track C), 3,988
Inishtrahull, Ireland (track A), 4,200
Inishtrahull, Ireland (track B), 4,164
Inishtrahull, Ireland (track C), 4,086
Panama, Panama, 855
Pentland Firth, Scotland (track A), 4,406
Pentland Firth, Scotland (track B), 4,364
Pentland Firth, Scotland (track C), 4,266
Punta Arenas, Chile (via east of South America), 6,874
Strait of Gibraltar, 4,199

Ports
Almirante, Panama, 814
Alvaro Obregon, Mexico, 548
Amuay, Venezuela, 1,050
Apalachicola, Florida, U.S.A., 474
Barcelona, Venezuela, 1,378
Barranquilla, Colombia, 881
Belem, Brazil, 2,739
Belize, British Honduras, 337
Bluefields, Nicaragua, 629
Boston, Massachusetts, U.S.A. (via Nantucket Light Vessel), 1,615
Bridgetown, Barbados (south of Hispaniola), 1,549
Buenos Aires, Argentina, 5,910
Campeche, Mexico, 291
Cape Town, Republic of South Africa, 6,822
Cardenas, Cuba, 269
Cartagena, Colombia, 891
Carupano, Venezuela, 1,451
Casilda, Cuba, 307
Castries, St. Lucia, 1,452
Catia la Mar, Venezuela, 1,240
Charleston, South Carolina, U.S.A., 815
Charlotte Amalie, Virgin Islands, 1,200
Cienfuegos, Cuba, 285
Colon, Panama, 812
Corpus Christi, Texas, U.S.A., 764
Covenas, Colombia, 924
Freetown, Sierra Leone, 4,229
Galveston, Texas, U.S.A., 696
Georgetown, Grand Cayman, 257
Georgetown, British Guiana, 1,846
Great Harbor, Culebra Island (south of Cuba and via Windward Passage), 1,170
Guantanamo, Cuba, 582
Gulfport, Mississippi, U.S.A., 534
Habana, Cuba, 186
Halifax, Canada, 1,817
Hamilton, Bermuda, 1,335
Isabela, Cuba, 329
Key West, Florida, U.S.A., 251
Kingston, Jamaica, 550
La Guaira, Venezuela, 1,242
Lake Charles, Louisiana, U.S.A., 689
Limon, Costa Rica, 732
Manzanillo, Cuba, 482
Maracaibo, Venezuela, 1,096
Mariel, Cuba, 164
Matagorda Bay, Texas, U.S.A., 729
Matanzas, Cuba, 241
Miami, Florida, U.S.A., 398
Mobile, Alabama, U.S.A., 558
Montego Bay, Jamaica, 450
Montevideo, Uruguay, 5,689
Nassau, Bahamas, 562
New Amsterdam, British Guiana, 1,907
New Orleans, Louisiana, U.S.A., 577
New York, New York, U.S.A., 1,369
Norfolk, Virginia, U.S.A., 1,168
Nuevitas, Cuba, 528
Oranjestad, Aruba, 1,024
Pedernales, Venezuela, 1,567
Pensacola, Florida, U.S.A., 531
Philadelphia, Pennsylvania, U.S.A., 1,339
Pina, Panama, 816
Pointe a Pitre, Guadeloupe, 1,410
Porlamar, Venezuela, 1,407
Port Antonio, Jamaica, 536
Port Arthur, Texas, U.S.A., 681
Port au Prince, Haiti, 741
Port of Spain, Trinidad, 1,517
Portsmouth, New Hampshire, U.S.A. (via outside Nantucket Light Vessel), 1,632
Puerto Barrios, Guatemala, 439
Puerto Cabello, Venezuela, 1,203
Puerto Cortes, Honduras, 399
Puerto Cumarebo, Venezuela, 1,103
Puerto la Cruz, Venezuela, 1,381
Puerto Mexico, Mexico, 625
Puerto Siboney, Cuba, 545
Puerto Sucre, Venezuela, 1,399
Punta Cardon, Venezuela, 1,055
Rio de Janeiro, Brazil (south of Hispaniola), 4,702
St. John's, Canada, 2,305
Salvador, Brazil, 4,128
San Felix, Venezuela, 1,861
San Fernando, Trinidad, 1,548
San Juan, Puerto Rico, 1,111
San Juan del Norte, Nicaragua, 681
Santa Cruz del Sur, Cuba, 416
Santa Lucia, Cuba, 99
Santa Maria, Cuba, 381
Santa Marta, Colombia, 892
Santiago de Cuba, Cuba, 548
Santo Domingo, Dominican Republic, 929
Sint Nicolaas, Aruba, 1,036
Surgidero de Batabamo, Cuba, 229
Swan Island, 273
Tampa, Florida, U.S.A., 404
Tampico, Mexico, 716
Turiamo, Venezuela, 1,221
Tuxpan, Mexico, 689
Veracruz, Mexico, 654
Willemstad, Curacao, 1,094

YU-LIN CHIANG, HAINAN-TAO, CHINA
(18°12'00'' N., 109°32'00'' E.) to:

Ports
Chi-lung Chiang, Taiwan, 830
Hong Kong, B.C.C. 389
Kao-hsiung Chiang, Taiwan, 681
Manila, Philippines, 713
Sai Gon Vietnam, 622

YUMURTALIK, TURKEY
(36°45'00'' N., 35°45'00'' E.) to:

Junction Points*
Port Said, U.A.R., 372
Strait of Gibraltar, 1,672

Ports
Haifa, Israel, 240
Iraklion, Crete, 540
Izmir, Turkey, 639

YUNG-CHIA, CHINA
(28°01'45'' N., 120°40'00'' E.) to:

Ports
Chi-lung Chiang, Taiwan, 204
Ching-tao, China, 623

*JUNCTION POINT.—See Preface for use of junction points.

Hong Kong, B.C.C., 595
Inchon, Korea, 723
Shang-hai, China, 365

ZADAR, YUGOSLAVIA
(44°07'00'' N., 15°13'00'' E.) to:

Junction Points*
Port Said, U.A.R., 1,214
Strait of Gibraltar, 1,590

Ports
Ancona, Italy, 87
Brindisi, Italy, 280
Trieste, Free Territory, 142

ZALIV CHIKHACHEVA, U.S.S.R.
(51°27'00'' N., 140°49'00'' E.) to:

Ports
Bukhta Broutona, Kuril Islands, 783
Kasatka, Japan, 632
Matsugahama, Japan, 625
Nikolayevsk, U.S.S.R., 132
Shelekhovo, Kuril Islands, 971
Slavnoye, Kuril Islands, 628
Tomari, Japan, 578

ZAMBOANGA, PHILIPPINES
(6°54'00'' N., 122°04'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 1,047
Panama, Panama (via south of Mindanao), 9,431
Singapore, 1,197
Wetar Passage, Indonesia, 995

Ports
Apra, Guam (via south of Mindanao), 1,467
Apra, Guam (via Surigao Strait), 1,484
Batangas, Philippines, 436
Belawan, Indonesia, 1,570
Cebu, Philippines, 252
Darwin, Australia (via Basilan Strait, Selat Bangka and Selat Manipa), 1,303
Iloilo, Philippines, 241
Jesselton, North Borneo, 412
Jolo, Philippines, 85
Kuching, Sarawak, 863
Manila, Philippines, 532
Pulupandan, Philippines, 237
Sandakan, North Borneo, 251
Tacloban, Philippines, 385

ZANZIBAR, ZANZIBAR
(6°10'00'' S., 39°11'00'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,358
Singapore, 4,060

Ports
Aden, Aden Protectorate, 1,731
Belawan, Indonesia, 3,727
Bombay, India (southwest monsoon), 2,541
Bombay, India (northeast monsoon), 2,538
Calcutta, India (via One and Half Degree Channel), 3,776
Darwin, Australia, 5,452
Durban, Republic of South Africa, 1,607
Fremantle, Australia, 4,536
Lourenco Marques, Mozambique, 1,388
Malacca, Malaysia, 3,945
Penang, Malaysia, 3,772
Port Louis, Mauritius, 1,388
Rangoon, Burma, 3,787
Sabang, Indonesia, 3,461
Tamatave, Malagasy Republic, 1,116
Tanga, Tanganyika, 75
Victoria, North Borneo, 563
Victoria, Seychelles, 1,011

ZEEBRUGGE, BELGIUM
(51°21'00'' N., 3°12'00'' E.) to:

Junction Points*
Bishop Rock, England, 393
Kiel Canal (east end), Germany, 354
Pentland Firth, Scotland, 505
Skagens Odde, Denmark, 479
Ushant, France, 380

Ports
Aberdeen, Scotland, 402
Amsterdam, Netherlands, 104
Antwerpen, Belgium, 64
Bergen, Norway, 558
Bremerhaven, Germany, 287
Cherbourg, France, 218
Dundee, Scotland, 394
Egersund, Norway, 440
Emden, Germany, 230
Esbjerg, Denmark, 318
Hamburg, Germany, 342
Hartlepool, England, 263
Hull, England, 205
Inverness, Scotland, 506
Le Havre, France, 186
Leith, Scotland, 392
London, England, 131
Newcastle, England, 289
Oslo, Norway, 586
Plymouth, England, 303
Portland, England, 229
Portsmouth, England, 179
Rotterdam, Netherlands, 73
Southampton, England, 197
Stavanger, Norway, 481
Wilhelmshaven, Germany, 274

ZONGULDAK, TURKEY
(41°28'00'' N., 31°49'00'' E.)

Add 136¼ miles to Istanbul distances for ports outside the Black Sea.

*JUNCTION POINT.—See Preface for use of junction points.

U.S. NAVAL OCEANOGRAPHIC OFFICE SAILING DIRECTIONS

New No.	Old No.	Ed.—Date	
			AREA 1—CANADA, GREENLAND AND ICELAND
10	175	6—1960	**British Columbia, Vol. I.** Strait of Juan de Fuca and inner passages to Cape Caution
11	176	6—1962	**British Columbia, Vol II.** Cape Caution to Alaska.
12	99	9—1952	**Nova Scotia.** The Bay of Fundy and Cape Breton Island.
13	100	7—1951	**The Gulf and River St. Lawrence.** Western shores of the gulf and the river and seaway to Cornwall Island.
14	73	8—1958	**Newfoundland.** Includes Strait of Belle Isle and St. Pierre and Miquelon Islands.
15	77	2—1951	**Northern Canada.** Labrador northward of St. Lewis Sound and Canadian mainland and archipelago, excluding Baffin Bay.
16	76	2—1951	**Baffin Bay and Davis Strait.** Includes northern Greenland eastward to Cape Morris Jesup.
17	75	2—1951	**East Greenland and Iceland.** Includes the island of Jan Mayen.
			AREA 2—LATIN AMERICA AND ANTARCTICA
20	130	5—1952	**East Coasts of Central America and Mexico.** Includes north coast of Columbia.
21	128	3—1958	**The West Indies, Vol I.** Bermuda, Bahamas, and Greater Antilles.
22	129	7—1963	**The West Indies, Vol. II.** Lesser Antilles and Venezuela.
23	172	5—1952	**South America, Vol. I.** East coast from Venezuelan border to and including Rio de la Plata.
24	173	5—1952	**South America, Vol. II.** East and west coasts between Rio de la Plata and Cabo Tres Montes, including Falkland, South Georgia, and South Sandwich Islands.
25	174	6—1960	**South America, Vol. III.** West coast between Gulf of Panama and Cabo Tres Montes.
26	84	9—1951	**West Coasts of Mexico and Central America.** The United States border to Colombian border.
27	138	2—1960	**Antarctica.** Includes islands south of latitude 60°.
			AREA 3—BRITISH ISLES AND NORTHWESTERN EUROPE
30	146	5—1962	**Ireland.**
31	144	4—1952	**South Coast of England.** Scilly Isles to North Foreland.
32	145	4—1951	**West Coasts of England and Wales.** Lands End to Mull of Galloway, including Isle of Man.
33	147	4—1951	**West Coast of Scotland.** Mull of Galloway to Cape Wrath, including the Hebrides.
34	149	3—1950	**North and East Coasts of Scotland.** Cape Wrath to Fife Ness, including Orkney, Shetland, and Faeroe Islands.
35	150	5—1951	**East Coast of England.** Fife Ness to North Foreland, including the Firth of Forth.
36	135	5—1959	**Eastern Shores of the North Sea.** Dunkerque to Skagen.
37	132	4—1951	**North Coast of France.** Northwestern end of France to Belgium
38	133	5—1951	**Bay of Biscay.** West coast of France and north coast of Spain.
			AREA 4—BALTIC, SCANDINAVIA, AND NORTHERN U.S.S.R.
40	140	1—1955	**Northern and Eastern Shores of the Skagerrak.** Lindesnes to Marstrandsfjorden.
41	141A	1—1956	**Kattegat and The Sound.** Skagen to Falsterbo, including Fakse Bugt.
42	141B	1—1958	**The Baltic, Vol. I.** Store Baelt, Lille Baelt, and coast from Denmark to Kap Arkona.
43	142	4—1951	**The Baltic, Vol. II.** Baltic Sea from Falsterbo Udde and Kap Arkona to the Gulfs of Finland and Bothnia.
44	143	3—1952	**The Baltic, Vol. III.** Gulfs of Finland and Bothnia.
45	139	1—1955	**Southwest Coast of Norway.** Lindesnes to Fedje.
46	136	4—1952	**Northwest and North Coasts of Norway.** Fedjeosen to Nyemyetski Point. U.S.S.R. including Svalbard Archipelago.
47	137A	1—1953	**Northern U.S.S.R., Vol. I.** Mys Nemetskiy to Mys Kanin Nos.
48	137B	1—1954	**Northern U.S.S.R., Vol. II.** Mys Kanin Nos to Ostrov Dikson.
49	137C	1—1954	**Northern U.S.S.R., Vol. III.** Ostrov Dikson to Mys Shmidta.
			AREA 5—MEDITERRANEAN AND WESTERN AFRICA
50	105	4—1951	**Southwest Coast of Africa.** Cape Palmas to Cape of Good Hope.
51	134	6—1952	**West Coasts of Spain, Portugal, and Northwest Africa and Off-lying Islands.** Includes Azores, Madeira, Canary and Cape Verde Islands, and Africa southward to Cape Palmas.
52	151	4—1952	**The Mediterranean, Vol. I.** Strait of Gibraltar, Spain, Balearic Islands, northern Africa to Ras Agedir.
53	152	5—1958	**The Mediterranean, Vol. II.** France, west coast of Italy, Corsica, Sardinia, and Sicily, including adjacent islands.
54	153	3—1951	**The Mediterranean, Vol. III.** Southeast Italy, the Adriatic, and western Greece to Akra Tainaron.
55	154A	3—1963	**The Mediterranean, Vol. IV.** Libya, Egypt, Israel, Lebanon, Syria, and southern Turkey including islands of Cyprus, Rodhos, Karpathos, and Crete.
56	154B	2—1952	**The Mediterranean, Vol. V.** The Aegean Sea.

