

**PUB. 151**

# **DISTANCES BETWEEN PORTS**

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## PREFACE

**GENERAL INFORMATION.**—The 2001 Edition of Pub. 151, Distances Between Ports, supersedes all previous editions. Distances in this table 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 safest passage. Most of the distances represent the shortest navigable routes, but in some cases, longer routes, that take advantage of favorable currents, have been used. In other cases, increased distances result from routes selected to avoid ice or other dangers to navigation, or to follow required separation schemes.

**DESCRIPTION OF THE TABLES.**—Departure Ports are listed alphabetically with distances to arrival Ports listed below them; distances to appropriate junction points are also listed. Junction Points are additionally located in the alphabetical sequence with distances to other appropriate Junction Points listed below. Great Lakes distances are given in U.S. Coast Pilot 6.

**JUNCTION POINTS.**—It is impractical to give all distances for every possible combination of Ports in this volume; therefore, the use of Junction Points greatly increases the number of distances that may be included by affording a means of connecting routes in adjacent oceans. 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 chartlets in the front part of the book.

**ROUTES.**—Routes throughout the world are described in the Sailing Directions along with route charts for the area of coverage. Articles on currents and meteorology are also covered in these publications. Additionally, charts are available, such as Pilot Charts and the NGA World Chart, Series 1145, which portray ocean routes worldwide. Any of these products may be used to assist the user in planning a voyage. A chartlet of basic ocean routes is included in the front of this publication for quick reference.

**HOW TO USE THE TABLES.**—To obtain distances, 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. To obtain a distance over a route that passes through one or more Junction Points, it is necessary to find and add distances for the two or more sections into which the route is divided.

For example: New York to Colombo—Using the Junction Point chartlets at the front of the book, locate all Junction Points between New York and Colombo.

There are two: Strait of Gibraltar and  
Port Said.

Find New York in the Distance Table: Page 69  
Under Junction Points, locate —

Strait of Gibraltar..... 3,180 miles

Find Strait of Gibraltar in the Distance Table:  
Page 108

Under Junction Points, locate —

Port Said, Arab Republic of  
Egypt..... 1,943 miles

Find Port Said in the Distance Table: Page 85

Under Ports, locate —

Colombo, Sri Lanka..... 3,481 miles

Total Nautical Miles..... 8,604

If the user wishes to know the westbound route because of enroute cargo commitments, or which route is shorter—proceed as follows:

New York to Panama..... 2,016

Panama to Singapore..... 10,505

Singapore to Colombo..... 1,581

Total Nautical Miles..... 14,102

**CORRECTIVE INFORMATION.**—Users are requested to forward new or corrective information useful in the correction of this publication to:

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## **THE NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY MARITIME SAFETY INFORMATION WEB SITE**

The National Geospatial-Intelligence Agency (NGA) Maritime Safety Information Web site provides worldwide remote query access to extensive menus of maritime safety information, 24 hours a day.

Databases made available for access, query and download include Chart Corrections, Publication Corrections, Hydrographic Catalog Corrections, Chart and Publication Reference Data (current edition number, dates, title, scale), List of Lights, USCG Light Lists, WorldWide Navigational Warning Service (WWNWS) Broadcast Warnings, Maritime Administration (MARAD) Advisories, Department of State Special Warnings, Mobile Offshore Drilling Units (MODUs), Anti-Shipping Activity Messages (ASAMs), World Port Index, and Radio Navigational Aids. Publications that are also made available as PDF files include the US Notice to Mariners, Sailing Directions, US Chart No. 1, The American Practical Navigator (Bowditch), International Code of Signals, Radio Navigational Aids, World Port Index, Distances Between Ports, Sight Reduction Tables for Marine and Air Navigation, and the Radar Navigation and Maneuvering Board Manual.

The Maritime Safety Information Web site can be accessed via the NGA Homepage ([www.nga.mil](http://www.nga.mil)) under the *Products and Services* > *Maritime* links, or directly at <http://pollux.nss.nga.mil>. Any questions concerning the Maritime Safety Information Website should be directed to:

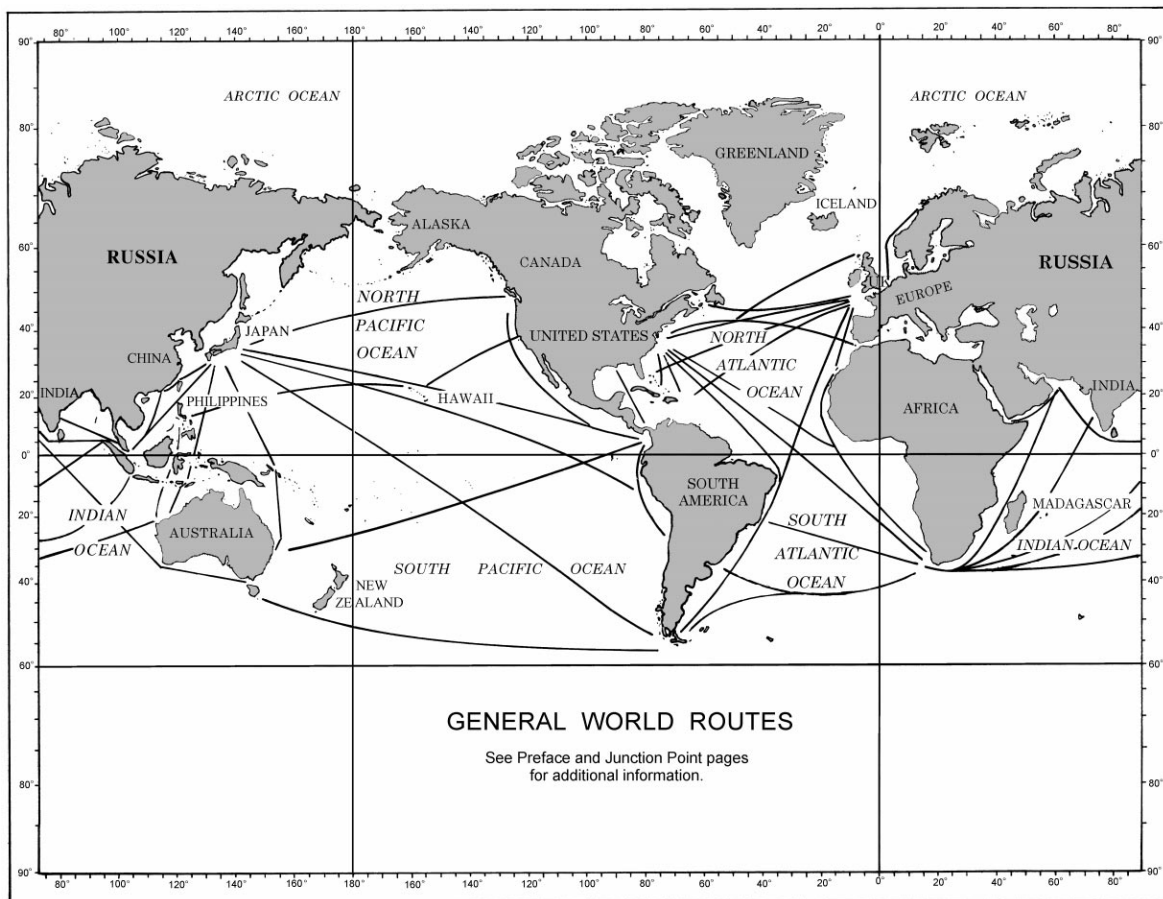
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## CONTENTS

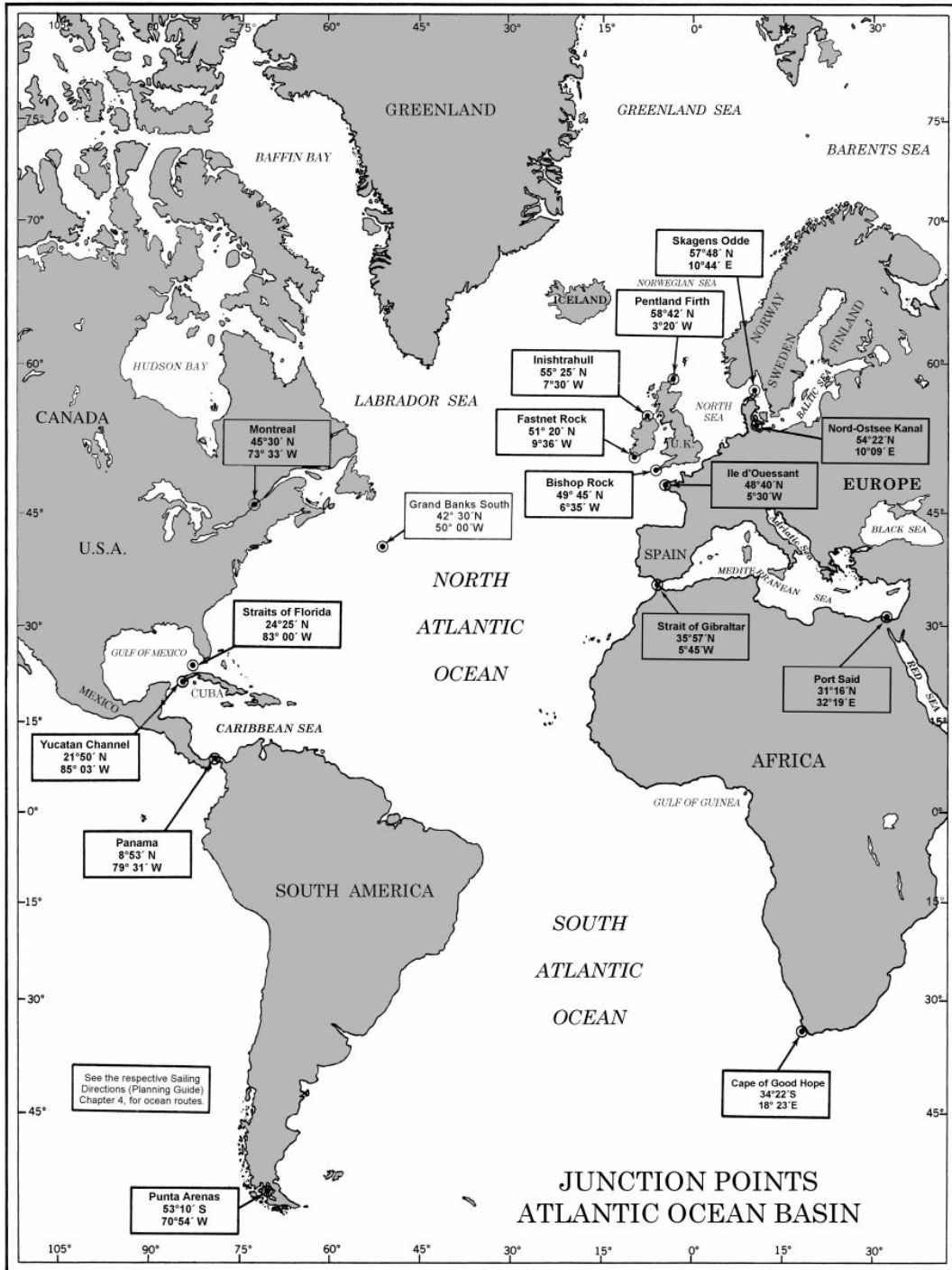
	<b>Page</b>
Preface .....	I
Chart Showing General World Routes .....	V
List of Junction Points .....	VI
Junction Points, Atlantic Ocean Basin .....	VII
Junction Points, Indian Ocean Basin .....	VIII
Junction Points, Pacific Ocean Basin .....	IX
Distance Between Ocean Ports of the World .....	1
Conversion Table for Nautical and Statute Miles .....	127
Table for Estimating Time of Transit .....	128



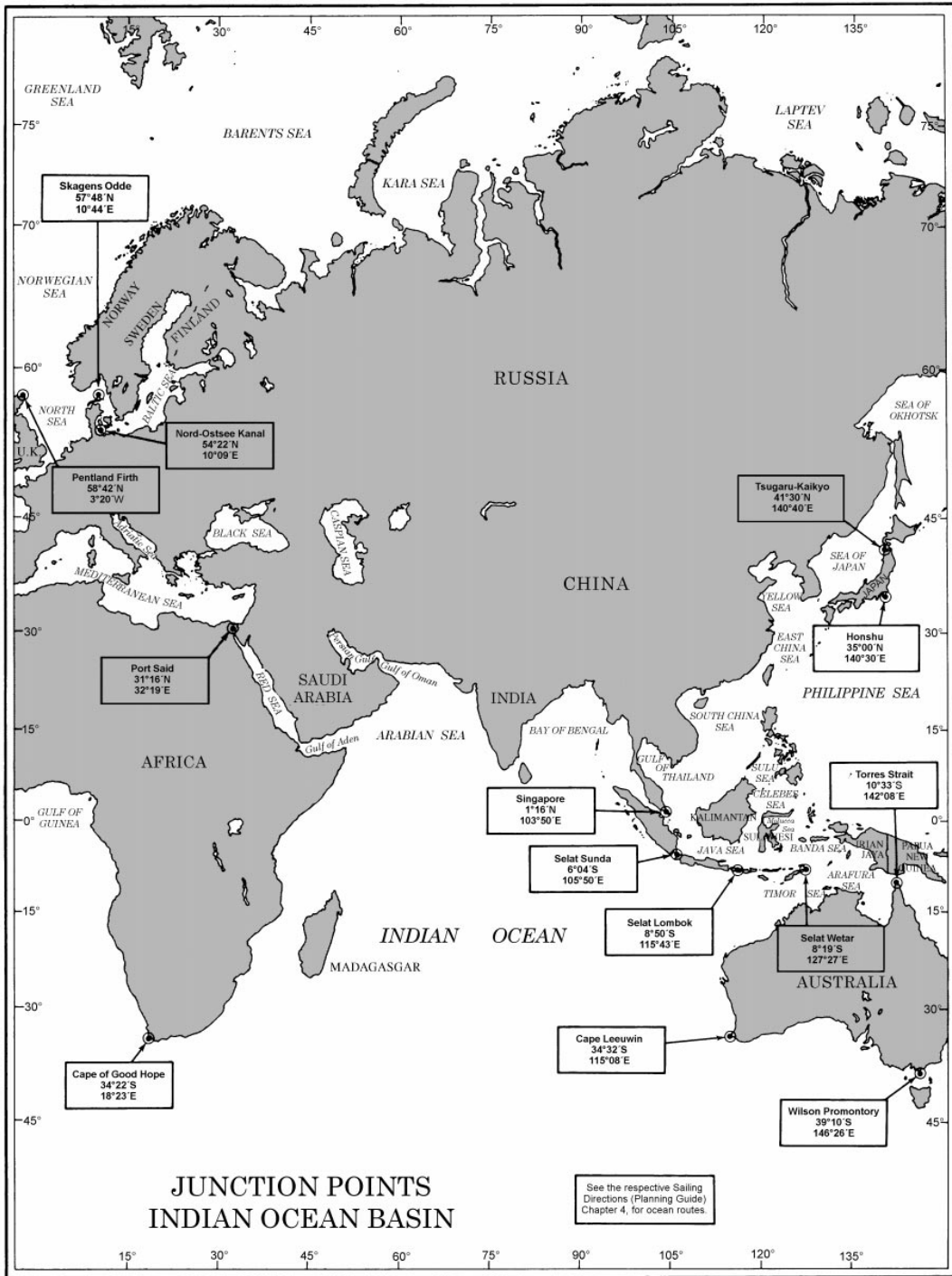


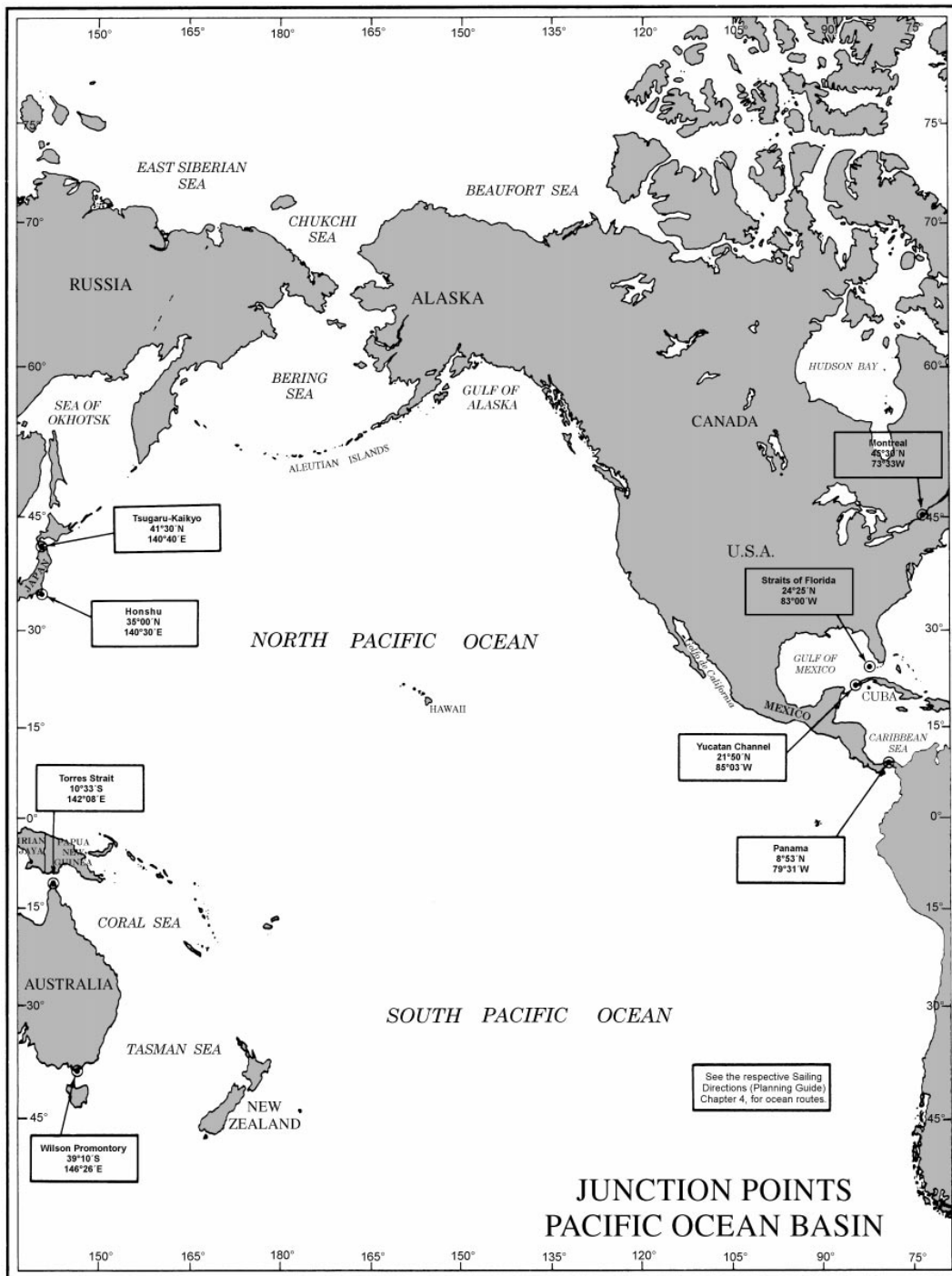
**PUB. 151**  
**JUNCTION POINTS**

Bishop Rock, England,.....	49°45'00"N., 6°35'00"W.
Cape Leeuwin, Australia,.....	34°32'00"S., 115°08'00"E.
Cape of Good Hope, South Africa,.....	34°22'00"S., 18°23'00"E.
Fastnet Rock, Ireland,.....	51°20'00"N., 9°36'00"W.
Grand Banks South,.....	42°30'00"N., 50°00'00"W.
Honshu, Japan,.....	35°00'00"N., 140°30'00"E.
Ile d'Ouessant, France,.....	48°40'00"N., 5°30'00"W.
Inishtrahull, Ireland,.....	55°25'00"N., 7°30'00"W.
Montreal, Canada,.....	45°30'00"N., 73°33'00"W.
Nord-Ostsee-Kanal, Germany,.....	54°22'00"N., 10°09'00"E.
Panama, Panama,.....	8°53'00"N., 79°31'00"W.
Pentland Firth, Scotland,.....	58°42'00"N., 3°20'00"W.
Port Said, Egypt,.....	31°16'00"N., 32°19'00"E.
Punta Arenas, Chile,.....	53°10'00"S., 70°54'00"W.
Selat Lombok, Indonesia,.....	8°50'00"S., 115°43'00"E.
Selat Sunda, Indonesia,.....	6°04'00"S., 105°50'00"E.
Selat Wetar, Indonesia,.....	8°19'00"S., 127°27'00"E.
Singapore,.....	1°16'00"N., 103°50'00"E.
Skagens Odde, Denmark,.....	57°48'00"N., 10°44'00"E.
Strait of Gibraltar,.....	35°57'00"N., 5°45'00"W.
Straits of Florida,.....	24°25'00"N., 83°00'00"W.
Torres Strait, Australia,.....	10°33'00"S., 142°08'00"E.
Tsugaru-Kaikyo, Japan,.....	41°30'00"N., 140°40'00"E.
Wilson Promontory, Australia,.....	39°10'00"S., 146°26'00"E.
Yucatan Channel,.....	21°50'00"N., 85°03'00"W.









**AAIUN, WESTERN SAHARA**  
(27°05'37"N., 13°26'55"W.) to:**Junction Points\***

Bishop Rock, England, 1,397  
Cape of Good Hope, South Africa, 4,436  
Fastnet Rock, Ireland, 1,465  
Grand Banks South, 2,003  
Ile d'Ouessant, France, 1,356  
Inishtrahull, Ireland, 1,753  
Panama, Panama, 3,894  
Pentland Firth, Scotland, 2,006  
Punta Arenas, Chile, 5,684  
Strait of Gibraltar, 667  
Straits of Florida, 3,712

**Ports**

Arrecife de Lanzarote, Canary Islands, 111  
Casablanca, Morocco, 506  
Dakar, Senegal, 793  
Monrovia, Liberia, 1,525  
New York, New York, U.S.A., 3,065  
Porto Grande, Cape Verde Islands, 887

**AALBORG, DENMARK**  
(57°03'30"N., 9°56'00"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 207  
Skagens Odde, Denmark, 87

**Ports**

Gdynia, Poland (via Store Baelt), 476  
Gdynia, Poland (via The Sound), 410  
Kobenhavn, Denmark, 143  
Lubeck, Germany (via Store Baelt), 244

**AARHUS, DENMARK**  
(56°09'30"N., 10°13'30"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 131  
Skagens Odde, Denmark, 127

**Ports**

Aabenraa, Denmark, 103  
Kobenhavn, Denmark, 108  
Szczecin, Poland, 268

**AASIAAT (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

**ABADAN, IRAN**  
(30°19'48"N., 48°16'30"E.)  
Subtract 30 miles from Al Basrah distances.**ABENRA, DENMARK**  
(55°01'36"N., 9°25'50"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 207  
Skagens Odde, Denmark, 87

**Ports**

Aarhus, Denmark, 114  
Helsinki, Finland, 666  
Kobenhavn, Denmark, 196  
Lubeck, Germany, 138  
Lulea, Sweden, 914  
Riga, Latvia, 588  
Sankt-Peterburg, Russia, 811  
Tallinn, Estonia, 646  
Umea, Sweden, 792

**ABERDEEN, SCOTLAND**  
(57°08'30"N., 2°04'30"W.) to:**Junction Points\***

Ile d'Ouessant, France, 715  
Nord-Ostsee-Kanal (West Entrance), 406  
Pentland Firth, Scotland, 106  
Skagens Odde, Denmark, 416

**Ports**

Amsterdam, Netherlands, 376  
Antwerp, Belgium, 465  
Bergen, Norway, 309  
Bodo, Norway, 767  
Bremerhaven, Germany, 435  
Egersund, Norway, 277  
Emden, Germany, 401  
Esbjerg, Denmark, 380  
Hamburg, Germany, 481  
Hammerfest, Norway, 1,073  
Hornmelvik, Norway, 586  
Kristiansand, Norway, 340  
Kristiansund, Norway, 498  
Le Havre, France, 530  
London, England, 431  
Murmansk, Russia, 1,363  
Oostende, Belgium, 415  
Oslo, Norway, 490  
Plymouth, England, 642  
Portland, England, 564  
Portsmouth, England, 514  
Rotterdam, Netherlands, 391  
Slagen, Norway, 450  
Southampton, England, 532  
Stavanger, Norway, 278  
Torshavn, Faroe Islands, 345  
Wilhelmshaven, Germany, 423  
Zeebrugge, Belgium, 420

**ABIDJAN, IVORY COAST**  
(5°19'00"N., 4°01'50"W.) to:**Junction Points\***

Bishop Rock, England, 3,417  
Cape of Good Hope, South Africa, 2,712  
Fastnet Rock, Ireland, 3,472  
Grand Banks South, 3,539  
Ile d'Ouessant, France, 3,375  
Inishtrahull, Ireland, 3,755  
Panama, Panama, 4,597  
Pentland Firth, Scotland, 4,048  
Punta Arenas, Chile, 4,910  
Strait of Gibraltar, 2,658  
Straits of Florida, 4,756  
Yucatan Channel, 4,895

**Ports**

Cape Town, South Africa, 2,679  
Dakar, Senegal, 1,166  
Freetown, Sierra Leone, 718  
Lagos (including Apapa & Tin Can Island), Nigeria, 457  
Luanda, Angola, 1,345  
Pepel, Sierra Leone, 732  
Walvisbaai, Namibia, 2,009

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

Cape of Good Hope, South Africa, 6,237  
Grand Banks South, 1,675  
Panama, Panama, 922  
Punta Arenas, Chile, 6,410  
Strait of Gibraltar, 3,552  
Straits of Florida, 593

**Ports**

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

**ABU DHABI, UNITED ARAB EMIRATES**  
(24°34'13"N., 54°19'49"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 4,812  
Cape Leeuwin, Australia, 5,115  
Selat Lombok, Indonesia, 4,341  
Port Said, Egypt, 2,944  
Singapore, 3,517  
Selat Sunda, Indonesia, 3,724

**Ports**

Aden, Yemen, 1,593  
Belawan, Indonesia, 3,188  
Bombay, India, 1,187  
Calcutta, India, 3,175  
Colombo, Sri Lanka, 1,954  
Darwin, Australia, 5,219  
Fremantle, Australia, 5,045  
Penang, Malaysia, 3,221  
Rangoon, Burma, 3,171

**ACAJUTLA, EL SALVADOR**  
(13°35'00"N., 89°51'00"W.) to:**Junction Points\***

Honshu, Japan, 6,908  
Panama, Panama, 833  
Punta Arenas, Chile, 4,309  
Tsugaru-Kaikyo, Japan, 6,750  
Torres Strait, Australia, 7,784  
Wilson Promontory, Australia, 7,519

**Ports**

San Francisco, California, U.S.A., 2,444

**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  
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 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, French Polynesia, 3,595  
Pedregal, Panama, 1,184  
Pisco, Peru, 2,309  
Puerto Masachapa, Nicaragua, 850  
Puerto Sandino, Nicaragua, 825  
Puntarenas, Costa Rica, 1,011  
Quepos, Costa Rica, 1,043  
Salina Cruz, Mexico, 314  
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  
Grand Bassam, Ivory Coast, 230  
Lagos, Nigeria, 229  
Lobito, Angola, 1,356  
Marshall, Liberia, 671  
Pointe Noire, Congo, 952  
Porto Grande, Cape Verde Islands, 1,760  
Sassandra, Ivory Coast, 362

**AD DAMMAN, SAUDI ARABIA**  
(26°31'00"N., 50°12'00"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 4,960  
Port Said, Egypt, 3,142  
Singapore, 3,681

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

## 2 ADEN, YEMEN

### Ports

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

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

### Junction Points\*

Cape of Good Hope, South Africa, 3,954  
Cape Leeuwin, Australia (north of Chagos Archipelago), 4,958  
Cape Leeuwin, Australia (south of Chagos Archipelago), 4,973  
Port Said, Egypt, 1,400  
Singapore, 3,631  
Selat Sunda, Indonesia (via Eight Degree Channel), 3,842  
Torres Strait, Australia (via One and Half Degree Channel), 6,022

### Ports

Abadan, Iraq, 1,937  
Al Aqabah, Jordan, 1,251  
Al Basrah, Iraq, 1,967  
Al Gurdagah, Egypt, 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  
Bassein, Burma, 3,251  
Beira, Mozambique, 2,610  
Belawan, Indonesia, 3,299  
Bhavnagar, India, 1,707  
Bombay, India, 1,657  
Bur Safaga, Egypt, 1,109  
Calcutta, India, 3,308  
Colombo, Sri Lanka, 2,094  
Dar es Salaam, Tanzania, 1,740  
Diego Garcia, Chagos Archipelago, 2,090  
Djibouti, Djibouti, 133  
Eilat, Israel, 1,247  
Fremantle, Australia (north of Chagos Archipelago), 4,921  
Hobart, Tasmania, 6,598  
Jiddah, Saudi Arabia, 701  
Karachi, Pakistan, 1,472  
Madras, India, 2,661  
Malacca, Malaysia, 3,517  
Maputo, Mozambique, 2,953  
Massawa, Ethiopia, 400  
Mina al Ahmadi, Kuwait, 1,897  
Mina Abd Allah, Kuwait, 1,894  
Mogadishu, Somalia, 1,106  
Mombasa, Kenya, 1,602  
Moulmein, Burma, 3,354  
Penang, Malaysia, 3,344  
Port Darwin, Australia (via Eight Degree Channel), 5,355  
Port Louis, Mauritius, 2,341  
Port Sudan, Sudan, 658  
Rangoon, Burma, 3,318  
Ras al Khafji, Saudi Arabia, 1,871  
Ras as Sidr, Egypt, 1,282  
Ras Gharib, Egypt, 1,207  
Ras Tannurah, Saudi Arabia, 1,773  
Sabang, Indonesia, 3,033  
Suakin, Sudan, 631  
Tanga, Tanzania, 1,671  
Victoria, Seychelles, 1,416  
Wellington, New Zealand (south of Chagos Archipelago and Tasmania), 7,814

Zanzibar, Tanzania, 1,722

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

### Junction Points\*

Cape of Good Hope, South Africa, 4,719  
Ile d'Ouessant, France, 1,136

### Ports

Abidjan, Ivory Coast, 2,258  
Casablanca, Morocco, 257  
Dakar, Senegal, 1,109  
Escravos, Nigeria, 2,778  
Freetown, Sierre Leone, 1,597  
Lagos, Nigeria, 2,699  
Luanda, Angola, 3,507  
Monrovia, Liberia, 1,761  
Nouadhibou, Mauritania, 751  
Pointe Noire, Congo, 3,321  
Port Harcourt, Nigeria, 2,944  
Qua Iboe, Nigeria, 2,961  
Tangier, Morocco, 414  
Walvisbaai, Namibia, 4,075

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

### Junction Points\*

Port Said, Egypt, 1,355  
Strait of Gibraltar, 778

### Ports

Beirut, Lebanon, 1,437  
Catania, Sicily, 464  
Civitavecchia, Italy, 180  
Genova, Italy, 170  
Marseillemarseille, France, 188  
Nice, France, 138  
Toulon, France, 155  
Venezia, Italy, 1,507  
Villefranche, France, 138  
Volos, Greece (south of Greece), 1,056  
Volos, Greece (Corinth Canal), 1,014

**AKITA, JAPAN**  
(39°45'30"N., 140°02'00"E.) to:

### Ports

Aomori, Japan, 158  
Hakodate, Japan, 150  
Maizuru, Japan, 352  
Shimonoseki, Japan, 586

**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, Russia, 1,256  
St. John's, Canada, 1,616

**AL AQABAH, JORDAN**  
(29°31'15"N., 34°59'55"E.) to:

### Junction Points\*

Port Said, Egypt, 380

### Ports

Aden, Yemen, 1,251  
Jiddah, Saudi Arabia, 573  
Massawa, Ethiopia, 897

**AL BASRAH, IRAQ**  
(30°31'30"N., 47°50'30"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 5,211  
Port Said, Egypt, 3,371  
Singapore, 3,916

### Ports

Ad Damman, Saudi Arabia, 304  
Aden, Yemen, 1,979  
Bandar Abbas, Iran, 572  
Bandar Khomeini, Iran, 154  
Belawan, Indonesia, 3,553  
Bombay, India, 1,594  
Calcutta, India, 3,593  
Colombo, Sri Lanka, 2,359  
Dumai, Indonesia, 3,824  
Fremantle, Australia, 5,440  
Karachi, Pakistan, 1,177  
Malacca, Malaysia, 3,771  
Massawa, Ethiopia, 2,372  
Mina al Ahmadi, Kuwait, 140  
Penang, Malaysia, 3,598  
Port Darwin, Australia, 5,650  
Rangoon, Burma, 3,603  
Ras Tannurah, Saudi Arabia, 295  
Sabang, Indonesia, 3,287  
Umm Said, Qatar, 444

**AL JUBAYL, SAUDI ARABIA**  
(27°01'00"N., 49°42'00"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 5,109  
Cape Leeuwin, Australia, 5,276  
Selat Lombok, Indonesia, 4,577  
Port Said, Egypt, 3,164  
Singapore, 3,723  
Selat Sunda, Indonesia, 3,949  
Torres Strait, Australia, 6,107

### Ports

Al Basrah, Iraq, 231  
Bandar Abbas, Iran, 366  
Colombo, Sri Lanka, 2,157  
Fremantle, Australia, 5,248  
Melaka, Malaysia, 3,610  
Port Darwin, Australia, 5,422  
Ra's at Tannurah, Saudi Arabia, 34

**AL LATAKIA, SYRIA**  
(35°31'40"N., 35°45'35"E.) to:

### Junction Points\*

Port Said, Egypt, 310  
Strait of Gibraltar, 2,029

### Ports

Alexandria, Egypt, 402  
Iraklion, Kriti, 527  
Larnaca, Cyprus, 114  
Mersin, Turkey, 94  
Napoli, Italy, 1,191  
Trieste, Italy (south of Greece), 1,370  
Trieste, Italy (via Corinth Canal), 1,337

Tunis, Tunisia, 1,258  
Valencia, Spain, 1,765

**AL MANAMAH, BAHRAIN**  
(26°17'00"N., 50°32'30"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 4,957  
Port Said, Egypt, 3,132  
Singapore, 3,652

### Ports

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

**ALBANY, AUSTRALIA**  
(35°02'40"S., 117°54'00"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 4,740  
Cape Leeuwin, Australia, 168  
Singapore, 2,525  
Wilson Promontory, Australia, 1,378

### Ports

Aden, Yemen, 5,127  
Durban, South Africa, 4,270  
Fremantle, Australia, 349  
Geraldton, Australia, 525  
Hobart, Tasmania, 1,494  
Malacca, Malaysia, 2,602  
Melbourne, Australia, 1,363  
Port Adelaide, Australia, 1,024  
Port Darwin, Australia, 2,152  
Port Lincoln, Australia, 953  
Port Louis, Mauritius, 3,340  
Rapid Bay, Australia, 990  
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.