U.S. NAVAL OCEANOGRAPHIC OFFICE SAILING DIRECTIONS—Continued

New No.	Old No.	Ed.—Date	
			AREA 6—MIDDLE EAST, EASTERN AFRICA, AND SOUTHERN ASIA
60	156	4—1951	**Southeast Coast of Africa.** Cape of Good Hope to Ras Hafun.
61	157	5—1965	**Red Sea and Gulf of Aden.** Includes Suez Canal, Gulf of Suez, Africa north of Ras Hafun, Suqutra, and Arabian coast eastward to Ra's al Hadd.
62	158	5—1960	**The Persian Gulf.** Includes Gulf of Oman and northern shore of Arabian Sea, eastward to Ras Muari.
63	159	4—1951	**West Coast of India.** Includes Ceylon and Maldive and Laccadive Islands.
64	160	4—1951	**Bay of Bengal.** Calimere Point to Salang Island, including Andaman and Nicobar Islands.
65	161	4—1952	**South Indian Ocean.** Madagascar and islands westward of longitude 90°.
			AREA 7—AUSTRALIA AND SOUTHWEST PACIFIC
70	162	4—1951	**Malacca Strait and Sumatra.** Central and western Sumatra and southwestern Malay Peninsula.
71	126	5—1951	**Soenda Strait and Western and Northeast Coasts of Borneo and Off-lying Islands.**
72	163	5—1962	**Java; Lesser Sundas; South, Southeast, and East Coasts of Borneo; and Celebes,** Excludes western end of Java between Tandjung Tjankuang and Udjung Krawang.
73	164	4—1952	**New Guinea.** Include Halmahera and islands southward.
74	170	3—1952	**North and West Coasts of Australia.** Cape York to Cape Leeuwin.
75	169	4—1954	**East Coast of Australia.** Sydney to Cape York, including islands in the Coral Sea.
76	168	3—1952	**Southeast Coast of Australia.** Cape Northumberland to Port Jackson, including Tasmania.
77	167	3—1950	**South Coast of Australia.** Cape Leeuwin to Cape Northumberland.
78	171	3—1952	**New Zealand.** Includes Kermadec Islands and islands eastward and southward of New Zealand.
			AREA 8—NORTH AND SOUTH PACIFIC
80	166	6—1952	**The Pacific Islands, Vol. III.** The south-central groups.
81	165B	1—1952	**The Pacific Islands, Vol. II.** Santa Cruz and New Hebrides groups, New Caledonia, and adjacent islands.
82	165A	2—1964	**The Pacific Islands, Vol. I.** Western groups, including the Solomon Islands.
			AREA 9—FAR EAST, PHILIPPINE ISLANDS, AND EASTERN U.S.S.R.
90	78	1—1955	**Philippine Islands, Vol. I.** Northern islands, including western Negros, and northern Samar.
91	79	1—1956	**Philippine Islands, Vol. II.** Central islands, including eastern Negroes, southern Samar and northern Mindanao.
92	80	1—1956	**Philippine Islands, Vol. III.** Southern Mindanao, Sulu Archipelago, and Palawan.
93	125	5—1957	**Western Shores of South China Sea.** Singapore Strait to Hong Kong.
94	124	6—1959	**Coast of China.** Coast northward of Hong Kong to Yalu Chiang, and island of Taiwan.
95	123B	2—1951	**Japan, Vol. II (Southern Part).** The Naikai and islands southward, including Nansei Shoto, and Tsushima.
96	123A	2—1951	**Japan Vol. I (Northern Part).** Honshu, except the Naikai, Hokkaido, Chishima Retto, and Nanpo Shoto.
97	122B	2—1951	**Southeast Coast of Siberia and Korea.** Sakhalinskiy Zaliv to Yalu Chiang, including Sakhalin.
98	122A	2—1951	**East Coast of Siberia.** Mys Otto Shimidta to Sakhalinskiy Zaliv, including Ostrov Vramgelya.

CONVERSION TABLE FOR NAUTICAL AND STATUTE MILES

1 nautical mile=6,076.11549 . . . feet

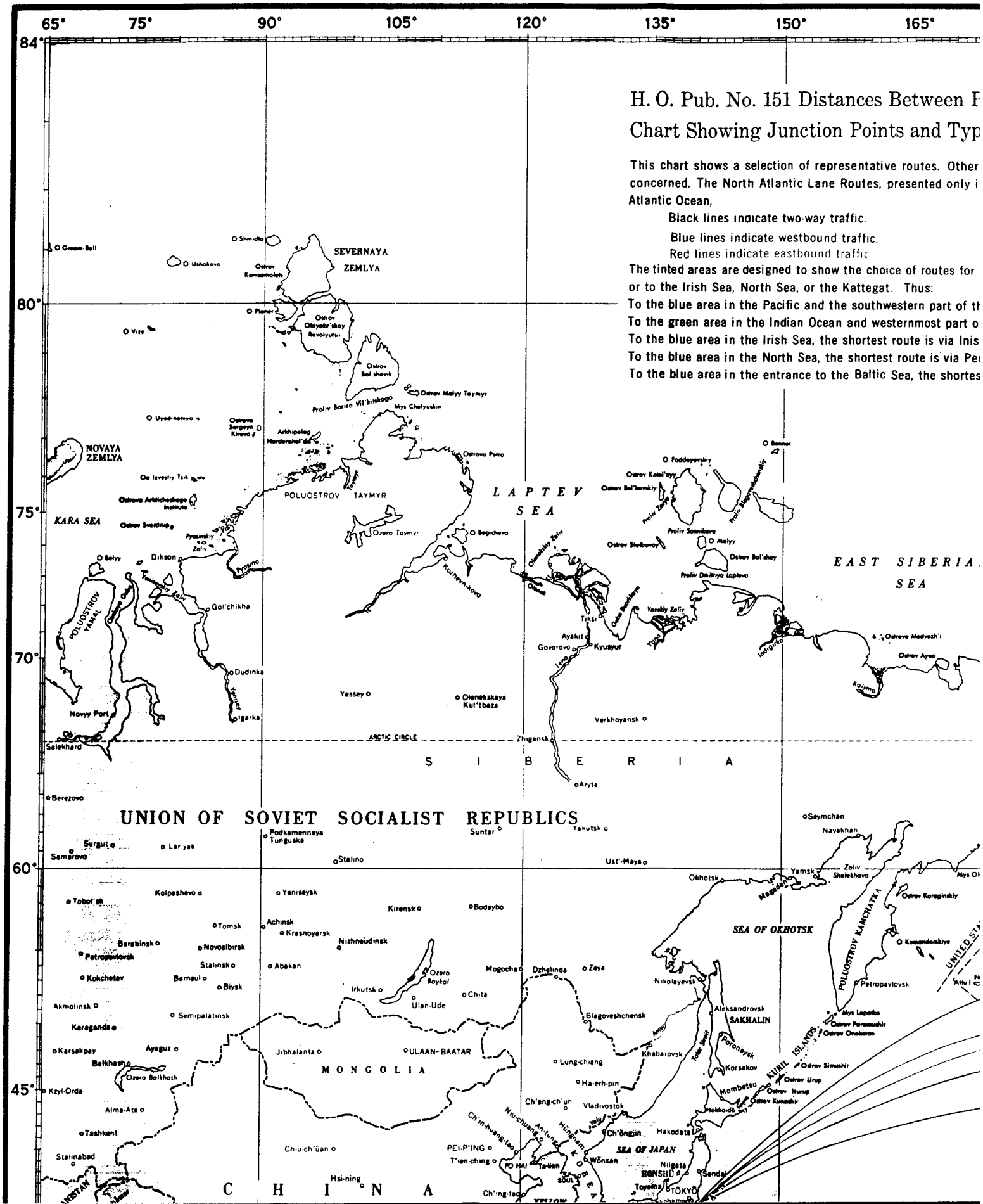
1 statute mile=5,280 feet

Nautical miles to statute miles				Statute miles to nautical miles			
Nautical miles	Statute miles	Nautical miles	Statute miles	Statute miles	Nautical miles	Statute miles	Nautical miles
1	1. 151	51	58. 690	1	0. 869	51	44. 318
2	2. 302	52	59. 840	2	1. 738	52	45. 187
3	3. 452	53	60. 991	3	2. 607	53	46. 056
4	4. 603	54	62. 142	4	3. 476	54	46. 925
5	5. 754	55	63. 293	5	4. 345	55	47. 794
6	6. 905	56	64. 444	6	5. 214	56	48. 663
7	8. 055	57	65. 594	7	6. 083	57	49. 532
8	9. 206	58	66. 745	8	6. 952	58	50. 401
9	10. 357	59	67. 896	9	7. 821	59	51. 270
10	11. 508	60	69. 047	10	8. 690	60	52. 139
11	12. 659	61	70. 197	11	9. 559	61	53. 008
12	13. 809	62	71. 348	12	10. 428	62	53. 877
13	14. 960	63	72. 499	13	11. 297	63	54. 746
14	16. 111	64	73. 650	14	12. 166	64	55. 615
15	17. 262	65	74. 801	15	13. 035	65	56. 484
16	18. 412	66	75. 951	16	13. 904	66	57. 353
17	19. 563	67	77. 102	17	14. 773	67	58. 222
18	20. 714	68	78. 253	18	15. 642	68	59. 091
19	21. 865	69	79. 404	19	16. 511	69	59. 959
20	23. 016	70	80. 554	20	17. 380	70	60. 828
21	24. 166	71	81. 705	21	18. 249	71	61. 697
22	25. 317	72	82. 856	22	19. 118	72	62. 566
23	26. 468	73	84. 007	23	19. 986	73	63. 435
24	27. 619	74	85. 158	24	20. 855	74	64. 304
25	28. 769	75	86. 308	25	21. 724	75	65. 173
26	29. 920	76	87. 459	26	22. 593	76	66. 042
27	31. 071	77	88. 610	27	23. 462	77	66. 911
28	32. 222	78	89. 761	28	24. 331	78	67. 780
29	33. 373	79	90. 911	29	25. 200	79	68. 649
30	34. 523	80	92. 062	30	26. 069	80	69. 518
31	35. 674	81	93. 213	31	26. 938	81	70. 387
32	36. 825	82	94. 364	32	27. 807	82	71. 256
33	37. 976	83	95. 515	33	28. 676	83	72. 125
34	39. 126	84	96. 665	34	29. 545	84	72. 994
35	40. 277	85	97. 816	35	30. 414	85	73. 863
36	41. 428	86	98. 967	36	31. 283	86	74. 732
37	42. 579	87	100. 118	37	32. 152	87	75. 601
38	43. 730	88	101. 268	38	33. 021	88	76. 470
39	44. 880	89	102. 419	39	33. 890	89	77. 339
40	46. 031	90	103. 570	40	34. 759	90	78. 208
41	47. 182	91	104. 721	41	35. 628	91	79. 077
42	48. 333	92	105. 871	42	36. 497	92	79. 946
43	49. 483	93	107. 022	43	37. 366	93	80. 815
44	50. 634	94	108. 173	44	38. 235	94	81. 684
45	51. 785	95	109. 324	45	39. 104	95	82. 553
46	52. 936	96	110. 475	46	39. 973	96	83. 422
47	54. 087	97	111. 625	47	40. 842	97	84. 291
48	55. 237	98	112. 776	48	41. 711	98	85. 160
49	56. 388	99	113. 927	49	42. 580	99	86. 029
50	57. 539	100	115. 078	50	43. 449	100	86. 898

To convert Nautical miles to Statute miles, multiply Nautical miles by 1.15.
To convert Statute miles to Nautical miles, multiply Statute miles by 0.87.

TABLE FOR ESTIMATING TIME OF TRANSIT

Distance	Speed in knots																		
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	30
Nautical miles	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*	*Days-hours*
10	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1						
20	0-3	0-2	0-2	0-2	0-2	0-2	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
30	0-4	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-1	0-1	0-1	0-1	0-1	0-1
40	0-5	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-1
50	0-6	0-6	0-5	0-5	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2
60	0-8	0-7	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-2	0-2
70	0-9	0-8	0-7	0-6	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-2
80	0-10	0-9	0-8	0-7	0-7	0-6	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3
90	0-11	0-10	0-9	0-8	0-8	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-3
100	0-13	0-11	0-10	0-9	0-8	0-8	0-7	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-5	0-4	0-4	0-4	0-3
200	1-1	0-22	0-20	0-18	0-17	0-15	0-14	0-13	0-13	0-12	0-11	0-11	0-10	0-10	0-9	0-9	0-8	0-8	0-7
300	1-14	1-9	1-6	1-3	1-1	0-23	0-21	0-20	0-19	0-18	0-17	0-16	0-15	0-14	0-14	0-13	0-13	0-12	0-10
400	2-2	1-20	1-16	1-12	1-9	1-7	1-5	1-3	1-1	1-0	0-22	0-21	0-20	0-19	0-18	0-17	0-17	0-16	0-13
500	2-15	2-8	2-2	1-21	1-18	1-14	1-12	1-9	1-7	1-5	1-4	1-2	1-1	1-0	0-23	0-22	0-21	0-20	0-17
600	3-3	2-19	2-12	2-7	2-2	1-22	1-19	1-16	1-14	1-11	1-9	1-8	1-6	1-5	1-3	1-2	1-1	1-0	0-20
700	3-16	3-6	2-22	2-16	2-10	2-6	2-2	1-23	1-20	1-17	1-15	1-13	1-11	1-9	1-8	1-6	1-5	1-4	0-23
800	4-4	3-17	3-8	3-1	2-19	2-14	2-9	2-5	2-2	1-23	1-20	1-18	1-16	1-14	1-12	1-11	1-9	1-8	1-3
900	4-17	4-4	3-18	3-10	3-3	2-21	2-16	2-12	2-8	2-5	2-2	1-23	1-21	1-19	1-17	1-15	1-14	1-12	1-6
1,000	5-5	4-15	4-4	3-19	3-11	3-5	2-23	2-19	2-15	2-11	2-8	2-5	2-2	2-0	1-21	1-19	1-18	1-16	1-9
2,000	10-10	9-6	8-8	7-14	6-23	6-10	5-23	5-13	5-5	4-22	4-15	4-9	4-4	3-23	3-19	3-15	3-11	3-8	2-19
3,000	15-15	13-21	12-12	11-9	10-10	9-15	8-22	8-8	7-20	7-8	6-23	6-14	6-6	5-23	5-16	5-10	5-5	5-0	4-4
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65°
75°
90°
105°
120°
135°
150°
165°
84°
80°
75°
70°
60°
45°
SEVERNAYA ZEMLYA
NOVAYA ZEMLYA
POLUOSTROV TAYMYR
KARA SEA
LAPTEV SEA
EAST SIBERIAN SEA
SEA OF OKHOTSK
SEA OF JAPAN
POLUOSTROV YAMAL
POLUOSTROV KAMCHATKA
SAKHALIN
KURIL ISLANDS
HONSHŪ
HOKKAIDŌ
MONGOLIA
ULAAN-BAATAR
SIBERIA
UNION OF SOVIET SOCIALIST REPUBLICS
CHINA
ARCTIC CIRCLE
Dikson
Salekhard
Novyy Port
Igarka
Dudinka
Yessey
Verkhoyansk
Zhigansk
Aryta
Tiksi
Ayakit
Kyusyur
Govorovo
Kolymo
Ostrova Medvezh'i
Ostrov Ayon
Yakutsk
Suntar
Ust'-Maya
Seymchan
Nayakhan
Okhotsk
Yamsk
Petropavlovsk
Mys Lopatka
Ostrov Paramushir
Ostrov Onekotan
Ostrov Kharimkotan
Ostrov Simushir
Ostrov Urup
Ostrov Iturup
Ostrov Kunashir
Nikolayevsk
Aleksandrovsk
Poronaysk
Korsakov
Mombetsu
Khabarovsk
Komsomol'sk
Vladivostok
Nakhodka
Hakodate
Sendai
Niigata
Wŏnsan
Tsingtao
Tientsin
PO HAI
PEI-P'ING
T'ien-ching
Ch'ing-tao
SOUL
Hsi-ning
Chiu-ch'üan
Kzyl-Orda
Alma-Ata
Tashkent
Stalinabad
Karaganda
Balkhash
Ayaguz
Jibhalanta
Lung-chiang
Ha-erh-pin
Ch'ang-ch'un
Ch'ŏngjin
Irkutsk
Ozero Baykal
Ulan-Ude
Chita
Mogocha
Dzhelinda
Zeya
Blagoveshchensk
Amur
Semipalatinsk
Barabinsk
Novosibirsk
Petropavlovsk
Tomsk
Achinsk
Krasnoyarsk
Nizhneudinsk
Abakan
Kirensk
Bodaybo
Kolpashevo
Yeniseysk
Tobol'sk
Surgut
Lar'yak
Samarovo
Berezovo
Podkamennaya Tunguska
Stalino
Ozero Taymyr
Begichevo
Khatanga
Ostrov Bol'shevik
Ostrov Malyy Taymyr
Proliv Borisa Vil'kitskogo
Mys Chelyuskin
Ostrova Petra
Ostrova Sergeya Kirova
Arkhipelag Nordenskiol'da
Ostrova Arkticheskogo Instituta
Ostrov Sverdrup
Ostrov Kotel'nyy
Ostrov Bel'kovskiy
Proliv Zapadnyy
Proliv Vostochnyy
Proliv Sannikova
Ostrov Stolbovoy
Ostrov Malyy
Ostrov Bol'shoy
Proliv Dmitriya Laptseva
Yanskiy Zaliv
Proliv Sannikova
Ostrov Faddeyevskiy
Ostrov Bennett
Ostrov Greem-Bell
Ostrov Ushakova
Ostrov Vize
Ostrov Kommunisma
Ostrov Oktyabr'skoy Revolyutsii
Ostrov Pioner
Ostrov Uyedineniya
Ostrova Isachenko
Ostrova Anzhu
Ostrov Shmidta
Ostrov Komsomolets
Ostrov Izvestiy Tsik
Proliv Yugorskiy Shar
Pyasinskiy Zaliv
Pyasino
Gol'chikha
Yenisey
Olenekskaya Kul'tbaza
Ozero Baykal
Ozero Khanka
Ozero Lobnor
Ozero Kukunor
Ozero Koko-Nor
Ozero Tsaydam
Ozero Lop-Nor
Ozero Issyk-Kul'
Ozero Balkhash
Ozero Aral
Ozero Chany
Ozero Tengiz
Ozero Ubsu-Nur
Ozero Dalay-Nur
Ozero Hulun
Ozero Buyr
Ozero Kuku

2

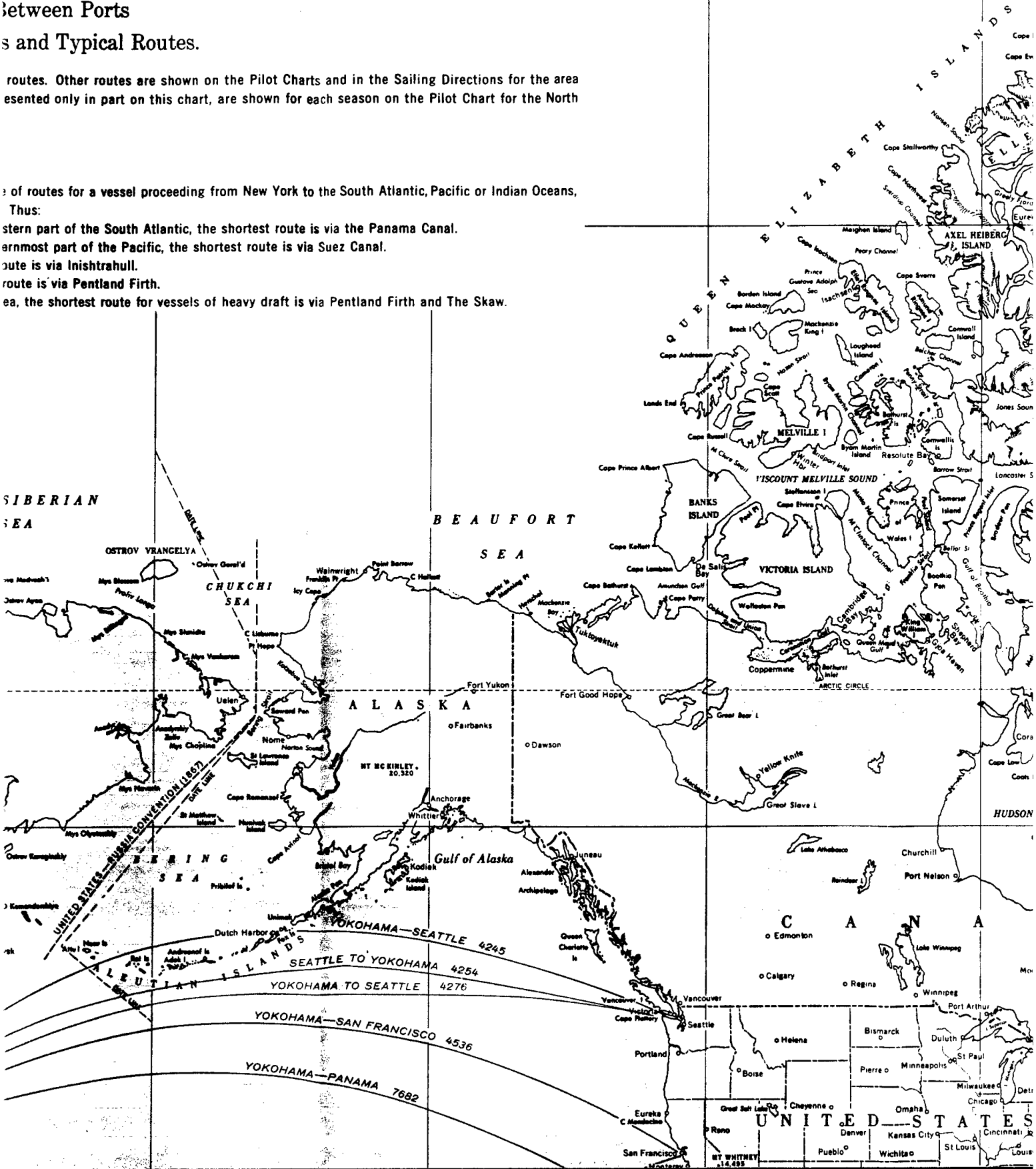
165° 180° 165° 150° 135° 120° 105° 90°

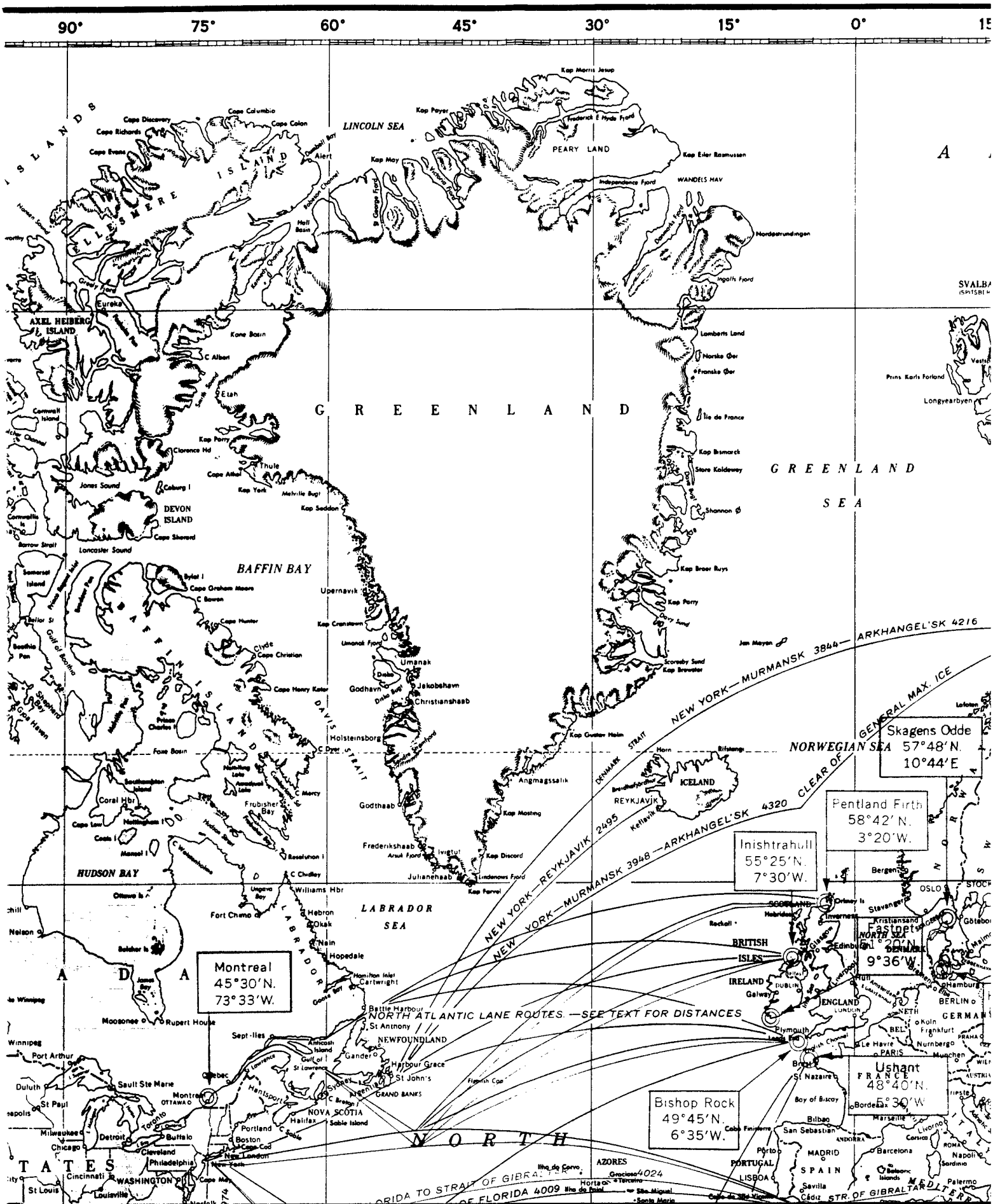
Between Ports

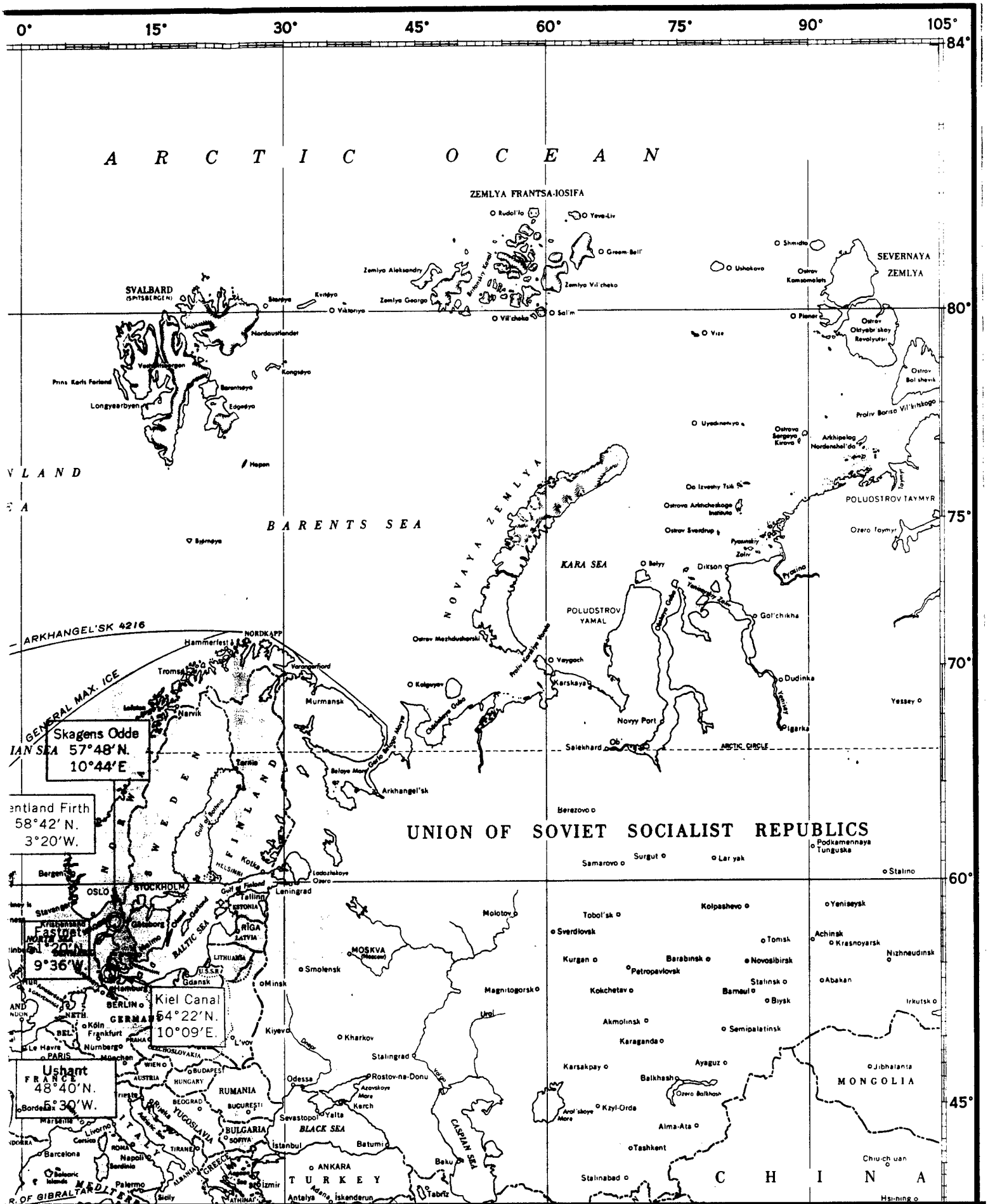
s and Typical Routes.