**ALBATROSS BAY, AUSTRALIA**  
(12°41'24"S., 141°32'57"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 6,793  
Cape Leeuwin, Australia, 2,677  
Selat Lombok, Indonesia, 1,583  
Port Said, Egypt, 7,406  
Torres Strait, Australia, 156  
Selat Wetar, Indonesia, 872

### Ports

Ambon, Indonesia, 1,036  
Darwin, Australia, 725  
Ho Chi Minh, Vietnam, 2,730  
Hong Kong, China, 2,727  
Manila, Philippines, 2,166  
Tjilatjap, Indonesia, 1,961  
Zamboanga, Philippines, 1,681

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

**ALEKSANDROVSK-SAKHALINSKIY, RUSSIA**  
(50°54'00"N., 142°07'00"E.) to:**Junction Points\***Singapore, 3,608  
Selat Sunda, Indonesia, 3,961**Ports**Bangkok, Thailand (outer bar), 3,639  
Bukhta Shelikohova, Kuril Islands, Russia, 934  
Busan, South Korea, 1,118  
Dagu, China, 1,807  
Dalian, China (via Maenggol Sudo), 1,648  
Hakodate, Japan, 631  
Ho Chi Minh, Vietnam, 3,105  
Hong Kong, China, 2,250  
Honolulu, Hawaii, U.S.A., 3,589  
Incheon, South Korea (via Maenggol Sudo), 1,507  
Jakarta, Indonesia, 3,942  
Kasatka, Japan, 595  
Kobe, Japan, 1,384  
Lo hsing-ta Mao-ti, China, 1,868  
Los Angeles, California, U.S.A., 4,687  
Manila, Philippines, 2,507  
Matsuga-hana, Japan, 589  
Mogpo, South Korea, 1,330  
Moskal'vo, Russia, 230  
Nagasaki, Japan, 1,253  
Nampo, North Korea, 1,601  
Nikolayevsk-Na-Amure, Russia, 162  
Osaka, Japan, 1,394  
Pago Pago, American Samoa, 4,765  
Petrovsk-Kamchatskiy, Russia (via Chetverty Kuril'skiy Proliv and La Perouse Strait), 1,158  
Port Darwin, Australia, 4,041  
Qingdao, China, 1,602  
Qinhuangdao, China (via San Maenggol, Sudo), 1,750  
Diego, California, U.S.A., 4,779  
San Francisco, California, U.S.A., 4,373  
Seattle, Washington, U.S.A. (via La Perouse Strait and Proliv Kruzenshterna), 4,108  
Shanghai, China, 1,597  
Tomari, Japan, 542  
Vladivostok, Russia, 713  
Weihai, China (via Maenggol Sudo), 1,579  
Weonsan, South Korea, 972  
Xiamen, China, 1,991  
Yantai, 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**ALEXANDRIA, EGYPT**  
(31°10'41"N., 29°51'28"E.) to:**Junction Points\***Port Said, Egypt, 164  
Strait of Gibraltar, 1,822**Ports**Al Latakia, Syria, 402  
Algiers, Algeria, 1,393  
Alicante, Spain, 1,560  
Ancona, Italy, 1,096  
Annaba, Algeria, 1,169  
Antalya, Turkey, 349  
Ashdod, Israel, 266  
Augusta, Sicily, 819  
Banghazi, Libya, 541  
Banzart, Tunisia, 1,064  
Barcelona, Spain, 1,482  
Bari, Italy, 890  
Beirut, Lebanon, 341  
Brindisi, Italy, 831  
Cagliari, Sardinia, 1,136  
Cartagena, Spain, 1,585  
Castellammare 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, Kriti, 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, 1,40  
Messina, Sicily, 834  
Napoli, Italy, 1,005  
Odessa, Ukraine, 1,090  
Oran, Algeria, 1,590  
Palermo, Sicily, 950  
Palma, Balearic Islands, 1,435  
Paphos, Cyprus, 256  
Piraeus, Greece, 515  
Rijeka, Croatia, 1,166  
Savona, Italy, 1,326  
Sibenik, Croatia, 1,039  
Siracusa, Sicily, 809  
Soudha, Kriti, 425  
Split, Croatia, 1,024  
Tarabulus, Libya, 866  
Taranto, Italy, 844  
Thessaloniki, Greece, 678  
Toulon, France, 1,376  
Trieste, Italy, 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, Egypt, 699  
Strait of Gibraltar, 1,716**Ports**Istanbul, Turkey, 200  
Thessaloniki, Greece, 191  
Volos, Greece, 205**ALGECIRAS, SPAIN**  
(36°07'30"N., 5°26'30"W.) to:**Junction Points\***Port Said, Egypt, 1,927  
Strait of Gibraltar, 25**Ports**Cartagena, Spain, 238  
Oran, Algeria, 229  
Palermo, Sicily, 924**ALGIERS, ALGERIA**  
(36°46'50"N., 3°04'11"E.) to:**Junction Points\***Port Said, Egypt, 1,514  
Strait of Gibraltar, 437**Ports**Alexandria, Egypt, 1,393  
Alicante, Spain, 198  
Ancona, Italy, 1,153  
Annaba, Algeria, 246  
Arzew, Algeria, 186  
Banghazi, Libya, 927  
Banzart, Tunisia, 340  
Barcelona, Spain, 282  
Bari, Italy, 946  
Bat'umi, Georgia (via Corinth Canal), 1,963  
Beirut, Lebanon, 1,605  
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, Kriti, 1,087  
Istanbul, Turkey (south of Greece), 1,393  
Istanbul, Turkey (via Corinth Canal), 1,376  
Izmir, Turkey (via Corinth Canal), 1,221  
Kavala, Greece (via Corinth Canal), 1,260  
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, Ukraine (via Corinth Canal), 1,724  
Oran, Algeria, 205  
Palermo, Sicily, 513  
Piraeus, Greece (south of Greece), 1,079  
Piraeus, Greece (via Corinth Canal), 1,022  
Savona, Italy, 518  
Sibenik, Croatia, 1,094  
Siracusa, Sicily, 626  
Skikda, Algeria, 200  
Split, Croatia, 1,079  
Tarabulus, Libya, 665  
Taranto, Italy, 841  
Thessaloniki, Greece (via Corinth Canal), 1,270  
Toulon, France, 406  
Trieste, Italy, 1,254  
Tunis, Tunisia, 392  
Valencia, Spain, 230  
Valletta, Malta, 576  
Venezia, Italy, 1,264

Volos, Greece (via Corinth Canal), 1,211

**ALICANTE, SPAIN**  
(38°20'00"N., 0°29'01"E.) to:**Junction Points\***Port Said, Egypt, 1,680  
Strait of Gibraltar, 317**Ports**Alexandria, Egypt, 1,560  
Algiers, Algeria, 198  
Almeria, Spain, 155  
Ancona, Italy, 1,308  
Annaba, Algeria, 419  
Arzew, Algeria, 152  
Banghazi, Libya, 1,094  
Banzart, Tunisia, 507  
Barcelona, Spain, 228  
Bari, Italy, 1,100  
Beirut, Lebanon, 1,772  
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, Kriti, 1,254  
Istanbul, Turkey (via Corinth Canal), 1,540  
Izmir, Turkey (via Corinth Canal), 1,386  
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, Ukraine (via Corinth Canal), 1,888  
Oran, Algeria, 159  
Palermo, Sicily, 667  
Palma, Balearic Islands, 173  
Piraeus, Greece (south of Greece), 1,246  
Piraeus, Greece (via Corinth Canal), 1,186  
Savona, Italy, 549  
Sibenik, Croatia, 1,249  
Siracusa, Sicily, 792  
Split, Croatia, 1,234  
Tarabulus, Libya, 832  
Taranto, Italy, 995  
Thessaloniki, Greece (via Corinth Canal), 1,435  
Toulon, France, 418  
Trieste, Italy, 1,409  
Tunis, Tunisia, 558  
Valencia, Spain, 98  
Valletta, Malta, 743  
Venezia, Italy, 1,418  
Villa Sanjurjo, Morocco, 260  
Volos, Greece (south of Greece), 1,395  
Volos, Greece (via Corinth Canal), 1,376**ALMERIA, SPAIN**  
(36°49'30"N., 2°27'48"W.) to:**Junction Points\***Port Said, Egypt, 1,780  
Strait of Gibraltar, 171\* **JUNCTION POINT.**—See Preface for use of junction points



## 4 ALMIRANTE, PANAMA

**Ports**

Alicante, Spain, 155  
 Barcelona, Spain, 371  
 Catania, Sicily, 919  
 Istanbul, Turkey (via Corinth Canal), 1,642  
 Kerch, Ukraine (via Corinth Canal), 2,077  
 Nice, France, 627  
 Palma, Balearic Islands, 308  
 Sfax, Tunisia, 881

**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.

**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

**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

**AMBON, INDONESIA**  
 (3°41'30"S., 128°10'25"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 819  
 Torres Strait, Australia, 964

**Ports**

Manila, Philippines, 1,260  
 Port Darwin, Australia, 579  
 Surabaya, Indonesia, 980

**AMLWCH, WALES**  
 (53°26'55"N., 4°18'09"W.) to:

**Junction Points\***

Bishop Rock, England, 259  
 Fastnet Rock, Ireland, 252  
 Inishtrahull, Ireland, 183

**Ports**

Ardrossan, Scotland, 145  
 Cobh, Ireland, 190  
 Milford Haven, Wales, 112  
 Port Talbot, Wales, 171  
 Swansea, Wales, 165

**AMSTERDAM, NETHERLANDS**  
 (52°23'00"N., 4°54'00"E.) to:

**Junction Points\***

Bishop Rock, England, 481  
 Ile d'Ouessant, France, 465  
 Nord-Ostsee-Kanal (East Entrance), Germany, 291  
 Pentland Firth, Scotland, 481  
 Skagens Odde, Denmark, 422

**Ports**

Aberdeen, Scotland, 380  
 Antwerp, 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  
 Ostende, 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

**ANACORTES, WASHINGTON, U.S.A.**  
 (48°30'48"N., 122°35'18"W.)  
 Subtract 23 miles from Seattle, Washington distances.

**ANAN, JAPAN**  
 (33°52'36"N., 134°44'20"E.) See

Tatibanako, Japan

**ANCONA, ITALY**  
 (43°37'22"N., 13°30'18"E.) to:

**Junction Points\***

Port Said, Egypt (south of Greece), 1,206  
 Strait of Gibraltar, 1,580

**Ports**

Alexandria, Egypt, 1,096  
 Algiers, Algeria, 1,153  
 Alicante, Spain, 1,308  
 Annaba, Algeria, 933  
 Banghazi, Libya, 800  
 Banzart, Tunisia, 842  
 Barcelona, Spain, 1,212  
 Bari, Italy, 216  
 Barletta, Italy, 199  
 Beirut, Lebanon (south of Greece), 1,276  
 Beirut, Lebanon (via Corinth Canal), 1,245  
 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  
 Iraklion, Kriti, 762  
 Istanbul, Turkey (via Corinth Canal), 962  
 Izmir, Turkey (south of Greece), 904  
 Izmir, Turkey (via Corinth Canal), 808  
 La Spezia, Italy, 979  
 Livorno, Italy, 946  
 Malaga, Spain, 1,510  
 Manfredonia, Italy, 195  
 Marseille, France, 1,109  
 Messina, Sicily, 536  
 Monopoli, Italy, 239  
 Napoli, Italy, 707  
 Odessa, Ukraine (south of Greece), 1,407  
 Odessa, Ukraine (via Corinth Canal), 1,310  
 Oran, Algeria, 1,349  
 Palermo, Sicily, 652  
 Palma, Balearic Islands, 1,170  
 Piraievs, Greece (south of Greece), 745  
 Piraievs, Greece (via Corinth Canal), 608  
 Ploce, Croatia, 167  
 Rijeka, Croatia, 112  
 Savona, Italy, 1,028  
 Shengjin, Albania, 297  
 Sibenik, Croatia, 115  
 Siracusa, Sicily, 557  
 Split, Croatia, 132  
 Tarabulus, Libya, 820  
 Taranto, Italy, 415  
 Thessaloniki, Greece (south of Greece), 953  
 Thessaloniki, Greece (via Corinth Canal), 857  
 Toulon, France, 1,077  
 Trieste, Italy, 130  
 Tunis, Tunisia, 830  
 Valencia, Spain, 1,295  
 Valletta, Malta, 634  
 Venezia, Italy, 124  
 Volos, Greece (south of Greece), 894

Volos, Greece (via Corinth Canal), 798  
 Zadar, Croatia, 87

**ANECHO, TOGO**  
 (6°13'15"N., 1°35'35"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,615  
 Ile d'Ouessant, France, 3,704

**Ports**

Douala, Cameroon, 526  
 Monrovia, Liberia, 850

**ANGO ANGO, 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, Egypt, 1,289  
 Strait of Gibraltar, 675

**Ports**

Alexandria, Egypt, 1,169  
 Algiers, Algeria, 246  
 Alicante, Spain, 419  
 Ancona, Italy, 933  
 Banghazi, Libya, 702  
 Banzart, Tunisia, 116  
 Barcelona, Spain, 386  
 Bari, Italy, 726  
 Beirut, Lebanon, 1,381  
 Bejaia, Algeria, 156  
 Brindisi, Italy, 668  
 Cartagena, Spain, 440  
 Ceuta, Morocco, 656  
 Genova, Italy, 458  
 Gibraltar, 658  
 Haifa, Israel, 1,378  
 Hyeres, Frances, 384  
 Iraklion, Kriti, 863  
 Istanbul, Turkey (south of Greece), 1,168  
 Istanbul, Turkey (via Corinth Canal), 1,151  
 Izmir, Turkey (south of Greece), 1,014  
 Izmir, Turkey (via Corinth Canal), 997  
 La Spezia, Italy, 463  
 Livorno, Italy, 431  
 Malaga, Spain, 607  
 Marseille, France, 409  
 Messina, Sicily, 401  
 Napoli, Italy, 388  
 Odessa, Ukraine (south of Greece), 1,516  
 Odessa, Ukraine (via Corinth Canal), 1,499  
 Oran, Algeria, 444

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

Palermo, Sicily, 292  
 Palma, Balearic Islands, 307  
 Piraeus, Greece (south of Greece), 854  
 Piraeus, Greece (via Corinth Canal), 797  
 Port St. Louis du Rhone, France, 419  
 Rijeka, Croatia, 1,000  
 Savona, Italy, 451  
 Sibenik, Croatia, 874  
 Siracusa, Sicily, 401  
 Sousse, Tunisia, 255  
 Split, Croatia, 859  
 Tarabulus, Libya, 440  
 Taranto, Italy, 620  
 Thessaloniki, Greece (south of Greece), 1,063  
 Thessaloniki, Greece (via Corinth Canal), 1,046  
 Toulon, France, 390  
 Trieste, Italy, 1,034  
 Tunis, Tunisia, 167  
 Valencia, Spain, 426  
 Valletta, Malta, 352  
 Venezia, Italy, 1,044  
 Volos, Greece (south of Greece), 1,004  
 Volos, Greece (via Corinth Canal), 987

**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°50'22"N., 30°38'00"E.) to:

**Junction Points\***

Port Said, Egypt, 346  
 Strait of Gibraltar, 1,822

**Ports**

Alexandria, Egypt, 349  
 Beirut, Lebanon, 322  
 Piraeus, Greece, 383

**ANTIBES, FRANCE**  
 (43°35'30"N., 7°08'02"E.) See Nice, France.

**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, Chile, 173  
 Coquimbo, Chile, 396  
 Corinto, Nicaragua, 2,400  
 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  
 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 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

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

**Junction Points\***

Bishop Rock, England, 449  
 Ile d'Ouessant, France, 441  
 Nord-Ostsee-Kanal (East Entrance), Germany, 398  
 Pentland Firth, Scotland, 553  
 Skagens Odde, Denmark, 528

**Ports**

Aberdeen, Scotland, 450  
 Amsterdam, Netherlands, 148  
 Belfast, Northern Ireland, 722  
 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 Shelikohova, Kuril Islands, Russia, 899  
 Kasatka, Japan, 441  
 Komatsushima, Japan, 813  
 Matsuga-hana, Japan, 350  
 Pago Pago, American Samoa, 4,358  
 Shioyama, Japan, 311  
 Tomari, Japan, 335

**APAPA, NIGERIA**  
 (6°22'23"N., 3°24'15"E.) to:

**Junction Points\***

Bishop Rock, England, 3,817  
 Cape of Good Hope, South Africa, 3,523  
 Fastnet Rock, Ireland, 3,870  
 Grand Banks South, 3,969  
 Ile d'Ouessant, France, 3,777  
 Inishtrahull, Ireland, 4,161  
 Panama, Panama, 5,063  
 Pentland Firth, Scotland, 4,865  
 Punta Arenas, Chile, 5,225  
 Strait of Gibraltar, 3,117  
 Straits of Florida, 5,222  
 Yucatan Channel, 5,346

**Ports**

Abidjan, Ivory Coast, 490  
 Accra, Ghana, 221  
 Baltimore, Maryland, U.S.A., 5,085  
 Benguela, Angola, 1,284  
 Boma, Congo, 933  
 Boston, Massachusetts, U.S.A., 4,765  
 Calabar, Nigeria, 305  
 Charleston, South Carolina, U.S.A., 5,070  
 Colon, Panama, 5,155  
 Douala, Cameroon, 424  
 Georgetown, Ascension Island, 1,368  
 Grand Bassam, Ivory Coast, 478  
 Douala, Cameroon, 449  
 Marshall, Liberia, 903  
 Matadi, Congo, 1,002  
 Monrovia, Liberia, 928  
 Natal, Brazil, 2,432  
 New York, New York, U.S.A., 4,885  
 Norfolk, Virginia, U.S.A., 4,943  
 Philadelphia, Pennsylvania, U.S.A., 4,983  
 Pointe Noire, Congo, 838  
 Port Harcourt, Nigeria, 319  
 Port of Spain, Trinidad, 3,910  
 Porto Grande, Cape Verde Islands, 1,981  
 Santa Isabel, Bioko, Equatorial

Guinea, 375  
 Sao Tome, Sao Tome, Gulf of Guinea, 421  
 Sassandra, Ivory Coast, 603  
 Sekondi, Ghana, 316  
 Tema, Ghana, 209  
 Victoria, Cameroon, 400  
 Willemstad, Curacao, 4,345

**APARRI, PHILIPPINES**  
 (18°22'15"N., 121°36'45"E.) to:

**Junction Points\***

Honshu, Japan, 1,418  
 Selat Lombok, Indonesia, 2,316  
 Panama, Panama, 8,996  
 Singapore, 1,518  
 Selat Sunda, Indonesia, 1,877  
 Torres Strait, Australia, 2,356

**Ports**

Apra, Guam, Mariana Islands, 1,370  
 Ho Chi Minh, Vietnam, 1,413  
 Kobe, Japan, 1,222  
 Manila, Philippines, 1,386  
 San Diego, California, U.S.A., 6,306  
 Yap, Caroline Islands, 1,125  
 Zamboanga, Philippines, 873

**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  
 Baie Taio-Hae, Marquesa Islands, 1,886  
 Brisbane, Australia, 2,177  
 Callao, Peru, 5,492  
 Christmas Island, Line Islands, 1,274  
 Enderbury Island, Phoenix Islands, 641  
 Funafuti, Tuvalu, 632  
 Hakodate, Japan, 4,252  
 Hobart, Tasmania, 2,776  
 Hong Kong, China, 4,869  
 Honolulu, Hawaii, U.S.A., 2,260  
 Johnston Island, 1,838  
 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  
 Noumea, New Caledonia, 1,371  
 Nukualofa, Tonga Islands, 508  
 Pago Pago, American Samoa, 80  
 Papeete, French Polynesia, 1,301  
 Petropavlovsk-Kamchatskiy, Russia, 4,292  
 Ponape, Caroline Islands, 2,189  
 Rabaul, Papua New Guinea, 2,232  
 Raoul Island, Kermadec Islands, 1,008  
 Rotoava, Iles Tuamotu, 1,520  
 Salina Cruz, Mexico, 4,886

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

## 6 APRA, GUAM, MARIANA ISLANDS

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  
 Shanghai, China, 4,715  
 Suva, Fiji Islands, 647  
 Sydney, Australia, 2,355  
 Talomako, Vanuatu, 1,255  
 Valparaiso, Chile, 5,453  
 Vancouver, Canada, 4,675  
 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 Taio-Hae, Marquesa Islands, 4,698  
 Barbers Point, Hawaii, U.S.A., 3,303  
 Bikini, Marshall Islands, 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  
 Christmas Island, Line Islands, 3,518  
 Dagu, China, 2,133  
 Dalian, China, 1,974  
 Dutch Harbor, Alaska, U.S.A., 3,403  
 Enderbury Island, Phoenix Islands, 2,827  
 Eniwetak, Marshall Islands, 1,066  
 Funafuti, Tuvalu, 2,455  
 Guayaquil, Ecuador, 8,147  
 Hakodate, Japan, 1,739  
 Ho Chi Minh, Vietnam, 2,304  
 Hobart, Tasmania, 3,683  
 Hong Kong, China, 1,822  
 Honolulu, Hawaii, U.S.A., 3,318  
 Iloilo, Philippines, 1,366  
 Incheon, South Korea (via Tokara Kaikyo), 1,837  
 Iwakuni, Japan, 1,437  
 Jakarta, Indonesia (via Makassar Strait), 2,639  
 Johnston Island, 2,665  
 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  
 Kure, Japan, 1,460  
 Kwajalein, Marshall Islands, 1,405  
 Lae, Papua New Guinea, 1,315  
 Levuka, Fiji Islands, 2,847  
 Lo hsing-ta Mao-ti, China, 1,617  
 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  
 Noumea, New Caledonia, 2,528  
 Nukualofa, Tonga Islands, 3,202  
 Olongapo, Philippines (north of Luzon), 1,663  
 Pago Pago, American Samoa, 3,156  
 Papeete, French Polynesia, 4,335  
 Petropavlovsk-Kamchatskiy, Russia, 2,475  
 Ponape, Caroline Islands, 906  
 Port Darwin, Australia (via Selat Sele), 1,925  
 Prince Rupert, Canada, 4,586  
 Qingdao, China, 1,900  
 Rabaul, Papua New Guinea, 1,187  
 Raoul Island, Kermadec Islands, 3,369  
 Rongelap, Marshall Islands, 1,341  
 Rotoava, Iles Tuamotu, 4,513  
 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  
 Shanghai, China, 1,687  
 Shimizu, Honshu, Japan, 1,351  
 Shimonoseki, Japan, 1,451  
 Sitka, Alaska, U.S.A., 4,407  
 Sorong, Irian Jaya, Indonesia, 1,171  
 Sukarnopura, Irian Jaya, Indonesia, 1,010  
 Surabaya, Indonesia, 2,334  
 Suva, Fiji Islands, 2,784  
 Sydney, Australia, 3,006  
 Talomako, Vanuatu, 2,177  
 Tinian, Mariana Islands, 127  
 Tokuyama, Japan, 1,427  
 Truk, Caroline Islands, 590  
 Valdivostok, Russia (via Tsugaru-Kaikyo), 2,155  
 Valparaiso, Chile, 8,510  
 Vinh Cam Ranh, Vietnam, 2,112  
 Vladivostok, Russia (via Shimonoseki Kaikyo), 2,019  
 Wake Island, 1,334  
 Wei-hae-wei, China (via Tokara Kaikyo), 1,901  
 Wotho, Marshall Islands, 1,294  
 Wotje Island, Marshall Islands, 1,547  
 Xiamen, China, 1,669  
 Yap, Caroline Islands, 458  
 Yantai, 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

**ARACAJU, BRAZIL**  
 (10°58'53"S., 36°59'26"W.) to:

**Junction Points\***

Bishop Rock, England, 4,021  
 Cape of Good Hope, South

Africa, 3,324  
 Fastnet Rock, Ireland, 4,046  
 Grand Banks South, 3,436  
 Ile d'Ouessant, France, 3,988  
 Inishtrahull, Ireland, 4,320  
 Panama, Panama, 3,526  
 Pentland Firth, Scotland, 4,602  
 Punta Arenas, Chile, 3,045  
 Strait of Gibraltar, 3,366  
 Straits of Florida, 3,822  
 Yucatan Channel, 3,869

#### Ports

Accra, Ghana, 2,411  
 Baltimore, Maryland, U.S.A., 4,040  
 Belem, Brazil, 1,442  
 Bridgetown, Barbados, 2,324  
 Buenos Aires, Argentina, 2,016  
 Cape Town, South Africa, 3,321  
 Colon, Panama, 3,536  
 Dakar, Senegal, 1,944  
 Freetown, Sierra Leone, 1,841  
 La Habana, Cuba, 3,775  
 Lisboa, Portugal, 3,394  
 Miami, Florida, U.S.A., 3,785  
 New York, New York, U.S.A., 4,034  
 Portland, Maine, U.S.A., 3,977  
 Salvador, Brazil, 161  
 Washington, D.C., U.S.A., 4,024

**ARBATAJ, ITALY**  
 (39°56'40"N., 9°42'45"E.) to:

#### Junction Points\*

Port Said, Egypt, 1,248  
 Strait of Gibraltar, 810

#### Ports

Alexandria, Egypt, 1,142  
 Algiers, Algeria, 389  
 Ayios, Nikolaos, Kriti, 846  
 Barcelona, Spain, 294  
 Beirut, Lebanon, 1,320  
 Ceuta, Morocco, 784  
 Derince, Turkey, 1,139  
 Iraklion, Kriti, 804  
 Kerch, Ukraine, 1,546  
 Marseille, France, 306  
 Sibenik, Croatia, 771  
 Tarabulus, Lebanon, 1,332

**ARDROSSAN, SCOTLAND**  
 (55°38'30"N., 4°49'30"W.) to:

#### Junction Points\*

Bishop Rock, England, 350  
 Fastnet Rock, 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, South Africa, 6,294  
 Fastnet Rock, 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

Arkhangel'sk, Russia, 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  
 Ivittuut, Greenland, 1,023  
 Key West, Florida, U.S.A., 1,953  
 Lisboa, Portugal, 2,101  
 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

**ARGOSTOLION, GREECE**  
 (38°08'23"N., 20°27'35"E.) to:

#### Junction Points\*

Port Said, Egypt, 754  
 Strait of Gibraltar (via Strait of Messina), 1,292

#### Ports

Algiers, Algeria, 862  
 Alicante, Spain, 1,015  
 Arzew, Algeria, 1,038  
 Benghazi, Libya, 366  
 Barcelona, Spain, 923  
 Bat'umi, Georgia, 1,183  
 Beirut, Lebanon, 811  
 Ceuta, Morocco, 1,268  
 Iraklion, Kriti, 299  
 Izmir, Turkey, 444  
 Marseille, France, 827  
 Napoli, Italy, 423  
 Oran, Algeria, 1,058

**ARICA, CHILE**  
 (18°28'00"S., 70°20'00"W.) to:

#### 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, Chile, 478  
 Coquimbo, Chile, 702

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



Corinto, Nicaragua, 1,711  
 Esmeraldas, 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  
 Monterey, California, U.S.A., 4,471  
 Pisco, Peru, 492  
 Puntarenas, Costa Rica, 1,996  
 Salina Cruz, Mexico, 2,579  
 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

**ARKHANGEL'SK, RUSSIA**  
 (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**

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, Russia, 1,105  
 Frederikshavn, Denmark, 1,805  
 Guantanamo, Cuba, 5,156  
 Halifax, Canada, 3,663  
 Hull, England, 1,926  
 Iokan'ga, Russia, 271  
 Ivittuut, Greenland (direct), 2,573  
 Ivittuut, 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, Russia, 1,469  
 New York, New York, U.S.A. (clear of general maximum winter solid pack ice in vicinity of Iceland), 4,320  
 New York, New York, U.S.A., 4,216  
 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

**ARRECIFFE DE LANZAROTE, CANARY ISLANDS**  
 (28°57'15"N., 13°32'11"W.) to:

**Junction Points\***

Bishop Rock, England, 1,289

Cape of Good Hope, South Africa, 4,530  
 Fastnet Rock, Ireland, 1,355  
 Grand Banks South, 1,934  
 Ile d'Ouessant, France, 1,248  
 Inishtrahull, Ireland, 1,643  
 Panama, Panama, 3,891  
 Pentland Firth, Scotland, 1,896  
 Punta Arenas, Chile, 5,777  
 Strait of Gibraltar, 576  
 Straits of Florida, 3,681

**Ports**

Aaiun, Western Sahara, 111  
 Casablanca, Morocco, 435  
 Dakar, Senegal, 912  
 Lagos, Nigeria, 2,547  
 Monrovia, Liberia, 1,622  
 New York, New York, U.S.A., 3,005  
 Recife, Brazil, 2,540  
 Savannah, Georgia, U.S.A., 3,496

**ARUBA**  
 See Sint Nicolaashaven.

**ARZEW, ALGERIA**  
 (35°51'30"N., 0°18'00"W.) to:

**Junction Points\***

Port Said, Egypt, 1,692  
 Strait of Gibraltar, 275

**Ports**

Algiers, Algeria, 186  
 Alicante, Spain, 152  
 Bejaia, Algeria, 294  
 Melilla, Morocco, 146

**AS SALIF, YEMEN**  
 (15°18'00"N., 42°40'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,181  
 Cape Leeuwin, Australia, 5,204  
 Selat Lombok, Indonesia, 4,684  
 Port Said, Egypt, 1,127  
 Singapore (north of Scorta and Strait of Malacca), 3,887  
 Selat Sunda, Indonesia, 4,673  
 Torres Strait, Australia, 6,247

**Ports**

Aden, Yemen, 249  
 Aseb, Ethiopia, 138  
 Jubail, Saudi Arabia, 2,059  
 Mitsiwa, Ethiopia, 186

**AS SUKHAYRAH, TUNISIA**  
 (34°18'00"N., 10°09'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,156  
 Strait of Gibraltar, 1,072

**Ports**

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

**ASH SHUWAYKH, KUWAIT**  
 (29°21'21"N., 47°56'08"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,258  
 Cape Leeuwin, Australia, 5,426  
 Selat Lombok, Indonesia, 4,688  
 Port Said, Egypt, 3,212  
 Singapore, 3,872  
 Selat Sunda, Indonesia, 4,098  
 Torres Strait, Australia, 6,256

**Ports**

Belawan, Indonesia, 3,606  
 Calcutta, India, 3,581  
 Fremantle, Australia, 5,429  
 Port Darwin, Australia, 5,701  
 Rangoon, Burma, 3,641  
 Sabang, Indonesia, 3,340

**ASHDOD, ISRAEL**  
 (31°51'00"N., 34°39'00"E.) to:

**Junction Points\***

Port Said, Egypt, 126  
 Strait of Gibraltar, 2,031

**Ports**

Alexandria, Egypt, 266  
 Beirut, 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, South Africa, 4,056  
 Port Said, Egypt, 1,258  
 Singapore, 3,769

**Ports**

Aden, Yemen, 150  
 Port Sudan, Sudan, 524

**ASSENS, DENMARK**  
 (55°16'15"N., 9°53'07"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 65  
 Skagens Odde, Denmark, 187

**Ports**

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

**ASTORIA, OREGON, U.S.A.**  
 (46°11'40"N., 123°50'00"W.)  
 Subtract 83 miles from Portland distances.

**ATUCHA, ARGENTINA**  
 Add 80 miles to Buenos Aires distances (via Mitre Channel).

**ATUMI, JAPAN**  
 (34°39'47"N., 137°04'54"E.)  
 Subtract 32 miles from Nagoya distances.

**AU-AO CHAING, TAIWAN**  
 (24°36'00"N., 121°52'00"E.) See

Su-ao Kang, Taiwan.

**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 30°S.), 6,132  
 Punta Arenas, Chile (via 49°S.), 4,814  
 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  
 Dagu, China, 5,648  
 Dalian, China (via Vitiaz Strait), 5,489  
 Dalian, China (west of New Ireland), 5,469  
 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, China, 5,060  
 Honolulu, Hawaii, U.S.A., 3,820  
 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 Kaiyo and Koshiki Kaiyo), 4,930  
 Nagasaki, Japan (via Tokara Kaiyo), 4,963  
 Nandi Bay, Fiji Islands, 1,224  
 Nelson, New Zealand, 633  
 Nome, Alaska, U.S.A., 6,159  
 Nukulofa, Tonga Islands, 1,009  
 Pago Pago, American Samoa, 1,565  
 Papeete, French Polynesia, 2,216  
 Petropavlovsk-Kamchatskiy, Russia, 5,466  
 Ponape, Caroline Islands, 2,813  
 Portland, Oregon, U.S.A., 6,075  
 Prince Rupert, Canada, 6,209  
 Qingdao, China, 5,378  
 Rabaul, Papua New Guinea, 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  
 Shanghai, China (via Vitiaz Strait), 5,149  
 Shanghai, 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  
 Truk, Caroline Islands, 3,000

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

## 8 AUGUSTA, SICILY

Valparaiso, Chile, 5,247  
 Vancouver, Canada, 6,191  
 Vladivostok, Russia, 5,516  
 Wake Island, 3,409  
 Wellington, New Zealand, 563  
 Xiamen, China, 4,990  
 Yokohama, Japan, 4,789

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

**Junction Points\***

Port Said, Egypt, 932  
 Strait of Gibraltar, 1,065

**Ports**

Alexandria, Egypt, 819  
 Baniyas, Syria, 1,028  
 Palermo, Sicily, 187  
 Sete, France, 703  
 Taranto, Italy, 243  
 Valencia, Spain, 801  
 Valletta, Malta, 98

**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, China, 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  
 Pago Pago, American Samoa, 750  
 Papeete, French Polynesia, 618  
 Petropavlovsk-Kamchatskiy, Russia, 4,951  
 Ponape, Caroline Islands, 3,001  
 Rabaul, Papua New Guinea, 2,993  
 San Francisco, California, U.S.A., 4,124  
 Seattle, Washington, U.S.A., 4,700  
 Shanghai, 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

**AVEIRO, PORTUGAL**  
 (40°39'20"N., 8°47'40"W.) to:

**Junction Points\***

Bishop Rock, England, 568  
 Cape of Good Hope, South Africa, 5,266  
 Fastnet Rock, Ireland, 644  
 Grand Banks South, 1,834

Ile d'Ouessant, France, 536  
 Inishtrahull, Ireland, 942  
 Panama, Panama, 4,186  
 Pentland Firth, Scotland, 1,194  
 Punta Arenas, Chile, 6,513  
 Strait of Gibraltar, 416  
 Straits of Florida, 3,778

**Ports**

Argentina, Canada, 2,006  
 Bathurst, Gambia, 1,740  
 Belem, Brazil, 3,327  
 Bordeaux, France, 573  
 Boston, Massachusetts, U.S.A., 2,735  
 Buenos Aires, Argentina, 5,435  
 Cadiz, Spain, 375  
 Cape Town, South Africa, 5,270  
 Casablanca, Morocco, 457  
 Charleston, South Carolina, U.S.A., 3,360  
 Charlotte Amalie, Virgin Islands, 3,194  
 Colon, Panama (via Mona Passage), 84,17  
 Dakar, Senegal, 1,623  
 El Ferrol del Caudillo, Spain, 229  
 Freetown, Sierra Leone, 2,134  
 Funchal, Madeira Island, 619  
 Georgetown, Guyana, 3,323  
 Guantanamo, Cuba, 4,105  
 Halifax, Canada, 2,420  
 Jacksonville, Florida, U.S.A., 3,512  
 Le Havre, France, 783  
 Monrovia, Liberia, 2,336  
 New York, New York, U.S.A., 2,898  
 Port Castries, St. Lucia, 3,149  
 Recife, Brazil, 3,261  
 San Juan, Puerto Rico, 3,209  
 Takoradi, Ghana, 2,923

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

**Junction Points\***

Ile d'Ouessant, France, 307  
 Strait of Gibraltar, 722

**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 Rock, Ireland, 202  
 Pentland Firth, Scotland, 624

**Ports**

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

**AYIOS NIKOLAOS, GREECE**  
 (35°11'38"N., 25°43'20"E.) to:

**Junction Points\***

Port Said, Egypt, 431  
 Strait of Gibraltar, 1,554

**Ports**

Alexandria, Egypt, 343  
 Antibes, France, 1,063  
 Arzew, Algeria, 1,295  
 Bat'umi, Georgia, 1,035  
 Cartagena, Spain, 1,313  
 Castellammare di Stabia, Italy, 712  
 Corinth Canal (west side, Korinthos), Greece, 416  
 Genova, Italy, 1,026  
 Istanbul, Turkey, 449  
 Limassol, Greece, 376  
 Mersin, Turkey, 457  
 Oran, Algeria, 791  
 Tangier, Morocco, 1,554  
 Toulon, France, 1,084  
 Venezia, Italy, 912

**AYN SUKHNAH, EGYPT**  
 (29°33'47"N., 32°25'43"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,204  
 Cape Leeuwin, Australia, 6,228  
 Port Said, Egypt, 102  
 Singapore, 4,911  
 Selat Sunda, Indonesia, 5,697  
 Torres Strait, Australia, 7,271

**Ports**

Aden, Yemen, 1,273  
 Assab, Ethiopia, 1,150  
 Colombo, Sri Lanka, 3,361  
 Jubail, Saudi Arabia, 3,083  
 Tulear, Madagascar, 3,873

**AZ ZARQA ISLAND, UNITED ARAB EMIRATES**  
 (25°00'00"N., 53°03'20"E.) See Zirku Petroleum Port.

**BACHAQUERO, VENEZUELA**  
 (9°56'45"N., 71°09'00"W.) Add 124 miles to Maracaibo\* distances.

**BAGNOLI, ITALY**  
 (40°48'15"N., 14°10'00"E.) See Napoli.

**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 LAS CALDERAS, DOMINICAN REPUBLIC**  
 (18°13'30"N., 70°31'30"W.) to:

**Junction Points\***

Panama, Panama, 810

**Ports**

Barranquilla, Colombia, 508  
 Kingston, Jamaica, 378  
 San Juan, Puerto Rico, 273  
 Willemstad, Curacao, 392

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

**BAIE TAIO-HAE, MARQUESA ISLANDS**  
 (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  
 Papeete, French Polynesia, 761  
 San Francisco, California, U.S.A., 2,987

**BAJO GRANDE, VENEZUELA**  
 (10°30'30"N., 171°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

**BALBOA, PANAMA**  
 (8°57'30"N., 79°34'15"W.) See

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

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

**BALIKPAPAN,  
KALIMANTAN, INDONESIA**  
(1°16'00"S., 116°48'30"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 472  
Singapore (via Selat Riouw), 1,053  
Selat Sunda, Indonesia, 837  
Selat Wetar, Indonesia, 870

**Ports**

Belawan, Indonesia, 1,422  
Manila, Philippines, 1,057  
Mogpo, South Korea, 2,308

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

**Junction Points\***

Bishop Rock, England, 3,224  
Fastnet Rock, Ireland, 3,102  
Inishtrahull, Ireland, 3,206  
Montreal, Canada (via Strait of Canso), 1,769  
Panama, Panama, 1,944  
Pentland Firth, Scotland, 3,401  
Punta Arenas, Chile, 7,021  
Strait of Gibraltar, 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, Belize (via Straits of Florida), 1,625  
Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 1,975  
Bordeaux, France, 3,308  
Brest, France, 3,308  
Bridgetown, Barbados, 1,853  
Buenos Aires, Argentina, 5,945  
Cadiz, Spain, 3,434  
Cap-Haitien, Haiti, 1,227  
Cape Town, South Africa, 6,912  
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  
Funchal, Madeira Island, 3,028  
Georgetown, Guyana, 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, Canary Islands, 3,251  
Les Cayes, Haiti, 1,374  
Limon, Costa Rica, 1,974  
Luanda, Angola, 5,850

Luderitz Bay, Namibia, 6,538  
Manzanillo, Cuba (via Windward Passage), 1,494  
Manzanillo, Dominican Republic, 1,223  
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  
Paamiut (Frederikshaab), Greenland, 2,261  
Paramaribo, Suriname, 2,321  
Pointe a Pitre, Guadeloupe, 1,653  
Ponce, Puerto Rico, 1,427  
Ponta Delgada, Azores, 2,529  
Port au Prince, Haiti, 1,301  
Port of Spain, Trinidad, 1,918  
Port Antonio, Jamaica, 1,350  
Port Castries, St. Lucia, 1,741  
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  
Salvador, Brazil, 4,163  
San Juan del Norte, Nicaragua (via Straits of Florida), 1,968  
San Juan, Puerto Rico, 1,374  
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  
St. Georges, Grenada, 1,843  
St. John, Canada (via Nantucket Light Vessel), 860  
St. John's, Canada, 1,400  
Vitoria, Brazil, 4,581  
Walvisbaai, Namibia, 6,385  
Willemstad, Curacao, 1,733

**BANANA, CONGO**  
(6°02'31"S., 12°22'40"E.) to:

**Junction Points\***

Bishop Rock, England, 4,500  
Cape of Good Hope, South Africa, 4,229  
Fastnet Rock, Ireland, 4,553  
Grand Banks South, 4,649  
Ile d'Ouessant, France, 4,459  
Inishtrahull, Ireland, 4,869  
Panama, Panama, 5,707  
Pentland Firth, Scotland, 5,158  
Punta Arenas, Chile, 5,001  
Strait of Gibraltar, 3,799  
Straits of Florida, 5,871  
Yucatan Channel, 5,980

**Ports**

Abidjan, Ivory Coast, 1,194  
Cape Town, South Africa, 1,705  
Lagos, Nigeria, 921  
Monrovia, Liberia, 1,578  
New York, New York, U.S.A., 5,534  
Recife, Brazil, 2,815  
Takoradi, Ghana, 1,070

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

**Junction Points\***

Port Said, Egypt, 2,842  
Singapore, 3,381

**Ports**

Aden, Yemen, 1,453  
Al Basrah, Iraq, 572  
Karachi, Pakistan, 643

**BANDAR AL MISHAB, SAUDI  
ARABIA**  
(28°10'06"N., 48°42'37"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,221  
Cape Leeuwin, Australia, 5,388  
Selat Lombok, Indonesia, 4,879  
Port Said, Egypt, 3,023  
Singapore, 3,835  
Selat Sunda, Indonesia, 4,060  
Torres Strait, Australia, 6,219

**Ports**

Aden, Yemen, 1,985  
Al Aqabah, Jordan, 3,242  
Colombo, Sri Lanka, 2,248  
Massawa, Ethiopia, 2,418  
Port Sudan, Sudan, 2,651

**BANDAR KHOMEINI, IRAN**  
(30°26'30"N., 49°05'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,169  
Port Said, Egypt, 3,322  
Singapore, 3,872

**Ports**

Al Basrah, Iraq, 154  
Al Manamah, Bahrain, 288  
Bushehr, Iran, 158

**BANDAR-E MAH SHAHR,  
IRAN**  
(30°27'40"N., 49°10'30"E.) Add 6 miles to Bandar Khomeini distances.

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

**Junction Points\***

Selat Lombok, Indonesia, 357  
Singapore, 830  
Selat Sunda, Indonesia, 775  
Torres Strait, Australia, 1,785

**Ports**

Makassar, Sulawesi, 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, Egypt, 673  
Strait of Gibraltar, 1,356

**Ports**

Alexandria, Egypt, 541  
Algiers, Algeria, 927  
Alicante, Spain, 1,094  
Ancona, Italy, 800  
Annaba, Algeria, 702  
As Sukhayrah, Tunisia, 523  
Baniyas, Syria, 834  
Banzart, Tunisia, 597  
Barcelona, Spain, 1,025  
Bari, Italy, 593  
Beirut, Lebanon, 806  
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, Kriti, 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, Ukraine, 1,064  
Oran, Algeria, 1,124  
Palermo, Sicily, 547  
Palma, Balearic Islands, 970  
Piraeus, Greece, 404  
Reggio Di Calabria, Sicily, 425  
Rijeka, Croatia, 868  
Savona, Italy, 922  
Sibenik, Croatia, 741  
Siracusa, Sicily, 381  
Split, Croatia, 726  
Tarabulus, Libya, 354  
Taranto, Italy, 523  
Thessaloniki, Greece, 611  
Toulon, France, 972  
Trieste, Italy, 901  
Tubruq, Libya, 248  
Tunis, Tunisia, 585  
Valencia, Spain, 1,094  
Valletta, Malta, 359  
Venezia, Italy, 911

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

## 10 BANGKOK, THAILAND

Volos, Greece, 552

**BANGKOK, THAILAND**  
(13°43'00"N., 100°31'00"E.) to:**Junction Points\***Singapore, 842  
Selat Sunda, Indonesia, 1,292**Ports**Aleksandrovsk-Sakhalinskiy,  
Russia, 3,639  
Busan, South Korea, 2,533  
Incheon, South Korea, 2,591  
Kompong Som, Cambodia, 300  
Los Angeles, California, U.S.A.,  
(via Balintang Channel), 7,775  
Manila, Philippines, 1,435  
Mogpo, South Korea, 2,438  
Nampo, North Korea, 2,652  
Petropavlovsk-Kamchatskiy,  
Russia, 4,252  
Vinh Cam Ranh, Vietnam, 817  
Vladivostok, Russia, 3,035  
Weonsan, North Korea, 2,885**BANIYAS, SYRIA**  
(35°11'00"N., 35°57'00"E.) to:**Junction Points\***Port Said, Egypt, 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**BANJUL, GAMBIA**  
(13°31'43"N., 16°35'05"W.) to:**Junction Points\***Bishop Rock, England, 2,294  
Cape of Good Hope, South  
Africa, 3,492  
Fastnet Rock, Ireland, 2,354  
Grand Banks South, 2,467  
Ile d'Ouessant, France, 2,261  
Inishtrahull, Ireland, 2,671  
Panama, Panama, 3,753  
Pentland Firth, Scotland, 2,960  
Punta Arenas, Chile, 4,890  
Strait of Gibraltar, 1,601  
Straits of Florida, 3,780  
Yucatan Channel, 4,031**Ports**Cadiz, Spain, 1,599  
Casablanca, Morocco, 1,460  
Freetown, Sierra Leone, 401  
Funchal, Madeira Islands, 1,183  
Lisboa, Portugal, 1,644  
Marshall, Liberia, 646  
New York, New York, U.S.A.,  
3,414  
Pointe Noire, Congo, 2,152  
Ponta Delgada, Azores, 1,531  
Porto Grande, Cape Verde Islands,  
527  
Vigo, Spain, 2,572**BANTRY BAY, IRELAND**  
(51°41'00"N., 9°27'00"W.) to:**Junction Points\***Bishop Rock, England, 159  
Cape of Good Hope, South  
Africa, 5,867  
Fastnet Rock, Ireland, 22  
Grand Banks South, 1,720  
Ile d'Ouessant, France, 236  
Inishtrahull, Ireland, 313  
Punta Arenas, Chile, 7,067  
Strait of Gibraltar, 1,082**Ports**Casablanca, Morocco, 1,080  
Dakar, Senegal, 2,247  
Galway, Ireland, 173  
Lisboa, Spain, 779  
Natal, Brazil, 3,698  
St. John's, Canada, 1,674  
Tromso, Norway, 1,453**BANZART, TUNISIA**  
(37°14'13"N., 9°51'00"E.) to:**Junction Points\***Port Said, Egypt, 1,184  
Strait of Gibraltar, 769**Ports**Alexandria, Egypt, 1,064  
Algiers, Algeria, 340  
Alicante, Spain, 507  
Ancona, Italy, 842  
Annaba, Algeria, 116  
Banghazi, Libya, 597  
Barcelona, Spain, 442  
Bari, Italy, 635  
Bastia, Corsica, 333  
Beirut, Lebanon, 1,276  
Brindisi, Italy, 577  
Cagliari, Sardinia, 126  
Cartagena, Spain, 532  
Ceuta, Morocco, 750  
Genova, Italy, 437  
Haifa, Israel, 1,273  
Iraklion, Kriti, 758  
Istanbul, Turkey, 1,063  
Izmir, Turkey, 909  
La Spezia, Italy, 414  
Livorno, Italy, 382  
Malaga, Spain, 699  
Marseille, France, 428  
Messina, Sicily, 364  
Napoli, Italy, 300  
Odessa, Ukraine, 1,411  
Olbia, Sardinia, 236  
Oran, Algeria, 538  
Palermo, Sicily, 192  
Palma, Balearic Islands, 384  
Piraeus, Greece (south of  
Greece), 749  
Piraeus, Greece (via Corinth  
Canal), 692  
Rijeka, Croatia, 910  
Sant Antioco Ponti, Sardinia, 132  
Savona, Italy, 440  
Sibenik, Croatia, 783  
Siracusa, Sicily, 296  
Split, Croatia, 768  
Tarabulus, Libya, 335  
Taranto, Italy, 530  
Thessaloniki, Greece, 958  
Toulon, France, 405  
Trieste, Italy, 943  
Valencia, Spain, 506  
Valletta, Malta, 247  
Venezia, Italy, 953  
Volos, Greece, 899**BAR, MONTENEGRO**  
(42°05'07"N., 19°05'26"E.) to:**Junction Points\***Port Said, Egypt, 995  
Strait of Gibraltar (via Strait of  
Messina), 1,379  
Strait of Gibraltar (via Strait of  
Sicily), 1,414**Ports**Algiers, Algeria, 943  
Arzew, Algeria, 1,119  
Barcelona, Spain, 1,003  
Catania, Sicily, 353  
Haifa, Israel, 1,053  
Izmir, Turkey, 691  
Kerch, Ukraine, 1,285  
Limassol, Cyprus, 940  
Messina, Sicily, 335  
Patrai, Greece, 291  
Tangier, Morocco, 1,382  
Venezia, Italy, 367  
Villefranche, France, 849**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**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, Egypt, 1,600

Strait of Gibraltar, 534

**Ports**Alcudia, Balearic Islands, 114  
Alexandria, Egypt, 1,482  
Algiers, Algeria, 282  
Alicante, Spain, 228  
Almeria, Spain, 371  
Ancona, Italy, 1,212  
Annaba, Algeria, 386  
Banghazi, Libya, 1,075  
Banzart, Tunisia, 442  
Bari, Italy, 1,005  
Bat'umi, Georgia (south of  
Greece), 2,073  
Bat'umi, Georgia (via Corinth  
Canal), 2,032  
Beaulieu, France, 280  
Beirut, Lebanon, 1,703  
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, Kriti, 1,186  
Istanbul, Turkey (south of  
Greece), 1,486  
Istanbul, Turkey (via Corinth  
Canal), 1,445  
Izmir, Turkey (south of Greece),  
1,332  
Izmir, Turkey (via Corinth Canal),  
1,290  
La Spezia, Italy, 383  
Livorno, Italy, 386  
Mahon, Balearic Islands, 144  
Malaga, Spain, 464  
Marseille, France, 189  
Menton, France, 285  
Messina, Sicily, 681  
Monaco, Monaco, 280  
Napoli, Italy, 559  
Odessa, Ukraine (south of  
Greece), 1,834  
Odessa, Ukraine (via Corinth  
Canal), 1,793  
Oran, Algeria, 365  
Palermo, Sicily, 574  
Palma, Balearic Islands, 140  
Piraeus, Greece (south of  
Greece), 1,172  
Piraeus, Greece (via Corinth  
Canal), 1,091  
Port St. Louis du Rhone, France,  
178  
Port Vendres, France, 108  
Rijeka, Croatia, 1,279  
Savona, Italy, 341  
Sibenik, Croatia, 1,153  
Siracusa, Sicily, 752  
Skikda, Algeria, 354  
Split, Croatia, 1,138  
St. Raphael, France, 251  
Tarabulus, Libya, 762  
Taranto, Italy, 900  
Thessaloniki, Greece (south of  
Greece), 1,380  
Thessaloniki, Greece (via Corinth  
Canal), 1,339  
Toulon, France, 205  
Trieste, Italy, 1,313  
Tunis, Tunisia, 492  
Valencia, Spain, 165  
Valletta, Malta, 671  
Venezia, Italy, 1,323  
Villefranche, France, 277

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

Volos, Greece (south of Greece), 1,322  
Volos, Greece (via Corinth Canal), 1,280

**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, Egypt, 999  
Strait of Gibraltar, 1,374

**Ports**

Alexandria, Egypt, 890  
Algiers, Algeria, 946  
Alicante, Spain, 1,100  
Ancona, Italy, 216  
Annaba, Algeria, 726  
Banghazi, Libya, 593  
Banzart, Tunisia, 635  
Barcelona, Spain, 1,005  
Beirut, Lebanon (south of Greece), 1,069  
Beirut, Lebanon (via Corinth Canal), 1,038  
Cagliari, Sardinia, 652  
Cartagena, Spain, 1,131  
Ceuta, Morocco, 1,354  
Dubrovnik, Croatia, 108  
Genova, Italy, 810  
Gibraltar, 1,356  
Haifa, Israel, 1,065  
Iraklion, Kriti, 554  
Istanbul, Turkey (south of Greece), 851  
Istanbul, Turkey (via Corinth Canal), 755  
Izmir, Turkey (south of Greece), 697  
Izmir, Turkey (via Corinth Canal), 601  
La Spezia, Italy, 775  
Livorno, Italy, 739  
Malaga, Spain, 1,303  
Marseille, France, 902  
Messina, Sicily, 329  
Napoli, Italy, 500  
Odessa, Ukraine (south of Greece), 1,200  
Odessa, Ukraine (via Corinth Canal), 1,103  
Oran, Algeria, 1,142  
Palermo, Sicily, 445  
Palma, Balearic Islands, 963  
Piraeus, Greece (south of Greece), 538  
Piraeus, Greece (via Corinth Canal), 402  
Rijeka, Croatia, 288  
Savona, Italy, 820  
Sibenik, Croatia, 167  
Siracusa, Sicily, 350  
Split, Croatia, 155  
Tarabulus, Libya, 613  
Taranto, Italy, 208  
Thessaloniki, Greece (south of

Greece), 746  
Thessaloniki, Greece (via Corinth Canal), 650  
Toulon, France, 870  
Trieste, Italy, 321  
Tunis, Tunisia, 622  
Valencia, Spain, 1,088  
Valletta, Malta, 427  
Venezia, Italy, 329  
Volos, Greece (south of Greece), 687  
Volos, Greece (via Corinth Canal), 591

**BARRANQUILLA, COLOMBIA**  
(10°58'00"N., 74°45'30"W.) to:

**Junction Points\***

Yucatan Channel, 881

**Ports**

Almirante, Panama, 477  
Amuay, Venezuela, 325  
Bahia de las Calderas, Dominican Republic, 508  
Barahona, Dominican Republic, 497  
Barcelona, Venezuela, 661  
Carupano, Venezuela, 734  
Casilda, Cuba, 732  
Catia la Mar, Venezuela, 524  
Charleston, South Carolina, U.S.A., 1,391  
Cienfuegos, Cuba, 755  
Colon, Panama, 336  
Fortaleza, Brazil, 685  
Galveston, Texas, U.S.A., 1,577  
Guantanamo, Cuba, 534  
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 de Hierro, Venezuela, 838  
Puerto Cortes, Honduras, 873  
Rio Haina, Dominican Republic, 536  
San Juan, Puerto Rico, 705  
Santa Maria, Cuba, 753  
Santiago de Cuba, Cuba, 549  
Santo Domingo, Dominican Republic, 538  
St. Louis, Marie Galante, 857  
Surgidero de Batabano, Cuba, 944  
Turiamo, Venezuela, 504  
Veraacruz, Mexico, 1,525  
Willemstad, Curacao, 389

**BARROSSO TERMINAL, BRAZIL**  
(23°48'00"S., 45°24'00"W.) See Sao Sebastiao.

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

**Junction Points\***

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

**Ports**

Avonmouth, England, 288  
Belfast, Northern 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

**BARROW ISLAND, AUSTRALIA**  
(20°48'30"S., 115°33'30"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,032  
Cape Leeuwin, Australia, 906  
Selat Lombok, Indonesia, 730  
Port Said, Egypt, 6,028  
Selat Sunda, Indonesia, 1,129  
Torres Strait, Australia, 1,750

**Ports**

Aden, Yemen, 4,641  
Bombay, India, 3,551  
Busan, South Korea (via west of Timor & Korea Strait), 3,484  
Colombo, Sri Lanka, 2,680  
Fremantle, Australia, 771  
Geraldton, Australia, 569  
Port Headland, Australia, 188  
San Francisco, California, U.S.A. (via west of Timor), 7,646

**BARRY, WALES**

(51°23'40"N., 3°15'30"W.)  
Subtract 6 miles from Cardiff distances.

**BASRA, IRAQ**  
(30°30'00"N., 47°49'00"E.) See Al Basrah.

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

**Junction Points\***

Port Said, Egypt, 4,638  
Singapore, 1,137

**Ports**

Calcutta, India, 643  
Colombo, Sri Lanka, 1,194  
Penang, Malaysia, 786

**BASSENS, FRANCE**  
(44°54'00"N., 0°32'15"W.)  
Subtract 3 1/2 miles from Bordeaux distances.

**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

**BASSETERRE, SAINT KITTS AND NEVIS**  
(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, Egypt, 1,337  
Strait of Gibraltar, 868

**Ports**

Banzart, Tunisia, 333  
Genova, Italy, 108  
Napoli, Italy, 258

**BASUO GANG, CHINA**  
(19°06'30"N., 108°37'00"E.) to:

**Junction Points\***

Selat Sunda, Indonesia, 1,588

**Ports**

Haiphong, Vietnam, 156  
Ho Chi Minh, Vietnam, 708  
Hong Kong, China, 408  
Kao-hsiung Kang, Taiwan, 811

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

**Junction Points\***

Cape of Good Hope, South Africa, 2,291  
Ile d'Ouessant, France, 4,173

**Ports**

Douala, Cameroon, 141  
Matadi, 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

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

**Junction Points\***

Bishop Rock, England, 2,738

**Ports**

St. John, Canada, 206

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



## 12 BATON ROUGE, LOUISIANA, U.S.A.

**BATON ROUGE, LOUISIANA, U.S.A.**  
(30°27'00"N., 91°06'00"W.) Add 115 miles to New Orleans distances.

**BAT'UMI, GEORGIA**  
(41°38'46"N., 41°38'51"E.) to:

**Junction Points\***

Port Said, Egypt, 1,391  
Strait of Gibraltar, 2,408

**Ports**

Algiers, Algeria (south of Greece), 1,980  
Algiers, Algeria (via Corinth Canal), 1,963  
Barcelona, Spain (south of Greece), 2,073  
Barcelona, Spain (via Corinth Canal), 2,032  
Iraklion, Kriti, 1,032  
Istanbul, Turkey, 591  
Izmir, Turkey, 880  
Marseille, France (south of Greece), 1,970  
Marseille, France (via Corinth Canal), 1,929  
Novorossiysk, Russia, 255  
Odessa, Ukraine, 569  
Tarabulus, Libya, 1,540  
Thessaloniki, Greece, 926  
Trieste, Italy (south of Greece), 1,749  
Trieste, Italy (via Corinth Canal), 1,650

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

**Junction Points\***

Ile d'Ouessant, France, 345  
Strait of Gibraltar, 912

**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 2 1/2 miles from New York distances.

**BAYTOWN, TEXAS, U.S.A.**  
(29°43'39"N., 96°01'21"W.) Subtract 17 miles from Houston distances.

**BEAUMONT, TEXAS, U.S.A.**  
(30°04'40"N., 94°05'10"W.) Add 24 miles to Port Arthur distances.

**BEE NESS, ENGLAND**  
(51°25'18"N., 0°39'00"E.) to:

**Junction Points\***

Bishop Rock, England, 386  
Ile d'Ouessant, France, 370  
Nord-Ostsee-Kanal (East Entrance), Germany, 412  
Pentland Firth, Scotland, 509  
Skagens Odde, Denmark, 527

**Ports**

Aberdeen, Scotland, 398  
Arkhangel'sk, Russia, 2,030  
Cardiff, Wales, 495  
Hull, England, 209  
Oslo, Norway, 619  
Wilhelmshaven, Germany, 331  
Zeebrugge, Belgium, 100

**BEIHAI, CHINA**  
(21°29'00"N., 109°02'00"E.) to:

**Junction Points\***

Singapore, 1,332

**Ports**

Cebu, Philippines, 1,220  
Ho Chi Minh, Vietnam, 837  
Hong Kong, China, 391

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

**Junction Points\***

Cape of Good Hope, South Africa, 1,454  
Port Said, Egypt, 3,990  
Singapore, 4,520

**Ports**

Aden, Yemen, 2,610  
Belawan, Indonesia, 4,187  
Fremantle, Australia, 4,351  
Inhambane, Mozambique, 259  
Lindi, Tanzania, 832  
Majunga, Madagascar, 732  
Malacca, Malaysia, 4,405  
Manakara, Madagascar, 974  
Maputo, Mozambique, 476  
Mocambique, Mozambique, 476  
Mombasa, Kenya, 1,146  
Penang, Malaysia (north of Madagascar), 4,232  
Port Darwin, Australia, 5,553  
Port Louis, Mauritius, 1,448  
Quelimane, Mozambique, 123  
Sabang, Indonesia, 3,921  
Tamatave, Madagascar, 1,239  
Tulear, Madagascar, 539

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

**Junction Points\***

Port Said, Egypt, 230  
Strait of Gibraltar, 2,034

**Ports**

Ajaccio, Corsica, 1,437  
Alexandria, Egypt, 341  
Algiers, Algeria, 1,605  
Alicante, Spain, 1,772  
Ancona, Italy (south of Greece), 1,276  
Ancona, Italy (via Corinth Canal), 1,245  
Annaba, Turkey, 1,381  
Antalya, Turkey, 322  
Ashdod, Israel, 136  
Banghazi, Libya, 806  
Banzart, Tunisia, 1,276  
Barcelona, Spain, 1,703  
Bari, Italy (south of Greece), 1,069  
Bari, Italy (via Corinth Canal), 1,038

Brindisi, Italy (south of Greece), 1,011  
Brindisi, Italy (via Corinth Canal), 980  
Cartagena, Spain, 1,797  
Ceuta, Morocco, 2,014  
Dubrovnik, Croatia (south of Greece), 1,107  
Dubrovnik, Croatia (via Corinth Canal), 1,074  
Genova, Italy, 1,508  
Gibraltar, 2,017  
Haifa, Israel, 76  
Iraklion, Kriti, 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, Ukraine, 1,194  
Oran, Algeria, 1,803  
Palermo, Sicily, 1,143  
Palma, Balearic Islands, 1,648  
Piraeus, Greece, 647  
Rhodes, Greece, 393  
Rijeka, Croatia (south of Greece), 1,345  
Rijeka, Croatia (via Corinth Canal), 1,312  
Savona, Italy, 1,519  
Sibenik, Croatia (south of Greece), 1,218  
Sibenik, Croatia (via Corinth Canal), 1,184  
Siracusa, Sicily, 1,013  
Split, Croatia (south of Greece), 1,203  
Split, Croatia (via Corinth Canal), 1,169  
Tarabulus, Libya, 1,129  
Taranto, Italy (south of Greece), 1,023  
Taranto, Italy (via Corinth Canal), 1,000  
Tarragona, Spain, 1,738  
Thessaloniki, Greece, 783  
Toulon, France, 1,568  
Trieste, Italy (south of Greece), 1,379  
Trieste, Italy (via Corinth Canal), 1,346  
Tubruq, Libya, 595  
Tunis, Tunisia, 1,263  
Valencia, Spain, 1,770  
Valletta, Malta, 1,049  
Venezia, Italy (south of Greece), 1,387  
Venezia, Italy (via Corinth Canal), 1,356  
Volos, Greece, 725

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

**Junction Points\***

Port Said, Egypt, 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, South Africa, 5,246  
Selat Lombok, Indonesia, 1,342  
Port Said, Egypt, 4,688  
Singapore, 368  
Selat Sunda, Indonesia, 870  
Torres Strait, Australia (via Selat Riouw and Selat Karimata), 2,839

**Ports**

Aden, Yemen, 3,299  
Al Basrah, Iraq, 3,553  
Al Manamah, Bahrain, 3,316  
Balikpapan, Kalimantan, 1,422  
Beira, Mozambique, 4,187  
Berbera, Somalia, 3,313  
Bombay, India, 2,109  
Bushehr, Iran, 3,372  
Calcutta, India, 1,326  
Calicut, India, 1,609  
Colombo, Sri Lanka, 1,240  
Dar es Salaam, Tanzania, 3,709  
Diego Garcia, Chagos Archipelago, 1,860  
East London, South Africa, 4,749  
Fort Dauphin, Madagascar, 3,642  
Jakarta, Indonesia, 864  
Kakinada, India, 1,261  
Karachi, Pakistan, 2,550  
Madras, India, 1,252  
Majunga, Madagascar, 3,512  
Malacca, Malaysia, 253  
Maputo, Mozambique, 4,436  
Mocambique, Mozambique, 3,747  
Mombasa, Kenya, 3,654  
Mosselbaai, South Africa, 5,051  
Port Elizabeth, South Africa, 4,876  
Port Louis, Mauritius, 2,997  
Rangoon, Burma, 802  
Sabang, Indonesia, 268  
Surabaya, Indonesia, 1,132  
Tamatave, Madagascar, 3,342  
Tanga, Tanzania, 3,704  
Victoria, Seychelles, 2,734  
Zamboanga, Philippines, 1,570  
Zanzibar, Tanzania, 3,727

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

**Junction Points\***

Bishop Rock, England, 3,760  
Cape of Good Hope, South Africa, 4,368  
Fastnet Rock, Ireland, 3,741  
Ile d'Ouessant, France, 3,748  
Inishtrahull, Ireland, 3,972  
Montreal, Canada (via Cabot Strait), 3,680  
Montreal, Canada (via Strait of Canso), 3,709  
Pentland Firth, Scotland, 4,219  
Punta Arenas, Chile, 4,363  
Strait of Gibraltar, 3,285  
Straits of Florida, 2,653  
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

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

Buenos Aires, Argentina, 3,274  
 Cabedelo, Brazil, 1,021  
 Cadiz, Spain, 3,286  
 Charleston, South Carolina, U.S.A., 2,773  
 Charlotte Amalie, Virgin Islands, 1,598  
 Cienfuegos, Cuba, 2,460  
 Colon, Panama, 3,320  
 Dakar, Senegal, 2,104  
 Georgetown, Guyana, 896  
 Guantanamo, Cuba, 2,148  
 Guiria, Venezuela, 1,226  
 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  
 La Habana, Cuba, 2,613  
 Lisboa, Portugal, 3,251  
 Luderitz Bay, Namibia, 4,076  
 Maceio, Brazil, 1,211  
 Natal, Brazil, 954  
 New Amsterdam, Guyana, 859  
 New York, New York, U.S.A., 2,975  
 Norfolk, Virginia, U.S.A., 2,832  
 Paramaribo, Suriname, 747  
 Philadelphia, Pennsylvania, U.S.A., 2,950  
 Ponta Delgada, Azores, 2,678  
 Port au Prince, Haiti, 2,192  
 Port of Spain, Trinidad, 1,212  
 Port Castries, St. Lucia, 1,265  
 Portsmouth, New Hampshire, U.S.A., 2,959  
 Puerto de Hierro, Venezuela, 1,215  
 Recife, Brazil, 1,084  
 Rio de Janeiro, Brazil, 2,174  
 Santa Cruz de Tenerife, Canary Islands, 2,599  
 Santo Domingo, Dominican Republic, 1,819  
 Sao Luiz, Brazil, 372  
 St. Helena Island, 4,329  
 St. John, Canada, 2,998  
 St. John's, Canada, 2,968  
 St. John's, Antigua, 1,433  
 Vigo, Spain, 3,398

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

**Junction Points\***

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

**Ports**

Antwerp, 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  
 Londonderry, Northern Ireland (via Rathlin Sound), 102  
 Milford Haven, Wales, 222  
 Stornoway, Scotland, 234  
 Workington, England, 87

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

**Junction Points\***

Montreal, Canada (via Strait of Canso), 2,985  
 Panama, Panama, 859  
 Yucatan Channel, 337

**Ports**

Baltimore, Maryland, U.S.A. (via Straits of Florida), 1,625  
 Boston, Massachusetts, 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  
 Charlotte Amalie, Virgin Islands, 1,368  
 Cienfuegos, Cuba, 545  
 Colon, Panama, 816  
 Galveston, Texas, U.S.A., 935  
 Gulfport, Mississippi, U.S.A., 838  
 Jacksonville, Florida, U.S.A., 1,047  
 Key West, Florida, U.S.A., 590  
 Kingston, Jamaica, 685  
 La Guaira, Venezuela, 1,328  
 La Habana, Cuba, 528  
 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 (north of Jamaica), 933  
 Port au Prince, Haiti (south of Jamaica), 953  
 Port of Spain, Trinidad, 1,637  
 Port Castries, St. Lucia, 1,609  
 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

**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

**BELMORSK, RUSSIA**  
 (64°32'00"N., 34°48'00"E.) Add 67 miles to Arkhangel'sk distances.

**BENICIA, CALIFORNIA, U.S.A.**  
 (38°02'30"N., 122°08'00"W.) Add 24 miles to San Francisco distances.

**BERBERA, SOMALIA**  
 (10°26'30"N., 45°01'00"E.) to:

**Junction Points\***

Singapore, 3,646

**Ports**

Belawan, Indonesia, 3,313  
 Fremantle, Australia, 4,933  
 Malacca, Malaysia, 3,531  
 Penang, Malaysia, 3,358  
 Port Darwin, Australia, 5,384  
 Sabang, Indonesia, 3,047

**BERGEN, NORWAY**  
 (60°24'00"N., 5°19'00"E.) to:

**Junction Points\***

Bishop Rock, England, 911  
 Ile d'Ouessant, France, 894  
 Pentland Firth, Scotland, 296  
 Skagens Odde, Denmark, 305

**Ports**

Aberdeen, Scotland, 309  
 Akureyri, Iceland, 803  
 Alesund, Norway, 167  
 Amsterdam, Netherlands, 502  
 Antwerp, Belgium, 602  
 Arendal, Norway, 254  
 Blyth, England, 400  
 Bodo, Norway, 521  
 Bremerhaven, Germany, 447  
 Calais, France, 588  
 Cherbourg, France, 734  
 Dover, England, 590  
 Dunquerque, France, 585  
 Emden, Germany, 457  
 Esbjerg, Denmark, 361  
 Farsund, Norway, 182  
 Flekkefjorden, 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, Iceland, 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, Russia, 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  
 Sandefjorden, Norway, 317  
 Seydhisfjordhur, Iceland, 634  
 Skien, Norway, 317  
 Sogndal, Norway, 152  
 Southampton, England, 713  
 Stavanger, Norway (via inner lead), 111  
 Stavanger, Norway (via outer lead), 115  
 Tonsberg, Norway, 329  
 Torshavn, Faroe Islands, 372  
 Tromso, Norway, 705  
 Trondheim, Norway, 321  
 Tvedestrand, Norway, 272  
 Wilhelmshaven, Germany, 441  
 Zeebrugge, Belgium, 558

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

**Ports**

Aden, Yemen, 1,707  
 Bombay, India, 204  
 Colombo, Sri Lanka, 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., 2,179

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

**Junction Points\***

Ile d'Ouessant, France, 346  
 Strait of Gibraltar, 854

**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., 3,147  
 Setubal, Portugal, 612  
 Villagarcia, Spain, 357

**BILHOROD-DNISTROVS'KYY, UKRAINE**  
 (46°11'33"N., 30°21'55"E.) to:

**Junction Points\***

Port Said, Egypt, 1,168  
 Strait of Gibraltar (via Corinth Canal), 4,035  
 Strait of Gibraltar (south of Greece), 4,095

**Ports**

Alexandria, Egypt, 1,106  
 Beirut, Lebanon, 1,218  
 Constanta, Romania, 153  
 Haifa, Israel, 1,219

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

## 14 BISHOP ROCK, ENGLAND

Istanbul, Turkey, 360  
Palermo, Sicily (via Corinth Canal), 1,239  
Palermo, Sicily (south of Greece), 1,303  
Tunis, Tunisia (via Corinth Canal), 1,381  
Tunis, Tunisia (south of Greece), 1,415  
Volos, Greece, 693

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

Cape of Good Hope, South Africa, 5,790  
Fastnet Rock, Ireland, 149  
Grand Banks South, 1,830  
Ile d'Ouessant, France, 80  
Inishrahull, Ireland, 395  
Montreal, Canada (via Cape Race), 2,844  
Nord-Ostsee-Kanal (East Entrance), Germany, 727  
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, 3,859  
Yucatan Channel, 4,176