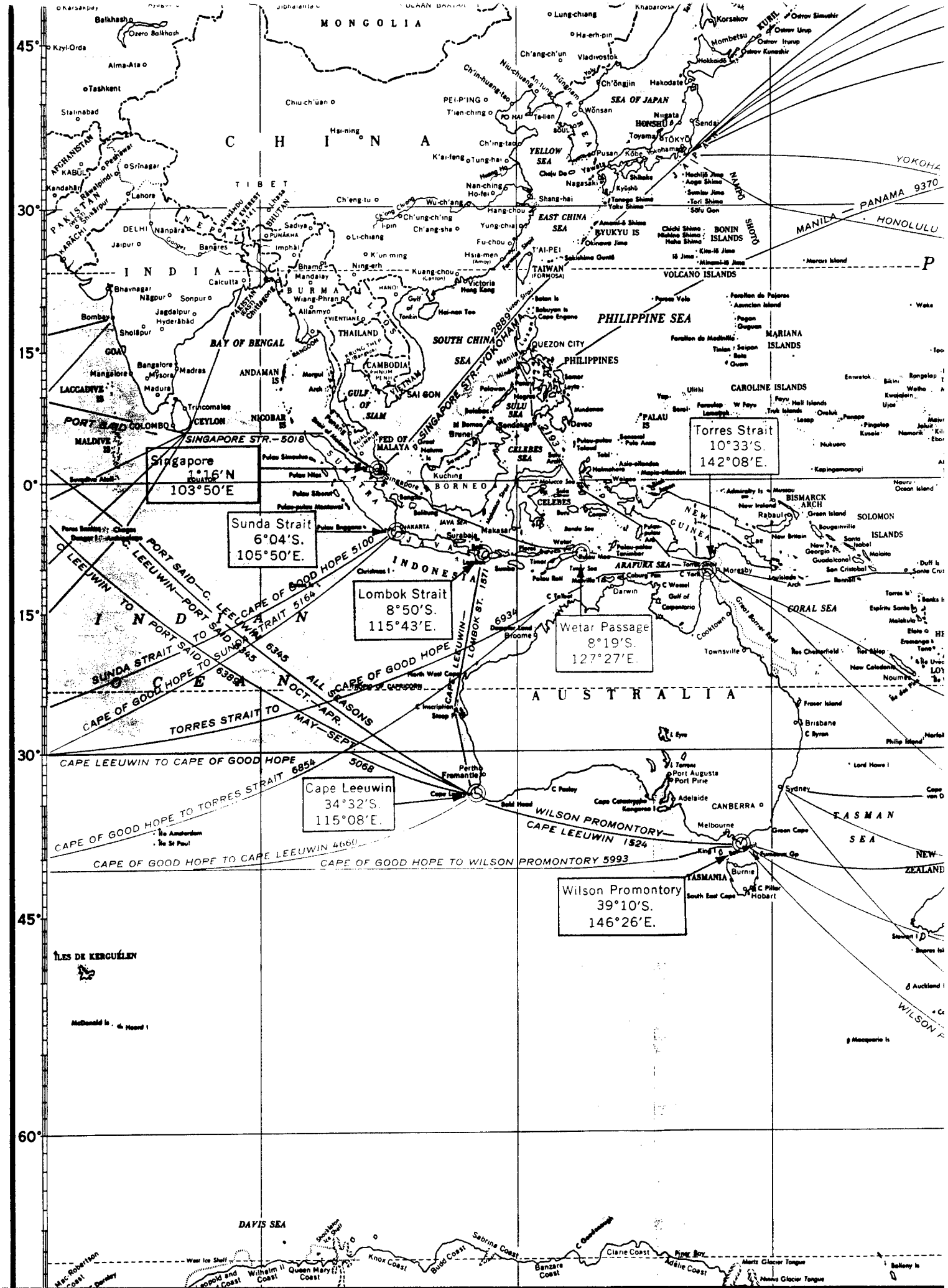
routes. Other routes are shown on the Pilot Charts and in the Sailing Directions for the area esented only in part on this chart, are shown for each season on the Pilot Chart for the North

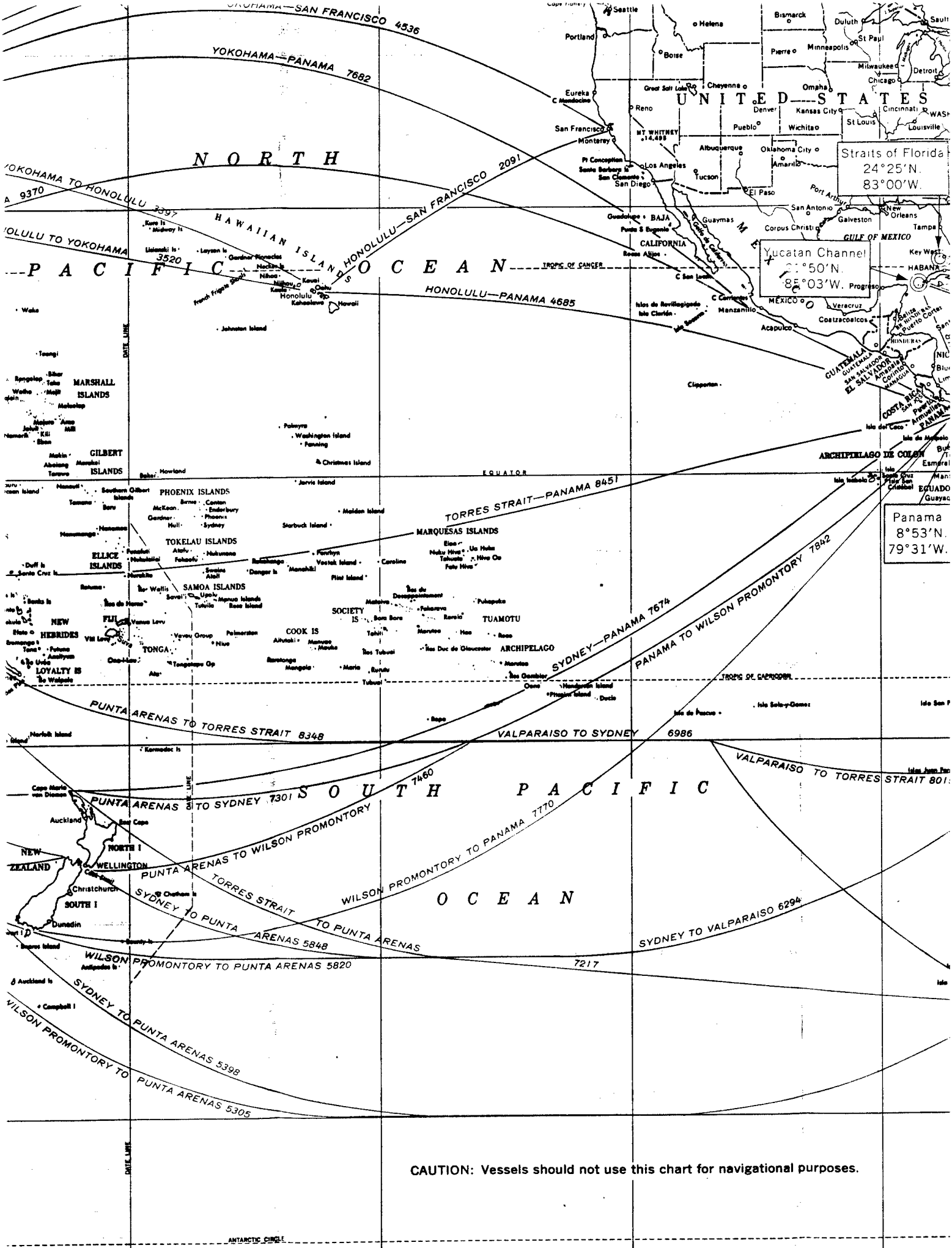
e of routes for a vessel proceeding from New York to the South Atlantic, Pacific or Indian Oceans, Thus:
stern part of the South Atlantic, the shortest route is via the Panama Canal.
ernmost part of the Pacific, the shortest route is via Suez Canal.
oute is via Inishtrahull.
route is via Pentland Firth.
ea, the shortest route for vessels of heavy draft is via Pentland Firth and The Skaw.

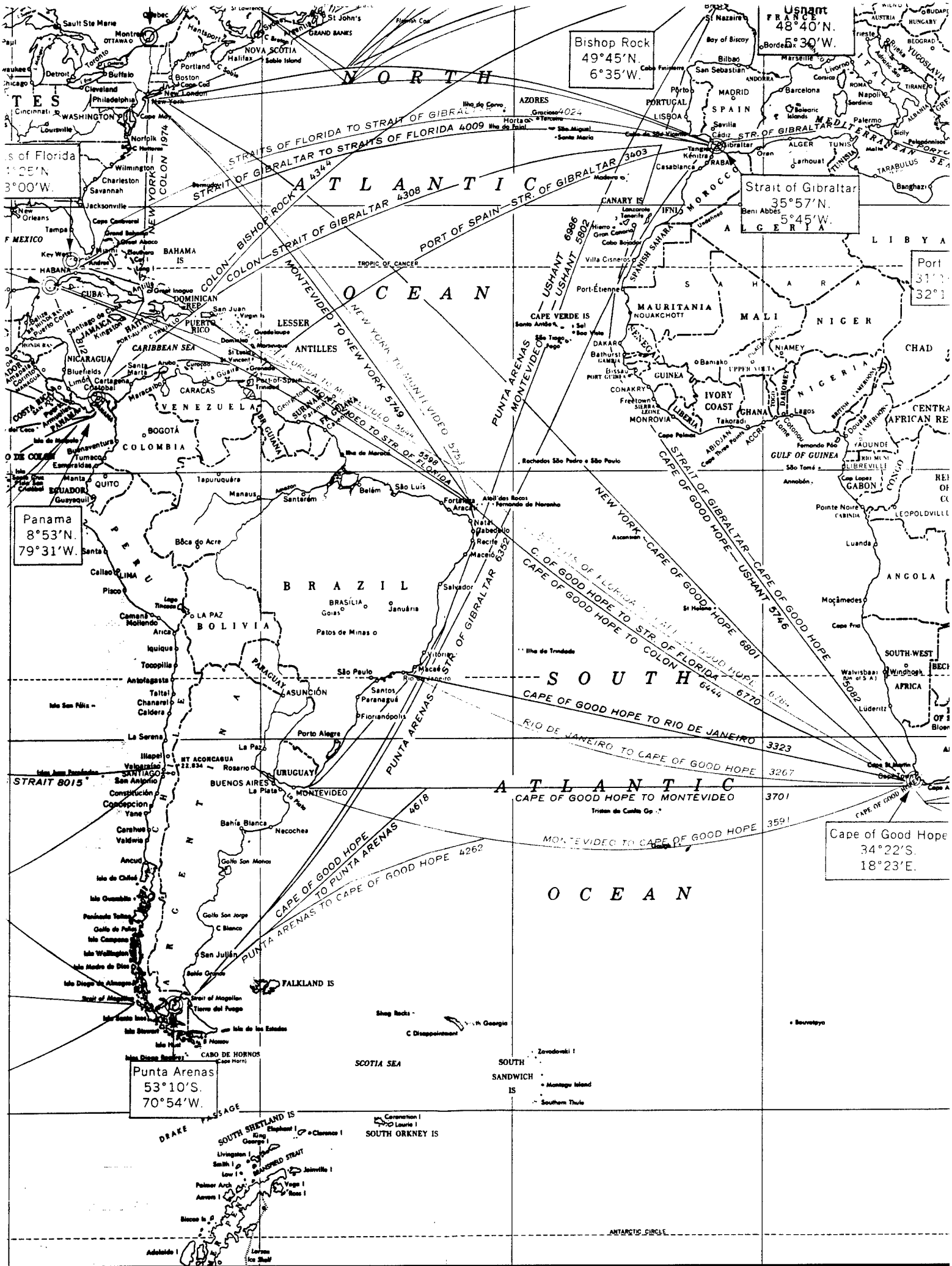


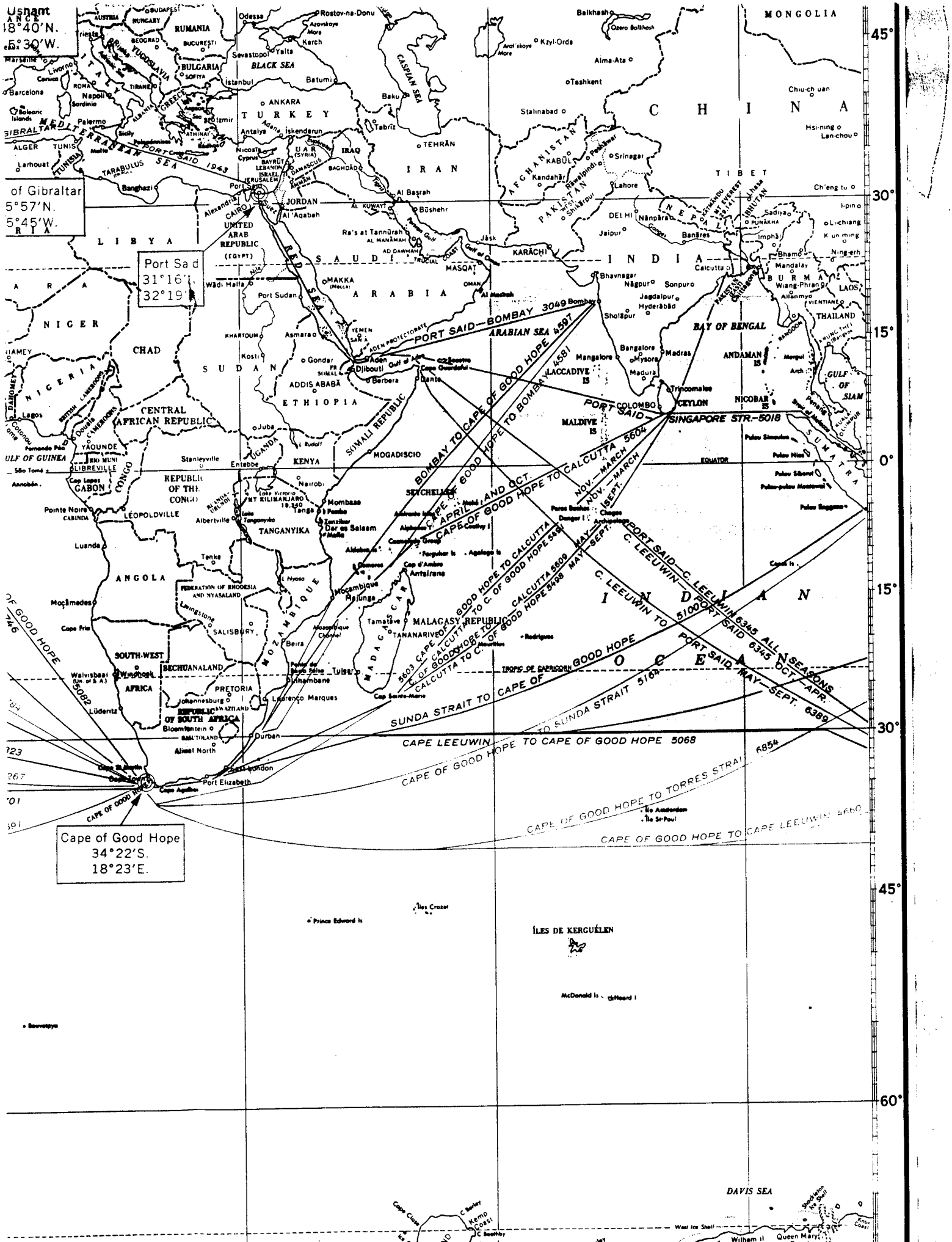

90°
75°
60°
45°
30°
15°
0°
LINCOLN SEA
PEARY LAND
ELLESMERE ISLAND
AXEL HEIBERG ISLAND
DEVON ISLAND
GREENLAND
GREENLAND SEA
BAFFIN BAY
DAVIS STRAIT
HUDSON BAY
LABRADOR SEA
NORWEGIAN SEA
ICELAND
REYKJAVIK
NEWFOUNDLAND
NOVA SCOTIA
Montreal
45°30'N.
73°33'W.
Skagens Odde
57°48'N.
10°44'E
Pentland Firth
58°42'N.
3°20'W.
Inishtrahull
55°25'N.
7°30'W.
Fastnet
51°20'N.
9°36'W.
Ushant
48°40'N.
5°30'W.
Bishop Rock
49°45'N.
6°35'W.
NEW YORK—MURMANSK 3844—ARKHANGEL'SK 4216
NEW YORK—REYKJAVIK 2495
NEW YORK—MURMANSK 3948—ARKHANGEL'SK 4320
GENERAL MAX. ICE
CLEAR OF
NORTH ATLANTIC LANE ROUTES.—SEE TEXT FOR DISTANCES
AZORES
PORTUGAL
SPAIN
FRANCE
BRITISH ISLES
IRELAND
ENGLAND
NORTH SEA
DENMARK
NORWAY
SWEDEN
GERMANY
Kap Morris Jesup
Kap Payer
Kap May
Kap Eider Rasmussen
WANDELS HAV
Nordostrundingen
Lamberts Land
Norske Øer
Franske Øer
Ile de France
Kap Bismarck
Store Koldewey
Shannon Ø
Kap Broer Ruys
Kap Parry
Jan Mayen
Scoresby Sund
Kap Brewster
Kap Gustav Holm
Angmagssalik
Kap Mosting
Kap Discord
Kap Farvel
Julianehaab
Frederikshaab
Godthaab
Godhavn
Jakobshavn
Christianshaab
Umanak
Upernavik
Kap Cranstown
Holsteinsborg
Cape Dyer
Cape Henry Kater
Cape Christian
Clyde
Cape Hunter
Cape Graham Moore
Cape Sherard
Kap Saddon
Kap York
Thule
Cape Athol
Kap Parry
Etah
Kane Basin
C Albert
Eureka
Alert
Cape Columbia
Cape Discovery
Cape Richards
Cape Evans
Cape Colan
Dumbell Bay
Robeson Channel
Hall Basin
Kennedy Channel
Nansen Sound
Greely Fjord
Jones Sound
Coburg I
Clarence Hd
Cape Sherard
Lancaster Sound
Barrow Strait
Prince Regent Inlet
Gulf of Boothia
Boothia Pen
Fury and Hecla Str
Foxe Basin
Frobisher Bay
C Mercy
C Chidley
Resolution I
Hudson Strait
Ungava Bay
Fort Chimo
Williams Hbr
Hebron
Okak
Nain
Hopedale
Hamilton Inlet
Cartwright
Battle Harbour
St Anthony
Anticosti Island
Gulf of St Lawrence
Gander
Harbour Grace
St John's
GRAND BANKS
Sept-Iles
Quebec
Montreal
OTTAWA
Hantsport
Sydney
C Breton I
Halifax
Sable Island
Portland
Boston
Cape Cod
New London
New York
Philadelphia
WASHINGTON
Cape May
Norfolk
Cincinnati
Louisville
St Louis
Chicago
Milwaukee
Detroit
Cleveland
Buffalo
Toronto
Lake Ontario
Lake Erie
Lake Michigan
Lake Superior
Duluth
St Paul
Winnipeg
Port Arthur
Sault Ste Marie
Moosonee
Rupert House
Nelson
Churchill
Ottawa Is
Belcher Is
Coats I
Mansel I
Cape Low
Nottingham I
Southampton Island
Coral Hbr
Baffin I
Cape Graham Moore
Bylot I
Somerset Island
Prince Regent Inlet
Gulf of Boothia
Boothia Pen
Taylor St
Shepherd Bay
Gore Haven
Prince Charles I
Melville Bugt
Umanak Fjord
Disko
Disko Bugt
Vaigat
Omenak Fjord
Scoresby Sund
Jan Mayen
Prins Karls Forland
Longyearbyen
Vestspitsbergen
SVALBARD
(SPITSBERGEN)
Lofoten
Bergen
OSLO
STOCKHOLM
Stavanger
Kristiansand
Göteborg
Malmö
Hamburg
BERLIN
GERMANY
Köln
Frankfurt
Nürnberg
München
PRAHA
WIEN
AUSTRIA
Trieste
ROMA
Napoli
Sardinia
Palermo
Corsica
Livorno
Barcelona
Balearic Islands
MADRID
SPAIN
Sevilla
Cádiz
STR. OF GIBRALTAR
MEDITERRANEAN
Porto
LISBOA
Cabo da Roca
Cabo Finisterre
San Sebastian
Bilbao
Bay of Biscay
Bordeaux
Marseille
St Nazaire
Brest
Plymouth
Le Havre
PARIS
Dublin
Galway
Liverpool
Hull
Amsterdam
Rotterdam
Antwerp
Ostende
Calais
Dover
English Channel
Lands End
Inverness
Edinburgh
Glasgow
Rockall
Hebrides
Orkney Is
Shetland Is
Lofoten
Faeroe Islands
Iceland
Reykjavik
Keflavik
Hornafjordur
Bjorn
Bjorn
Ilha do Corvo
Horta
Ilha do Faial
Graciosa
Terceira
Ilha Miguel
Santa Maria
4024
4009
FLORIDA TO STRAIT OF GIBRALTAR
OF FLORIDA

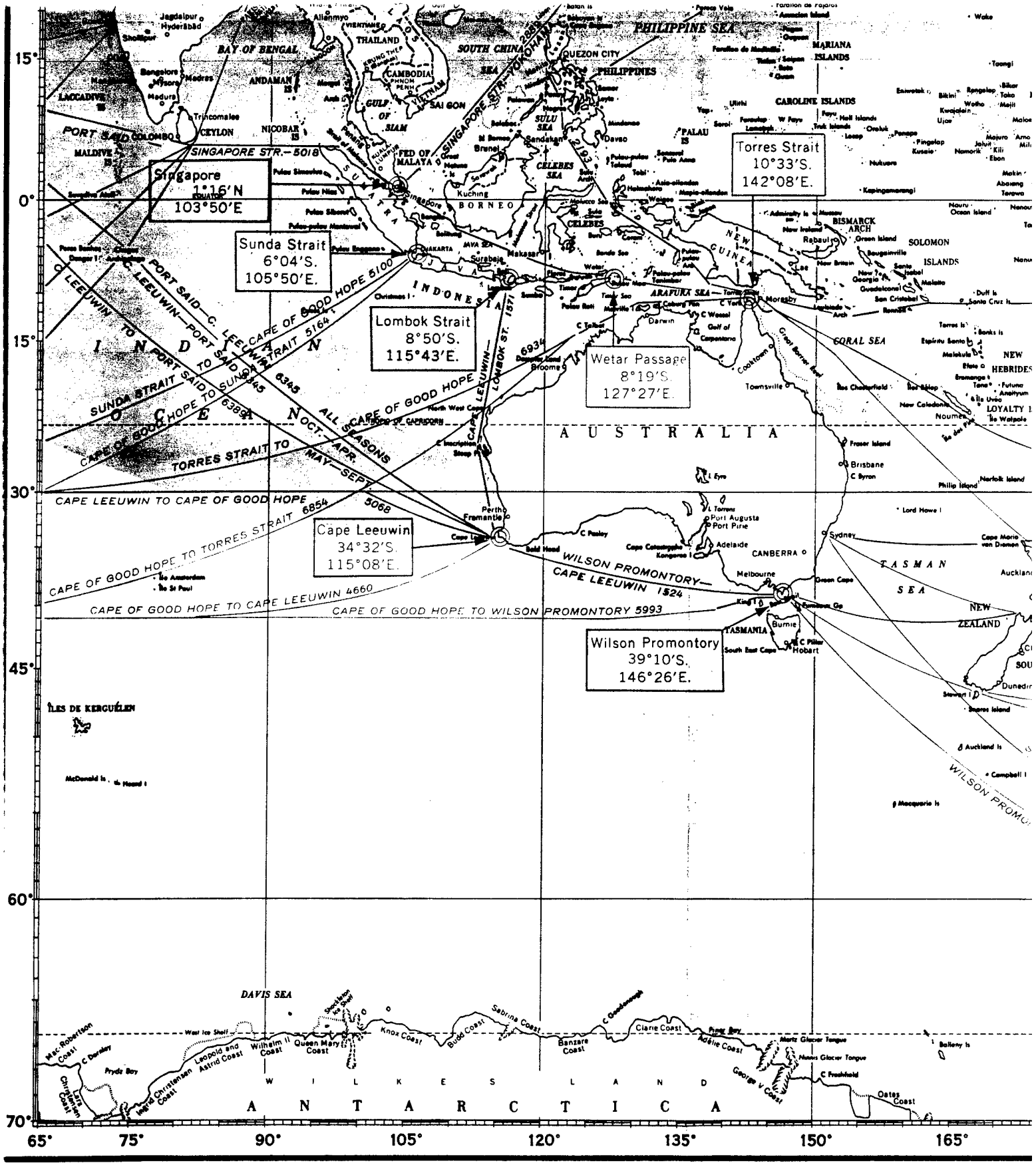

0°
15°
30°
45°
60°
75°
90°
105°
84°
80°
75°
70°
60°
45°
A R C T I C O C E A N
ZEMLYA FRANTSA-IOSIFA
Rudol'fa
Yeva-Liv
Greem-Bell'
Zemlya Aleksandry
Zemlya Georga
Zemlya Vil'cheka
Vil'cheka
Sal'm
Shmidta
Ushakova
SEVERNAYA ZEMLYA
Ostrov Komsomolets
Pioner
Ostrov Oktyabr'skoy Revolyutsii
Vize
Ostrov Bol'shevik
Proliv Borisa Vil'kitskogo
SVALBARD
(SPITSBERGEN)
Kvitøya
Storøya
Viktoriya
Nordaustlandet
Prins Karls Forland
Barentsøya
Kongsøya
Longyearbyen
Edgeøya
Hopen
Uyedineniya
Ostrova Sergeya Kirova
Arkhipelag Nordenshel'da
Ostrova Arkticheskogo Instituta
Ostrov Sverdrup
Pyasinskiy Zaliv
POLUOSTROV TAYMYR
Ozero Taymyr
Yenisey
Bjørnøya
BARENTS SEA
NOVAYA ZEMLYA
KARA SEA
Baly
Dikson
Pyasino
POLUOSTROV YAMAL
Gol'chikha
Ostrov Mezhdushariski
Vaygach
Karskaya
Dudinka
Novyy Port
Pigarka
Salekhard
Ob'
ARCTIC CIRCLE
Kolguyev
Arkhangel'sk
Belaye More
Berezovo
ARKHANGEL'SK 4216
GENERAL MAX. ICE
Hammerfest
NORDKAPP
Tromsø
Narvik
Murmansk
Skagens Odde
57°48'N.
10°44'E
Pentland Firth
58°42'N.
3°20'W.
Fastnet
51°20'N.
9°36'W.
Kiel Canal
54°22'N.
10°09'E.
Ushant
FRANCE
48°40'N.
5°30'W.
UNION OF SOVIET SOCIALIST REPUBLICS
Samarovo
Surgut
Lar'yak
Podkamennaya Tunguska
Stalino
Kolpashevo
Yeniseysk
Tobol'sk
Sverdlovsk
Achinsk
Tomsk
Krasnoyarsk
Nizhneudinsk
Kurgan
Barabinsk
Novosibirsk
Petropavlovsk
Abakan
Kokchetav
Stalinsk
Bameul
Biysk
Irkutsk
Akmolinsk
Semipalatinsk
Karaganda
Karsakpay
Ayaguz
Balkhash
Jibhalanta
MONGOLIA
Ozero Balkhash
Kzyl-Orda
Alma-Ata
Tashkent
Chiu-ch'uan
Hsi-ning
C H I N A
Stalinabad
Tabriz
Baku
CASPIAN SEA
Batumi
Istanbul
ANKARA
TURKEY
Antalya
İskenderun
Izmir
Sevastopol
Yalta
Kerch
Odessa
Rostov-na-Donu
Azovskoye More
BLACK SEA
Kharkov
Stalingrad
Kiyev
L'vov
Molotov
MOSKVA
(Moscow)
Smolensk
Minsk
Magnitogorsk
Ural
Dnepr
Volga
Leningrad
Ladozhskoye Ozero
Tallinn
ESTONIA
RIGA
LATVIA
LITHUANIA
U.S.S.R.
Gdańsk
Helsinki
Kotka
Gulf of Finland
Gulf of Bothnia
Tornio
Oulu
Luleå
Stockholm
Oslo
Bergen
Stavanger
Göteborg
Kristiansand
Aalborg
Skagerrak
BALTIC SEA
SWEDEN
FINLAND
NORWAY
DENMARK
NETH.
BEL.
GERMANY
BERLIN
Hamburg
Köln
Frankfurt
Nürnberg
München
Le Havre
PARIS
CZECHOSLOVAKIA
PRAHA
WIEN
AUSTRIA
BUDAPEST
HUNGARY
RUMANIA
BUCUREST
YUGOSLAVIA
BEOGRAD
BULGARIA
SOFIYA
Trieste
Adriatic Sea
ITALY
Livorno
Corsica
ROMA
Napoli
Sardinia
TIRANE
ALBANIA
GREECE
Palermo
Sicily
Barcelona
Balearic Islands
MEDITERRANEAN SEA
Bordeaux
Marseille
ANDORRA
Ireland
London
Dublin
Belfast
Liverpool
Manchester
Birmingham
Cardiff
Plymouth
Portsmouth
Southampton
Dover
Calais
Boulogne
Dunkerque
Ostend
Antwerpen
Rotterdam
Amsterdam
Den Helder
Vlissingen
Zeebrugge
Brugge
Gent
Bruxelles
Luxembourg
Metz
Nancy
Strasbourg
Basel
Zürich
Bern
Genève
Lyon
Dijon
Paris
Le Havre
Caen
Cherbourg
Rouen
Nantes
Brest
Lorient
Bordeaux
Toulouse
Montpellier
Marseille
Nice
Monaco
Corsica
Sardinia
Napoli
Roma
Palermo
Sicily
Tripoli
Benghazi
Tobruk
Alexandria
Cairo
Suez
Port Said
Haifa
Beirut
Damascus
Amman
Jerusalem
Tel Aviv
Gaza
Sinai
Red Sea
Jeddah
Mecca
Medina
Riyadh
Dhahran
Abu Dhabi
Muscat
Oman
Aden
Yemen
Sana
Hodeida
Asmara
Khartoum
Port Sudan
Addis Ababa
Djibouti
Somalia
Mogadishu
Kenya
Nairobi
Mombasa
Tanzania
Dar es Salaam
Zanzibar
Mozambique
Beira
Lourenço Marques
Durban
Cape Town
Port Elizabeth
East London
Pretoria
Johannesburg
Bloemfontein
Kimberley
Windhoek
Walvis Bay
Luanda
Angola
Zaire
Kinshasa
Matadi
Boma
Congo
Brazzaville
Pointe Noire
Gabon
Libreville
Port Gentil
Cameroon
Douala
Yaoundé
Nigeria
Lagos
Port Harcourt
Benin
Togo
Lomé
Ghana
Accra
Ivory Coast
Abidjan
Liberia
Monrovia
Sierra Leone
Freetown
Guinea
Conakry
Guinea-Bissau
Bissau
Senegal
Dakar
Gambia
Banjul
Mauritania
Nouakchott
Western Sahara
Morocco
Casablanca
Rabat
Tangier
Algeria
Algiers
Oran
Annaba
Tunisia
Tunis
Sfax
Libya
Tripoli
Benghazi
Egypt
Alexandria
Cairo
Suez
Port Said
Israel
Haifa
Tel Aviv
Jerusalem
Gaza
Jordan
Amman
Lebanon
Beirut
Syria
Damascus
Iraq
Baghdad
Basra
Iran
Tehran
Isfahan
Shiraz
Bandar Abbas
Persian Gulf
Strait of Hormuz
Gulf of Oman
Muscat
Oman
Saudi Arabia
Riyadh
Dhahran
Jeddah
Mecca
Medina
Red Sea
Yemen
Aden
Sana
Hodeida
Asmara
Eritrea
Ethiopia
Addis Ababa
Djibouti
Somalia
Mogadishu
Kenya
Nairobi
Mombasa
Uganda
Kampala
Tanzania
Dar es Salaam
Zanzibar
Mozambique
Beira
Lourenço Marques
Swaziland
Lesotho
South Africa
Durban
Cape Town
Port Elizabeth
East London
Pretoria
Johannesburg
Bloemfontein
Kimberley
Namibia
Windhoek
Walvis Bay
Angola
Luanda