**Ports**

Amsterdam, Netherlands, 481  
Antwerp, Belgium, 449  
Ardrossan, Scotland, 350  
Argentina, Canada, 1,949  
Arkhangel'sk, Russia, 2,263  
Avonmouth, England, 191  
Baltimore, Maryland, U.S.A., 3,208  
Barrow in Furness, England, 303  
Bath, Maine, U.S.A., 2,696  
Belem, Brazil, 3,769  
Belfast, Northern Ireland, 320  
Bergen, Norway, 911  
Blyth, England, 610  
Bodo, Norway, 1,405  
Bordeaux, France, 397  
Boston, Massachusetts, U.S.A., 2,769  
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-Haitien, Haiti, 3,565  
Cape Town, South Africa, 5,772  
Cardiff, Wales, 176  
Cartagena, Colombia, 4,138  
Charleston, South Carolina, U.S.A., 3,368  
Charlotte Amalie, Virgin Islands, 3,369  
Cherbourg, France, 197  
Christiansted, Virgin Islands, 3,370  
Cienfuegos, Cuba (via Windward Passage), 4,063  
Cobh, Ireland, 143  
Colon, Panama (via Mona Passage), 4,408  
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, Guyana, 3,643  
Glasgow, Scotland, 402  
Granville, France, 267  
Guantanamo, Cuba (via Windward Passage), 3,714  
Halifax, Canada, 2,336  
Hamburg, Germany, 717  
Hamilton, Bermuda, 2,769  
Hartlepool, England, 594  
Holyhead, Wales, 232  
Horta, Fayal, Azores, 1,158  
Hull, England, 531  
Ivittuut, Greenland (via 75 miles off Kap Farvel), 1,652  
Ivittuut, Greenland (direct), 1,608  
Jacksonville, Florida, U.S.A., 3,569  
Key West, Florida, U.S.A. (via Florida Strait), 3,807  
Kingston, Jamaica (via Windward Passage), 3,866  
Kristiansand, Norway, 809  
La Guaira, Venezuela, 3,777  
La Habana, Cuba (via Florida Strait), 3,868  
Las Palmas, Canary Islands, 1,360  
Le Havre, France, 263  
Leith, Scotland, 708  
Lisboa, Portugal, 710  
Liverpool, England, 297  
London, England, 413  
Londonderry, Northern Ireland, 396  
Lorient, France, 202  
Methil, Scotland, 698  
Miami, Florida, U.S.A. (via Florida Strait), 3,663  
Middlesbrough, England, 591  
Milford Haven, Wales, 129  
Montevideo, Uruguay, 5,834  
Narvik, Norway, 1,505  
New London, Connecticut, U.S.A., 2,849  
New York, New York, U.S.A., 2,937  
Newcastle, England, 616  
Newport, Wales, 177  
Norfolk, Virginia, U.S.A., 3,101  
Oostende, Belgium, 400  
Oslo, Norway, 947  
Paramaribo, Suriname, 3,602  
Philadelphia, Pennsylvania, U.S.A., 3,082  
Plymouth, England, 106  
Ponta Delgada, Azores, 1,103  
Port au Prince, Haiti (via Windward Passage), 3,743  
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 Da Vitoria, Terceira, Azores, 1,128  
Providence, Rhode Island, U.S.A., 2,841

Recife, Brazil, 3,775  
Rio de Janeiro, Brazil, 4,846  
Rotterdam, Netherlands, 454  
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  
St. John's, Canada, 1,804  
St. Malo, France, 90  
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  
Walvisbaai, Namibia, 5,165  
Washington, D.C., U.S.A., 3,221  
Waterford, Ireland, 137  
Wilhelmshaven, Germany, 651  
Wilmington, North Carolina, U.S.A., 3,304  
Zarate, Argentina, 6,075  
Zeebrugge, Belgium, 393

**BISSAU, GUINEA-BISSAU**  
(11°51'00"N., 15°38'00"W.) to:**Junction Points\***

Cape of Good Hope, South Africa, 3,518  
Ile d'Ouessant, France, 2,401

**Ports**

Natal, Brazil, 1,604  
Porto Grande, Cape Verde Islands, 631

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

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

**BLAYE, FRANCE**  
(45°07'30"N., 0°40'15"W.) For ocean distances subtract 13 mile from Bordeaux distances.**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, 1,135

**Ports**

Botany Bay, Australia, 1,097  
Dunedin, New Zealand, 147  
Hobart, Australia, 930  
Melbourne, Australia, 1,211  
New Plymouth, New Zealand, 618  
Picton, New Zealand, 465

Sydney, Australia, 1,105  
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

**BOCA DE TANAMO, CUBA**  
(20°42'00"N., 75°20'00"W.) to:**Junction Points\***

Panama, Panama, 869  
Straits of Florida, 489

**Ports**

Kingston, Jamaica, 318  
La Habana, Cuba, 444  
San Juan, Puerto Rico, 549

**BOCA GRANDE, FLORIDA, U.S.A.**  
(26°40'00"N., 82°19'27"W.) to:**Junction Points\***

Straits of Florida, 148  
Yucatan Channel, 329

**Ports**

Campeche, Mexico, 658  
Tampico, Mexico, 891

**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  
Halifax, Canada, 2,369  
Kingston, Jamaica, 604  
La Habana, Cuba, 981  
Mobile, Alabama, U.S.A., 1,340  
New Orleans, Louisiana, 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), 2,048  
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

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



**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

**BOHANG, SOUTH KOREA**  
(36°02'45"N., 129°23'30"E.) to:

**Ports**

Hakodate, Japan, 665  
Incheon, South Korea, 511  
Maizuru, Japan, 313  
Shimonoseki, Japan, 164

**BOMA, CONGO**  
(6°00'40"S., 12°16'25"E.) to:

**Junction Points\***

Bishop Rock, England, 4,493  
Cape of Good Hope, South Africa, 4,223  
Fastnet Rock, Ireland, 4,546  
Grand Banks South, 4,642  
Ile d'Ouessant, France, 4,452  
Inishtrahull, Ireland, 4,862  
Panama, Panama, 5,670  
Pentland Firth, Scotland, 5,151  
Punta Arenas, Chile, 4,998  
Strait of Gibraltar, 3,792  
Straits of Florida, 5,864  
Yucatan Channel, 5,969

**Ports**

Abidjan, Ivory Coast, 1,187  
Amboim, Angola, 356  
Bridgetown, Barbados, 4,478  
Cabinda, Cabinda, 89  
Cape Town, South Africa, 3,747  
Dakar, Senegal, 2,284  
Douala, Cameroon, 742  
Lagos, Nigeria, 977  
Luanda, Angola, 190  
Monrovia, Liberia, 1,576  
New York, New York, U.S.A., 5,567  
Pointe Noire, Congo, 140  
Port Gentil, Gabon, 470  
Recife, Brazil, 2,808  
Sao Tome, Sao Tome, 563  
St. Helena Island, 1,232  
Takoradi, Ghana, 1,064

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

**Junction Points\***

Cape of Good Hope, South Africa (via west of Madagascar), 4,554  
Cape Leeuwin, Australia, 4,059  
Port Said, Egypt, 3,046  
Singapore, 2,441  
Selat Sunda, Indonesia, 2,664  
Torres Strait, Australia (south of Java and Timor), 4,849

**Ports**

Abadan, Iran, 1,357  
Ad Damman, Saudi Arabia, 1,373  
Aden, Yemen, 1,657  
Al Basrah, Iraq, 1,594

Al Jubayl, Saudi Arabia, 2,353  
Belawan, Indonesia, 2,109  
Bhavnager, India, 204  
Calcutta, India, 2,128  
Cochin, India, 392  
Colombo, Sri Lanka, 895  
Dampier, Australia, 3,624  
Dar es Salaam, Tanzania, 2,500  
Diego Garcia, Chagos Archipelago, 1,603  
Durban, South Africa, 3,826  
Fateh Terminal, United Arab Emirates, 1,146  
Fremantle, Australia, 3,984  
Galle, Sri Lanka, 944  
Karachi, Pakistan, 504  
Madras, India, 1,482  
Malacca, Malaysia, 2,327  
Marmagao, India, 235  
Massawa, Ethiopia, 2,050  
Mina al Ahmadi, Kuwait, 1,517  
Mina Abd Allah, Kuwait, 1,514  
Mina Az Zawr, Kuwait, 1,495  
Mombasa, Kenya, 2,400  
Okha, India, 341  
Penang, Malaysia, 2,154  
Port Darwin, Australia, 4,193  
Port Louis, Mauritius, 2,517  
Port Said, Egypt, 3,046  
Port Sudan, Sudan, 2,310  
Port Victoria, Mahe, Seychelles, 1,752  
Rangoon, Burma, 2,139  
Ras al Khafji, Saudi Arabia, 1,491  
Sabang, Indonesia, 1,843  
Tamatave, Madagascar, 2,621  
Trincomalee, Sri Lanka, 1,218  
Weipa, Australia (via south of Java), 4,844  
Yenbo, Indonesia, 2,503  
Zanzibar, Tanzania, 2,517

**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, South Africa, 5,838  
Ile d'Ouessant, France, 321  
Montreal, Canada (via Cape Race), 3,171  
Panama, Panama (via Mona Passage), 4,597  
Punta Arenas, Chile, 7,074  
Strait of Gibraltar, 1,010  
Straits of Florida, 4,172

**Ports**

Abidjan, Ivory Coast, 3,376  
Accra, Ghana, 3,603  
Baltimore, Maryland, U.S.A., 3,528  
Bayonne, France, 200  
Belem, Brazil, 3,868  
Boston, Massachusetts, U.S.A., 3,073  
Buenos Aires, Argentina, 6,009  
Cadiz, Spain, 952  
Cape Town, South Africa, 5,820  
Charleston, South Carolina, U.S.A., 3,700  
Dakar, Senegal, 2,243  
Fort de France, Martinique, 3,607  
Funchal, Madeira Island, 1,192

Halifax, Canada (via Cape Race), 2,663  
Horta, Fayal, Azores, 1,348  
La Guaira, Venezuela, 3,993  
La Habana, Cuba (north of Little Bahama Bank), 4,153  
La Habana, Cuba (via Northeast Providence Channel), 4,188  
La Pallice, France, 103  
Lagos, Nigeria, 3,817  
Lisboa, Portugal, 732  
Luanda, Angola, 4,623  
New London, Connecticut, U.S.A., 3,153  
New Orleans, Louisiana, U.S.A., 4,692  
New York, New York, U.S.A., 3,241  
Norfolk, Virginia, U.S.A., 3,405  
Panama, Panama (via Mona Passage), 4,597  
Philadelphia, Pennsylvania, U.S.A., 3,386  
Pictou, Canada, 2,655  
Point Noire, Congo, 4,437  
Ponta Delgada, Azores, 1,256  
Providence, Rhode Island, U.S.A., 3,145  
Puerto de Pasajes, Spain, 178  
Recife, Brazil, 3,823  
Rio de Janeiro, Brazil, 4,908  
San Sebastian, Spain, 210  
Santa Cruz de Tenerife, Canary Islands, 1,406  
St. Nazaire, France, 184  
Washington, D.C., U.S.A., 3,543  
Wilmington, North Carolina, U.S.A., 3,638

**BOSTON, MASSACHUSETTS, U.S.A.**  
(42°22'00"N., 71°03'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,769  
Cape of Good Hope, South Africa, 6,722  
Fastnet Rock, Ireland, 2,647  
Inishtrahull, Ireland, 2,751  
Montreal, Canada (via Cabot Strait), 1,308  
Montreal, Canada (via Strait of Canso), 1,248  
Panama, Panama (via Crooked Island Passage), 2,200  
Pentland Firth, Scotland, 2,947  
Punta Arenas, Chile, 6,918  
Strait of Gibraltar, 3,008  
Straits of Florida, 1,408  
Yucatan Channel (via outside route, Southbound), 1,595

**Ports**

Antilla, Cuba, 1,408  
Argentina, Canada, 801  
Arkhangel'sk, Russia, 4,014  
Bahia Blanca, Argentina, 6,125  
Banes, Cuba (via Crooked Island Passage), 1,398  
Belem, Brazil, 2,970  
Belize, Belize (via Straits of Florida and Yucatan Channel), 1,934  
Bilbao, Spain, 2,979  
Bocas del Toro, Panama (via Crooked Island Passage), 2,231  
Bordeaux, France, 3,073  
Brest, France, 2,854  
Bridgetown, Barbados, 1,899  
Buenos Aires, Argentina, 5,842  
Cadiz, Spain, 2,992

Cape Town, South Africa, 6,707  
Cartagena, Colombia (via Crooked Island Passage), 2,036  
Casablanca, Morocco, 2,981  
Charlotte Amalie, Virgin Islands, 1,513  
Charlottetown, Canada (via Strait of Canso), 621  
Cienfuegos, Cuba (via Windward Passage), 1,865  
Colon, Panama (via Crooked Island Passage), 2,157  
Dakar, Senegal, 3,221  
Fort de France, Martinique, 1,799  
Freetown, Sierra Leone, 3,656  
Georgetown, Guyana, 2,282  
Guantanamo, Cuba, 1,495  
Halifax, Canada, 380  
Hamilton, Bermuda, 704  
Ivittuut, Greenland, 1,731  
Jacmel, Haiti, 1,672  
Kingston, Jamaica (via Crooked Island Passage), 1,657  
La Guaira, Venezuela, 1,955  
La Habana, Cuba, 1,415  
Lagos, Nigeria, 4,774  
Las Piedras, Venezuela, 1,907  
Les Cayes, Haiti, 1,630  
Limon, Costa Rica (via Crooked Island Passage), 2,230  
Lisboa, Portugal, 2,801  
Liverpool, Canada, 317  
Luderitz Bay, Namibia, 6,302  
Maracaibo, Venezuela, 2,001  
Montecristi, Dominican Republic, 1,415  
Montevideo, Uruguay, 5,728  
Murmansk, Russia, 3,719  
Nassau, Bahamas, 1,173  
Nuevitas, Cuba, 1,454  
Paramaribo, Suriname, 2,380  
Parrsboro, Canada, 349  
Pointe a Pitre, Guadeloupe, 1,742  
Ponce, Puerto Rico, 1,563  
Ponta Delgada, Azores, 2,088  
Port au Prince, Haiti, 1,557  
Port of Spain, Trinidad, 2,022  
Port Antonio, Jamaica (via Crooked Island Passage), 1,606  
Port Castries, St. Lucia, 1,812  
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  
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), 1,966  
Santiago de Cuba, Cuba (via Crooked Island Passage), 1,545  
Santo Domingo, Dominican Republic, 1,599  
Santos, Brazil, 4,928  
Sint Nicolaashaven, Aruba, 1,853  
St. Georges, Grenada, 1,932  
St. John, Canada, 286  
St. John's, Canada, 885  
Sydney, Canada, 597  
Vigo, Spain, 2,746  
Walvisbaai, Namibia, 6,131  
Willemstad, Curacao, 1,881  
Yarmouth, Canada, 237

**BOTAS, TURKEY**  
(36°50'37"N., 35°57'05"E.) to:

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

## 16 BOTWOOD, CANADA

**Junction Points\***

Port Said, Egypt, 390  
Strait of Gibraltar, 2,049

**Ports**

Beirut, Lebanon, 178  
Istanbul, Turkey, 846  
Piraeus, Greece, 650  
Tarabulus, Libya, 1,147

**BOTWOOD, CANADA**  
(49°09'00"N., 55°20'24"W.) to:

**Junction Points\***

Bishop Rock, England, 1,868  
Fastnet Rock, Ireland, 1,731  
Grand Banks South, 560  
Inishtrahull, Ireland, 1,759  
Montreal, Canada (via Cabot Strait), 1,329  
Montreal, Canada (via Strait of Belle Isle), 1,024  
Panama, Panama, 3,360  
Pentland Firth, Scotland, 2,151  
Strait of Gibraltar, 2,309  
Straits of Florida, 2,736

**Ports**

Boston, Massachusetts, U.S.A., 1,147  
Colon, Panama, 2,947  
Halifax, Canada, 782  
Ilulissat (Jakobshavn), Greenland, 1,237  
Keflavik, Iceland, 1,390  
New York, New York, U.S.A., 1,304  
Ponta Delgada, Azores, 2,675  
Port of Spain, Trinidad, 2,512  
Reykjavik, Iceland, 1,472  
Upernavik, Greenland, 1,417

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

**Junction Points\***

Bishop Rock, England, 322

**Ports**

Cardiff, Wales, 429  
Dublin, Ireland, 496  
Glasgow, Scotland, 672  
Hull, England, 225  
Le Havre, France, 98  
Manchester, England, 601  
Plymouth, England, 226  
Southampton, England, 120  
Yarmouth, England, 113

**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

**BOWLING, SCOTLAND**  
(55°55'45"N., 4°29'07"W.) to:

**Junction Points\***

Bishop Rock, England, 377  
Fastnet Rock, Ireland, 377  
Inishtrahull, Ireland, 125

**Ports**

Ardrossan, Scotland, 33  
Avonmouth, England, 384  
Cardiff, Wales, 368  
Cobn, Ireland, 329  
Fishguard, Wales, 248  
Glasgow, Scotland, 10  
Stornoway, Scotland, 273

**BRAKE, GERMANY**  
(53°19'55"N., 8°29'30"E.) Add 14 1/2 miles to Bremerhaven distances.

**BRASS RIVER (OFFSHORE TERMINAL), NIGERIA**  
(4°04'00"N., 6°17'17"E.) to:

**Junction Points\***

Bishop Rock, England, 3,971  
Cape of Good Hope, South Africa, 3,534  
Fastnet Rock, Ireland, 4,024  
Grand Banks South, 4,123  
Ile d'Ouessant, France, 3,863  
Inishtrahull, Ireland, 4,315  
Panama, Panama, 5,216  
Pentland Firth, Scotland, 5,019  
Punta Arenas, Chile, 5,226  
Strait of Gibraltar, 3,271  
Straits of Florida, 5,376  
Yucatan Channel, 5,500

**Ports**

Abidjan, Ivory Coast, 632  
Boston, Massachusetts, U.S.A., 4,931  
Cape Town, South Africa, 2,385  
Casablanca, Morocco, 3,266  
Dakar, Senegal, 1,783  
Monrovia, Liberia, 1,053  
New York, New York, U.S.A., 5,028  
Norfolk, Virginia, U.S.A., 5,124  
Port of Spain, Trinidad, 4,054  
Recife, Brazil, 2,570  
Takoradi, Ghana, 482

**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  
Ile d'Ouessant, France, 647  
Nord-Ostsee-Kanal (East Entrance), Germany, 129  
Pentland Firth, Scotland, 507  
Skagens Odde, Denmark, 320

**Ports**

Aberdeen, Scotland, 425  
Amsterdam, Netherlands, 223  
Antwerp, 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  
Le Havre, France, 453  
Leith, Scotland, 442  
London, England, 375  
Narvik, Norway, 1,058  
Newcastle, England, 374  
Oostende, Belgium, 299  
Oslo, Norway, 427  
Plymouth, England, 573  
Portland, England, 499  
Portsmouth, England, 446  
Rotterdam, Netherlands, 256  
Sandefjorden, Norway, 373  
Skien, Norway, 372  
Southampton, England, 464  
Stavanger, Norway, 366  
Zeebrugge, Belgium, 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.

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

**Junction Points\***

Cape of Good Hope, South Africa, 5,757  
Ile d'Ouessant, France, 55  
Straits of Florida, 3,953

**Ports**

Baltimore, Maryland, U.S.A., 3,302  
Barrow in Furness, England, 416  
Boston, Massachusetts, U.S.A., 2,838  
Cardiff, Wales, 277  
Charleston, South Carolina, U.S.A., 3,452  
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., 3,017  
Philadelphia, Pennsylvania, U.S.A., 3,160  
Reykjavik, Iceland, 1,181  
Rio de Janeiro, Brazil, 4,841  
Rotterdam, Netherlands, 457  
Rouen, France, 342  
St. Malo, France, 177  
Yarmouth, England, 440

**BREVIK, NORWAY**  
(59°03'00"N., 9°41'30"E.) to:

**Junction Points\***

Bishop Rock, England, 886  
Ile d'Ouessant, France, 871  
Nord-Ostsee Kanal (East Entrance), Germany, 307  
Pentland Firth, Scotland, 451  
Skagens Odde, Denmark, 82

**Ports**

Aarhus, Denmark, 211  
Bergen, Norway, 316  
Kokkola, Finland (via The Sound), 958  
Kotka, Finland (via The Sound), 827  
Narvik, Norway, 914  
Sankt-Peterburg, Russia (via The Sound), 916  
Stavanger, Norway, 234  
Tallinn, Estonia (via The Sound), 752  
Vassa, Finland (via The Sound), 899

**BRIDGEPORT, CONNECTICUT, U.S.A.**  
(41°10'18"N., 73°10'48"W.) to:

**Junction Points\***

Panama, Panama, 2,118

**Ports**

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

**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, Congo, 4,478  
Boston, Massachusetts, U.S.A., 1,899  
Charleston, South Carolina, U.S.A., 1,628  
Charlotte Amalie, Virgin Islands, 442  
Colon, Panama, 1,237  
Fort de France, Martinique, 130  
Georgetown, Guyana, 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, Suriname, 496  
Philadelphia, Pennsylvania, U.S.A., 1,839  
Port au Prince, Haiti, 1,070  
Port of Spain, Trinidad (via Boca Grande), 211  
Port Castries, St. Lucia (north of St. Lucia), 110  
Port Castries, St. Lucia (south of St. Lucia), 115  
Recife, Brazil, 2,054  
Rio de Janeiro, Brazil, 3,157  
Salvador, Brazil, 2,476  
San Juan, Puerto Rico (west of St. Croix Island and Virgin Passage), 517  
Santa Barbara de Samana, Dominican Republic, 675

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

Savannah, Georgia, U.S.A., 1,646  
St. Georges, Grenada (north of island), 144  
St. Georges, Grenada (south of island), 152

**BRIGHTON, TRINIDAD**  
(10°15'34"N., 61°37'38"W.) to:

**Junction Points\***

Bishop Rock, England, 3,610  
Cape of Good Hope, South Africa, 5,391  
Panama, Panama, 1,208  
Punta Arenas, Chile, 5,438  
Strait of Gibraltar, 3,409  
Straits of Florida (via Mona Passage), 1,539  
Yucatan Channel, 1,523

**Ports**

Alvaro Obregon, Mexico, 2,066  
Belize, Belize, 1,643  
Boston, Massachusetts, U.S.A., 2,028  
La Habana, Cuba (via Old Bahama Channel and Mona Passage), 1,500  
Limetree Bay, Virgin Islands, 480  
Monrovia, Liberia, 3,051  
Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,944  
San Juan, Puerto Rico, 574  
Veracruz, Mexico, 2,182  
Willemstad, Curacao, 456

**BRINDISI, ITALY**  
(40°38'30"N., 17°57'03"E.) to:

**Junction Points\***

Port Said, Egypt, 941  
Strait of Gibraltar, 1,315

**Ports**

Alexandria, Egypt, 831  
Algiers, Algeria, 888  
Alicante, Spain, 1,042  
Ancona, Italy, 274  
Annaba, Algeria, 668  
Banghazi, Libya, 535  
Banzart, Tunisia, 577  
Barcelona, Spain, 947  
Beirut, Lebanon, 1,011  
Cartagena, Spain, 1,073  
Ceuta, Morocco, 1,296  
Chioggia, Italy, 375  
Civitavecchia, Italy, 568  
Genova, Italy, 752  
Gibraltar, 1,298  
Haifa, Israel, 1,007  
Iraklion, Kriti, 496  
Istanbul, Turkey (south of Greece), 793  
Istanbul, Turkey (via Corinth Canal), 697  
Izmir, Turkey (south of Greece), 639  
Izmir, Turkey (via Corinth Canal), 543  
Kerkira, Greece, 123  
La Spezia, Italy, 717  
Livorno, Italy, 681  
Malaga, Spain, 1,245  
Marseille, France, 844  
Messina, Sicily, 270  
Napoli, Italy, 442  
Odessa, Ukraine (south of Greece), 1,142

Odessa, Ukraine (via Corinth Canal), 1,045  
Oran, Algeria, 1,084  
Palermo, Sicily, 387  
Palma, Balearic Islands, 905  
Pescara, Italy, 209  
Piraeus, Greece (south of Greece), 480  
Piraeus, Greece (via Corinth Canal), 343  
Rijeka, Croatia, 342  
Savona, Italy, 762  
ShengJin, Albania, 103  
Sibenik, Croatia, 217  
Siracusa, Sicily, 292  
Split, Croatia, 202  
Tarabulus, Libya, 555  
Taranto, Italy, 150  
Thessaloniki, Greece (south of Greece), 688  
Thessaloniki, Greece (via Corinth Canal), 592  
Toulon, France, 812  
Trieste, Italy, 376  
Tunis, Tunisia, 564  
Valencia, Spain, 1,048  
Valletta, Malta, 369  
Venezia, Italy, 386  
Volos, Greece (south of Greece), 629  
Volos, Greece (via Corinth Canal), 533  
Zadar, Croatia, 280

**BRISBANE, AUSTRALIA**  
(27°28'00"S., 153°03'30"E.) to:

**Junction Points\***

Panama, Panama, 7,687  
Punta Arenas, Chile (via 30°S.), 7,369  
Punta Arenas, Chile (via 49°S.), 6,063  
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  
Christmas Island, Line Islands, 3,379  
Dutch Harbor, Alaska, U.S.A., 5,369  
Funafuti, Tuvalu, 1,895  
Gladstone Harbor, Australia, 314  
Honolulu, Hawaii, U.S.A., 4,117  
Jaluit, Marshall Islands, 2,231  
Lae, Papua New Guinea, 1,560  
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, French Polynesia, 3,234  
Ponape, Caroline Islands, 2,108

Portland, Oregon, U.S.A., 6,421  
Rabaul, Papua New Guinea, 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  
Shanghai, China, 4,243  
Suva, Fiji Islands, 1,548  
Sydney, Australia, 529  
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.

**BRIXHAM, ENGLAND**  
(50°24'57"N., 3°27'42"W.) to:

**Junction Points\***

Bishop Rock, England, 128  
Ile d'Ouessant, France, 141  
Nord-Ostsee-Kanal (East Entrance), Germany, 679  
Pentland Firth, Scotland, 737  
Skagens Odde, Denmark, 757

**Ports**

Cherbourg, France, 81  
Cobh, Ireland, 246  
Dover, England, 197  
King's Lynn, England, 405  
Le Havre, France, 148

**BROOKLYN, NEW YORK, U.S.A.**  
(40°40'00"N., 74°01'00"W.) For ocean distances subtract 1 1/4 miles from New York distances.

**BROOME, AUSTRALIA**  
(17°59'00"S., 122°10'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,460  
Cape Leeuwin, Australia, 1,316  
Selat Lombok, Indonesia, 673  
Port Said, Egypt, 6,328  
Selat Sunda, Indonesia, 1,270  
Torres Strait, Australia, 1,419

**Ports**

Colombo, Sri Lanka, 2,943  
Flying Fish Cove, Christmas Island, 1,059  
Fremantle, Australia, 1,183  
Port Darwin, Australia, 694  
Thursday Island, Australia, 1,385  
Zanzibar, Tanzania, 4,820

**BROWNSVILLE, TEXAS, U.S.A.**  
(25°57'06"N., 97°24'00"W.) to:

**Junction Points\***

Straits of Florida, 793  
Yucatan Channel, 729

**Ports**

Campeche, Mexico, 552  
Coatzacoaleas, Mexico, 517  
Tampico, Mexico, 267

**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, Belize (via Straits of Florida), 1,072  
Belize, Belize (via Windward Passage), 1,661  
Buenos Aires, Argentina, 5,845  
Cape Town, South Africa, 6,857  
Cartagena, Colombia, 1,417  
Charlotte Amalie, Virgin Islands, 1,190  
Colon, Panama (via Windward Passage), 1,538  
Halifax, Canada, 1,210  
Kingston, Jamaica, 1,038  
Las Palmas, Canary Islands, 3,442  
Limon, Costa Rica, 1,611  
Montevideo, Uruguay, 5,731  
Port of Spain, Trinidad, 1,694  
Port Castries, St. Lucia, 1,529  
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, BELGIUM**  
(50°50'00"N., 4°20'00"E.) See Bruxelles.

**BRUXELLES, BELGIUM**  
(50°50'00"N., 4°20'00"E.) Add 29 miles to Antwerp distances.

**BUCHANAN, LIBERIA**  
(5°51'30"N., 10°03'30"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,912  
Ile d'Ouessant, France, 2,904

**Ports**

Dakar, Senegal, 755  
Takoradi, Ghana, 197

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

**BUENAVENTURA, COLOMBIA**  
(3°54'00"N., 77°04'30"W.) to:

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

## 18 BUENOS AIRES, ARGENTINA

**Junction Points\***

Panama, Panama, 352

**Ports**

Callao, Peru, 1,126  
 Golfofito, 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, South Africa, 3,704  
 Ile d'Ouessant, France, 5,916  
 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  
 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  
 Cape Town, South Africa, 3,720  
 Cartagena, Colombia, 5,154  
 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, Guyana, 3,954  
 Guantanamo, Cuba, 5,213  
 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  
 La Habana, Cuba, 5,671  
 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, Suriname, 3,813  
 Philadelphia, Pennsylvania, U.S.A., 5,918  
 Ponta Delgada, Azores, 4,975  
 Port au Prince, Haiti, 5,258  
 Port Castries, St. Lucia, 4,375  
 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 Gallegos, Argentina, 1,231  
 Rio Grande, Argentina, 1,306  
 Rio Grande, Brazil, 440  
 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  
 St. Helena Island, 3,052  
 St. John, Canada, 5,853  
 St. John's, Canada, 5,663  
 Sydney, Canada, 5,749  
 Ushuaia, Argentina, 1,447  
 Vigo, Spain, 5,518  
 Wilmington, North Carolina, U.S.A., 5,805

**BUKHTA NAGAYEVA, RUSSIA**

(59°33'00"N., 150°45'00"E.) to:

**Ports**

Moskal'vo, Russia, 472  
 Petropavlovsk-Kamchatskiy, Russia, 864  
 Zaliv Urkt, Russia, 441

**BUKTA SHELIKHOVA, KURIL ISLANDS, RUSSIA**

(50°23'00"N., 155°37'00"E.) to:

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 934  
 Aomori, Honshu, Japan, 899  
 Attu Island, Alaska, U.S.A., 675  
 Dutch Harbor, Alaska, U.S.A., 1,411  
 Hakodate, Japan, 865  
 Kholmsk, Russia, 709  
 Kiska, Alaska, U.S.A., 867  
 Korsakov, Sakhalin, Russia, 616  
 Muroran, Japan, 858  
 Nikolayevsk-Na-Amure, Russia (north of Sakhalin), 676  
 Otaru, Japan, 788  
 Petropavlovsk-Kamchatskiy, Russia, 224  
 Vladivostok, Russia, 1,122  
 Wakkanai, Japan, 643

**BUNBURY, AUSTRALIA**

(33°17'50"S., 115°38'40"E.) to:

**Junction Points\***

Cape Leeuwin, Australia, 97  
 Selat Lombok, Indonesia, 1,510  
 Port Said, Egypt, 6,343

**Ports**

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

**BUNDEBERG, AUSTRALIA**

(24°45'29"S., 152°27'33"E.) to:

**Junction Points\***

Panama, Panama (via Central

Route), 8,249

Punta Arenas, Chile (via Cook Strait), 6,062  
 Torres Strait, Australia, 1,182  
 Wilson Promontory, Australia, 1,089

**Ports**

Arica, Chile (via Curtis Channel and north of New Zealand), 7,263  
 Brisbane, Australia, 265  
 Hobart, Tasmania, 1,296  
 Mollendo, Peru (via Curtis Channel and north of New Zealand), 7,244  
 Sydney, Australia, 679  
 Tumaco, Colombia (via Curtis Channel), 7,574  
 Valparaiso, Chile (via Cook Strait and Curtis Channel), 6,615

**BUR IBRAHIM, EGYPT**

(29°55'30"N., 32°32'30"E.) For distances via Red Sea subtract 88 miles from Port Said distances.

**BUR SAFAGA, EGYPT**

(26°44'00"N., 33°56'30"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,016  
 Port Said, Egypt, 310  
 Singapore, 4,729

**Ports**

Aden, Yemen, 1,109  
 Port Sudan, Sudan, 508

**BUREA, SWEDEN**

(64°37'10"N., 21°14'25"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 844  
 Skagens Odde, Denmark (via The Sound), 90

**Ports**

Helsinki, Finland, 404  
 Kobenhavn, Denmark, 774  
 Reposaari, Finland, 222  
 Stockholm, Sweden, 389

**BURGAS, BULGARIA**

(42°28'50"N., 27°27'13"E.) to:

**Junction Points\***

Port Said, Egypt, 930  
 Strait of Gibraltar (south of Greece), 1,965

**Ports**

Alexandria, Egypt, 848  
 Algiers, Algeria, 1,510  
 Antibes, France, 1,448  
 Banzart, Tunisia, 1,179  
 Bari, Italy, 968  
 Es Sider, Libya, 959  
 Haifa, Israel, 942  
 Iskenderun, Turkey, 936  
 Istanbul, Turkey, 126  
 Napoli, Italy, 1,100  
 Novorossiysk, Russia, 476

**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

**BURNSIDE, LOUISIANA, U.S.A.**

(30°08'00"N., 90°55'00"W.) Add 63 miles to New Orleans distances.

**BURUTU, NIGERIA**

(5°25'45"N., 5°06'28"E.) to:

**Junction Points\***

Bishop Rock, England, 3,908  
 Cape of Good Hope, South Africa, 3,499  
 Fastnet Rock, Ireland, 3,961  
 Grand Banks South, 4,060  
 Ile d'Ouessant, France, 3,868  
 Inishtrahull, Ireland, 4,252  
 Panama, Panama, 5,153  
 Pentland Firth, Scotland, 4,956  
 Punta Arenas, Chile, 5,246  
 Strait of Gibraltar, 3,207  
 Straits of Florida, 5,313  
 Yucatan Channel, 5,437

**Ports**

Abidjan, Ivory Coast, 565  
 Cape Town, South Africa, 4,475  
 Casablanca, Morocco, 3,207  
 Dakar, Senegal, 1,653  
 Monrovia, Liberia, 986  
 New York, New York, U.S.A., 4,982  
 Philadelphia, Pennsylvania, U.S.A., 5,080  
 Recife, Brazil, 2,525

**BUSAN, SOUTH KOREA**

(35°06'00"N., 129°03'00"E.) to:

**Junction Points\***

Singapore, 2,502  
 Selat Sunda, Indonesia, 2,855  
 Selat Wetar, Indonesia (via Molucca Passage and Selat Manipa), 2,632

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,118  
 Bangkok, Thailand (outer bar), 2,533  
 Chongjin, North Korea, 417  
 Dagu, China (via-Maenggol Sudo), 702  
 Dalian, China (via Maenggol Sudo), 543  
 Gunsan, South Korea, 376  
 Hakodate, Japan, 686  
 Higashi-Iwase, Japan, 492  
 Ho Chi Minh, Vietnam, 1,999  
 Hong Kong, China, 1,144  
 Honolulu, Hawaii, U.S.A., 3,973  
 Hua-lien Kang, Taiwan, 782  
 Incheon, South Korea (via Maenggol Sudo), 402  
 Jakarta, Indonesia, 2,836

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



Kimchaek, North Korea, 351  
 Kobe, Japan, 361  
 Koshiro, Japan, 876  
 Lo hsing-ta Mao-ti, China, 762  
 Los Angeles, California, U.S.A.,  
 5,229  
 Maizuru, Japan, 333  
 Manila, Philippines, 1,402  
 Moji, Japan, 123  
 Mogpo, South Korea, 225  
 Nagasaki, Japan, 163  
 Naha, Ryukyu Islands, 550  
 Nakhodka, Russia, 508  
 Nampo, North Korea (via  
 Maenggol Sudo), 496  
 Nanao, Japan, 476  
 Niigata, Japan, 516  
 Pago Pago, American Samoa (via  
 Bungo Suido), 4,561  
 Petropavlovsk-Kamchatskiy,  
 Russia, 1,731  
 Port Darwin, Australia (via  
 Molucca Passage), 2,937  
 Qingdao, China, 497  
 Qinhuangdao, China (via  
 Maenggol Sudo), 650  
 Rumoi, Japan, 793  
 Sakata, Japan, 577  
 San Francisco, California, U.S.A.,  
 4,914  
 Shanghai, China (north of Chedu  
 Do, and via South Channel),  
 491  
 Tai-tung Kang, Taiwan, 860  
 Tongyeong, South Korea, 63  
 Ube, Japan, 143  
 Unggi, North Korea, 452  
 Vladivostok, Russia, 514  
 Wakamatsu, Japan, 120  
 Weihai, China, 474  
 Weonsan, North Korea, 308  
 Xiamen, China, 885  
 Yantai, China (via Maenggol  
 Sudo), 508  
 Yeosu, South Korea, 97  
 Yokohama, Japan, 665

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

**Junction Points\***

Cape of Good Hope, South Africa,  
 5,032  
 Singapore, 3,737

**Ports**

Bandar Khomeini, Iran, 158  
 Belawan, Indonesia, 3,372  
 Calcutta, India, 3,414  
 Fremantle, Australia, 5,259  
 Malacca, Malaysia, 3,590  
 Penang, Malaysia, 3,417  
 Port Darwin, Australia, 5,446  
 Rangoon, Burma, 3,425  
 Sabang, Indonesia, 3,106

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

**Junction Points\***

Cape of Good Hope, 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, 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  
 Ile d'Ouessant, France, 894  
 Montreal, Canada, 3,209  
 Strait of Gibraltar, 50  
 Straits of Florida, 3,978

**Ports**

Baltimore, Maryland, U.S.A.,  
 3,437  
 Banjul, Gambia, 1,587  
 Belem, Brazil, 3,286  
 Belize, Belize (via Providence  
 Channels), 4,485  
 Boston, Massachusetts, U.S.A.,  
 2,992  
 Brest, France, 887  
 Bridgeport, Connecticut, U.S.A.,  
 3,119  
 Buenos Aires, Argentina, 5,293  
 Cape Town, South Africa, 5,078  
 Casablanca, Morocco, 192  
 Charleston, South Carolina,  
 U.S.A., 3,578  
 Colon, Panama, 4,286  
 Dakar, Senegal, 1,500  
 Freetown, Sierra Leone, 1,979  
 Funchal, Madeira Island, 579  
 Halifax, Canada, 2,664  
 Horta, Azores, 1,070  
 Jacksonville, Florida, U.S.A.,  
 3,710  
 Lisboa, Portugal, 253  
 Luanda, Angola, 3,898  
 Manzanillo, Dominican Republic,  
 3,583  
 New York, New York, U.S.A.,  
 3,155  
 Norfolk, Virginia, U.S.A., 3,303  
 Oporto, Portugal, 399  
 Pepel, Sierra Leone, 2,001  
 Philadelphia, Pennsylvania,  
 U.S.A., 3,296  
 Ponta Delgada, Azores, 930  
 Port Stanley, Falkland Islands,  
 5,955  
 Porto Grande, Cape Verde Islands,  
 1,547  
 Qaanaaq (Thule), Greenland, 3,322  
 Recife, Brazil, 3,125  
 Rio de Janeiro, Brazil, 4,192  
 San Juan, Puerto Rico, 3,313  
 Santa Cruz de Tenerife, Canary  
 Islands, 702  
 Santander, Spain, 789  
 Vigo, Spain, 463  
 Walvisbaai, Namibia, 4,466

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

**Junction Points\***

Bishop Rock, England, 264

Ile d'Ouessant, France, 240

**Ports**

Calais, France, 133  
 Cardiff, Wales, 367  
 Chatham, England, 190  
 Cherbourg, France, 73  
 Cobh, Ireland, 368  
 Dartmouth, England, 172  
 Dover, England, 140  
 Southampton, England, 119

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

**Junction Points\***

Port Said, Egypt, 1,255  
 Strait of Gibraltar, 750

**Ports**

Alexandria, Egypt, 1,136  
 Algiers, Algeria, 332  
 Alicante, Spain, 473  
 Banzart, Tunisia, 126  
 Barcelona, Spain, 379  
 Bari, Italy, 652  
 Cannes, France, 347  
 Castellammare di Stabia, Italy, 276  
 Catania, Sicily, 377  
 Ceuta, Morocco, 731  
 Civitavecchia, Italy, 239  
 Constanta, Romania (south of  
 Greece), 1,330  
 Constanta, Romania (via Corinth  
 Canal), 1,289  
 Genova, Italy, 359  
 Istanbul, Turkey (south of  
 Greece), 1,133  
 Istanbul, Turkey (via Corinth  
 Canal), 1,092  
 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  
 Piraeus, Greece (south of  
 Greece), 820  
 Piraeus, Greece (via Corinth  
 Canal), 738  
 Savona, Italy, 362  
 Sete, France, 402  
 Toulon, France, 337  
 Tunis, Tunisia, 169  
 Valencia, Spain, 461  
 Valletta, Malta, 331  
 Venezia, Italy, 970  
 Volos, Greece (south of Greece),  
 969  
 Volos, Greece (via Corinth Canal),  
 927

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

**Junction Points\***

Panama, Panama, 1,138  
 Straits of Florida, 252

**Ports**

Casablanca, Morocco, 3,814  
 Dakar, Senegal, 3,567  
 Freeport, Bahamas (via Florida  
 Strait), 272  
 Freetown, Sierra Leone, 3,916

Hamilton, Bermuda, 1,126  
 Houston, Texas, 986  
 Jacksonville, Florida, U.S.A. (via  
 Florida Strait), 519  
 La Habana, Cuba, 203  
 Lagos, Nigeria, 4,999  
 Manzanillo, Dominican Republic,  
 479  
 Montreal, Canada, 2,511  
 Nuevitas, Cuba, 181  
 Pepel, Sierra Leone, 3,930  
 Walvisbaai, Namibia (via Mona  
 Passage), 6,142

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

**Junction Points\***

Bishop Rock, England, 330  
 Fastnet Rock, 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, South Africa,  
 2,458  
 Ile d'Ouessant, France, 4,054  
 Strait of Gibraltar, 3,420

**Ports**

Lagos, Nigeria, 391  
 Matadi, Congo, 818

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

**Junction Points\***

Bishop Rock, England, 333  
 Ile d'Ouessant, France, 321  
 Nord-Ostsee-Kanal (East  
 Entrance), Germany, 408

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

## 20 CALDERA, CHILE

### Junction Points\*

Cape of Good Hope, South Africa (via east of Madagascar), 5,444  
Cape Leeuwin, Australia, 3,796  
Selat Lombok, Indonesia (via Malacca, Sapudi and Selat Lombok), 2,608  
Port Said, Egypt, 4,691  
Singapore, 1,649  
Selat Sunda, Indonesia, 2,140

### Ports

Aden, Yemen, 3,304  
Akyab, Burma, 402  
Al Basrah, Iraq, 3,593  
Al Manamah, Bahrain, 3,355  
Assab, Ethiopia, 3,446  
Bandar Abbas, Iran, 3,058  
Bassein, Burma, 643  
Belawan, Indonesia, 1,326  
Bombay, India, 2,128  
Bushehr, Iran, 3,414  
Chalna, Mungla Anchorage, Bangladesh, 288  
Chittagong, Bangladesh, 367  
Colombo, Sri Lanka, 1,258  
Dumai, Indonesia, 1,579  
Fremantle, Australia, 3,693  
Kakinada, India, 522  
Karachi, Pakistan, 2,578  
Madras, India, 769  
Malacca, Malaysia, 1,523  
Massawa, Ethiopia, 3,696  
Mocambique, Mozambique, 3,831  
Mombasa, Kenya (via One and Half Degree Channel), 3,703  
Moulmein, Burma, 824  
Penang, Malaysia, 1,294  
Phuket, Thailand, 1,124  
Port Blair, Andaman Islands, 775  
Port Louis, Mauritius, 3,212  
Port Swettenham, Malaysia, 1,444  
Rangoon, Burma, 787  
Sabang, Indonesia (via Duncan Passage), 1,120  
Singapore, 1,650  
Vishakhapatnam, India, 458  
Yenbo, Saudi Arabia, 4,148  
Zanzibar, Tanzania (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.) See

Bahia de las Calderas, Dominican Republic.

**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

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

### Junction Points\*

Selat Lombok, Indonesia, 2,916  
Singapore, 1,942

### Ports

Belawan, Indonesia, 1,604  
Bombay, India, 506  
Calcutta, India, 1,612  
Chittagong, Bangladesh, 1,664  
Dar es Salaam, Tanzania, 2,432  
Fremantle, Australia, 3,484  
Galle, Sri Lanka, 437  
Jakarta, Indonesia (via Selat Sunda), 2,208  
Malacca, Malaysia, 1,827  
Mombasa, Kenya, 2,342  
Penang, Malaysia, 1,654  
Port Darwin, Australia, 3,683  
Rangoon, Burma, 1,617  
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, 8,206  
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  
Arica, Chile, 593  
Auckland, New Zealand, 5,834  
Avarua, Cook Islands, 4,733  
Buenaventura, Colombia, 1,126  
Caldera, Chile, 980  
Chimbote, Peru, 206  
Coquimbo, Chile, 1,136  
Corinto, Nicaragua, 1,606  
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  
Monterey, California, U.S.A., 3,907  
Nome, Alaska, U.S.A., 6,578  
Noumea, New Caledonia, 6,541  
Papeete, French Polynesia, 4,192  
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 Sandino, Nicaragua, 1,608  
Puntarenas, Costa Rica, 1,421  
Quepos, Costa Rica, 1,387  
Rabaul, Papua New Guinea, 7,713  
Salaverry, Peru, 266  
Salina Cruz, Mexico, 2,005  
San Antonio, Chile, 1,328  
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  
Talcahuano, Chile, 1,508  
Talara, Peru, 534  
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, 1434  
Reykjavik, Iceland, 1,274  
St. John's, Canada, 1,198

**CAMPANA, ARGENTINA**  
(34°05'50"S., 58°57'42"W.) Add 155 miles to Buenos Aires distances or add 60 miles via Mitre Channel.

**CAMPBELTOWN, SCOTLAND**  
(55°25'53"N., 5°32'38"W.) to:

### Junction Points\*

Bishop Rock, England, 353  
Fastnet Rock, Ireland, 342  
Inishtrahull, Ireland, 82

### Ports

Belfast, Northern Ireland, 53  
Cardiff, Wales, 333  
Cobh, Ireland, 289  
Dublin, Ireland, 141  
Glasgow, Scotland, 73  
Liverpool, England, 165

Londonderry, Northern Ireland, 82

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

### Junction Points\*

Panama, Panama, 1,210  
Yucatan Channel, 291

### Ports

Belize, Belize (west of Banco Chinchorro, and Isla de Cozumel), 609  
Cienfuegos, Cuba, 691  
Colon, Panama, 1,167  
Galveston, Texas, U.S.A., 617  
Gulfport, Mississippi, U.S.A., 652  
Key West, Florida, U.S.A., 632  
La Guaira, Venezuela, 1,635  
La Habana, Cuba, 561  
Mobile, Alabama, U.S.A., 674  
New Orleans, Louisiana, U.S.A. (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  
Port Castries, St. Lucia, 1,848  
Puerto Cabello, Venezuela, 1,595  
Santo Domingo, Dominican Republic, 1,364  
Tampico, Mexico, 430  
Tuxpan, Mexico, 375  
Veracruz, Mexico, 307  
Willemstad, Curacao, 1,527

**CANAKKLE, TURKEY**  
(40°09'00"N., 26°24'00"E.) For ports outside the Black Sea and Sea of Marmara, subtract 133 Y2 miles from Istanbul distances.

**CANNES, FRANCE**  
(43°32'00"N., 7°01'03"E.) to:

### Junction Points\*

Port Said, Egypt, 1,472  
Strait of Gibraltar, 773

### Ports

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

**CANSO CANAL (PORT HAWBESBURG), CANADA**  
(45°42'45"N., 61°29'06"W.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 6,484  
Grand Banks South, 531  
Panama, Panama (via Windward Passage), 2,424  
Pentland Firth, Scotland, 468  
Punta Arenas, Chile, 6,971  
Straits of Florida, 1,730

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

**Ports**

Argentia, Canada, 357  
 Baltimore, Maryland, U.S.A., 975  
 Bridgetown, Barbados, 1,965  
 Guantamo, Cuba, 1,771  
 New York, New York, U.S.A., 675  
 Port Castries, St. Lucia, 1,908  
 Santo Domingo, Dominican Republic, 1,855  
 St. John's, Canada, 452  
 Wilmington, North Carolina, U.S.A., 1,074

**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**

Baltimore, Maryland, U.S.A., 1,227  
 Belize, Belize, 950  
 Carmen, Mexico, 1,228  
 Cartagena, Colombia, 697  
 Charlotte Amalie, Virgin Islands, 442  
 Cienfuegos, Cuba, 543  
 Colon, Panama, 817  
 Dakar, Senegal, 3,154  
 Guantamo, Cuba, 175  
 Gulfport, Mississippi, U.S.A., 1,145  
 Key West, Florida, U.S.A. (via Old Bahama Channel), 619  
 Kingston, Jamaica, 326  
 La Habana, Cuba, 631  
 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  
 Port Castries, St. Lucia, 764  
 Puerto Cabello, Venezuela, 752  
 San Juan, Puerto Rico, 372  
 Santo Domingo, Dominican Republic, 392  
 Willemstad, Curacao (via Mona Passage), 674  
 Willemstad, Curacao (via Windward Passage), 697

**CAPE COD CANAL (NORTH END), MASSACHUSETTS, U.S.A.**

(41°46'40"N., 70°29'20"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,742  
 Grand Banks South, 924  
 Montreal, Canada, 1,419  
 Panama, Panama, 2,070  
 Punta Arenas, Chile, 7,073  
 Straits of Florida, 1,284

**Ports**

Argentia, Canada, 838  
 Arkhangel'sk, Russia, 4,201  
 Boston, Massachusetts, U.S.A., 77

Halifax, Canada, 413  
 Hamilton, Bermuda, 651  
 Murmansk, Russia, 3,834  
 New York, New York, U.S.A., 174  
 Portland, Maine, U.S.A., 119  
 Reykjavik, Iceland, 2,341  
 Yarmouth, Canada, 228

**CAPE COD CANAL (SOUTH END), MASSACHUSETTS, U.S.A.**

(41°37'49"N., 70°41'52"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,711  
 Grand Banks South, 923  
 Montreal, Canada, 1,432  
 Panama, Panama, 2,054  
 Punta Arenas, Chile, 7,046  
 Straits of Florida, 1,270

**Ports**

Antilla, Cuba, 1,274  
 Bahia Blanca, Argentina, 6,335  
 Belem, Brazil, 2,855  
 Buenos Aires, Argentina, 6,031  
 Fort de France, Martinique, 1,698  
 Kingston, Jamaica, 1,564  
 La Habana, Cuba, 1,272  
 Montevideo, Uruguay, 5,928  
 Philadelphia, Pennsylvania, U.S.A., 338  
 Port Castries, St. Lucia, 1,733  
 Recife, Brazil, 3,633  
 San Juan, Puerto Rico, 1,410

**CAPE LEEUWIN, AUSTRALIA\***

(34°32'00"S., 115°08'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa (via 30°S.), 5,068  
 Selat Lombok, Indonesia, 1,571  
 Port Said, Egypt, 6,389  
 Selat Sunda, Indonesia, 1,815  
 Torres Strait, Australia, 2,717  
 Selat Wetar, Indonesia, 1,954  
 Wilson Promontory, Australia, 1,524

**Ports**

Aden, Yemen (north of Chagos Archipelago), 4,958  
 Aden, Yemen (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, Sri Lanka, 3,203  
 Dunedin, New Zealand, 2,622  
 Flying Fish Cove, Christmas Island, 1,540  
 Fremantle, Australia, 181  
 Geraldton, Australia, 356  
 Gladstone Harbor, Australia, 2,688  
 Hobart, Tasmania, 1,628  
 Karachi, Pakistan, 4,512  
 Launceston, Tasmania, 1,577  
 Lyttelton, New Zealand, 2,792  
 Madras, India, 3,480  
 Massawa, Ethiopia, 5,390  
 Melbourne, Australia, 1,497  
 Mina al Ahmadi, Kuwait, 5,440

Mina Abd Allah, Kuwait, 5,437  
 Mina Az Zawr, Kuwait, 5,418  
 Nelson, New Zealand, 2,794  
 Port des Galets, Reunion Island, 3,241  
 Port Adelaide, Australia, 1,165  
 Port Augusta, Australia, 1,252  
 Port Darwin, Australia, 1,978  
 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  
 Ras al Khafji, Saudi Arabia, 5,414  
 Ras Tannurah, Saudi Arabia, 5,316  
 Sabang, Indonesia, 2,711  
 Simons Bay, 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

**CAPE LOPEZ, GABON**

(0°37'43"S., 8°43'19"E.) to:

**Junction Points\***

Bishop Rock, England, 4,147  
 Cape of Good Hope, South Africa, 2,105  
 Fastnet Rock, Ireland, 4,200  
 Grand Banks South, 4,299  
 Ile d'Ouessant, France, 4,107  
 Inishtrahull, Ireland, 4,491  
 Panama, Panama, 5,393  
 Pentland Firth, Scotland, 5,195  
 Punta Arenas, Chile, 5,102  
 Strait of Gibraltar, 3,447  
 Straits of Florida, 5,552  
 Yucatan Channel, 5,676

**Ports**

Abidjan, Ivory Coast, 841  
 Cape Town, South Africa, 2,081  
 Douala, Cameroon, 288  
 Lagos, Nigeria, 529  
 Libreville, Gabon, 52  
 Monrovia, Liberia, 1,269  
 New York, New York, U.S.A., 5,243  
 Paramaribo, Surinam, 3,866  
 Rio de Janeiro, Brazil, 7,178  
 Salvador, Brazil, 2,903  
 Savannah, Georgia, U.S.A., 5,517

**CAPE OF GOOD HOPE, SOUTH AFRICA\***

(34°22'00"S., 18°23'00"E.) to:

**Junction Points\***

Bishop Rock, England, 5,790  
 Cape Leeuwin, Australia (via 41°S), 4,660  
 Fastnet Rock, Ireland, 5,880  
 Grand Banks South, 5,954  
 Ile d'Ouessant, France, 5,746  
 Inishtrahull, Ireland, 6,141  
 Selat Lombok, Indonesia, 5,461  
 Montreal, Canada (via Cabot Strait), 7,134  
 Panama, Panama, 6,466  
 Pentland Firth, Scotland, 6,389  
 Port Said, Egypt, 5,340  
 Punta Arenas, Chile, 4,262  
 Singapore, 5,579

Strait of Gibraltar, 5,082  
 Straits of Florida, 6,770  
 Selat Sunda, Indonesia, 5,164  
 Torres Strait, Australia, 6,854  
 Selat Wetar, Indonesia, 6,768  
 Wilson Promontory, Australia, 5,530  
 Yucatan Channel, 6,770

**Ports**

Abidjan, Ivory Coast, 2,712  
 Ad Dammam, Saudi Arabia, 4,960  
 Aden, Yemen (alternate), 4,235  
 Aden, Yemen, 3,980  
 Agadir, Morocco, 4,719  
 Al Basrah, Iraq, 5,232  
 Al Gurdagah, Egypt, 5,041  
 Al Hudaydah, Yemen, 4,137  
 Al Manamah, Al Bahrain, 4,957  
 Al Mukha, Yemen, 4,043  
 Albany, Australia, 4,740  
 Anecho, Togo, 2,615  
 Argentina, Canada, 6,294  
 Assab, Ethiopia, 4,056  
 Baltimore, Maryland, U.S.A., 6,924  
 Bandar Khomeini, Iran (inside Agulhas Current), 5,190  
 Bandar Khomeini, Iran (outside Agulhas Current), 5,395  
 Bata, Equatorial Guinea, 2,291  
 Beira, Mozambique, 1,454  
 Belawan, Indonesia, 5,246  
 Belem, Brazil, 4,368  
 Bissau, Guinea-Bissau, 3,518  
 Bolama, Guinea-Bissau, 3,403  
 Boma, Congo, 1,775  
 Bombay, India (east of Madagascar), 4,822  
 Bombay, India (west of Madagascar), 4,581  
 Bordeaux, France, 5,838  
 Boston, Massachusetts, U.S.A., 6,731  
 Brest, France, 5,770  
 Buchanan, Liberia, 2,919  
 Buenos Aires, Argentina, 3,815  
 Bur Safaga, Egypt, 5,016  
 Bushehr, Iran, 5,053  
 Cabedelo, Brazil, 3,374  
 Calabar, Nigeria, 2,458  
 Calcutta, India, 5,603  
 Cape Town, South Africa, 45  
 Chalna, Mungla Anchorage, Bangladesh, 5,458  
 Charleston, South Carolina, U.S.A., 6,838  
 Chittagong, Bangladesh, 5,492  
 Cobh, Ireland, 5,892  
 Colombo, Sri Lanka, 4,475  
 Colon, Panama, 6,444  
 Cotonou, Benin, 2,560  
 Dakar, Senegal, 3,610  
 Dar es Salaam, Tanzania, 2,330  
 Djibouti, Djibouti, 4,089  
 Durban, South Africa, 764  
 East London, South Africa, 508  
 Eilat, Israel, 5,155  
 El Jadida, Morocco, 4,941  
 Fedala, Morocco, 4,951  
 Flying Fish Cove, Christmas Island, Line Islands, 4,923  
 Fort Dauphin, Madagascar, 1,614  
 Freetown, Sierra Leone, 3,190  
 Fremantle, Australia, 4,755  
 Funchal, Madeira Island, 4,689  
 Georgetown, Ascension Island, 2,409  
 Georgetown, Guyana, 5,026  
 Greenville, Liberia, 2,826  
 Halifax, Canada, 6,502  
 Hamilton, Bermuda, 6,169

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

## 22 CAPE ST. JACQUES, VIETNAM

Horta, Azores, 5,152  
 Inhambane, Mozambique, 1,228  
 Jacksonville, Florida, U.S.A., 6,862  
 Kakinada, India, 5,023  
 Karachi, Pakistan, 4,668  
 Kenitra, Morocco, 5,056  
 Larache, Morocco, 5,049  
 Lindi, Tanzania, 2,155  
 Lisboa, Portugal, 5,152  
 Lobito, Angola, 1,440  
 Longji, Cameroon, 2,359  
 Luanda, Angola, 1,627  
 Luderitz Bay, Namibia, 511  
 Madras, India (east of Madagascar), 4,956  
 Malacca, Malaysia, 5,464  
 Manakara, Madagascar, 1,779  
 Maputo, Mozambique, 1,057  
 Marmagao, India, 4,447  
 Marshall, Liberia, 2,927  
 Mawa, Ethiopia, 4,367  
 Mayumba, Gabon, 1,942  
 Miami, Florida, U.S.A., 6,685  
 Mina al Ahmadi, Kuwait, 5,104  
 Mina Abd Allah, Kuwait, 5,101  
 Mina Az Zawr, Kuwait, 5,082  
 Mocambique, Mozambique, 1,807  
 Mocamedes, Angola, 1,239  
 Mogadishu, Somalia, 2,855  
 Mombasa, Kenya, 2,472  
 Montevideo, Uruguay, 3,701  
 Mosselbaai, South Africa, 206  
 Mtwara, Tanzania, 2,111  
 New York, New York, U.S.A., 6,801  
 Norfolk, Virginia, U.S.A., 6,802  
 Paranagua, Brazil, 3,496  
 Penang, Malaysia, 5,291  
 Philadelphia, Pennsylvania, U.S.A., 6,874  
 Port des Galets, Reunion Island, 2,120  
 Port of Spain, Trinidad, 5,337  
 Port Adelaide, Australia, 5,754  
 Port Blair, Andaman Islands, 5,075  
 Port Darwin, Australia, 6,100  
 Port Elizabeth, South Africa, 390  
 Port Etienne, Mauritania, 4,018  
 Port Louis, Mauritius, 2,382  
 Port Nolloth, South Africa, 325  
 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  
 Rabat, Morocco, 5,036  
 Rangoon, Burma (east of Madagascar), 5,610  
 Ras al Khafji, Saudi Arabia, 5,078  
 Ras as Sidr, Egypt, 5,189  
 Ras Gharib, Egypt, 5,114  
 Ras Tannurah, Saudi Arabia, 4,980  
 Recife, Brazil, 3,324  
 Rio de Janeiro, Brazil, 3,323  
 Sabang, Indonesia, 4,980  
 Safi, Morocco, 4,870  
 Santa Cruz de Tenerife, Canary Islands, 4,453  
 Simons Bay, South Africa, Suakin, Sudan, 4,538  
 Sulima, Sierra Leone, 3,060  
 Swakopmund, South Africa, 743  
 Tabu, Ivory Coast, 2,751  
 Tamatave, Madagascar, 2,104  
 Tanga, Tanzania, 2,425  
 Telukbayur, Indonesia, 4,979  
 Tema, Ghana, 2,619  
 Tulear, Madagascar, 1,509  
 Umm Said, Qatar, 4,909  
 Victoria, Cameroon, 2,399

Victoria, Seychelles, 2,892  
 Zanzibar, Tanzania, 2,358

**CAPE ST. JACQUES, VIETNAM**  
 (10°20'30"N., 107°04'00"E.) See Vung Tao.

**CAPE TOWN, SOUTH AFRICA**  
 (33°54'00"S., 18°26'00"E.) to:

**Junction Points\***

Bishop Rock, England, 5,772  
 Cape of Good Hope, South Africa, 35  
 Ile d'Ouessant, France, 5,743  
 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  
 Yucatan Channel, 6,776

**Ports**

Abidjan, Ivory Coast, 2,679  
 Baltimore, Maryland, U.S.A., 6,912  
 Boma, 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  
 Halifax, Canada, 6,490  
 Jacksonville, Florida, U.S.A., 6,854  
 Kingston, Jamaica, 6,278  
 La Habana, Cuba, 6,724  
 Lisboa, Portugal, 5,134  
 Luanda, Angola, 1,601  
 Luderitz Bay, Namibia, 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  
 Portland, Maine, U.S.A., 6,709  
 Recife, Brazil, 3,318  
 Rio de Janeiro, Brazil, 3,273  
 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  
 St. Helena Island, 1,697  
 St. John, Canada, 6,667  
 St. John's, Canada, 6,205  
 Swakopmund, South Africa, 719  
 Sydney, Canada, 6,425  
 Vigo, Spain, 5,322  
 Willemstad, Curacao, 5,740  
 Wilmington, North Carolina,

U.S.A., 6,820

**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  
 Hamilton, Bermuda, 1,122  
 Kingston, Jamaica, 703  
 La Habana, Cuba, 88  
 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 Rock, Ireland, 246  
 Pentland Firth, Scotland, 609

**Ports**

Bantry Bay, Ireland, 280  
 Barrow in Furness, England, 273  
 Belfast, Northern Ireland, 293  
 Boulogne, France, 431  
 Brest, France, 277  
 Cherbourg, France, 309  
 Cobh, Ireland, 204  
 Cork, Ireland, 210  
 Dartmouth, England, 239  
 Douglas, Isle of Man, 246  
 Dublin, Ireland, 205  
 Fishguard, Wales, 130  
 Glasgow, Scotland, 375  
 Holyhead, Wales, 202  
 Liverpool, England, 267  
 London, England, 526  
 Londonderry, Northern Ireland, 369  
 Manchester, England, 314  
 Southampton, England, 346  
 Swansea, Wales, 46  
 Waterford, Ireland, 160

**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**

Belize, Belize (west of Banco Chinchoro and Isla de Cozumel), 688  
 Cap-Haitien, Haiti, 1,228  
 Charlotte Amalie, Virgin Islands (via Yucatan Channel and south of Hispaniola), 1,675  
 Charlotte Amalie, Virgin Islands (via Yucatan Channel and Windward Passage), 1,658  
 Cienfuegos, Cuba, 770

Colon, Panama, 1,246  
 Galveston, Texas, U.S.A., 661  
 Gulfport, Mississippi, U.S.A., 725  
 Key West, Florida, U.S.A., 708  
 Kingston, Jamaica, 1,056  
 La Guaira, Venezuela, 1,714  
 La Habana, Cuba, 639  
 Mobile, Alabama, U.S.A., 749  
 New Orleans, Louisiana, U.S.A., 723  
 Pensacola, Florida, U.S.A., 745  
 Pointe a Pitre, Guadeloupe, 1,885  
 Port au Prince, Haiti, 1,219  
 Port of Spain, Trinidad, 1,992  
 Port Castries, St. Lucia, 1,927  
 Santo Domingo, Dominican Republic, 1,437  
 Tampico, Mexico, 401  
 Tuxpan, Mexico, 333  
 Veracruz, Mexico, 242  
 Willemstad, Curacao, 1,599

**CARRICKFERGUS, NORTHERN IRELAND**  
 (54°41'44"N., 5°45'50"W.) See Belfast.

**CARTAGENA, COLOMBIA**  
 (10°24'20"N., 7°32'00"W.) to:

**Junction Points\***

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

**Ports**

Belize, Belize, 904  
 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  
 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  
 Guantanamo, Cuba, 586  
 Gulfport, Mississippi, U.S.A., 1,449  
 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  
 La Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,142  
 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), 1,853  
 Norfolk, Virginia, U.S.A. (via Windward Passage), 1,658  
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage), 1,825  
 Pointe a Pitre, Guadeloupe, 941  
 Portlamar, Margarita, Venezuela, 785

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



Port au Prince, Haiti, 639  
 Port of Spain, Trinidad, 932  
 Port Castries, St. Lucia, 933  
 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  
 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), 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, Egypt, 1,705  
 Strait of Gibraltar, 259

**Ports**

Alexandria, Egypt, 1,585  
 Algeciras, Spain, 238  
 Algiers, Algeria, 208  
 Ancona, Italy, 1,338  
 Annaba, Algeria, 440  
 Banghazi, Libya, 1,119  
 Banzart, Tunisia, 532  
 Barcelona, Spain, 282  
 Bari, Italy, 1,131  
 Beirut, Lebanon, 1,797  
 Brindisi, Italy, 1,073  
 Ceuta, Morocco, 240  
 Dubrovnik, Croatia, 1,177  
 Genova, Italy, 616  
 Gibraltar, 241  
 Haifa, Israel, 1,794  
 Iraklion, Kriti, 1,279  
 Istanbul, Turkey (south of Greece), 1,573  
 Istanbul, Turkey (via Corinth Canal), 1,567  
 Izmir, Turkey (south of Greece), 1,430  
 Izmir, Turkey (via Corinth Canal), 1,413  
 La Spezia, Italy, 640  
 Livorno, Italy, 636  
 Malaga, Spain, 189  
 Marseille, France, 460  
 Messina, Sicily, 806  
 Napoli, Italy, 756  
 Odessa, Ukraine (south of Greece), 1,932  
 Odessa, Ukraine (via Corinth Canal), 1,915  
 Oran, Algeria, 115  
 Palermo, Sicily, 697  
 Palma, Balearic Islands, 222  
 Piraeus, Greece (south of Greece), 1,271  
 Piraeus, Greece (via Corinth Canal), 1,214  
 Rijeka, Croatia, 1,405  
 Savona, Italy, 601  
 Sibenik, Croatia, 1,279  
 Siracusa, Sicily, 817  
 Skikda, Algeria, 395

Split, Croatia, 1,264  
 Tarabulus, Libya, 856  
 Taranto, Italy, 1,025  
 Thessaloniki, Greece (south of Greece), 1,479  
 Thessaloniki, Greece (via Corinth Canal), 1,462  
 Toulon, France, 471  
 Trieste, Italy, 1,439  
 Tunis, Tunisia, 583  
 Valencia, Spain, 152  
 Valletta, Malta, 768  
 Venezia, Italy, 1,449  
 Volos, Greece (south of Greece), 1,420  
 Volos, Greece (via Corinth Canal), 1,403

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

**Junction Points\***

Ile d'Ouessant, France, 960  
 Strait of Gibraltar, 166

**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 Real de Santo Antonio, Portugal, 218  
 Villa Cisneros, Western 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

**CASTELLON, SPAIN**  
 (39°58'09"N., 0°01'39"W.) to:

**Junction Points\***

Port Said, Egypt, 1,668  
 Strait of Gibraltar, 429

**Ports**

Ajaccio, Corsica, 419  
 Alexandria, Egypt, 1,545  
 Antibes, France, 392  
 Arzew, Algeria, 249  
 Banghazi, Libya, 1,080

Bat'umi, Georgia, 2,127  
 Castellammare di Stabia, Italy, 692  
 Es Sider, Libya, 1,075  
 Fiumicino, Italy, 565  
 Melilla, Morocco, 339  
 Savona, Italy, 468  
 Tubruq, Libya, 1,251

**CASTRIES, ST. LUCIA**  
 (14°01'00"N., 61°00'00"W.) See Port Castries.

**CASTRO-URDIALES, SPAIN**  
 (43°22'40"N., 3°12'15"W.) to:

**Junction Points\***

Bishop Rock, England, 407  
 Cape of Good Hope, South Africa, 5,693  
 Fastnet Rock, Ireland, 543  
 Grand Banks South, 2,029  
 Ile d'Ouessant, France, 331  
 Inishtrahull, Ireland, 846  
 Montreal, Canada (via Strait of Belle Isle), 2,965  
 Panama, Panama, 4,496  
 Pentland Firth, Scotland, 1,147  
 Punta Arenas, Chile, 6,918  
 Strait of Gibraltar, 863  
 Straits of Florida, 4,128

**Ports**

Boston, Massachusetts U.S.A., 2,934  
 Huelva, Spain, 819  
 La Pallice, France, 187  
 Lisboa, Portugal, 594  
 Lorient, France, 262  
 Marin, Spain, 418  
 New York, New York, U.S.A., 3,087  
 Philadelphia, Pennsylvania U.S.A., 3,239  
 Quiberon, France, 246  
 Stanley, Falkland Islands, 6,548  
 Villagarcia, Spain, 368

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

**Junction Points\***

Port Said, Egypt, 942  
 Strait of Gibraltar, 1,081

**Ports**

Ajaccio, Corsica, 464  
 Alexandria, Egypt, 828  
 Almeria, Spain, 919  
 Banghazi, Libya, 406  
 Cagliari, Sardinia, 377  
 Genova, Italy, 35  
 Belfast, Northern Ireland, 293  
 Boulogne, France, 431  
 Brest, France, 277  
 Cherbourg, France, 309  
 Cobh, Ireland, 204  
 Cork, Ireland, 210  
 Dartmouth, England, 239  
 Belfast, Northern Ireland, 293  
 Boulogne, France, 431  
 Brest, France, 277  
 Cherbourg, France, 309  
 Cobh, Ireland, 204  
 Cork, Ireland, 210  
 Dartmouth, England, 239  
 Kerkira, Greece, 290  
 Livorno, Italy, 464  
 Malaga, Spain, 1,012

Marseille, France, 627  
 Messina, Sicily, 53  
 Napoli, Italy, 225  
 Palermo, Sicily, 170  
 Pula Croatia, 594

**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

**CAYMAN BRAC, CAYMAN ISLANDS**  
 (19°41'50"N., 79°53'45"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,522  
 Grand Banks South, 2,162  
 Panama, Panama, 649  
 Punta Arenas, Chile, 6,686  
 Strait of Gibraltar, 4,017  
 Yucatan Channel, 316