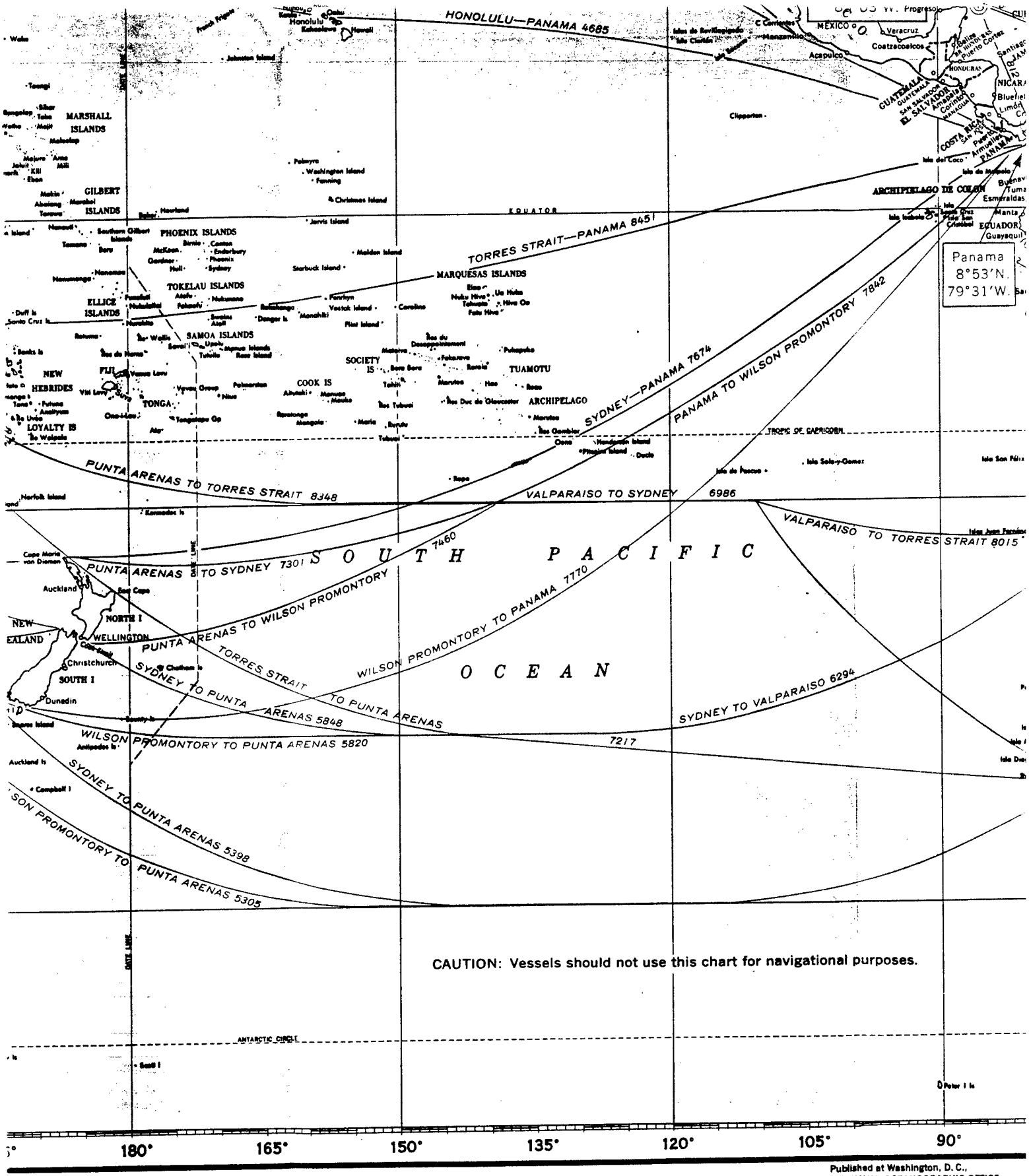

Singapore
1°16'N
103°50'E
Sunda Strait
6°04'S.
105°50'E.
Lombok Strait
8°50'S.
115°43'E.
Wetar Passage
8°19'S.
127°27'E.
Torres Strait
10°33'S.
142°08'E.
Cape Leeuwin
34°32'S.
115°08'E.
Wilson Promontory
39°10'S.
146°26'E.
SINGAPORE STR.—5018
CAPE OF GOOD HOPE 5100
PORT SAID—C. LEEUWIN—PORT SAID STRAIT 5164
C. LEEUWIN TO PORT SAID
SUNDA STRAIT TO SUNDA 6345
CAPE OF GOOD HOPE TO SUNDA 6388
CAPE OF GOOD HOPE ALL SEASONS
TORRES STRAIT TO MAY—SEPT.
OCT.—APR.
CAPE LEEUWIN—LOMBOK ST. 1871
6934
CAPE LEEUWIN TO CAPE OF GOOD HOPE 6854
5068
CAPE OF GOOD HOPE TO TORRES STRAIT
CAPE OF GOOD HOPE TO CAPE LEEUWIN 4660
CAPE OF GOOD HOPE TO WILSON PROMONTORY 5993
WILSON PROMONTORY—CAPE LEEUWIN 1524
MANILA — PANAMA 9370
HONOLULU
YOKOHA
SINGAPORE STR.—YOKOHAMA 2889
2190
MONGOLIA
CHINA
INDIA
INDIAN OCEAN
AUSTRALIA
PHILIPPINE SEA
SEA OF JAPAN
YELLOW SEA
EAST CHINA SEA
SOUTH CHINA SEA
BAY OF BENGAL
CELEBES SEA
SULU SEA
ARAFURA SEA
CORAL SEA
TASMAN SEA
DAVIS SEA
TIBET
BURMA
THAILAND
PHILIPPINES
TAIWAN (FORMOSA)
BORNEO
JAVA
SUMATRA
NEW GUINEA
NEW ZEALAND
TASMANIA
VOLCANO ISLANDS
MARIANA ISLANDS
CAROLINE ISLANDS
BONIN ISLANDS
RYUKYU IS
PALAU IS
SOLOMON ISLANDS
BISMARCK ARCH
ILES DE KERGUELEN
Balkhash
Ozero Balkhash
Kzyl-Orda
Alma-Ata
Tashkent
Stalinabad
Lung-chiang
Ha-erh-pin
Vladivostok
Khabarovsk
Korsakov
Ch'ang-ch'un
Mombetsu
Hokkaido
Ch'ongjin
Hakodate
Wönsan
Niigata
Sendai
HONSHU
TOKYO
Toyama
Yokohama
Kōbe
Pusan
Yawata
Nagasaki
Kyūshū
Shikoku
Chiu-ch'üan
PEI-P'ING
T'ien-ching
PO HAI
Te-lien
SOUTH KOREA
Hsi-ning
K'ai-feng
Tung-hai
Nan-ching
Ho-fei
Ch'ing-tao
Shang-hai
Ch'eng-tu
Wu-ch'ang
Hang-chou
Yung-chia
Fu-chou
T'AI-PEI
Kuang-chou (Canton)
Victoria Hong Kong
Gulf of Tonkin
Hai-nan Tao
Ning-erh
K'un-ming
Hsia-men (Amoy)
Ch'ung-ch'ing
Ch'ang-sha
Li-chiang
Ipin
Sadiya
PUNAKHA
Imphāl
Bhamo
Mandalay
Wiang-Phrao
Vientiane
Hanoi
Bangkok
Phnom Penh
Saigon
Gulf of Siam
Kuala Lumpur
Singapore
Kuching
Pulau Simeulue
Pulau Nias
Pulau Siberut
Pulau-pulau Mentawai
Pulau Enggano
Jakarta
Surabaja
Bali
Lombok
Sumbawa
Flores
Timor
Sea
Java Sea
Makasar
Celebes
Sulu Sea
Mindanao
Davao
Manila
Quezon City
Luzon
Baguio
Mindoro
Palawan
Negros
Cebu
Leyte
Samar
Boton Is
Baburyan Is
Cape Engano
Pagan
Guguan
Asuncion Island
Farallon de Pajaros
Farallon de Medinilla
Saipan
Tinian
Rota
Guam
Ulithi
Yap
Sonsorol
Pulo Anna
Tobi
Helmahera
Waigeo
Misole
Aru Islands
Kepingamarangi
Nukuoro
Admiralty Is
Manus
New Ireland
Rabaul
Green Island
Bougainville
New Britain
Santa Isabel
Malaita
Guadalcanal
San Cristobal
Nauru
Ocean Island
Port Moresby
Louisiade Arch
Rennell
Santa Cruz
Torres Is
Banks Is
Espiritu Santo
Malekula
Efate
Erromango
Tanna
Loyalty Is
Lord Howe I
Norfolk I
Darwin
Timor Sea
Arafura Sea
Coburg Pen
C Wessel
Gulf of Carpentaria
Cooktown
Great Barrier Reef
Townsville
Broome
Derby
Roebuck Bay
Dampier Land
Christmas I
Cocos Is
Java Trench
Sunda Strait
Krakatau
Merak
Anjer
Panaitan I
Pulau Bawean
Pulau Laut
Pulau-pulau Tanimbar
Pulau-pulau Aru
Pulau-pulau Kai
Pulau Babar
Pulau Roti
Pulau Sumba
Pulau Timor
Ashmore Reef
Scott Reef
North West Cape
Exmouth Gulf
Shark Bay
Dirk Hartog I
Cape Inscription
Steep Pt
Perth
Fremantle
Cape Leeuwin
Bald Head
C Naturaliste
C Freycinet
Geographe Bay
C Peron
Rottnest I
Albany
Esperance
Recherche Archipelago
Eyre
L Torrens
Port Augusta
Port Pirie
Adelaide
C Jervis
Kangaroo I
Cape Catastrophe
C Otway
Portland
Warrnambool
Port Fairy
Lorne
Geelong
Melbourne
CANBERRA
Sydney
Jervis Bay
Port Hacking
Botany Bay
Port Kembla
Newcastle
Port Stephens
Broken Bay
Sydney Harbour
Lord Howe I
Norfolk I
Fraser Island
Brisbane
C Byron
Philip Island
Phillip Island
Gabo I
Green Cape
Twofold Bay
Eden
Cape Howe
Wilsons Promontory
Port Welshpool
Port Albert
Lakes Entrance
Gabo Island
Cape Everard
Point Hicks
Cape Conran
Mallacoota Inlet
Mallacoota
Cape Howe
Burnie
Devonport
C Pillar
Hobart
South East Cape
Port Arthur
Maria I
Tasman Peninsula
Frederick Henry Bay
Storm Bay
Derwent R
Bruny I
D'Entrecasteaux Channel
Recherche Bay
Southport
Macquarie Harbour
Strahan
Gordon R
Port Davey
Bathurst Harbour
Hunter I
Three Hummock I
Robbins I
Cape Grim
Woolnorth
Stanley
Circular Head
Table Cape
Wynyard
Penguin
Ulverstone
Latrobe
Port Sorell
George Town
Low Head
Beauty Point
Launceston
Tamar R
Port Dalrymple
Bass Strait
Flinders I
Cape Barren I
Furneaux Group
Kent Group
Deal I
Hogan Group
Curtis I
Three Kings Is
Auckland I
Macquarie Is
Stewart I
Snares Is
Bounty Is
Antipodes Is
Campbell I
Auckland Is
Chatham Is
Kermadec Is
Raoul I
Tonga
Fiji
Nouméa
New Caledonia
Loyalty Is
Lifou
Mare
Ouvea
Huon Peninsula
Vitiaz Strait
Dampier Strait
Solomon Sea
Coral Sea
Gulf of Papua


YOKOHAMA—SAN FRANCISCO 4536
YOKOHAMA—PANAMA 7682
YOKOHAMA TO HONOLULU 3397
HONOLULU TO YOKOHAMA 3520
HONOLULU—SAN FRANCISCO 2091
HONOLULU—PANAMA 4685
TORRES STRAIT—PANAMA 8451
SYDNEY—PANAMA 7674
PANAMA TO WILSON PROMONTORY 7842
PUNTA ARENAS TO TORRES STRAIT 8348
VALPARAISO TO SYDNEY 6986
VALPARAISO TO TORRES STRAIT 801
PUNTA ARENAS TO SYDNEY 7301
PUNTA ARENAS TO WILSON PROMONTORY 7460
WILSON PROMONTORY TO PANAMA 7770
TORRES STRAIT TO PUNTA ARENAS 7217
SYDNEY TO PUNTA ARENAS 5848
SYDNEY TO VALPARAISO 6294
WILSON PROMONTORY TO PUNTA ARENAS 5820
SYDNEY TO PUNTA ARENAS 5398
WILSON PROMONTORY TO PUNTA ARENAS 5305
NORTH PACIFIC OCEAN
SOUTH PACIFIC OCEAN
UNITED STATES
MEXICO
HAWAIIAN ISLANDS
MARSHALL ISLANDS
GILBERT ISLANDS
PHOENIX ISLANDS
TOKELAU ISLANDS
ELLICE ISLANDS
SAMOA ISLANDS
MARQUESAS ISLANDS
SOCIETY IS
TUAMOTU ARCHIPELAGO
COOK IS
NEW HEBRIDES
LOYALTY IS
NEW ZEALAND
NORTH I
SOUTH I
WELLINGTON
Straits of Florida 24°25'N. 83°00'W.
Yucatan Channel 21°50'N. 85°03'W.
Panama 8°53'N. 79°31'W.
CAUTION: Vessels should not use this chart for navigational purposes.