**Ports**

Accra, Ghana, 4,899  
 Boston, Massachusetts, U.S.A., 1,823  
 Cape Town, South Africa, 6,512  
 Colon, Panama, 621  
 New York, New York, U.S.A., 1,898  
 Port of Spain, Trinidad, 1,194  
 Recife, Brazil, 3,278  
 Savannah, Georgia, U.S.A., 1,333

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

**Junction Points\***

Selat Lombok, Indonesia, 1,278  
 Singapore, 1,355

**Ports**

Apra, Guam, 1,344  
 Bataan, Philippines, 390  
 Batangas, Philippines, 309  
 Beihai, China, 1,220  
 Da Nang, Vietnam, 1,049  
 Dagou, China, 1,907  
 Dalian, China (via San Bernardino Strait), 1,764  
 Davao, Philippines, 439  
 Haiphong, Vietnam (via Jintotolo Channel, Romblon Island, Verde Island Passage, and south of Hainan Tao), 1,331  
 Hakodate, Japan, 2,177  
 Ho Chi Minh, Vietnam (via Jintotolo Channel and Mindoro Strait, N of North Danger Reef), 1,152  
 Hong Kong, China (via Verde Island Passage and Jintotolo Channel), 960  
 Honolulu, Hawaii, U.S.A., 4,610  
 Incheon, Korea, 1,656  
 Iloilo, Philippines, 176  
 Jakarta, Indonesia (via Lumbean

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

## 24 CEUTA, MOROCCO

Channel), 1,563  
 Kobe, Japan, 1,601  
 Lo hsing-ta Mao-ti, China (via Balintang Channel), 1,051  
 Manila, Philippines (via Verde Island Passage and Jintotolo Channel), 391  
 Masbate, Philippines, 183  
 Nagasaki, Japan, 1,406  
 Petropavlovsk-Kamchatskiy, Russia, 3,101  
 Portland, Oregon, U.S.A., 6,001  
 Pulpandan, Philippines, 225  
 Shanghai, China (via San Bernardino Strait, Steep Island Pass, and Pai-chieh Hsia), 1,322  
 Shantou, China (via Verde Island Passage and Jintotolo Channel), 952  
 Shimonoseki, Japan, 1,547  
 Tan-shui, Taiwan (via Peng-hu Lieh Tao and Balintang Channel), 1,006  
 Vladivostok, Russia, 2,026  
 Weihai, China, 1,679  
 Xiamen, China (via Balintang Channel), 965  
 Yantai, China, 1,713  
 Yokohama, Japan (via San Bernardino Strait), 1,766  
 Yokoshima, Japan (via San Bernardino Strait), 1,571  
 Zamboanga, Philippines, 260

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

**Junction Points\***

Port Said, Egypt, 1,923  
 Strait of Gibraltar, 23

**Ports**

Alexandria, Egypt, 1,802  
 Algiers, Algeria, 417  
 Alicante, Spain, 299  
 Ancona, Italy, 1,561  
 Annaba, Algeria, 656  
 Banghazi, Libya, 1,336  
 Banzart, Tunisia, 750  
 Barcelona, Spain, 515  
 Bari, Italy, 1,354  
 Beirut, Lebanon, 2,014  
 Brindisi, Italy, 1,296  
 Cagliari, Sardinia, 731  
 Cartagena, Spain, 240  
 Casablanca, Morocco, 189  
 Genova, Italy, 849  
 Haifa, Israel, 2,012  
 Iraklion, Kriti, 1,496  
 Istanbul, Turkey (south of Greece), 1,802  
 Istanbul, Turkey (via Corinth Canal), 1,785  
 Izmir, Turkey (south of Greece), 1,648  
 Izmir, Turkey (via Corinth Canal), 1,630  
 La Spezia, Italy, 872  
 Livorno, Italy, 868  
 Marseille, France, 692  
 Melilla, Morocco, 131  
 Messina, Sicily, 1,029  
 Napoli, Italy, 982  
 Odessa, Ukraine (south of Greece), 2,150  
 Odessa, Ukraine (via Corinth Canal), 2,133  
 Oran, Algeria, 232  
 Palermo, Sicily, 921  
 Palma, Balearic Islands, 452

Piraeus, Greece (south of Greece), 1,488  
 Piraeus, Greece (via Corinth Canal), 1,431  
 Rijeka, Croatia, 1,628  
 Savona, Italy, 834  
 Sibenik, Croatia, 1,502  
 Siracusa, Sicily, 1,035  
 Split, Croatia, 1,487  
 Tangier, Morocco, 29  
 Tarabulus, Libya, 1,074  
 Taranto, Italy, 1,249  
 Thessaloniki, Greece (south of Greece), 1,696  
 Thessaloniki, Greece (via Corinth Canal), 1,679  
 Toulon, France, 704  
 Trieste, Italy, 1,662  
 Tunis, Tunisia, 801  
 Valencia, Spain, 385  
 Valletta, Malta, 986  
 Venezia, Italy, 1,672  
 Volos, Greece (south of Greece), 1,637  
 Volos, Greece (via Corinth Canal), 1,620

**CHAH BAHAR, IRAN**  
 (25°18'00"N., 60°31'40"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,862  
 Cape Leeuwin, Australia, 4,746  
 Port Said, Egypt, 2,626  
 Selat Lombok, Indonesia, 3,972  
 Selat Sunda, Indonesia, 3,351  
 Singapore, 3,144  
 Torres Strait, Australia, 5,543

**Ports**

Aden, Yemen, 1,276  
 Al Basrah, Iraq, 802  
 Colombo, Sri Lanka, 1,578  
 Karachi, Pakistan, 357

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

**Junction Points\***

Cape of Good Hope, South Africa, 5,458  
 Port Said, Egypt, 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  
 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

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

**Junction Points\***

Bishop Rock, England, 3,375  
 Cape of Good Hope, South Africa, 6,838  
 Fastnet Rock, Ireland, 3,262  
 Inishtrahull, Ireland, 3,360  
 Montreal, Canada (via Strait of Canso), 1,940  
 Panama, Panama, 1,607  
 Pentland Firth, Scotland, 3,540  
 Punta Arenas, Chile, 6,898  
 Strait of Gibraltar, 3,613  
 Straits of Florida, 637  
 Yucatan Channel, 819

**Ports**

Antilla, Cuba (via Crooked Island Passage), 813  
 Argentina, Canada, 1,489  
 Arkhangel'sk, Russia, 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, 3,683  
 Brest, France, 3,465  
 Bridgetown, Barbados, 1,628  
 Buenos Aires, Argentina, 5,817  
 Cadiz, Spain, 3,563  
 Cape Town, South Africa, 6,830  
 Cartagena, Colombia (via Crooked Island Passage), 1,443  
 Charlotte Amalie, Virgin Islands, 1,192  
 Charlottetown, Canada, 1,313  
 Cienfuegos, Cuba (southbound, via Straits of Florida and Yucatan Channel), 1,104  
 Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,264  
 Colon, Panama (via Crooked Island Passage), 1,564  
 Colon, Panama (via Yucatan Channel), 1,636  
 Dakar, Senegal, 3,557  
 Elizabeth Harbor, Bahamas, 610  
 Gibara, Cuba (via Crooked Island Passage), 806  
 Guantanamo, Cuba (via Crooked Island Passage), 900  
 Halifax, Canada, 1,077  
 Kingston, Jamaica (via Crooked Island Passage), 1,064  
 La Guaira, Venezuela, 1,549  
 La Habana, Cuba (southbound, via Straits of Florida), 648  
 Lagos, Nigeria, 5,065  
 Las Palmas, Canary Islands, 3,341  
 Limon, Costa Rica (via Crooked Island Passage), 1,637  
 Lisboa, Portugal, 3,397  
 Manzanillo, Cuba (via Crooked Island Passage and Canal de Balandras), 1,105  
 Maracaibo, 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 au Prince, Haiti, 961  
 Port of Spain, Trinidad, 1,682  
 Port Antonio, Jamaica (via Crooked Island Passage), 1,013  
 Port Castries, St. Lucia, 1,532  
 Recife, 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), 1,373  
 Santiago de Cuba, Cuba (via Crooked Island 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

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

**Junction Points\***

Bishop Rock, England, 3,369  
 Fastnet Rock, Ireland, 3,279  
 Inishtrahull, Ireland, 3,427  
 Montreal, Canada, 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**

Baltimore, Maryland, U.S.A., 1,417  
 Belem, Brazil, 1,598  
 Belize, Belize, 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 (south of Hispaniola and via Yucatan Channel), 1,675  
 Carmen, Mexico (via Yucatan Channel and Windward Passage), 1,658  
 Cartagena, Colombia, 811  
 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, Guyana, 814  
 Guantanamo, Cuba (north of Hispaniola and Virgin Passage), 607  
 Halifax, Canada, 1,595  
 Hamilton, Bermuda, 872  
 Jacksonville, Florida, U.S.A., 1,181

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

Key West, Florida, U.S.A., 1,036  
Kingston, Jamaica, 705  
La Cuaira, Venezuela, 479  
La Habana, Cuba, 1,048  
Las Palmas, Canary Islands, 2,791  
Lisboa, Portugal, 3,147  
Miami, Florida, U.S.A., 991  
Montevideo, Uruguay, 4,575  
New Amsterdam, Guyana, 903  
New York, New York, U.S.A.,  
1,434

Norfolk, Virginia, U.S.A., 1,296  
Philadelphia, Pennsylvania,  
U.S.A., 1,434

Pointe a Pitre, Guadeloupe, 267  
Port au Prince, Haiti, 628  
Port of Spain, Trinidad, 518  
Port Castries, St. Lucia, 346  
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 Old Bahama  
Channel), 1,890

Tuxpan, Mexico (via Yucatan  
Channel and north of  
Hispaniola), 1,867  
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 and Crooked Island  
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  
and Crooked Island Passage),  
2,535  
Halifax, Canada, 268  
Key West, Florida, U.S.A., 1,788  
La Habana, Cuba, 1,846  
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, CANADA**  
(47°02'08"N., 65°28'00"W.) to:

**Junction Points\***

Grand Banks South, 744  
Montreal, Canada, 685  
Panama, Panama, 2,797  
Pentland Firth, Scotland, 2,265  
Punta Arenas, Chile, 7,250  
Straits of Florida, 1,988

**Ports**

Boston, Massachusetts, U.S.A.,  
977  
Colon, Panama, 2,796  
La Guaira, Venezuela, 2,498  
Natal, Brazil, 3,684  
New York, New York, U.S.A.,  
1,150  
Port Castries, St. Lucia, 2,254  
Port of Spain, Trinidad, 2,455  
San Juan, Puerto Rico, 2,025  
Yarmouth, Canada, 783

**CHATHAM, ENGLAND**  
(51°24'00"N., 0°33'00"E.)  
Subtract 23 miles from London  
distances.

**CHEN-CHANG, CHINA**  
(32°13'00"N., 110°24'00"E.) See  
Zhenjiang, China.

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

**Junction Points\***

Bishop Rock, England, 197  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 554  
Skagens Odde, Denmark, 671

**Ports**

Amsterdam, Netherlands, 305  
Antwerp, 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, Walf, 306  
Hamburg, Germany, 543  
Holyhead, Wales, 377  
Kristiansand, Norway, 632  
Liverpool, England, 442  
Oostende, Belgium, 203  
Oslo, Norway, 784  
Rotterdam, Netherlands, 282  
Stavanger, Norway, 661  
Wilhelmshaven, Germany, 472  
Zeebrugge, Belgium, 218

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

**Ports**

Dagu, China, 1,013  
Dalian, China, 852  
Macau, China, 516

Misumi, Japan, 654  
Naha, Ryukyu Islands, 337  
Sanmen Wen, China, 248  
Shanghai, China, 447  
Uno, Japan, 903

Wenzhou, China, 204  
Xiamen, China, 227  
Yulin Gang, Hainan Dao, China,  
830

**CHIBAI, JAPAN**  
(35°28'00"N., 139°58'00"E.)  
Add 4 miles to Yokohama  
distances.

**CHICOUTIMI, CANADA**  
(48°26'00"N., 71°03'37"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
6,982  
Grand Banks South, 1,012  
Montreal, Canada, 260  
Panama, Panama, 3,077  
Pentland Firth, Scotland, 2,435  
Punta Arenas, Chile, 7,515  
Straits of Florida, 2,405

**Ports**

Angmagssalik, Greenland, 1,873  
Argentina, Canada, 847  
Belem, Brazil, 3,491  
Cape Town, South Africa, 6,965  
Colon, Panama, 3,111  
Hamilton, Bermuda, 1,468  
La Habana, Cuba, 2,408  
Montevideo, Uruguay, 6,354  
New York, New York, U.S.A.,  
1,374  
Portland, Maine, U.S.A., 1,181  
Recife, Brazil (via Cabot Strait),  
4,120

**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, French Polynesia, 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°26'00"N., 128°00'00"E.) to:

**Junction Points\***

Singapore, 2,046

**Ports**

Apra, Guam, 1,228  
Manila, Philippines, 947  
Dalian, China, 527  
Yokohama, Japan, 830

**CHING-TAO, CHINA**  
(36°05'30"N., 120°19'00"E.) See  
Qingdao, China.

**CHIN-HUANG-TAO, CHINA**  
(39°55'00"N., 119°36'30"E.) See  
Qinhuangdao, China.

**CHIN HAI, SOUTH KOREA**  
(38°08'40"N., 128°28'3"E.) See  
Jinhae, South Korea.

**CHINNAMPO, NORTH  
KOREA**  
(38°43'00"N., 125°25'00"E.) See  
Nampo.

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

**Junction Points\***

Port Said, Egypt, 1,307  
Strait of Gibraltar, 1,682

**Ports**

Ancona, Italy, 111  
Brindisi, Italy, 375  
Rijeka, Croatia, 126

**CHITTAGONG,  
BANGLADESH**  
(22°18'45"N., 91°49'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
5,492  
Port Said, Egypt, 4,739  
Singapore, 1,517

**Ports**

Bombay, India, 2,160  
Calcutta, India, 367  
Calicut, India, 1,664  
Cochin, India, 1,578  
Madras, India, 891  
Malacca, Malaysia, 1,391  
Marmagao, India, 1,940  
Penang, Malaysia, 1,167  
Port Kelang, Malaysia, 1,311  
Visakhapatman, India, 578

**CHONGJIN, NORTH KOREA**  
(41°46'30"N., 129°49'30"E.) to:

**Ports**

Busan, South Korea, 417  
Hakodate, Japan, 509  
Maizuru, Japan, 463  
Shimonoseki, Japan, 480  
Vladivostok, Russia, 135

**CHRISTIANSHAAB,  
GREENLAND**  
(64°49'00"N., 51°11'30"W.) See  
Qasigiannuit, Greenland.

**CHRISTIANSTED, ST. CROIX**  
(17°45'20"N., 64°42'00"W.) to:

**Junction Points\***

Bishop Rock, England, 3,370

**Ports**

Guantanamo, Cuba (north of

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

## 26 CHRISTMAS ISLAND, LINE ISLANDS

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, LINE ISLANDS (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  
 Papeete, French Polynesia, 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  
 Pentland Firth, Scotland (via 75 miles off Kap Farvel), 2,820

#### Ports

Aasiaat (Egedesminde), Greenland, 1,485  
 Camp Lloyd, Greenland, 1,434  
 Goose Bay, Canada, 1,557  
 Ilulissat (Jakobshavn), Greenland, 1,532  
 Kangerluarsoruseq, Greenland, 1,326  
 Maniitsoq, Greenland, 1,341  
 Nanortalik, Greenland, 1,511  
 Narsarsuaq, Greenland, 1,513  
 Nuuk (Godthaab), Greenland, 1,331  
 Qaanaaq (Thule), Greenland, 1,909  
 Qasigianguit, Greenland, 1,523  
 Reykjavik, Iceland (via 75 miles off Kap Farvel), 2,290  
 Ritenbenk, Greenland, 1,695  
 Shelburne, Canada, 2,467  
 Sisimiut, Greenland, 1,384  
 Upernavik, Greenland, 1,669

### CIENFUEGOS, CUBA (22°08'30"N., 80°27'00"W.) to:

#### Junction Points\*

Bishop Rock, England, 4,056  
 Fastnet Rock, Ireland, 3,950  
 Inishtrahull, Ireland, 4,054

Panama, Panama, 815  
 Pentland Firth, Scotland, 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, Belize, 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, South Africa, 6,610  
 Cardenas, Cuba, 905  
 Carmen, Mexico, 770  
 Cartagena, Colombia, 778  
 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  
 Halifax, Canada (via Straits of Florida), 2,102  
 Hamilton, Bermuda, 1,346  
 La Guaira, Venezuela, 1,050  
 La Habana, Cuba, 482  
 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 Crooked Island Passage and Windward Passage), 1,654  
 Philadelphia, Pennsylvania, U.S.A. (via Yucatan Channel), 1,627  
 Pointe a Pitre, Guadeloupe, 1,204  
 Port au Prince, Haiti, 534  
 Port of Spain, Trinidad, 1,310  
 Port Castries, St. Lucia, 1,246  
 Puerto Cabello, Venezuela, 1,015  
 Rio de Janeiro, Brazil, 4,490  
 San Juan, Puerto Rico (south of Hispaniola), 930  
 San Juan, Puerto Rico (via Windward Passage and north of Hispaniola), 903  
 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.

### CIVITAVECCHIA, ITALY (42°05'36"N., 11°47'15"E.) to:

#### Junction Points\*

Port Said, Egypt, 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 (south of Greece), 1,107  
 Istanbul, Turkey (via Corinth Canal), 1,066  
 Livorno, Italy, 120  
 Marseille, France, 316  
 Menton, France, 180  
 Messina, Sicily, 308  
 Napoli, Italy, 152  
 Odessa, Ukraine (south of Greece), 1,456  
 Odessa, Ukraine (via Corinth Canal), 1,414  
 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

### COATZACOALCOS, 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  
 La Habana, Cuba, 840  
 Mobile, Alabama, U.S.A., 834  
 New Orleans, Louisiana, U.S.A., 801  
 Norfolk, Virginia, U.S.A., 1,736  
 Pensacola, Florida, U.S.A., 836  
 Port of Spain, Trinidad, 2,137  
 Port Arthur, Texas, U.S.A., 708  
 Tampico, Mexico, 320  
 Veracruz, Mexico, 127

### COBH, IRELAND (51°50'50"N., 8°18'00"W.) to:

#### Junction Points\*

Bishop Rock, England, 143  
 Cape of Good Hope, South Africa, 5,892  
 Fastnet Rock, Ireland, 64  
 Pentland Firth, Scotland, 578

#### Ports

Barrow in Furness, England, 252  
 Belfast, Northern Ireland, 264  
 Cape Town, South Africa, 5,894  
 Cardiff, Wales, 204  
 Cherbourg, France, 315  
 Dublin, Ireland, 176  
 Falmouth, England, 182

Felixstowe, England, 493  
 Fishguard, Wales, 131  
 Galway, Ireland, 222  
 Glasgow, Scotland, 346  
 Holyhead, Wales, 182  
 Inverness, Scotland (via Pentland Firth), 659  
 Leith, England (via Pentland Firth), 765  
 Limerick, Ireland, 221  
 Liverpool, England, 246  
 Londonderry, Northern Ireland, 340  
 Newport, Wales, 210  
 Plymouth, England, 215

### COCHIN, INDIA (9°58'00"N., 76°15'20"E.) to:

#### Junction Points\*

Port Said, Egypt, 3,237  
 Singapore, 1,853

#### Ports

Bombay, India, 585  
 Colombo, Sri Lanka, 318  
 Karachi, Pakistan, 1,044  
 Marmagao, India, 365  
 Trincomalee, Sri Lanka, 606

### COLOMBO, SRI LANKA (6°57'00"N., 79°51'00"E.) to:

#### Junction Points\*

Cape of Good Hope, South Africa (east of Madagascar), 4,317  
 Cape Leeuwin, Australia, 3,203  
 Port Said, Egypt (south of Socotra), 3,481  
 Singapore, 1,581  
 Selat Sunda, Indonesia, 1,781  
 Torres Strait, Australia (south of Java and Timor), 3,978

#### Ports

Aden, Yemen (south of Socotra), 2,094  
 Akyab, Burma, 1,225  
 Al Basrah, Iraq, 2,359  
 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, Tanzania, 2,565  
 Diego Garcia, Chagos Archipelago, 974  
 Dumai, Indonesia, 1,496  
 Durban, South Africa (via east of Madagascar), 3,615  
 Flying Fish Cove, Christmas Island, Indian Ocean, 1,888  
 Fremantle, Australia, 3,122  
 Karachi, Pakistan, 1,344  
 Madras, India, 611  
 Malacca, Malaysia, 1,458  
 Marmagao, India, 671  
 Massawa, Ethiopia, 2,486  
 Mombasa, Kenya, 2,518  
 Negappattinam, India, 476  
 New Mangalore, India, 499  
 Okha, India, 1,183  
 Penang, Malaysia, 1,285  
 Phuket, Thailand, 1,192  
 Port Darwin, Australia, 3,314  
 Port Louis, Mauritius, 2,098  
 Port Refuge, Cocos Islands, 1,539

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



Rangoon, Burma, 1,268  
 Sabang, Indonesia, 976  
 Tamatave, Madagascar, 2,351  
 Tanga, Tanzania, 2,564  
 Trincomalee, Sri Lanka, 347  
 Victoria, Seychelles, 1,652  
 Vishakhapatnam, India, 880  
 Zanzibar, Tanzania, 2,627

**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, South Africa, 6,488  
 Fastnet Rock, Ireland (via Caicos Passage), 4,244  
 Inishtrahull, Ireland (via Mona Passage), 4,393  
 Inishtrahull, Ireland (via Windward Passage), 4,362  
 Montreal, Canada (via Strait of Canso), 3,126  
 Panama, Panama, 44  
 Pentland Firth, Scotland (via Mona Passage), 4,594  
 Pentland Firth, Scotland (via Windward Passage), 4,529  
 Punta Arenas, Chile (east of South America), 6,543  
 Strait of Gibraltar (via Mona Passage), 4,308  
 Yucatan Channel, 812

**Ports**

Antilla, Cuba, 844  
 Argentina, Canada, 2,640  
 Arkhangel'sk, Russia, 5,820  
 Baltimore, Maryland, U.S.A. (via Windward Passage), 1,901  
 Barranquilla, Colombia, 336  
 Belem, Brazil, 2,403  
 Belize, Belize, 816  
 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 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, 5,385  
 Cadiz, Spain, 14,286  
 Campeche, Mexico, 1,167  
 Cap-Haitien, Haiti, 817  
 Cape Town, South Africa, 6,494  
 Carmen, Mexico, 1,246  
 Cartagena, Colombia, 281  
 Charleston, South Carolina, U.S.A. (via Windward 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  
 Coatzacoalcas, Mexico, 1,396  
 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, Ascension Island, 4,181  
 Georgetown, Guyana, 1,515  
 Guantanamo, Cuba, 689  
 Gulfport, Mississippi, U.S.A., 1,388  
 Halifax, Canada, 2,295  
 Hamilton, Bermuda, 1,659  
 Horta, Azores, 3,260  
 Ivittuut, 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, 83  
 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 Windward 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), 1,946  
 Pointe a Pitre, Guadeloupe, 1,168  
 Ponta Delgada, Azores, 3,379  
 Portlamar, Venezuela, 1,012  
 Port of Spain, Trinidad, 1,159  
 Port Antonio, Jamaica, 582  
 Port Arthur, Texas, U.S.A., 1,485  
 Port Castries, St. Lucia, 1,160  
 Portland Bight, Jamaica, 536  
 Portland, Maine, U.S.A., 2,198  
 Porto Grande, Cape Verde Islands, 3,240  
 Portsmouth, New Hampshire, U.S.A. (via Windward Passage), 2,174  
 Progreso, Mexico, 1,026  
 Puerto Barrios, Guatemala, 78  
 Puerto Cabello, Venezuela, 802  
 Puerto Cortes, Honduras, 733  
 Recife, Brazil, 3,295  
 Reykjavik, Iceland, 4,098  
 Rio de Janeiro, Brazil, 4,367  
 Salvador, Brazil, 3,698  
 San Juan, Puerto Rico, 993  
 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 Nicolaashaven, Aruba, 633  
 St. Georges, Grenada, 1,118  
 St. John, Canada, 2,294  
 St. John's, Canada, 2,695  
 St. John's, Antigua, 1,158  
 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.

**COME BY CHANCE, CANADA**  
 (47°48'00"N., 54°01'25"W.) Add 23 miles to Argentina 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

**CONAKRY, GUINEA**  
 (9°30'30"N., 13°43'35"W.) to:

**Junction Points\***

Bishop Rock, England, 2,626  
 Cape of Good Hope, South Africa, 3,209  
 Fastnet Rock, Ireland, 2,689  
 Grand Banks South, 2,765  
 Ile d'Ouessant, France, 2,584  
 Inishtrahull, Ireland, 3,029  
 Panama, Panama, 3,926  
 Pentland Firth, Scotland, 3,357  
 Punta Arenas, Chile, 5,142  
 Strait of Gibraltar, 1,931  
 Straits of Florida, 4,038  
 Yucatan Channel, 4,220

**Ports**

Accra, Ghana, 995  
 Bathurst, Gambia, 345  
 Boston, Massachusetts, U.S.A., 3,612  
 Buenos Aires, Argentina, 3,755  
 Cadiz, Spain, 1,952  
 Cape Town, South Africa, 3,189  
 Casablanca, Morocco, 1,809  
 Colon, Panama, 3,954  
 Dakar, Senegal, 443  
 Funchal, Madeira Island, 1,506  
 Georgetown, Ascension Island, 1,048  
 Grand Bassam, Ivory Coast, 760  
 Guantanamo, Cuba, 3,615  
 Huelva, Spain, 1,941  
 Key West, Florida, U.S.A., 4,013  
 Las Palmas, Canary Islands, 1,306  
 Lisboa, Portugal, 1,962  
 Marshall, Liberia, 321  
 Monrovia, Liberia, 294  
 Natal, Brazil, 2,137  
 New York, New York, U.S.A., 3,713

Norfolk, Virginia, U.S.A., 3,746  
 Oporto, Portugal, 2,105  
 Philadelphia, Pennsylvania, U.S.A., 3,775  
 Ponta Delgada, Azores, 1,873  
 Port Harcourt, Nigeria, 1,392  
 Port of Spain, Trinidad, 2,856  
 Porto Grande, Cape Verde Islands, 792  
 Portsmouth, New Hampshire, U.S.A., 3,605  
 Recife, Brazil, 1,645  
 Rio de Janeiro, Brazil, 2,627  
 St. Helena Island, 1,600  
 Takoradi, Ghana, 872

**CONCHAN, PERU**  
 (12°10'00"S., 77°00'00"W.) See Callao.

**CONSTANTA, ROMANIA**  
 (44°09'56"N., 28°40'14"E.) to:

**Junction Points\***

Port Said, Egypt, 1,000  
 Strait of Gibraltar, 2,018

**Ports**

Cagliari, Sardinia (south of Greece), 1,317  
 Iskenderun, Turkey, 1,044  
 Istanbul, Turkey, 201  
 Kerch, Ukraine, 370  
 Larnaca, Cyprus, 962  
 Mersin, Turkey, 986  
 Nice, France (south of Greece), 1,509  
 Novorossiysk, Russia, 403  
 Odessa, Ukraine, 186  
 Patrai, Greece (south of Greece), 811  
 Patrai, Greece (via Corinth Canal), 653  
 Pula, Croatia (south of Greece), 1,305  
 Pula, Croatia (via Corinth Canal), 1,206  
 Rostov-na-Donu, Russia, 572  
 Sevastopol, Ukraine, 212

**CONTRECOEUR, CANADA**  
 (45°53'00"N., 73°12'00"W.)  
 Subtract 25 miles from Montreal distances.

**COOS BAY, OREGON, U.S.A.**  
 (43°22'14"N., 124°23'00"W.) to:

**Junction Points\***

Panama, Panama, 3,589  
 Punta Arenas, Chile, 6,549  
 Singapore (via San Bernardino Strait), 7,284  
 Singapore (via 30°N., 180° and Balintang Channel), 7,512  
 Torres Strait, Australia, 6,057  
 Wilson Promontory, Australia, 6,920

**Ports**

Antofagasta, Chile, 5,120  
 Auckland, New Zealand, 5,853  
 Brisbane, Australia, 6,253  
 Callao, Peru, 4,344  
 Guayaquil, Ecuador, 3,920  
 Honolulu, Hawaii, 2,150  
 Kobe, Japan, 4,565

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

## 28 COPENHAGEN, DENMARK

Yokohama, Japan, 4,302

**COPENHAGEN, DENMARK**  
(55°42'00"N., 12°36'06"E.) See  
Kobenhavn.

**COQUIMBO, CHILE**  
(29°57'00"S., 71°21'00"W.) to:

**Junction Points\***

Panama, Panama, 2,448  
Punta Arenas, Chile, 1,623  
Torres Strait, Australia, 8,107  
Wilson Promontory, Australia,  
6,730

**Ports**

Acapulco, Mexico, 3,259  
Antofagasta, Chile, 396  
Arica, Chile, 702  
Caldera, Chile, 196  
Callao, Peru, 1,136  
Corinto, Nicaragua, 2,711  
Esmeraldas, Ecuador, 2,014  
Guayaquil, Ecuador, 1,781  
Guaymas, Mexico, 4,153  
Iquique, Chile, 602  
Lota, Chile, 455  
Monterey, California, U.S.A.,  
4,927  
Pisco, Peru, 1,036  
Puntarenas, Costa Rica, 2,526  
Salina Cruz, Mexico, 3,091  
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

**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  
Esmeraldas, Ecuador, 823  
Guayaquil, Ecuador, 1,071  
Guaymas, Mexico, 1,738  
Iquique, Chile, 2,247  
La Libertad, El Salvador, 141  
La Union, El Salvador, 73  
Los Angeles, California, U.S.A.,  
2,281  
Lota, Chile, 3,081

Monterey, California, U.S.A.,  
2,533  
Pisco, Peru, 1,718  
Puerto Armuelles, Panama, 409  
Puntarenas, Costa Rica, 262  
Salina Cruz, Mexico, 525  
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  
Valparaiso, Chile, 2,875

**CORK, IRELAND**  
(51°54'00"N., 8°27'30"W.) Add  
9 miles to Cobh distances.

**CORNER BROOK, CANADA**  
(48°57'30"N., 57°56'46"W.) to:

**Junction Points\***

Inishtrahull, Ireland (via Strait of  
Belle Isle), 1,906  
Montreal, Canada, 740  
Panama, Panama, 2,707  
Pentland Firth, Scotland (via Strait  
of Belle Isle), 2,001  
Straits of Florida, 2,035

**Ports**

Angmagssalik, Greenland, 1,304  
Argentina, Canada, 413  
Belem, Brazil, 3,121  
Boston, Massachusetts, U.S.A.,  
835  
Buenos Aires, Argentina, 6,131  
Colon, Panama, 2,691  
Hamilton, Bermuda, 1,098  
Murmansk, Russia, 2,988  
New York, New York, U.S.A., 999  
Reykjavik, Iceland (via Strait of  
Belle Isle), 1,516  
Wilmington, North Carolina,  
U.S.A., 1,393

**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  
La Habana, Cuba, 864  
Tampico, Mexico, 366

**CORUNNA, SPAIN**  
(43°22'00"N., 8°24'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 331

**Ports**

Horta, Azores, 967  
New York, New York, U.S.A.,  
2,917  
San Juan, Puerto Rico, 3,255  
Santander, Spain, 224

**COTONOU, BENIN**  
(6°21'00"N., 2°26'30"E.) to:

**Junction Points\***

Cape of Good Hope, South  
Africa, 857  
Ile d'Ouessant, France, 3,747

**Ports**

Douala, Cameroon, 486  
Monrovia, Liberia, 893

**COURTENAY BAY, NEW  
BRUNSWICK, CANADA**  
(45°16'13"N., 66°02'35"W.) See  
St. John.

**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

**COWES, ENGLAND**  
(50°46'04"N., 1°17'51"W.) See  
Southampton.

**CRISTOBAL, PANAMA**  
(9°22'00"N., 79°55'00"W.) See  
Colon.

**CUXHAVEN, GERMANY**  
(53°52'00"N., 8°43'00"E.)  
Subtract 56 miles from Hamburg  
distances.

**DAGU, CHINA**  
(38°59'15"N., 117°40'45"E.) to:

**Junction Points\***

Panama, Panama (via Osumi  
Kaikyō), 9,002  
Panama, Panama (via Tsugaru-  
Kaikyō), 8,786  
Punta Arenas, Chile, 10,280  
Singapore, 2,770

**Ports**

Aleksandrovs-Sakhalinskiy,  
Russia (via Maenggol Sudo),  
1,807  
Apra, Guam, 2,133  
Auckland, New Zealand (via Vitiiaz  
Strait), 5,648  
Busan, South Korea (via Maenggol  
Sudo), 702  
Cebu, Philippines (via San  
Bernardino Strait), 1,907  
Chi-lung, Taiwan, 1,013  
Dalian, China, 207  
Dutch Harbor, Alaska, U.S.A. (via  
La Perouse Strait), 3,594  
Hakodate, Japan, 1,385  
Hong Kong, China, 1,418  
Honolulu, Hawaii, U.S.A. (via  
Osumi Kaikyō), 4,677  
Honolulu, Hawaii, U.S.A. (via  
Shimonoseki Kaikyō), 4,628  
Iloilo, Philippines (via San  
Bernardino Strait), 1,929  
Incheon, South Korea, 465  
Jakarta, Indonesia, 3,088

Kobe, Japan, 1,034  
Lo-hsing-ta Mao-ti, China, 1,029  
Manila, Philippines (east of  
Taiwan), 1,722  
Manila, Philippines (via Formosa  
Strait), 1,732  
Mogpo, South Korea (south of  
Kasa Do), 536  
Nagasaki, Japan, 754  
Nakagusuku, Ryukyu Islands,  
1,026  
Nampo, North Korea, 369  
Nikolayevsk-Na-Amure, Russia,  
1,961  
Noumea, New Caledonia, 4,667  
Pago Pago, American Samoa,  
5,194  
Papeete, French Polynesia, 6,281  
Petropavlovsk-Kamchatskiy,  
Russia (via La Perouse Strait),  
2,419  
Petropavlovsk-Kamchatskiy,  
Russia (via Tsugaru-Kaikyō),  
2,444  
Port Darwin, Australia, 3,363  
Rabaul, Papua New Guinea, 3,294  
Qingdao, China, 436  
Qinhuangdao, China, 131  
San Francisco, California, U.S.A.  
(via Osumi Kaikyō), 5,856  
San Francisco, California, U.S.A.  
(via Tsugaru-Kaikyō), 5,615  
Seattle, Washington, U.S.A. (via  
La Perouse Strait, and north of  
Aleutian Islands), 5,286  
Seattle, Washington, U.S.A. (via  
Osumi Kaikyō and South of  
Aleutian Islands), 5,596  
Seattle, Washington, U.S.A. (via  
Tsugaru-Kaikyō and north of  
Aleutian Islands), 5,290  
Tsugaru-Kaikyō and south of  
Aleutian Islands), 5,351  
Shanghai, China, 720  
Shimonoseki, Japan, 790  
Surabaya, Indonesia, 3,174  
Suva, Fiji Islands, 4,898  
Sydney, Australia (via Vitiiaz  
Strait), 5,135  
Tianjin, China, 48  
Valparaiso, Chile (via Shimonoseki  
Kaikyō), 10,482  
Vladivostok, Russia, 1,212  
Weonsan, North Korea, 1,007  
Xiamen, China, 1,169  
Yantai, China, 205  
Yokohama, Japan (via Osumi  
Kaikyō), 1,394