Bishop Rock
49°45'N.
6°35'W.
Ushant
48°40'N.
5°30'W.
Strait of Gibraltar
35°57'N.
5°45'W.
Panama
8°53'N.
79°31'W.
Punta Arenas
53°10'S.
70°54'W.
Cape of Good Hope
34°22'S.
18°23'E.
NORTH ATLANTIC OCEAN
SOUTH ATLANTIC OCEAN
STRAITS OF FLORIDA TO STRAIT OF GIBRALTAR 4009
STRAIT OF GIBRALTAR TO STRAITS OF FLORIDA 4344
COLON—BISHOP ROCK 4308
COLON—STRAIT OF GIBRALTAR 4308
PORT OF SPAIN—STR. OF GIBRALTAR 3403
MONTEVIDEO TO NEW YORK 5749
NEW YORK TO MONTEVIDEO 5753
PUNTA ARENAS—MONTEVIDEO
USHANT 6986
USHANT 5802
NEW YORK—CAPE OF GOOD HOPE 6352
STRAIT OF GIBRALTAR—CAPE OF GOOD HOPE—USHANT 5746
CAPE OF GOOD HOPE—STR. OF FLORIDA 6444
CAPE OF GOOD HOPE TO COLON 6770
CAPE OF GOOD HOPE TO RIO DE JANEIRO 3323
RIO DE JANEIRO TO CAPE OF GOOD HOPE 3267
CAPE OF GOOD HOPE TO MONTEVIDEO 3701
MONTEVIDEO TO CAPE OF GOOD HOPE 3591
CAPE OF GOOD HOPE—PUNTA ARENAS 4618
PUNTA ARENAS TO CAPE OF GOOD HOPE 4262
STRAIT 8015
NEW YORK—COLON 1974
TROPIC OF CANCER
ANTARCTIC CIRCLE
CARIBBEAN SEA
GULF OF GUINEA
SCOTIA SEA
DRAKE PASSAGE
BRAZIL
PERU
BOLIVIA
PARAGUAY
URUGUAY
CHILE
ARGENTINA
COLOMBIA
VENEZUELA
ECUADOR
CUBA
MEXICO
FRANCE
SPAIN
PORTUGAL
MOROCCO
ALGERIA
TUNISIA
LIBYA
MAURITANIA
MALI
NIGER
CHAD
NIGERIA
GHANA
IVORY COAST
GUINEA
SENEGAL
ANGOLA
SOUTH WEST AFRICA
FALKLAND IS
SOUTH SANDWICH IS
SOUTH ORKNEY IS
SOUTH SHETLAND IS
CANARY IS
AZORES
HABANA
BUENOS AIRES
SANTIAGO
LIMA
BOGOTÁ
CARACAS
QUITO
LA PAZ
MONTEVIDEO
ASUNCIÓN
BRASÍLIA
CAPE VERDE IS
DAKAR
MONROVIA
ACCRA
LAGOS
LUANDA
CAPE TOWN
WALVISBAAI
LÜDERITZ
CAPE HORN
CABO DE HORNOS
TIERRA DEL FUEGO
STRAIT OF MAGELLAN
PUERTO RICO
JAMAICA
HAITI
DOMINICAN REP.
BAHAMA IS
LESSER ANTILLES
TRINIDAD
ARUBA
CURAÇAO
NICARAGUA
COSTA RICA
PANAMA
GUYANA
SURINAM
FR. GUIANA
BR. GUIANA
NEW YORK
WASHINGTON
PHILADELPHIA
BOSTON
NOVA SCOTIA
NEWFOUNDLAND
GRAND BANKS
MIAMI
KEY WEST
NEW ORLEANS
CHICAGO
DETROIT
TORONTO
MONTREAL
QUEBEC
SAULT STE MARIE
BERMUDA
AZORES
MADEIRA
CANARY IS
CAPE VERDE IS
ST HELENA
ASCENSION
TRISTAN DA CUNHA GP.
GOUGH I.
ATOL DAS ROCAS
FERNANDO DE NORONHA
ROCHEDOS SÃO PEDRO E SÃO PAULO
ILHA DE TRINDADE
ILHA DE MARACÁ
SOUTH GEORGIA
SHAG ROCKS
BOUVETOYA
ZAVODOVSKI I.
SOUTHERN THULE
MONTAGUE ISLAND
CORONATION I.
LAURIE I.
CLARENCE I.
ELEPHANT I.
KING GEORGE I.
LIVINGSTON I.
SMITH I.
LOW I.
BRANSFIELD STRAIT
JOINVILLE I.
VEGA I.
ROSS I.
PALMER ARCH
ADELAIDE I.
LARSEN ICE SHELF
BISCOE IS.
ANVERS I.
SAN JULIÁN
GOLFO SAN JORGE
GOLFO SAN MATIAS
BAHÍA BLANCA
NECOCHEA
LA PLATA
ROSARIO
PORTO ALEGRE
SÃO PAULO
SANTOS
PARANAGUÁ
FLORIANÓPOLIS
VITÓRIA
RIO DE JANEIRO
SALVADOR
RECIFE
MACEIÓ
NATAL
FORTALEZA
BELÉM
SÃO LUÍS
MANAUS
SANTARÉM
BÔCA DO ACRE
PUCALLPA
IQUITOS
TARAPUQUÉRA
GUAYAQUIL
MANTA
BUENAVENTURA
TUMACO
ESMERALDAS
CARTAGENA
BARRANQUILLA
MARACAIBO
PUERTO CABELLO
LA GUAIRA
PORT-OF-SPAIN
GEORGETOWN
PARAMARIBO
CAYENNE
BELIZE
PUERTO CORTEZ
PUERTO LIMÓN
BLUEFIELDS
CORN I.
GREAT INAGUA
GUANTÁNAMO
SANTIAGO DE CUBA
KINGSTON
PORT-AU-PRINCE
SAN JUAN
VIRGIN IS
GUADELOUPE
MARTINIQUE
DOMINICA
ST LUCIA
ST VINCENT
GRENADA
ARUBA
CURAÇAO
SANTA MARTA
CHARLESTON
SAVANNAH
JACKSONVILLE
CAPE CANAVERAL
GRAND BAHAMA
GREAT ABACO
ANDROS
BIMINI
SOUTHWEST CAY
LONG I.
CAT I.
NORFOLK
CAPE HATTERAS
CAPE MAY
NEW LONDON
PORTLAND
BOSTON
CAPE COD
HALIFAX
SABLE ISLAND
ST JOHN'S
ST LAWRENCE
CAPE BRETON
FLEMISH CAP
GRACIOSA
TERCEIRA
HORTA
ILHA DO FAIAL
ILHA DO CORVO
SÃO MIGUEL
SANTA MARIA
MADEIRA
CASABLANCA
RABAT
TANGIER
KÉNITRA
GIBRALTAR
CÁDIZ
SEVILLA
CABO DE SÃO VICENTE
CABO FINISTERRE
SAN SEBASTIAN
BILBAO
BAY OF BISCAY
ST NAZAIRE
BORDEAUX
MARSEILLE
BARCELONA
PORTO
LISBOA
MADRID
ANDORRA
CORSICA
SARDINIA
BALEARIC ISLANDS
ROMA
NAPOLI
PALERMO
SICILY
TUNIS
ALGER
ORAN
LARHOUAT
TARABULUS
BENGHAZI
MALTA
TRIESTE
AUSTRIA
HUNGARY
BUDAPEST
BEOGRAD
YUGOSLAVIA
ADRIATIC SEA
ALBANIA
GREECE
TIRANE
PELOPONNISOS
SICILY
CANARY IS
IFNI
SPANISH SAHARA
UNDEFINED
HIERRO
GRAN CANARIA
TENERIFE
LANZAROTE
CABO BOJADOR
VILLA CISNEROS
PORT-ÉTIENNE
NOUAKCHOTT
DAKAR
BATHURST
GAMBIA
BISSAU
PORT GUINEA
CONAKRY
FREETOWN
SIERRA LEONE
LIBERIA
TAKORADI
ABIDJAN
CAPE THREE POINTS
LOME
TOGO
DAHOMEY
BENIN
BAMAKO
NIAMEY
UPPER VOLTA
FERNANDO PÓO
CAPE PALMAS
CAPE LOPEZ
GABON
LIBREVILLE
SÃO TOMÉ
ANNOBÓN
YAOUNDÉ
DOUALA
BRITISH CAMEROONS
FR. CAMEROONS
NIGERIA
CENTRAL AFRICAN RE
POINTE NOIRE
CABINDA
LEOPOLDVILLE
CONGO
LUANDA
MOÇÂMEDES
CAPE PRIO
ST HELENA
WALVISBAAI
LÜDERITZ
WINDHOEK
SOUTH WEST AFRICA
CAPE TOWN
CAPE OF GOOD HOPE
GULF OF GUINEA
RIO MUNI
LIBREVILLE
CAPE LOPEZ
GABON
CONGO
ANGOLA
ZAMBIA
BECHUANALAND
BLOEMFONTEIN
ORANGE
PORT
31°
32°1
CAPE OF GOOD HOPE
CAPE ST MARTIN
CAPE AGULHAS
CAPE OF GOOD HOPE
CAPE HORN
CABO DE HORNOS
PUNTA ARENAS
STRAIT OF MAGELLAN
TIERRA DEL FUEGO
ISLA DE LOS ESTADOS
ISLA NOSTE
ISLA HOSTE
ISLAS DIEGO RAMÍREZ
ISLA DE CHILOÉ
ISLA GUAMBLIN
PENÍNSULA TAITAO
GOLFO DE PENAS
ISLA CAMPANA
ISLA WELLINGTON
ISLA MADRE DE DIOS
ISLA DIEGO DE ALMAGRO
STRAIT OF MAGELLAN
ISLAS SANTA INÉS
ISLA STEWART
ISLAS JUAN FERNÁNDEZ
ISLA SAN FÉLIX
ISLA DE PASCUA
ISLA SALA Y GOMEZ
ISLA DUCIE
ISLA HENDERSON
ISLA OENO
ISLA PITCAIRN
ISLA MANGAREVA
ISLA TUBUAI
ISLA RAPA
ISLA RAPA NUI
ISLA SOLA
ISLA SALAS


Ushant
18°40'N.
5°30'W.
of Gibraltar
5°57'N.
5°45'W.
Port Said
31°16'N.
32°19'E.
Cape of Good Hope
34°22'S.
18°23'E.
MONGOLIA
CHINA
TIBET
INDIA
BURMA
THAILAND
LAOS
IRAN
TURKEY
ARABIA
SAUDI
LIBYA
NIGER
CHAD
SUDAN
ETHIOPIA
KENYA
SOMALI REPUBLIC
MOGADISCIO
ADDIS ABABA
CENTRAL AFRICAN REPUBLIC
NIGERIA
ANGOLA
MOZAMBIQUE
MALAGASY REPUBLIC
TANGANYIKA
SOUTH-WEST AFRICA
BECHUANALAND
REPUBLIC OF SOUTH AFRICA
PRETORIA
Johannesburg
Durban
Port Elizabeth
Cape Agulhas
Cape Town
Walvisbaai
Lüderitz
Moçâmedes
Luanda
Pointe Noire
LEOPOLDVILLE
REPUBLIC OF THE CONGO
GABON
CAMEROONS
Lagos
Douala
Fernando Póo
São Tomé
Annobón
Libreville
Yaoundé
Entebbe
Kampala
Nairobi
Mombasa
Dar es Salaam
Zanzibar
Beira
Lourenço Marques
Lusaka
Salisbury
Tete
Nyasa
Tulear
Majunga
Tamatave
Antsirane
Comoros
Seychelles
Aldabra Is
Farquhar Is
Agalega Is
Cargados Carajos Shoals
Rodriguez
Mauritius
Réunion
Cape d'Ambre
Mozambique Channel
Madagascar
Aden
Djibouti
Berbera
Gulf of Aden
Cape Guardafui
Socotra
Perim
Hanish Is
Asmara
Port Sudan
Wadi Halfa
Khartoum
Kosti
Gondar
Makka (Mecca)
Jeddah
Al Hudaydah
Mocha
Yemen
Sana
Aden Protectorate
Muscat
Oman
Masqat
Trucial Coast
Gulf of Oman
Ra's at Tannūrah
Al Manāmah
Ad Dawhah
Persian Gulf
Al Kuwayt
Būshehr
Al Başrah
Abadan
Tabrīz
Baku
Caspian Sea
Aral'skoye More
Kzyl-Orda
Balkhash
Ozero Balkhash
Alma-Ata
Tashkent
Stalinabad
Kabul
Kandahar
Rawalpindi
Peshawar
Srinagar
Lahore
Karachi
Jask
Jaipur
Delhi
Nānpāra
Gonda
Banāres
Sadiya
Punākha
Imphāl
Bhamo
Mandalay
Calcutta
Bhavnagar
Nāgpur
Sonpur
Jagdalpur
Hyderābād
Sholāpur
Bombay
Mangalore
Bangalore
Mysore
Madras
Madura
Laccadive Is
Andaman Is
Nicobar Is
Trincomalee
Ceylon
Colombo
Maldive Is
Pulau Simalue
Pulau Nias
Pulau Siberut
Pulau-pulau Mentawai
Pulau Enggano
Sumatra
Gulf of Siam
Bangkok
Vientiane
Hung Thi
Rangoon
Arch
Mergui
Pakistan (East)
Pakistan (West)
Nepal
Bhutan
Tibet
Chiu-ch uan
Hsi-ning
Lan-chou
Ch'eng tu
I-pin
Li-chiang
K un ming
Ning-erh
Liamey
Dahomey
Lagos
Douala
Cameroons
British Cameroons
Gulf of Guinea
Stanleyville
Juba
Lake Victoria
Lake Tanganyika
Lake Rudolf
Lake Nyasa
Mt Kilimanjaro 19,340
Ruanda-Urundi
Federation of Rhodesia and Nyasaland
Swaziland
Basutoland
Tropic of Capricorn
Equator
Cape Leeuwin
Cape Pillar
Cape Frio
Cape Lopez
Cape Verga
Cape Priaz
Cape Santa Maria
Cape Amsterdam
Cape St Paul
Port Said
Suez
Alexandria
Cairo
United Arab Republic (Egypt)
Nile
Red Sea
Gulf of Aqaba
Al 'Aqabah
Jordan
Israel
Lebanon
Syria
Damascus
Baghdad
Iraq
Iskenderun
Adana
Antalya
Cyprus
Nicosia
Bayrūt
Izmir
Athinai
Piraeus
Greece
Albania
Sicily
Palermo
Napoli
Sardinia
Roma
Tirane
Yugoslavia
Italy
Trieste
Austria
Hungary
Budapest
Rumania
Bucuresti
Beograd
Bulgaria
Sofiya
Istanbul
Black Sea
Sevastopol
Yalta
Odessa
Rostov-na-Donu
Azovskoye More
Kerch
Batumi
Caspian Sea
Barcelona
Corsica
Livorno
Marseille
Balearic Islands
Algeria
Alger
Tunis
Tunisia
Bizerte
Malta
Gibraltar
Mediterranean Sea
Port Said—Bombay 3049
Arabian Sea 4597
Bombay to Cape of Good Hope to Bombay 4581
Port Said—Singapore Str.—5018
Bombay to Cape of Good Hope and Oct. Cape of Good Hope to Calcutta Nov.—March 5604
Cape of Good Hope to Calcutta 5603
Calcutta to C. of Good Hope 5498 May—Sept.
Port Said—C. Leeuwin—Sunda Strait 5168 May—Sept.
C. Leeuwin to Port Said 6345 All seasons
Port Said—May—Sept. 6389
Sunda Strait to Cape of Good Hope 5082
Cape Leeuwin—Cape of Good Hope 5068
Cape of Good Hope to Torres Strait 6854
Cape of Good Hope to Cape Leeuwin 4660
Indian Ocean
Îles de Kerguélen
Îles Crozet
Prince Edward Is
McDonald Is
Heard I
Davis Sea
Shackleton Ice Shelf
West Ice Shelf
Queen Mary Coast
Wilhelm II Coast
Leopold and Astrid Coast
Princess Ragnhild Coast
Kemp Coast
C Darnley
C Bonney
C Berkley
Mac-Robertson
Cape Close
Ice Barr
45°
30°
15°
0°
15°
30°
45°
60°


Singapore
1°16'N
103°50'E
Sunda Strait
6°04'S.
105°50'E.
Lombok Strait
8°50'S.
115°43'E.
Wetar Passage
8°19'S.
127°27'E.
Torres Strait
10°33'S.
142°08'E.
Cape Leeuwin
34°32'S.
115°08'E.
Wilson Promontory
39°10'S.
146°26'E.
SINGAPORE STR.—5018
PORT SAID—C. LEEUWIN—PORT SAID 5100
C. LEEUWIN—PORT SAID TO SUNDA STRAIT 5164
C. LEEUWIN TO PORT SAID 6345
SUNDA STRAIT TO CAPE OF GOOD HOPE 6389
CAPE OF GOOD HOPE TO SUNDA STRAIT 6345
CAPE OF GOOD HOPE TO TORRES STRAIT 6854
CAPE OF GOOD HOPE TO CAPE LEEUWIN 4660
CAPE OF GOOD HOPE TO WILSON PROMONTORY 5993
CAPE LEEUWIN TO CAPE OF GOOD HOPE 6854
CAPE LEEUWIN—LOMBOK ST. 1571
WILSON PROMONTORY—CAPE LEEUWIN 1524
TORRES STRAIT TO SUNDA STRAIT 6934
TORRES STRAIT TO PORT SAID 5068
ALL SEASONS
OCT.—APR.
MAY—SEPT.
INDIAN OCEAN
AUSTRALIA
ANTARCTICA
WILKES LAND
PHILIPPINE SEA
SOUTH CHINA SEA
BAY OF BENGAL
ARAFURA SEA
CORAL SEA
TASMAN SEA
DAVIS SEA
BOUNDARIES
Boundaries shown on this chart should not be regarded as having official significance
International Boundary
Unsettled boundary claim



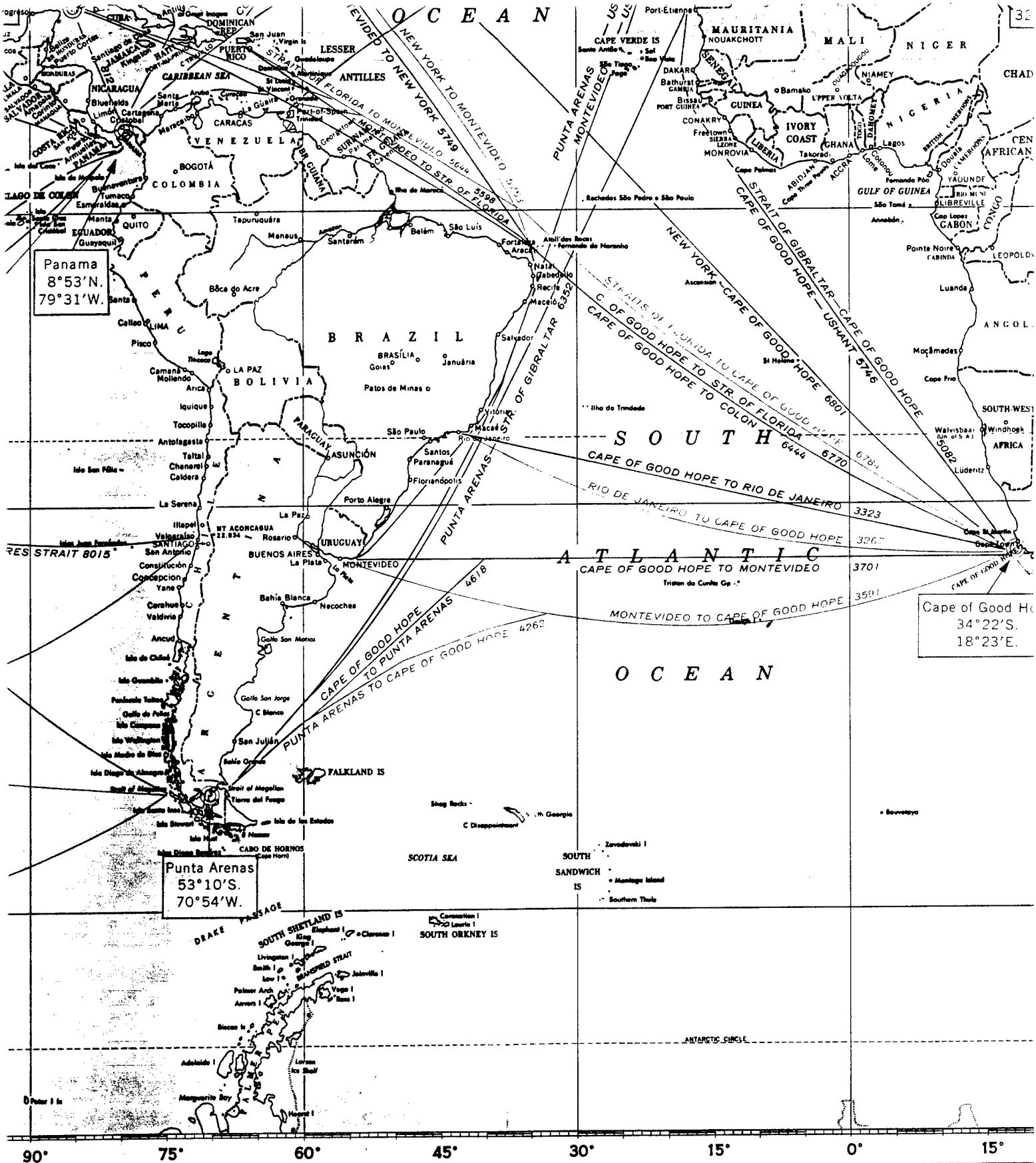
CAUTION: Vessels should not use this chart for navigational purposes.

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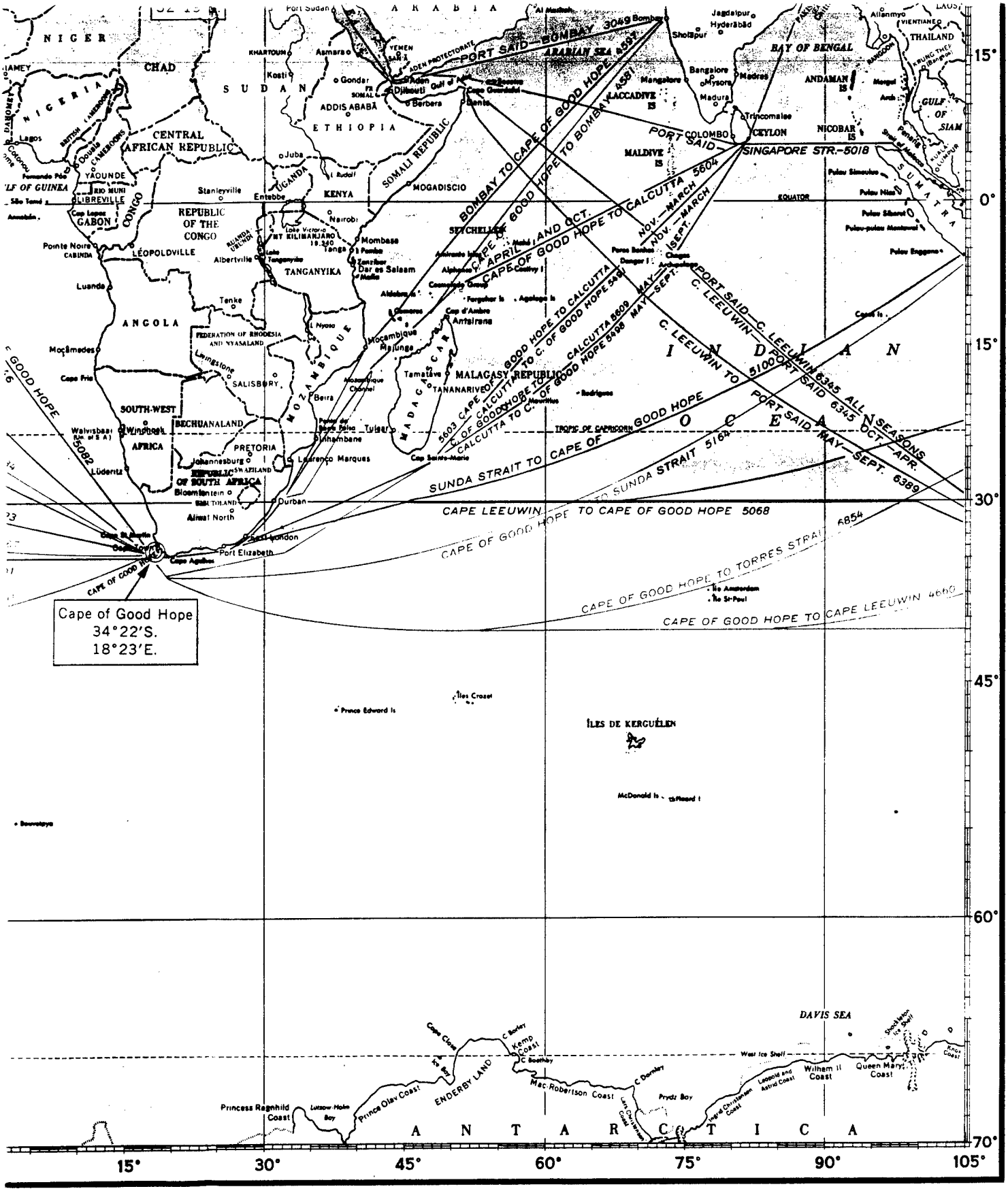
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ɔton, D. C.,
IGRAPHIC OFFICE
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NOTE

Geographic names or their spellings do not necessarily reflect recognition of the political status of an area by the United States Government


Cape of Good Hope
34°22'S.
18°23'E.
PORT SAID—BOMBAY 3049
ARABIAN SEA 6597
BOMBAY TO CAPE OF GOOD HOPE
CAPE OF GOOD HOPE TO BOMBAY
ASBI
LACCADIVE IS
PORT SAID—SINGAPORE STR.-5018
MALDIVE IS
CEYLON
NICOBAR IS
ANDAMAN IS
BAY OF BENGAL
CAPE OF GOOD HOPE TO CALCUTTA 5604
Nov.—MARCH
Nov.—MARCH
SEPT.
CAPE OF GOOD HOPE TO CALCUTTA
C. APRIL AND OCT.
SEYCHELLES
CAPE OF GOOD HOPE TO CALCUTTA 5498
MAY—SEPT.
PORT SAID—C. LEEUWIN—C. LEEUWIN 6385 ALL SEASONS
C. LEEUWIN TO PORT SAID 5100
MAY—SEPT.
OCT.—APR.
CALCUTTA TO C. OF GOOD HOPE 5603
C. OF GOOD HOPE TO CALCUTTA 5609
C. OF GOOD HOPE TO CALCUTTA 5498
MAY—SEPT.
SUNDA STRAIT TO CAPE OF GOOD HOPE 5164
SUNDA STRAIT TO
MAY—SEPT. 6389
CAPE LEEUWIN TO CAPE OF GOOD HOPE 5068
CAPE OF GOOD HOPE TO TORRES STRAIT 6854
CAPE OF GOOD HOPE TO CAPE LEEUWIN 4660
CAPE OF GOOD HOPE 5082
I N D I A N
O C E A N
SEA
NIGER
CHAD
SUDAN
NIGERIA
CENTRAL AFRICAN REPUBLIC
ETHIOPIA
SOMALI REPUBLIC
MOGADISCIO
KENYA
UGANDA
TANGANYIKA
REPUBLIC OF THE CONGO
CONGO
GABON
LÉOPOLDVILLE
ANGOLA
MOZAMBIQUE
FEDERATION OF RHODESIA AND NYASALAND
SALISBURY
SOUTH-WEST AFRICA
BECHUANALAND
PRETORIA
REPUBLIC OF SOUTH AFRICA
SWAZILAND
BASUTOLAND
MALAGASY REPUBLIC
TANANARIVE
ADDIS ABABA
KHARTOUM
Port Sudan
ARABIA
THAILAND
LAOS
GULF OF SIAM
SUMATRA
EQUATOR
ÎLES DE KERGUÉLEN
DAVIS SEA
ANTARCTICA
Princess Ragnhild Coast
Prince Olav Coast
ENDERBY LAND
Mac.Robertson Coast
Prydz Bay
Wilhelm II Coast
Queen Mary Coast
15°
0°
15°
30°
45°
60°
70°
15°
30°
45°
60°
75°
90°
105°

12