**DAGU BAR, CHINA**  
(38°56'15"N., 117°58'45"E.)  
Subtract 36 miles from Tianjin  
distances.

**DAKAR, SENEGAL**  
(14°41'00"N., 17°26'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,195  
Cape of Good Hope, South  
Africa, 3,610  
Ile d'Ouessant, France, 2,152  
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

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

**Ports**

Abidjan, Ivory Coast, 1,166  
 Agadir, Morocco, 1,109  
 Belem, Brazil, 2,104  
 Bolama, Guinea-Bissau, 272  
 Bordeaux, France, 2,243  
 Boston, Massachusetts, U.S.A., 3,221  
 Buchanan, Liberia, 755  
 Buenos Aires, Argentina, 3,864  
 Cadiz, Spain, 1,500  
 Cap-Haitien, Haiti, 3,154  
 Cape Town, South Africa, 3,593  
 Casablanca, Morocco, 1,333  
 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  
 Oporto, Portugal, 1,682  
 Paramaribo, Suriname, 2,315  
 Philadelphia, Pennsylvania, U.S.A., 3,441  
 Ponta Delgada, Azores, 1,459  
 Port of Spain, Trinidad, 2,628  
 Port Castries, St. Lucia, 2,543  
 Port Etienne, Mauritania, 394  
 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  
 Safi, Morocco, 1,228  
 San Juan, Puerto Rico, 2,812  
 Santa Cruz de Tenerife, Canary Islands, 846  
 Santo Domingo, Dominican Republic, 3,036  
 St. John's, Canada, 2,646  
 Sulima, Sierra Leone, 589  
 Tangier, Morocco, 1,483  
 Vigo, Spain, 1,744  
 Villa Cisneros, Western Sahara, 578

**DALHOUSE, CANADA**  
 (48°03'15"N., 66°15'00"W.) to:

**Junction Points\***

Grand Banks South, 770  
 Fastnet Rock, Ireland (via Strait of Belle Isle), 2,183

Inishtrahull, Ireland (via Strait of Belle Isle), 2,187  
 Montreal, Canada, 636  
 Panama, Panama (via Windward Passage), 2,836  
 Pentland Firth, Scotland (via Strait of Belle Isle), 2,282  
 Punta Arenas, Chile, 7,274  
 Straits of Florida, 2,164

**Ports**

Angmagssalik, Greenland, 1,568  
 Argentina, Canada, 605  
 Bordeaux, France (via Strait of Belle Isle), 2,677  
 Boston, Massachusetts, U.S.A., 964  
 Colon, Panama, 2,819  
 Hamilton, Bermuda, 1,227  
 Montevideo, Uruguay, 6,113  
 Murmansk, Russia, 3,292  
 New York, New York, U.S.A., 1,128  
 Norfolk, Virginia, U.S.A., 1,338

**DALIAN, 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-Sakhalinskiy, Russia, 1,648  
 Apra, Guam, 1,974  
 Auckland, New Zealand (via Vitiaz Strait), 5,489  
 Auckland, New Zealand (west of New Ireland), 5,469  
 Busan, South Korea (via Maenggol Sudo), 543  
 Chi-lung, Taiwan, 852  
 Dagu, China, 207  
 Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,435  
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru-Kaikyo), 3,437  
 Gunsan, South Korea, 294  
 Hakodate, Japan, 1,226  
 Honolulu, Hawaii, U.S.A. (via Shimonoseki Kaikyo), 4,470  
 Honolulu, Hawaii, U.S.A., 4,531  
 Incheon, South Korea, 290  
 Kobe, Japan, 877  
 Lianyungang, China, 348  
 Lo-hsing-ta Mao-ti, China, 871  
 Manila, Philippines (east of Taiwan), 1,561  
 Manila, Philippines (via Formosa Strait), 1,571  
 Masan, South Korea, 546  
 Mogpo, South Korea (via south of Kasa Do), 377  
 Moji, Japan, 633  
 Nampo, North Korea, 180  
 Pago Pago, American Samoa, 5,035  
 Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 2,260  
 Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,285  
 Port Darwin, Australia, 3,204

Portland, Oregon, U.S.A., 5,240  
 Qingdao, China, 277  
 Qinhuangdao, China, 145  
 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 Osumi Kaikyo and south of Aleutian Islands), 5,437  
 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  
 Shanghai, China, 560  
 Sydney, Australia (via west of New Ireland), 5,015  
 Sydney, Australia (via Vitiaz Strait), 4,976  
 Valparaiso, Chile (via Shimonoseki Kaikyo), 10,324  
 Valparaiso, Chile (via Tokara Kaikyo), 10,366  
 Vladivostok, Russia, 1,057  
 Weonsan, North Korea, 848  
 Xiamen, China, 1,008  
 Yokohama, Japan (via Osumi Kaikyo), 1,235

**DALIEN, CHINA**  
 (38°56'00"N., 121°39'00"E.) See Dalian.

**DANANG, VIETNAM**  
 (16°06'30"N., 108°12'00"E.) to:

**Ports**

Cebu, Philippines, 1,049  
 Ho Chi Minh, Vietnam, 518  
 Hong Kong, China, 520  
 Manila, Philippines, 758

**DAR ES SALAAM, TANZANIA**  
 (6°49'30"S., 39°17'30"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,330  
 Port Said, Egypt, 3,238  
 Singapore, 4,042

**Ports**

Aden, Yemen, 1,751  
 Belawan, Indonesia, 3,709  
 Colombo, Sri Lanka, 2,565  
 Fremantle, Australia, 4,513  
 Malacca, Malaysia, 3,927  
 Mocambique, Mozambique, 533  
 Mtwara, Tanzania, 230  
 Penang, Malaysia, 3,754  
 Port Darwin, Australia, 5,428  
 Sabang, Indonesia, 3,443

**DARTMOUTH, ENGLAND**  
 (50°21'00"N., 3°34'20"W.) to:

**Junction Points\***

Bishop Rock, England, 122  
 Ile d'Ouessant, France, 135

**Ports**

Le Havre, France, 151

London, England, 292  
 Southampton, England, 100

**DARWIN, AUSTRALIA**  
 (12°28'30"S., 130°50'00"E.) See Port Darwin.

**DAS ISLAND, UNITED ARAB EMIRATES**  
 (25°08'04"N., 52°55'25"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,820  
 Cape Leeuwin, Australia, 5,156  
 Selat Lombok, Indonesia, 4,403  
 Port Said, Egypt, 3,002  
 Singapore, 3,541  
 Selat Sunda, Indonesia, 3,748  
 Torres Strait, Australia, 6,005

**Ports**

Aden, Yemen, 1,613  
 Belawan, Indonesia, 3,210  
 Bombay, India, 1,233  
 Fremantle, Australia, 5,087  
 Penang, Malaysia, 3,250  
 Port Sudan, 2,266

**DAVAO, PHILIPPINES**  
 (7°04'38"N., 125°37'38"E.) to:

**Junction Points\***

Singapore, 1,532  
 Torres Strait, Australia, 1,628

**Ports**

Cebu, Philippines, 439  
 Hong Kong, China, 1,382  
 Makasar, Sulawesi, 929  
 Manila, Philippines, 831  
 Sorong, Indonesia, 601

**DEEPWATER POINT, NEW JERSEY, U.S.A.**  
 (39°41'36"N., 75°30'42"W.)  
 Subtract 27 miles from Philadelphia distances.

**DELFTZIJL, NETHERLANDS**  
 (53°20'30"N., 6°56'15"E.)

Subtract 10 miles from Emden, Germany distances.

**DEN HELDER, NETHERLANDS**  
 (52°58'00"N., 4°45'22"E.) to:

**Junction Points\***

Bishop Rock, England, 509  
 Nord-Ostsee-Kanal (East Entrance), 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, Egypt, 837  
 Strait of Gibraltar (south of Greece), 1,855

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

## 30 DEVONPORT, ENGLAND

Strait of Gibraltar (via Corinth Canal), 1,838

**Ports**

Banghazi, Libya, 750  
Genova, Italy (south of Greece), 1,325  
Genova, Italy (via Corinth Canal), 1,283  
Malaga, Spain (south of Greece), 1,785  
Malaga, Spain (via Corinth Canal), 1,768  
Patrai, Greece (south of Greece), 648  
Patrai, Greece (via Corinth Canal), 489  
Rostov-na-Donu, Russia, 685  
Sfax, Tunisia, 1,081  
Thessaloniki, Greece, 372

**DEVONPORT, ENGLAND**  
(50°22'00"N., 4°11'00"W.) Add 2 miles to Plymouth distances.

**DHEKELIA, CYPRUS**  
(34°57'58"N., 33°43'57"E.) to:

**Junction Points\***

Port Said, Egypt, 241  
Strait of Gibraltar, 1,959

**Ports**

Ajaccio, Corsica, 233  
Algiers, Algeria, 1,514  
Bari, Italy, 978  
Ceuta, Morocco, 1,921  
Corfu, Greece, 819  
Derince, Turkey, 763  
Famagusta, Cyprus, 36  
Kerch, Ukraine, 793  
Egypt, 352  
Moni Anchorage, Cyprus, 34  
Ravenna, Italy, 1,255  
Tangier, Morocco, 1,948  
Taranto, Italy, 933  
Thessaloniki, Greece, 690  
Tunis, Tunisia, 1,172

**DIAMANTE, ARGENTINA**  
(32°03'48"S., 60°39'24"W.) Add 286 miles to Buenos Aires distances.

**DIEGO GARCIA, CHAGOS ARCHIPELAGO**  
(7°18'40"S., 72°28'00"E.) to:

**Junction Points\***

Singapore (via Ujung Masam Muka), 2,224

**Ports**

Aden, Yemen, 2,116  
Belawan, Indonesia, 1,860  
Colombo, Sri Lanka, 974  
Fremantle, Australia, 2,850  
Hobart, Tasmania (via D'Entrecasteaux Channel), 4,501  
Malacca, Malaysia, 2,078  
Penang, Malaysia, 1,905  
Port Darwin, Australia, 3,483  
Sabang, Indonesia, 1,594  
Victoria, Seychelles, 1,032

**DIEPPE, FRANCE**  
(49°56'58"N., 1°05'00"E.) to:

**Junction Points\***

Bishop Rock, England, 297  
Ile d'Ouessant, France, 270

**Ports**

Cherbourg, France, 105  
Plymouth, England, 206

**DIGBY, CANADA**  
(44°42'38"N., 65°46'27"W.)  
Subtract 76 miles from Parrsboro distances.

**DIKSON, RUSSIA**  
(73°30'00"N., 80°28'00"E.) to:

**Ports**

Arkhangel'sk, Russia, 1,105  
Berlevag, Norway, 1,069  
Hull, England, 2,552  
Longyearbyen, Svalbard, 1,148  
Murmansk, Russia, 1,025  
Mys Chelyuskin, Russia, 457

**DJIBOUTI, DJIBOUTI**  
(11°36'30"N., 43°08'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,063  
Port Said, Egypt, 1,374  
Singapore (north of Socotra and Strait of Malacca), 3,769

**Ports**

Aden, Yemen, 133

**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, Equatorial Guinea, 141  
Boma, Congo, 742  
Cabinda, Cabinda, 668  
Cotonou, Benin, 486  
Kribi, Cameroon, 87  
Lagos, Nigeria, 442  
Libreville, Gabon, 228  
Mayumba, Gabon, 513  
Pointe Noire, Congo, 613  
Port Gentil, Gabon, 297  
Sao Tome, Sao Tome, 285

**DOUGLAS, ISLE OF MAN**  
(54°09'00"N., 4°28'00"W.) to:

**Junction Points\***

Bishop Rock, England, 276

Fastnet Rock, 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  
Ile d'Ouessant, France, 306  
Nord-Ostsee-Kanal (East Entrance), Germany, 410  
Skagens Odde, Denmark, 527

**Ports**

Amsterdam, Netherlands, 161  
Antwerp, 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  
Southampton, England, 123  
St. Malo, France, 228  
Stavanger, Norway, 517  
Wilhelmshaven, Germany, 328

**DRAMMEN HARBOR, NORWAY**  
(59°44'18"N., 10°14'32"E.) to:

**Junction Points\***

Bishop Rock, England (via Dover Strait), 943  
Ile d'Ouessant, France (via Dover Strait), 929  
Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 358  
Nord-Ostsee-Kanal (East Entrance), Germany (via The Sound), 430  
Pentland Firth, Scotland, 504  
Skagens Odde, Denmark, 121

**Ports**

Aarhus, Denmark, 250  
Antwerp, Belgium, 647  
Bergen, Norway, 368  
Bremerhaven, Germany, 418  
Calais, France, 624  
Kobenhavn, Denmark, 262  
London, England, 656  
Narvik, Norway, 966  
Wilhelmshaven, Germany, 413  
Zeebrugge, Belgium, 593

**DUBLIN, IRELAND**  
(53°20'45"N., 6°13'00"W.) to:

**Junction Points\***

Bishop Rock, England, 232  
Fastnet Rock, 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, Northern Ireland, 189  
Newport, Wales, 219  
Port Talbot, Wales, 179  
Waterford, Ireland, 113

**DUBROVNIK, CROATIA**  
(42°38'24"N., 18°06'55"E.) to:

**Junction Points\***

Port Said, Egypt (south of Greece), 1,038  
Port Said, Egypt (via Corinth Canal), 1,025  
Strait of Gibraltar, 1,420

**Ports**

Bari, Italy, 108  
Barletta, Italy, 113  
Beirut, Lebanon, 1,092  
Cartagena, Spain, 1,177  
Genova, Italy, 856  
Kerkira, Greece, 208  
Manfredonia, Italy, 117  
Rijeka, Croatia, 276  
Sibenik, Croatia, 144  
Venezia, Italy, 320

**DUDINKA, RUSSIA**  
(69°24'00"N., 86°10'00"E.) Add 298 miles to Dikson distances.

**DUMAI, INDONESIA**  
(1°42'00"N., 101°28'00"E.) to:

**Junction Points\***

Port Said, Egypt, 4,943  
Singapore, 200

**Ports**

Al Basrah, Iraq, 3,824  
Calcutta, India, 1,579  
Cochin, India, 1,779  
Colombo, Sri Lanka, 1,496  
Madras, India, 1,512  
Vishakhapatnam, India, 1,499

**DUN LAOGHAIRE, IRELAND**  
(53°18'10"N., 6°07'40"W.) See Dublin.

**DUNDEE, SCOTLAND**  
(56°27'45"N., 2°56'40"W.) to:

**Junction Points\***

Bishop Rock, England, 713  
Ile d'Ouessant, France, 698  
Nord-Ostsee-Kanal (East Entrance), Germany, 501  
Pentland Firth, Scotland, 179  
Skagens Odde, Denmark, 455

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



**Ports**

Amsterdam, Netherlands, 374  
 Antwerp, 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**

Brisbane, Australia, 1,606  
 Burnie Harbor, Tasmania (via Bank Strait), 1,193  
 Geelong, Australia (via Banks Strait), 1,341  
 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  
 Ile d'Ouessant, France, 351  
 Nord-Ostsee-Kanal (East Entrance), Germany, 386  
 Pentland Firth, Scotland, 525  
 Skagens Odde, Denmark, 511

**Ports**

Aberdeen, Scotland, 418  
 Amsterdam, Netherlands, 135  
 Antwerp, 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 Havre, France, 144  
 Leith, Scotland, 399  
 London, England, 112  
 Newcastle, England, 307  
 Oslo, Norway, 617  
 Plymouth, England, 264  
 Portland, England, 190  
 Portsmouth, England, 150  
 Southampton, England, 168  
 Stavanger, Norway, 510  
 Wilhelmshaven, Germany, 308

**DURBAN, SOUTH AFRICA**  
(29°52'00"S., 31°02'00"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 764  
 Port Said, Egypt, 4,567  
 Singapore, 4,872

**Ports**

Albany, Australia, 4,275  
 Bombay, India, 3,829  
 Colombo, Sri Lanka, 3,704  
 East London, South Africa, 258  
 Fremantle, Australia, 4,243  
 Karachi, Pakistan, 3,915  
 Malacca, Malaysia, 4,757  
 Maputo, Mozambique, 307  
 Mombasa, Kenya, 1,718  
 Penang, Malaysia, 4,584  
 Port des Galets, Reunion Island, 1,418  
 Port Adelaide, Australia, 5,160  
 Port Darwin, Australia, 5,561  
 Port Louis, Mauritius, 1,560  
 Sabang, Indonesia, 4,273  
 Telukbayur, Indonesia, 4,307  
 Zanzibar, Tanzania, 1,607

**DURRES, ALBANIA**  
(41°18'15"N., 19°27'15"E.) to:**Junction Points\***

Port Said, Egypt, 951  
 Strait of Gibraltar, 1,349

**Ports**

Crotone, Italy, 172  
 Manfredonia, Italy, 161  
 Monopoli, Italy, 100  
 Piraievs, Greece (via Corinth Canal), 339  
 Ploce, Croatia, 214  
 Preveza, Greece, 181  
 Salamis, Greece, 343  
 Split, Croatia, 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 Limen, Russia, 824  
 Apra, Guam, 3,403  
 Auckland, New Zealand, 5,578  
 Brisbane, Australia, 5,369  
 Bukhta Shelihova, Kuril Islands, Russia, 1,411  
 Callao, Peru, 5,988  
 Dagu, China, 3,594  
 Dalian, China (via La Perouse Strait), 3,435  
 Dalian, China (via Tsugaru-Kaikyo), 3,437  
 Guayaquil, Ecuador, 5,552  
 Hakodate, Japan, 2,228  
 Ho Chi Minh, Vietnam, 4,894  
 Hobart, Tasmania, 6,365  
 Hong Kong, China, 4,026  
 Honolulu, Hawaii, U.S.A., 2,040  
 Juneau, Alaska, U.S.A., 1,136

Kasatka, Japan, 1,846  
 Kiska, Alaska, U.S.A., 596  
 Kobe, Japan, 2,833  
 Los Angeles, California, U.S.A., 2,382  
 Manila, Philippines (north of Luzon), 4,233  
 Matsuga-hana, Japan, 1,917  
 Melbourne, Australia, 6,321  
 Midway Island, 1,651  
 Nagasaki, Japan (South of Kyushu), 3,181  
 Nagasaki, Japan (via Tsugaru-Kaikyo), 3,011  
 Noumea, New Caledonia, 4,857  
 Pago Pago, American Samoa, 4,132  
 Papeete, French Polynesia, 4,400  
 Petersburg, Alaska, U.S.A., 1,215  
 Petropavlovsk-Kamchatskiy, Russia, 1,249  
 Port Darwin, Australia, 5,332  
 Prince Rupert, Canada, 1,274  
 Qingdao, China, 3,385  
 San Diego, California, U.S.A., 2,465  
 San Francisco, California, U.S.A., 2,051  
 Sand Bay, Alaska, U.S.A., 397  
 Sasebo, Japan (via Osumi Kaikyo), 3,207  
 Seattle, Washington, U.S.A., 1,707  
 Shanghai, China (via La Perouse Strait), 3,375  
 Shanghai, China (via Tsugaru-Kaikyo), 3,377  
 Shimonoseki, Japan, 2,892  
 Surabaya, Indonesia, 5,555  
 Suva, Fiji Islands, 4,493  
 Sweeper Cove, Alaska, U.S.A., 407  
 Sydney, Australia, 5,761  
 Tomari, Japan, 1,978  
 Truk, Caroline Islands, 3,493  
 Unalakleet, Alaska, U.S.A., 752  
 Valparaiso, Chile, 7,140  
 Vancouver, Canada, 1,724  
 Vladivostok, Russia, 2,518  
 Wake Island, 2,463  
 Whittier, Alaska, U.S.A., 817  
 Xiamen, China (via La Perouse Strait), 3,771  
 Xiamen, China (via Tsugaru-Kaikyo), 3,770  
 Yokohama, Japan, 2,551

**EAST LONDON, SOUTH AFRICA**  
(33°01'30"S., 27°54'30"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 508  
 Port Said, Egypt, 4,830  
 Singapore, 5,082

**Ports**

Belawan, Indonesia, 4,749  
 Durban, South Africa, 258  
 Fremantle, Australia, 4,304  
 Inhambane, Mozambique, 722  
 Malacca, Malaysia, 4,967  
 Penang, Malaysia, 4,967  
 Port Darwin, Australia, 5,673  
 Port Elizabeth, South Africa, 131

**EASTER ISLAND, SOUTH PACIFIC**  
(27°08'30"S., 109°26'30"W.) to:**Junction Points\***

Panama, Panama, 2,785

**Ports**

Islas Juan Fernandez, 1,633

**EGEDESMINDE, GREENLAND**  
(68°42'33"N., 52°53'12"W.) See Aasiaat**EGERSUND, NORWAY**  
(58°27'00"N., 6°00'00"E.) to:**Junction Points\***

Bishop Rock, England (via English Channel), 797  
 Ile d'Ouessant, France, 781  
 Pentland Firth, Scotland, 298  
 Skagens Odde, Denmark, 165

**Ports**

Aberdeen, Scotland, 273  
 Amsterdam, Netherlands, 380  
 Antwerp, 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, South Africa, 5,155  
 Port Said, Egypt, 381  
 Singapore, 4,868

**Ports**

Aden, Yemen, 1,247

**EL AAIUN, WESTERN SAHARA**  
(27°05'37"N., 13°26'55"W.) See Aaiun.**EL FERROL DEL CAUDILLO, SPAIN**  
(43°28'30"N., 8°15'00"W.) to:**Junction Points\***

Bishop Rock, England, 394  
 Ile d'Ouessant, France, 343

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

## 32 EL JADIDA, MOROCCO

**Ports**

Aviles, Spain, 133  
 Bayonne, France, 322  
 Cape Town, 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  
 San Sebastian, Spain, 302  
 St. John's, Canada, 1,861  
 Viana do Castelo, Portugal, 155

**EL JADIDA, MOROCCO**  
 (33°15'25"N., 8°30'00"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,941  
 Ile d'Ouessant, France, 998

**Ports**

Dakar, Senegal, 1,317  
 Tangier, Morocco, 207

**EL SEGUNDO, CALIFORNIA, U.S.A.**  
 (33°54'33"N., 118°27'31"W.) to:

**Junction Points\***

Panama, Panama, 2,922  
 Punta Arenas, Chile, 5,883  
 Singapore (via Balintang Channel), 7,642  
 Singapore (via 30°N., 180° and Balintang Channel), 7,867  
 Torres Strait, Australia, 6,432  
 Wilson Promontory, Australia, 6,863

**Ports**

Guaymas, Mexico, 1,230  
 Honolulu, Hawaii, U.S.A., 2,218  
 Melbourne, Australia, 7,003  
 Sydney, Australia, 6,506  
 Talcahuano, Chile, 4,941  
 Valparaiso, Chile, 4,817  
 Yokohama, Japan, 4,829

**EMDEN, GERMANY**  
 (53°21'00"N., 7°12'00"E.) to:

**Junction Points\***

Bishop Rock, England, 606  
 Ile d'Ouessant, France, 590  
 Nord-Ostsee-Kanal (East Entrance), Germany, 197  
 Pentland Firth, Scotland, 484  
 Skagens Odde, Denmark, 344

**Ports**

Aberdeen, Scotland, 394  
 Antwerp, 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

**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, Line Islands, 878  
 Seattle, Washington, U.S.A., 4,047

**ENIWETAK, 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  
 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

**ENSTED, DENMARK**  
 (55°05'00"N., 9°25'00"E.) See Abenra.

**ES SIDER, LIBYA**  
 (30°38'00"N., 18°22'00"E.) to:

**Junction Points\***

Port Said, Egypt, 796  
 Strait of Gibraltar, 1,356

**Ports**

Alexandria, Egypt, 657

Algiers, Algeria, 917  
 Ancona, Italy, 883  
 Ashdod, Israel, 885  
 Banzart, Tunisia, 585  
 Beirut, Lebanon, 920  
 Cartagena, Spain, 1,100  
 Castellon, Spain, 1,075  
 Dhekelia, Cyprus, 846  
 Genova, Italy, 950  
 Istanbul, Turkey, 833  
 Kherson, Ukraine, 1,255  
 Marsaxlokk, Malta, 360

**ESBJERG, DENMARK**  
 (55°27'30"N., 8°26'30"E.) to:

**Junction Points\***

Bishop Rock, England, 688  
 Ile d'Ouessant, France, 676  
 Nord-Ostsee-Kanal (East Entrance), Germany, 372  
 Pentland Firth, Scotland, 443  
 Skagens Odde, Denmark, 234

**Ports**

Aberdeen, Scotland, 373  
 Amsterdam, Netherlands, 255  
 Antwerp, 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  
 Hartlepool, England, 336  
 Harwich, England, 338  
 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  
 Rotterdam, Netherlands, 287  
 Southampton, England, 493  
 Savanger, Norway, 278  
 Wilhelmshaven, Germany, 129  
 Zeebrugge, Belgium, 318

**ESCRAVOS, NIGERIA**  
 (05°32'24"N., 4°59'42"E.) to:

**Junction Points\***

Bishop Rock, England, 3,902  
 Cape of Good Hope, South Africa, 2,510  
 Fastnet Rock, Ireland, 3,955  
 Grand Banks South, 4,054  
 Ile d'Ouessant, France, 3,861  
 Inishtrahull, Ireland, 4246  
 Panama, Panama, 5,150  
 Pentland Firth, Scotland, 4,960  
 Punta Arenas, Chile, 5,246  
 Strait of Gibraltar, 3,201  
 Straits of Florida, 5,306  
 Yucatan Channel, 5,431

**Ports**

Abidjan, Ivory Coast, 550  
 Accra, Ghana, 311  
 Boma, Congo, 866

Boston, Massachusetts, U.S.A., 4,851  
 Colon, Panama, 5,238  
 Douala, Cameroon, 343  
 Monrovia, Liberia, 1,012  
 Natal, Brazil, 2,514  
 New York, New York, U.S.A., 4,968  
 Norfolk, Virginia, U.S.A., 5,013  
 Philadelphia, Pennsylvania, U.S.A., 5,081  
 Port of Spain, Trinidad, 4,022  
 Sekondi, Ghana, 402  
 Takoradi, Ghana, 404

**ESMERALDAS, ECUADOR**  
 (1°01'27"N., 79°39'36"W.) to:

**Junction Points\***

Panama, Panama, 474  
 Punta Arenas, Chile, 3,486  
 Torres Strait, Australia, 8,449  
 Wilson Promontory, Australia, 7,570

**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  
 Monterey, California, U.S.A., 3,262  
 Pisco, Peru, 1,021  
 Puntarenas, Costa Rica, 614  
 Salina Cruz, Mexico, 1,290  
 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

**ESPERANCE, AUSTRALIA**  
 (33°52'00"S., 121°54'28"E.) to:

**Junction Points\***

Cape Leeuwin, Australia, 367  
 Wilson Promontory, Australia, 1,266

**Ports**

Adelaide, Australia, 889  
 Albany, Australia, 224  
 Murnie, Tasmania, 1,275  
 Melbourne, Australia, 1,239

**EUREKA, CALIFORNIA, U.S.A.**  
 (40°48'00"N., 124°10'00"W.) to:

**Junction Points\***

Panama, Panama, 3,438  
 Punta Arenas, Chile, 6,438  
 Singapore (via San Bernardino Strait), 7,352  
 Singapore (via 30°N., 180° and Balintang Channel), 7,532  
 Torres Strait, Australia, 6,030  
 Wilson Promontory, Australia, 6,843

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

**Ports**

Antofagasta, Chile, 4,963  
Auckland, New Zealand, 5,746  
Brisbane, Australia, 6,188  
Guaymas, Mexico, 1,675  
Ho Chi Minh, Vietnam (via Tsugaru Strait), 6,720  
Honolulu, Hawaii, U.S.A., 2,080  
Manzanillo, Mexico, 1,750  
Valparaiso, Chile, 5,335  
Zamboanga, Philippines, 6,313

**EVERETT, WASHINGTON, U.S.A.**

(47°58'53"N., 122°14'06"W.)  
Subtract 9 miles from Seattle, Washington distances.

**FAABORG, DENMARK**

(55°05'40"N., 10°14'22"E.) See Faborg, Denmark.

**FABORG, DENMARK**

(55°05'40"N., 10°14'22"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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.) See Kangerluarsoruseq, Greenland.

**FALL RIVER, MASSACHUSETTS, U.S.A.**

(41°42'21"N., 71°10'00"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,732  
Grand Banks South, 975  
Panama, Panama, 2,089  
Punta Arenas, Chile, 7,063  
Straits of Florida, 1,264

**Ports**

Argentina, Canada, 851  
Belem, Brazil, 3,393  
Buenos Aires, Argentina, 6,048  
Cape Town, South Africa, 6,717  
Dakar, Senegal, 3,235  
Halifax, Canada, 435  
Libreville, Gabon, 5,217  
New York, New York, U.S.A., 172  
Port of Spain, Trinidad, 1,932  
Recife, Brazil, 3,656  
Walvisbaai, Namibia, 6,154

**FALMOUTH, ENGLAND**

(50°09'20"N., 5°03'30"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 100

**Ports**

Brest, France, 137  
Cardiff, Wales, 181  
Cobh, Ireland, 182

Dublin, Ireland, 248  
Hull, England, 464  
Liverpool, England, 313  
London, England, 351  
Plymouth, England, 37  
Southampton, England, 160

**FAMAGUSTA, CYPRUS**

(35°07'20"N., 33°56'40"E.) to:

**Junction Points\***

Port Said, Egypt, 257  
Strait of Gibraltar, 1,991

**Ports**

Alexandria, Egypt, 340  
Ashdod, Israel, 203  
Banghazi, Libya, 768  
Marseille, France, 1,558  
Piraeus, 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

**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 ROCK, IRELAND\***

(51°20'00"N., 9°36'00"W.) to:

**Junction Points\***

Bishop Rock, England, 149  
Cape of Good Hope, South Africa, 5,880  
Grand Banks South, 1,714  
Ile d'Ouessant, France, 225  
Inishtrahull, Ireland, 335  
Panama, Panama (via Mona Passage), 4,247  
Punta Arenas, Chile, 7,051  
Montreal, Canada, 2,872  
Pentland Firth, Scotland (via east coast of Ireland), 625  
Pentland Firth, Scotland (via west coast of Ireland), 578  
Strait of Gibraltar, 1,068

Straits of Florida, 3,761  
Yucatan Channel, 4,058

**Ports**

Ardrossan, Scotland, 348  
Argentina, Canada, 1,819  
Avonmouth, England, 262  
Baltimore, Maryland, U.S.A., 3,098  
Barrow in Furness, England, 302  
Belem, Brazil, 3,741  
Belfast, Northern Ireland, 311  
Boston, Massachusetts, U.S.A., 2,633

Cairn Ryan, Scotland, 338  
Cardiff, Wales, 246  
Charleston, South Carolina, U.S.A., 3,239  
Charlotte Amalie, Virgin Islands, 3,279

Cienfuegos, Cuba, 3,992  
Cobh, Ireland, 64  
Colon, Panama, 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, 3,626  
Halifax, Canada, 2,315  
Hamilton, Bermuda, 2,655

Holyhead, Wales, 232  
Jacksonville, Florida, U.S.A., 3,407  
Key West, Florida, U.S.A., 3,685  
Kingston, Jamaica, 3,748  
La Habana, Cuba, 3,721  
Limerick, Ireland, 157

Liverpool, England, 295  
Londonderry, Northern Ireland (via west coast of Ireland), 371  
Mathew Town, Great Inagua Island, 3,467  
Miami, Florida, U.S.A., 3,554  
Milford Haven, Wales, 178  
New London, Connecticut, U.S.A., 2,723

New York, New York, U.S.A., 2,805  
Newport, Wales, 258  
Norfolk, Virginia, U.S.A., 2,977  
Paramaribo, Suriname, 3,554  
Philadelphia, Pennsylvania, U.S.A., 2,957

Port au Prince, Haiti, 3,619  
Port Talbot, Wales, 218  
Providence, Rhode Island, U.S.A., 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., 3,112  
Waterford, Ireland, 110  
Willemstad, Curacao, 3,708

Wilmington, North Carolina, U.S.A., 3,183

**FATEH TERMINAL, UNITED ARAB EMIRATES**

(25°36'00"N., 54°31'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,733  
Cape Leeuwin, Australia, 5,069  
Selat Lombok, Indonesia, 4,314

Port Said, Egypt, 2,915  
Singapore, 3,454  
Selat Sunda, Indonesia, 3,661  
Torres Strait, Australia (via South of Java), 5,863

**Ports**

Aden, Yemen, 1,526  
Belawan, Indonesia, 3,123  
Bombay, India, 1,146  
Fremantle, Australia, 5,000  
Penang, Malaysia, 3,163

**FECAMP, FRANCE**

(49°46'00"N., 0°21'45"E.) to:

**Junction Points\***

Ile d'Ouessant, France, 246  
Nord-Ostsee-Kanal (East Entrance), Germany, 482

**Ports**

Cherbourg, France, 79  
Plymouth, England, 183  
Rotterdam, Netherlands, 228

**FELIXSTOWE, ENGLAND**

(51°56'56"N., 1°19'00"E.) to:

**Junction Points\***

Bishop Rock, England, 377  
Ile d'Ouessant, France, 303  
Nord-Ostsee-Kanal (East Entrance), Germany, 377  
Pentland Firth, Scotland, 460  
Skagens Odde, Denmark, 478

**Ports**

Amsterdam, Netherlands, 144  
Antwerp, Belgium, 141  
Bergen, Norway, 544  
Emden, Germany, 251  
Rotterdam, Netherlands, 121  
Stavanger, Norway, 477  
Wilhelmshaven, Germany, 300

**FELTON, CUBA**

(20°50'00"N., 75°44'00"W.) See Antilla.

**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, BRAZIL**

(3°50'00"S., 32°25'00"W.) to:

**Ports**

Kingston, St. Vincent, 1,320  
New York, New York, U.S.A., 3,517  
Recife, Brazil, 300  
Santos, Brazil, 1,560

**FETHIYE, TURKEY**

(36°37'30"N., 29°07'20"E.) to:

**Junction Points\***

Port Said, Egypt, 375

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

**34 FIGUERA DA FOZ, PORTUGAL**

Strait of Gibraltar, 1,712

**Ports**

Ashdod Yam, Israel, 416  
 Banghazi, Libya, 548  
 Piraievs, Greece, 305

**FIGUERA DA FOZ,  
 PORTUGAL**  
 (40°08'23"N., 8°52'38"W.) to:

**Junction Points\***

Bishop Rock, England, 598  
 Cape of Good Hope, South  
 Africa, 5,236  
 Fastnet Rock, Ireland, 674  
 Grand Banks South, 1,840  
 Ile d'Ouessant, France, 565  
 Inishtrahull, Ireland, 970  
 Panama, Panama, 4,178  
 Pentland Firth, Scotland, 1,224  
 Punta Arenas, Chile, 6,483  
 Strait of Gibraltar, 386  
 Straits of Florida, 3,779

**Ports**

Cadiz, Spain, 341  
 Conakey, Guinea, 2,045  
 Dakar, Senegal, 1,616  
 Freetown, Sierra Leone, 2,105  
 Funchal, Madeira Island, 594  
 Lisboa, Portugal, 109  
 New York, New York, U.S.A.,  
 2,904  
 Ponta Delgada, Azores, 795  
 Recife, Brazil, 3,232  
 Tangier, Morocco, 385

**FISHGUARD, WALES**  
 (52°00'30"N., 4°58'30"W.) to:

**Junction Points\***

Bishop Rock, England, 161  
 Fastnet Rock, Ireland, 180  
 Pentland Firth, Scotland, 497

**Ports**

Avonmouth, England, 145  
 Barrow in Furness, England, 157  
 Belfast, Northern 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

**FIUMICINO, ITALY**  
 (41°44'5"N., 12°09'37"E.) to:

**Junction Points\***

Port Said, Egypt, 1,217  
 Strait of Gibraltar, 918

**Ports**

Ajaccio, Corsica, 187  
 Antalya, Turkey, 1,067  
 Banzart, Tunisia, 273  
 Bar, Montenegro, 608  
 Cartagena, Spain, 664  
 Corinth Canal (west side,  
 Korinthos), Greece, 645

Genova, Italy, 217  
 Iraklion, Kriti, 771  
 Kerch, Ukraine, 1,513  
 La Nouvelle, France, 423  
 Mersa El Hamra, Egypt, 1,058  
 Mitilini, Greece, 875  
 Oran, Algeria, 710  
 P'ot'i, Georgia, 1,675  
 Ravenna, Italy, 866  
 Tunis, Tunisia, 296

**FLEETWOOD, ENGLAND**  
 (53°55'00"N., 3°00'00"W.) to:

**Junction Points\***

Bishop Rock, England, 307  
 Fastnet Rock, Ireland, 315  
 Inishtrahull, Ireland, 189  
 Pentland Firth, Scotland, 437

**Ports**

Southampton, England, 485

**FLEKKEFJORDEN, 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\***

Nord-Ostsee-Kanal (East  
 Entrance), Germany, 52  
 Skagens Odde, Denmark, 260

**Ports**

Gdynia, Poland, 358  
 Goteborg, Sweden, 272  
 Lubeck, Germany, 131

**FLORIDA STRAITS, U.S.A.**  
 (24°25'00"N., 83°00'00"W.) See  
 Straits of Florida.

**FLOTTA TERMINAL,  
 SCOTLAND**  
 (58°52'14"N., 3°06'42"W.) See  
 Scapa Flow.

**FLUSHING, NETHERLANDS**  
 (51°26'30"N., 3°36'00"E.) See  
 Vlissingen.

**FLYING FISH COVE,  
 CHRISTMAS ISLAND**  
 (10°25'00"S., 105°43'00"E.) to:

**Junction Points\***

Cape of Good Hope, South  
 Africa, 4,923  
 Cape Leeuwin, Australia, 1,540  
 Selat Lombok, Indonesia, 603  
 Selat Sunda, Indonesia, 281

**Ports**

Colombo, Sri Lanka, 1,888

**FORCADOS OFFSHORE  
 TERMINAL, NIGERIA**  
 (5°10'00"N., 5°08'45"E.) to:

**Junction Points\***

Bishop Rock, England, 3,908  
 Cape of Good Hope, South  
 Africa, 2,495  
 Fastnet Rock, Ireland, 3,961  
 Grand Banks South, 4,060  
 Ile d'Ouessant, France, 3,868  
 Inishtrahull, Ireland, 4,252  
 Panama, Panama, 5,153  
 Pentland Firth, Scotland, 4,956  
 Punta Arenas, Chile, 5,234  
 Strait of Gibraltar, 3,208  
 Straits of Florida, 5,312  
 Yucatan Channel, 5,437

**Ports**

Abidjan, Ivory Coast, 566  
 Accra, Ghana, 320  
 Boston, Massachusetts, U.S.A.,  
 4,843  
 Dakar, Senegal, 1,653  
 Freetown, Sierra Leone, 1,207  
 Lisboa, Portugal, 3,220  
 Natal, Brazil, 2,536  
 New York, New York, U.S.A.,  
 4,905  
 Philadelphia, Pennsylvania,  
 U.S.A., 5,080  
 Port of Spain, Trinidad, 4,114  
 Porto Grande, Cape Verde Islands,  
 2,745  
 Takoradi, Ghana, 416

**FORT DAUPHIN,  
 MADAGASCAR**  
 (25°01'00"S., 47°01'00"E.) to:

**Junction Points\***

Cape of Good Hope, South  
 Africa, 1,614  
 Port Said, Egypt, 4,035  
 Singapore, 3,975

**Ports**

Belawan, Indonesia, 3,642  
 Fremantle, Australia, 3,593  
 Malacca, Malaysia, 3,860  
 Penang, Malaysia, 3,687  
 Port Darwin, Australia, 4,775  
 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  
 Cienfuegos, Cuba, 1,240  
 Colon, Panama, 1,159  
 Kingstown, St. Vincent, 89  
 La Habana, Cuba (via Mona  
 Passage and Old Bahama  
 Channel), 1,350

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  
 Port Castries, St. Lucia, 37  
 Roseau, Dominica, 50  
 San Juan, Puerto Rico, 385  
 Santiago de Cuba, Cuba, 951  
 Willemstad, Curacao, 495

**FORT LAUDERDALE,  
 FLORIDA, U.S.A.**  
 (26°05'36"N., 80°04'48"W.) to:

**Junction Points\***

Cape of Good Hope, South  
 Africa, 6,697  
 Grand Banks South, 1,778  
 Panama, Panama, 1,236  
 Punta Arenas, Chile, 6,874  
 Strait of Gibraltar, 3,778  
 Straits of Florida, 238

**Ports**

Cape Town, South Africa, 6,688  
 Elizabeth Harbor, Bahamas, 283  
 Georgetown, Guyana, 1,894  
 Hamilton, Bermuda, 883  
 Kingston, Jamaica, 769  
 La Habana, Cuba, 236  
 Lagos, Nigeria, 5,069  
 Matadi, Congo, 5,758  
 Port of Spain, Trinidad, 1,504  
 Recife, Brazil, 3,459  
 San Juan, Puerto Rico, 900

**FORT-LIBERATE, HAITI**  
 (19°41'30"N., 71°50'20"W.) to:

**Junction Points\***

Panama, Panama, 881  
 Straits of Florida, 692

**Ports**

New York, New York, U.S.A.,  
 1,283  
 Nuevitas, Cuba, 339  
 San Juan, Puerto Rico, 373

**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

**FRAY BENTOS, URUGUAY**  
 (33°06'58"S., 58°19'57"W.) Add  
 213 miles to Montevideo distances  
 or 145 miles to Buenos Aires  
 distances.

**FREDERICIA, DENMARK**  
 (55°33'45"N., 9°45'35"E.) to:

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

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 85  
Skagens Odde, Denmark, 169

**Ports**

Gdynia, Poland, 384  
Goteborg, Sweden, 181  
Lubeck, Germany, 155

**FREDERICKSHAAB, GREENLAND**

(61°59'00"N., 49°43'00"W.) See Paamuit, Greenland.

**FREDERIKSHAVN, DENMARK**

(57°26'00"N., 10°33'15"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 200  
Skagens Odde, Denmark, 24

**Ports**

Arkhangel'sk, Russia, 1,805  
Gdynia, Poland, 395  
Kobenhavn, Denmark, 142  
Lubeck, Germany, 170

**FREDERIKSTED, ST. CROIX**

(17°43'00"N., 64°53'20"W.) to:

**Ports**

Roseau, Dominica, 252

**FREDRIKSTAD, NORWAY**

(59°12'10"N., 10°57'00"E.) to:

**Junction Points\***

Bishop Rock, England, 918  
Ile d'Ouessant, France, 904  
Nord-Ostsee-Kanal (East Entrance) (via Store Baelt), Germany, 330  
Nord-Ostsee-Kanal (East Entrance) (via The Sound), Germany, 402  
Pentland Firth, Scotland, 488  
Skagens Odde, Denmark, 93

**Ports**

Bergen, Norway, 335  
Oslo, Norway, 57

**FREEPORT, BAHAMAS**

(26°31'00"N., 78°46'45"W.) to:

**Junction Points\***

Panama, Panama (via Windward Passage), 1,280  
Straits of Florida, 278  
Yucatan Channel, 456

**Ports**

Baltimore, Maryland, U.S.A., 841  
Jacksonville, Florida, U.S.A., 304  
La Habana, Cuba, 286  
Philadelphia, Pennsylvania, U.S.A., 890  
San Juan, Puerto Rico, 872  
Wilmington, North Carolina, U.S.A., 487

**FREETOWN, SIERRA LEONE**

(08°30'00"N., 13°14'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,673  
Cape of Good Hope, South Africa, 3,190  
Ile d'Ouessant, France, 2,630  
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  
Yucatan Channel, 4,229

**Ports**

Accra, Ghana, 955  
Banjul, Gambia, 450  
Boston, Massachusetts, U.S.A., 3,656  
Buenos Aires, Argentina, 3,712  
Cadiz, Spain, 1,979  
Cape Town, South Africa, 3,164  
Casablanca, Morocco, 1,812  
Colon, Panama, 3,976  
Dakar, Senegal, 496  
Funchal, Madeira Island, 1,573  
Georgetown, Ascension Island, 996  
Guantanamo, Cuba, 3,650  
Huelva, Spain, 1,999  
Key West, Florida, U.S.A., 4,076  
Las Palmas, 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  
Oporto, Portugal, 2,161  
Philadelphia, Pennsylvania, U.S.A., 3,862  
Pointe Noire, Congo, 1,788  
Ponta Delgada, Azores, 1,941  
Port of Spain, Trinidad, 2,896  
Port Harcourt, Nigeria, 1,397  
Porto Grande, Cape Verde Islands, 871  
Portsmouth, New Hampshire, U.S.A., 3,654  
Recife, Brazil, 1,632  
Rio de Janeiro, Brazil, 2,613  
San Juan, Puerto Rico, 3,141  
Santa Cruz de Tenerife, Canary Islands, 1,342  
St. Helena Island, 1,564  
Takoradi, Ghana, 859  
Vigo, Spain, 2,223

**FREMANTLE, AUSTRALIA**

(32°03'00"S., 115°44'20"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,755  
Cape Leeuwin, Australia, 181  
Selat Lombok, Indonesia, 1,440  
Port Said, Egypt, 6,310  
Selat Sunda, Indonesia, 1,691  
Torres Strait, Australia, 2,531

**Ports**

Aden, Yemen (north of Chagos Archipelago), 4,921  
Al Basrah, Iraq, 5,440  
Al Manamah, Bahrain, 5,203  
Albany, Australia, 349

Beira, Mozambique, 4,351  
Berbera, Somalia, 4,933  
Bombay, India, 3,986  
Bushehr, Iran, 5,259  
Calcutta, India (via west of Sumatra), 3,693  
Calicut, India, 3,484  
Colombo, Sri Lanka, 3,122  
Dar es Salaam, Tanzania, 4,513  
Diego Garcia, Chagos Archipelago, 2,850  
Durban, South Africa, 4,244  
East London, South Africa, 4,304  
Fort Dauphin, Madagascar, 3,593  
Geraldton, Australia, 213  
Kakinada, India, 3,515  
Karachi, Pakistan, 4,446  
Madras, India, 3,393  
Majunga, Madagascar, 4,132  
Maputo, Mozambique, 4,283  
Mocambique, Mozambique, 4,367  
Mombasa, Kenya, 4,564  
Mosselbaai, South Africa, 4,525  
Port Darwin, Australia, 1,847  
Port Louis, Mauritius (north of Mauritius), 3,202  
Port Louis, Mauritius (south of Mauritius), 3,217  
Rangoon, Burma (west of Sumatra), 3,248  
Sabang, Indonesia, 2,601  
Surabaya, Indonesia (via Bali Strait and north of Madura), 1,674  
Surabaya, Indonesia (via Bali Strait and south of Madura), 1,627  
Tamatave, Madagascar, 3,650  
Tanga, Tanzania, 4,583  
Tjilatjap, Indonesia, 1,519  
Victoria, Seychelles, 3,752  
Wyndham, Australia, 1,780  
Yampi Sound, Australia, 586  
Zanzibar, Tanzania, 4,536

**FU-CHOU, CHINA**

(26°03'30"N., 119°19'00"E.) See Fuzhou, China.

**FUJAYRAH, UNITED ARAB EMIRATES**

(25°09'00"N., 56°26'45"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,645  
Cape Leeuwin, Australia, 4,909  
Selat Lombok, Indonesia, 4,127  
Port Said, Egypt, 2,447  
Singapore, 3,356  
Selat Sunda, Indonesia, 3,509  
Torres Strait, Australia, 5,701

**Ports**

Aden, Yemen, 1,377  
Belawan, Indonesia, 2,973  
Calcutta, India, 2,961  
Fremantle, Australia, 7,614  
Penang, Malaysia, 3,007

**FUNAFUTI, TUVALU**

(8°30'45"S., 179°12'15"E.) to:

**Junction Points\***

Panama, Panama, 6,217

**Ports**

Apia, Samoa, 632

Apra, Guam, 2,455  
Brisbane, Australia, 1,895  
Hong Kong, China, 4,247  
Honolulu, Hawaii, U.S.A., 2,249  
Jaluit, Marshall Islands, 1,041  
Midway Island, 2,220  
Noumea, New Caledonia, 1,132  
Papeete, French Polynesia, 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, South Africa, 4,689  
Fastnet Rock, Ireland, 1,177  
Ile d'Ouessant, France, 1,089  
Inishtrahull, Ireland, 1,466  
Montreal, Canada, 2,850  
Pentland Firth, Scotland, 1,714  
Punta Arenas, Chile, 5,894  
Strait of Gibraltar, 589  
Straits of Florida, 3,503

**Ports**

Baltimore, Maryland, U.S.A., 3,028  
Banjul, Gambia, 1,182  
Bordeaux, France, 1,192  
Boston, Massachusetts, U.S.A., 2,604  
Brest, France, 1,110  
Buenos Aires, Argentina, 4,823  
Cadiz, Spain, 579  
Cape Town, 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, Canary Islands, 282  
Lisboa, Portugal, 532  
New York, New York, U.S.A. (direct), 2,761  
Norfolk, Virginia, U.S.A., 2,907  
Oporto, Portugal, 650  
Philadelphia, Pennsylvania, U.S.A., 2,901  
Plymouth, England, 1,234  
Ponta Delgada, Azores, 550  
Port of Spain, Trinidad, 2,819  
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

**FUZHOU, CHINA**

(26°03'30"N., 119°19'00"E.)

Fuzhou is 9 miles above Lo hsing-ta Mao-ti, on the River Min. See Lo hsing-ta Mao-ti.

**GAETA, ITALY**

(41°13'00"N., 13°35'00"E.) to:

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



## 36 GALEOTA POINT, TRINIDAD

<p><b>Junction Points*</b></p>	<p><b>Ports</b></p>	<p>Helsinki, Finland, 292 Riga, Latvia, 355 Stockholm, Sweden, 153</p>	<p>Singapore (via Karimata Strait), 2,019 Torres Strait, Australia, 1,062 Selat Wetar, Indonesia, 680</p>
<p>Port Said, Egypt, 1,150 Strait of Gibraltar, 986</p>	<p>Barranquilla, Colombia, 1,577 Belize, Belize, 935 Campeche, Mexico, 617 Carmen, Mexico, 661 Cartagena, Colombia, 1,583 Cienfuegos, Cuba, 989 Coatzacoalcos, Mexico, 680 La 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 San Juan del Norte, Nicaragua (via inside route), 1,344 Santa Marta, Colombia, 1,588 Tampico, Mexico, 473 Tuxpan, Mexico, 530 Veracruz, Mexico, 623</p>	<p><b>GDANSK, POLAND</b> (54°22'00"N., 18°40'00"E.) to:</p>	<p><b>Ports</b></p>
<p><b>Ports</b></p>	<p><b>Ports</b></p>	<p><b>Junction Points*</b></p>	<p>Anchorage, Alaska, U.S.A., 5,529 Balikpapan, Kalimantan, 1,276 Hong Kong, China, 1,783 Jakarta, Indonesia, 1,686 Manila, Philippines, 2,531 San Francisco, California, U.S.A., 6,260</p>
<p>Livorno, Italy, 228 Messina, Sicily, 209 Tunis, Tunisia, 315</p>	<p><b>Ports</b></p>	<p>Nord-Ostsee-Kanal (East Entrance), Germany, 344 Skagens Odde, Denmark (via Store Baelt), 533 Skagens Odde, Denmark (via The Sound), 418</p>	<p><b>Ports</b></p>
<p><b>GALEOTA POINT, TRINIDAD</b> (10°07'55"N., 61°00'55"W.) to:</p>	<p><b>GALWAY, IRELAND</b> (53°15'00"N., 9°03'00"W.) to:</p>	<p><b>Ports</b></p>	<p><b>GEELONG, AUSTRALIA</b> (38°08'00"S., 144°22'00"E.) to: 6 miles to Melbourne distances.</p>
<p><b>Junction Points*</b></p>	<p><b>Junction Points*</b></p>	<p>Assens, Denmark, 370 Faborg, Denmark, 368 Kobenhavn, Denmark, 468 Oslo, Norway (via Store Baelt), 657 Oslo, Norway (via The Sound), 540 Szczecin, Poland, 240</p>	<p><b>GELA, ITALY</b> (37°03'35"N., 14°13'52"E.) to:</p>
<p>Bishop Rock, England, 3,603 Cape of Good Hope, South Africa, 5,320 Panama, Panama, 1,273 Punta Arenas, Chile, 5,365 Strait of Gibraltar, 3,367 Straits of Florida (via Mona Passage), 1,588 Yucatan Channel, 1,595</p>	<p><b>Ports</b></p>	<p><b>Junction Points*</b></p>	<p><b>Junction Points*</b></p>
<p><b>Ports</b></p>	<p>Fastnet Rock, Ireland, 166 Inishtrahull, Ireland, 231 Strait of Gibraltar, 1,184</p>	<p><b>GDYNIA, POLAND</b> (54°32'00"N., 18°33'00"E.) to:</p>	<p>Port Said, Egypt, 981 Strait of Gibraltar, 968</p>
<p>Baltimore, Maryland, U.S.A., 1,983 Campeche, Mexico, 2,107 Jacksonville, Florida, U.S.A., 1,748 La Habana, Cuba (via Mona Passage and Old Bahama Channel), 1,548 Philadelphia, Pennsylvania, U.S.A., 1,999 San Juan, Puerto Rico, 637 Veracruz, Mexico, 2,236 Willemstad, Curacao, 542</p>	<p><b>Ports</b></p>	<p><b>Junction Points*</b></p>	<p><b>Ports</b></p>
<p><b>Ports</b></p>	<p>Dakar, Senegal, 2,383 Natal, Brazil, 3,786 St. John's, Canada, 1,678 Tromso, Norway, 1,352</p>	<p><b>Junction Points*</b></p>	<p>Ajaccio, Corsica, 417 Antalya, Turkey, 847 Bar, Montenegro, 443 Bat'umi, Georgia, 1,439 Canakkle, Turkey, 719 Constanta, Romania, 1,049 Famagusta, Cyprus, 1,012 Jaffa, Israel, 1,061 Malaga, Spain, 899 Marseille, France, 584 Thessaloniki, Greece, 749 Tubruq, Libya, 577</p>
<p><b>GALE, SRI LANKA</b> (6°01'45"N., 80°13'20"E.) to:</p>	<p><b>Junction Points*</b></p>	<p>Nord-Ostsee-Kanal (East Entrance), Germany, 339 Skagens Odde, Denmark, 528</p>	<p><b>Junction Points*</b></p>
<p><b>Junction Points*</b></p>	<p><b>Ports</b></p>	<p><b>Ports</b></p>	<p><b>Ports</b></p>
<p>Singapore, 1,502</p>	<p>Bishop Rock, England, 4,255 Cape of Good Hope, South Africa, 1,967 Fastnet Rock, Ireland, 4,307 Grand Banks South, 4,407 Ile d'Ouessant, France, 3,835 Inishtrahull, Ireland, 4,598 Panama, Panama, 5,099 Pentland Firth, Scotland, 5,321 Punta Arenas, Chile, 5,051 Strait of Gibraltar, 3,554 Straits of Florida, 5,659 Yucatan Channel, 5,784</p>	<p>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 Masnedssund, 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, Russia, 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</p>	<p><b>GELIBOLU, TURKEY</b> (40°24'18"N., 26°40'00"E.) Subtract 113 miles from Istanbul distances for ports outside the Black Sea and Sea of Marmara.</p>
<p><b>Ports</b></p>	<p><b>Ports</b></p>	<p><b>GAMBIA, GABON</b> (2°49'32"S., 9°56'46"E.) to:</p>	<p><b>GEMLICK, TURKEY</b> (40°25'46"N., 29°09'06"E.) to:</p>
<p>Bombay, India, 944 Calicut, India, 437 Karachi, Pakistan, 1,393 Trincomalee, Sri Lanka, 255</p>	<p><b>Junction Points*</b></p>	<p><b>Junction Points*</b></p>	<p><b>Junction Points*</b></p>
<p><b>GALLIPOLI, ITALY</b> (40°02'00"N., 17°59'00"E.) to:</p>	<p><b>Ports</b></p>	<p>Port Said, Egypt, 905 Strait of Gibraltar (south of Greece), 1,841</p>	<p><b>Ports</b></p>
<p><b>Junction Points*</b></p>	<p>Accra, Ghana, 789 Cape Town, South Africa, 1,943 Dakar, Senegal, 2,045 Douala, Cameroon, 459 Freetown, Sierra Leone, 1,588 Monrovia, Liberia, 1,363 New York, New York, U.S.A., 5,330 Sao Tome, Sao Tome, 260 Takoradi, Ghana, 1,051</p>	<p><b>GEBE ISLAND, INDONESIA</b> (0°03'50"S., 129°22'44"E.) to:</p>	<p><b>Junction Points*</b></p>
<p>Port Said, Egypt, 908 Strait of Gibraltar, 1,246</p>	<p><b>Ports</b></p>	<p><b>Junction Points*</b></p>	<p><b>Ports</b></p>
<p><b>Ports</b></p>	<p><b>Ports</b></p>	<p>Honshu, Japan, 2,187 Selat Lombok, Indonesia, 1,078 Panama, Panama, 9,116</p>	<p>Alexandria, Egypt, 722 Barcelona, Spain, 1,469 Beirut, Lebanon, 810 Canakkle, Turkey, 133 Napoli, Italy, 974 Oran, Algeria, 1,580 Piraeus, Greece, 352 Tangiers, Morocco, 1,824 Tarabulus, Libya, 948 Toulon, France, 1,343 Volos, Greece, 324 Zelinika, Montenegro, 868</p>
<p>Durres, Albania, 137 Izmir, Turkey (south of Greece), 606 Messina, Sicily, 201</p>	<p><b>GAVLE, SWEDEN</b> (60°41'28"N., 17°13'50"E.) to:</p>	<p><b>Junction Points*</b></p>	<p><b>GENERAL SANTOS CITY, PHILIPPINES</b> (6°06'15"N., 125°10'07"E.) to:</p>
<p><b>Junction Points*</b></p>	<p><b>Junction Points*</b></p>	<p><b>Ports</b></p>	<p><b>Junction Points*</b></p>
<p>Panama, Panama, 1,536 Straits of Florida, 698 Yucatan Channel, 696</p>	<p>Nord-Ostsee-Kanal (East Entrance), Germany, 615 Skagens Odde, Denmark, 676</p>	<p><b>Ports</b></p>	<p>Honshu, Japan, 2,048 Selat Lombok, Indonesia, 1,096 Panama, Panama, 9,384 Punta Arenas, Chile, 8,757</p>
<p><b>Ports</b></p>	<p><b>Ports</b></p>	<p>Gdynia, Poland, 438</p>	<p><b>Junction Points*</b></p>

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

Singapore, 1,431  
Selat Sunda, Indonesia, 1,570

**Ports**

Cebu, Philippines, 450  
Honolulu, Hawaii, U.S.A., 4,583  
Makassar, Sulawesi, 840  
Manila, Philippines, 773  
Manzanillo, Mexico, 7,702  
Monterey, California, U.S.A., 6,402

**GENOVA, ITALY**  
(44°23'52"N., 8°55'20"E.) to:

**Junction Points\***

Port Said, Egypt, 1,426  
Strait of Gibraltar, 868

**Ports**

Ajaccio, Corsica, 170  
Alexandria, Egypt, 1,316  
Algiers, Algeria, 531  
Alicante, Spain, 564  
Ancona, Italy, 1,010  
Annaba, Algeria, 458  
Banghazi, Libya, 912  
Banzart, Tunisia, 437  
Barcelona, Spain, 356  
Bari, Italy, 810  
Bastia, Corsica, 108  
Beirut, Lebanon, 1,508  
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 (south of Greece), 1,325  
Derince, Turkey (via Corinth Canal), 1,283  
Dubrovnik, Croatia, 856  
Gibraltar, 850  
Golfe-Juan, France, 101  
Haifa, Israel, 1,505  
Hyeres, France, 147  
Iraklion, Kriti, 991  
Istanbul, Turkey (south of Greece), 1,291  
Istanbul, Turkey (via Corinth Canal), 1,250  
Izmir, Turkey (south of Greece), 1,137  
Izmir, Turkey (via Corinth Canal), 1,095  
Malaga, Spain, 798  
Marseille, France, 204  
Messina, Sicily, 492  
Napoli, Italy, 338  
Nice, France, 89  
Odessa, Ukraine (south of Greece), 1,639  
Odessa, Ukraine (via Corinth Canal), 1,598  
Olbia, Sardinia, 221  
Oran, Algeria, 686  
Palermo, Sicily, 431  
Palma, Balearic Islands, 448  
Piraeus, Greece (south of Greece), 978  
Piraeus, Greece (via Corinth Canal), 896  
Port St. Louis du Rhone, France, 221  
Porto Vecchio di Piombino, Italy, 116

Rijeka, Croatia, 1,085  
Sete, France, 266  
Sibenik, Croatia, 958  
Siracusa, Sicily, 557  
Split, Croatia, 943  
St. Raphael, France, 118  
Tarabulus, Libya, 719  
Taranto, Italy, 705  
Thessaloniki, Greece (south of Greece), 1,186  
Thessaloniki, Greece (via Corinth Canal), 1,144  
Toulon, France, 171  
Trieste, Italy, 1,118  
Tubruq, Libya, 1,048  
Tunis, Tunisia, 472  
Valencia, Spain, 512  
Valletta, Malta, 584  
Venezia, Italy, 1,128  
Villefranche, France, 88  
Volos, Greece (south of Greece), 1,127  
Volos, Greece (via Corinth Canal), 1,085

**GEORGETOWN, ASCENSION ISLAND**  
(7°55'00"S., 14°25'00"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,409

**Ports**

Boma, Congo, 1,608  
Colon, Panama, 4,181  
Freetown, Sierra Leone, 996  
Lagos, Nigeria, 1,375  
Luanda, Angola, 1,657  
Malabo, Equatorial Guinea, 1,561  
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

**GEORGETOWN, GUYANA**  
(6°49'00"N., 58°10'00"W.) to:

**Junction Points\***

Bishop Rock, England, 3,643  
Cape of Good Hope, 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  
Charlotte Amalie, Virgin Islands, 814  
Colon, Panama, 1,515  
Elizabeth Harbor, Bahamas, 1,484

Guantanamo, Cuba, 1,316  
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  
La Habana, Cuba, 1,830  
Limon, Costa Rica, 1,547  
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, Suriname, 215  
Philadelphia, Pennsylvania, U.S.A., 2,223  
Pointe a Pitre, Guadeloupe, 606  
Port of Spain, Trinidad, 376  
Port Castries, St. Lucia, 482  
Portsmouth, New Hampshire, U.S.A., 2,284  
Puerto Cortes, Honduras, 1,933  
Recife, Brazil, 1,781  
Rio de Janeiro, Brazil, 2,853  
Salvador, Brazil, 2,172  
San Juan, Puerto Rico, 876  
Sint Nicolaashaven, Aruba, 856  
St. John's, Antigua, 689  
Wilmington, North Carolina, U.S.A., 2,011

**GERALDTON, AUSTRALIA**  
(28°47'00"S., 114°35'00"E.) to:

**Junction Points\***

Cape Leeuwin, Australia, 356  
Selat Lombok, Indonesia, 1,242  
Selat Sunda, Indonesia, 1,494

**Ports**

Albany, Australia, 525  
Fremantle, Australia, 213  
Port Darwin, Australia, 1,638

**GHAZAOUET, ALGERIA**  
(35°06'18"N., 1°51'30"W.) to:

**Junction Points\***

Port Said, Egypt, 1,784  
Strait of Gibraltar, 199

**Ports**

Algiers, Algeria, 278  
Alicante, Spain, 209  
Malaga, Spain, 158

**GHEENT, BELGIUM**  
(51°03'00"N., 3°44'00"E.)  
Subtract 17 miles from Antwerp 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  
Nuevas, Cuba, 82

Port Antonia, Jamaica, 323

**GIBRALTAR**  
(36°08'00"N., 6°21'30"W.) to:

**Junction Points\***

Port Said, Egypt, 1,925  
Strait of Gibraltar, 24

**Ports**

Alexandria, Egypt, 1,805  
Algiers, Algeria, 420  
Alicante, Spain, 300  
Ancona, Italy, 1,563  
Annaba, Algeria, 658  
Banghazi, Libya, 1,338  
Barcelona, Spain, 516  
Bari, Italy, 1,356  
Beirut, Lebanon, 2,017  
Brindisi, Italy, 1,298  
Cartagena, Spain, 241  
Genova, Italy, 850  
Guantanamo, Cuba (via Turks Island Passage), 3,767  
Haifa, Israel, 2,014  
Iraklion, Kriti, 1,499  
Istanbul, Turkey, 1,804  
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, Ukraine, 2,152  
Oran, Algeria, 237  
Palermo, Sicily, 922  
Palma, Balearic Islands, 453  
Piraeus, Greece (south of Greece), 1,490  
Piraeus, Greece (via Corinth Canal), 1,433  
Rijeka, Croatia, 1,630  
Savona, Italy, 835  
Sfax, Tunisia, 1,026  
Sibenik, Croatia, 1,504  
Siracusa, Sicily, 1,037  
Split, Croatia, 1,489  
Tarabulus, Libya, 1,076  
Taranto, Italy, 1,250  
Thessaloniki, Greece (south of Greece), 1,698  
Thessaloniki, Greece (via Corinth Canal), 1,682  
Toulon, France, 705  
Trieste, Italy, 1,66  
Tunis, Tunisia, 803  
Valencia, Spain, 386  
Valletta, Malta, 988  
Venezia, Italy, 1,674  
Volos, Greece (south of Greece), 1,640  
Volos, Greece (via Corinth Canal), 1,623

**GIJON, SPAIN**  
(43°33'00"N., 50°40'30"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 294

**Ports**

Casablanca, Morocco, 763  
Horta, Azores, 1,092  
St. Nazaire, France, 274

**GIZAN, SAUDI ARABIA**  
(16°53'15"N., 42°23'20"E.) to:

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

## 38 GLADSTONE HARBOR, AUSTRALIA

<p><b>Junction Points*</b></p> <p>Cape of Good Hope, South Africa, 4,344 Cape Leeuwin, Australia, 5,324 Selat Lombok, Indonesia, 4,764 Port Said, Egypt, 1,130 Singapore, 4,008 Selat Sunda, Indonesia, 4,217 Torres Strait, Australia, 6,443</p> <p><b>Ports</b></p> <p>Aden, Yemen, 400 Al Aqabah, Jordan, 988 Massawa, Ethiopia, 222 Port Sudan, Sudan, 403</p> <p><b>GLADSTONE HARBOR, AUSTRALIA</b> (23°50'00"S., 151°15'30"E.) to:</p> <p><b>Junction Points*</b></p> <p>Cape Leeuwin, Australia, 2,688 Torres Strait, Australia, 1,085</p> <p><b>Ports</b></p> <p>Brisbane, Australia, 314 Port Moresby, Papua New Guinea, 1,389 Wellington, New Zealand, 1,678</p> <p><b>GLASGOW, SCOTLAND</b> (55°51'45"N., 4°18'00"W.) to:</p> <p><b>Junction Points*</b></p> <p>Bishop Rock, England, 402 Fastnet Rock, Ireland, 395 Inishtrahull, Ireland, 146 Pentland Firth, Scotland (via The Minch), 384</p> <p><b>Ports</b></p> <p>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 Londonderry, Northern Ireland, 143 Reykjavik, Iceland, 860 Stornoway, Scotland, 283</p> <p><b>GLOUCESTER, ENGLAND</b> (51°52'00"N., 2°13'00"W.) Add 34 miles to Avonmouth distances.</p> <p><b>GODHAVN, GREENLAND</b> (69°14'00"N., 53°32'00"W.) See Qeqertarsauq, Greenland.</p> <p><b>GODTHAB, GREENLAND</b> (64°10'45"N., 51°45'14"W.) See Nuuk, Greenland.</p> <p><b>GOLCUK, TURKEY</b> (40°44'00"N., 29°49'00"E.) Add 34 miles to Istanbul distances for ports outside the Black Sea and Sea of Marmara.</p> <p><b>GOLFITO, COSTA RICA</b> (8°38'30"N., 83°10'30"W.) to:</p>	<p><b>Junction Points*</b></p> <p>Panama, Panama, 334</p> <p><b>Ports</b></p> <p>Acapulco, Mexico, 1,123 Ampala, Honduras, 432 Buenaventura, Colombia, 426 La Union, El Salvador, 4326</p> <p><b>GONAIVES, HAITI</b> (19°27'00"N., 72°42'00"W.) to:</p> <p><b>Junction Points*</b></p> <p>Panama, Panama, 805</p> <p><b>Ports</b></p> <p>Kingston, Jamaica, 263 New York, New York, U.S.A., 1,328 Port au Prince, Haiti, 70</p> <p><b>GOOD HOPE, LOUISIANA, U.S.A.</b> (29°59'35"N., 90°24'00"W.) Add 24 miles to New Orleans distances.</p> <p><b>GOOLE, ENGLAND</b> (53°42'00"N., 0°51'00"W.) Add 27 miles to Hull distances.</p> <p><b>GOOSE BAY, CANADA</b> (53°22'00"N., 60°18'00"W.) to:</p> <p><b>Junction Points*</b></p> <p>Inishtrahull, Ireland, 1,812 Strait of Gibraltar, 2,538</p> <p><b>Ports</b></p> <p>Churchill, Canada, 1,557 Reykjavik, Iceland, 1,332 St. John's, Canada, 588</p> <p><b>GOTEBORG, SWEDEN</b> (57°42'00"N., 11°57'00"E.) to:</p> <p><b>Junction Points*</b></p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 230 Skagens Odde, Denmark, 42</p> <p><b>Ports</b></p> <p>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 Middelfart, Denmark, 173 Naestved, Denmark, 199 Nakskov, Denmark, 201 Oslo, Norway, 159 Sonderborg, Denmark, 239 Veje, Denmark, 176</p> <p><b>GOTHENBURG, SWEDEN</b> (57°42'00"N., 11°57'00"E.) See Goteborg, Sweden.</p> <p><b>GOVE HARBOR, AUSTRALIA</b> (12°10'33"S., 136°38'43"E.) to:</p>	<p><b>Junction Points*</b></p> <p>Cape of Good Hope, South Africa, 6,489 Cape Leeuwin, Australia, 2,457 Torres Strait, Australia, 346 Selat Wetar, Indonesia, 611</p> <p><b>Ports</b></p> <p>Ambon, Indonesia, 767 Colombo, Sri Lanka, 3,700 Ho Chi Minh, Vietnam, 2,484 Hong Kong, China, 2,583 Manila, Philippines, 2,034 Port Darwin, Australia, 460</p> <p><b>GRAND BANKS SOUTH*</b> (42°30'00"N., 50°00'00"W.) to:</p> <p><b>Junction Points*</b></p> <p>Bishop Rock, England, 1,830 Cape of Good Hope, South Africa, 5,954 Fastnet Rock, Ireland, 1,714 Ile d'Ouessant, France, 1,877 Inishtrahull, Ireland, 1,809 Montreal, Canada, 1,335 Panama, Panama, 2,555 Pentland Firth, Scotland, 1,998 Punta Arenas, Chile, 6,440 Strait of Gibraltar, 2,070 Straits of Florida, 1,990</p> <p><b>Ports</b></p> <p>Belem, Brazil, 2,638 Boston, Massachusetts, U.S.A., 932 Dakar, Senegal, 2,336 Galway, Ireland, 1,741 Lisboa, Portugal, 1,858 St. John's, Canada, 325</p> <p><b>GRANGEMOUTH, SCOTLAND</b> (56°02'00"N., 3°41'20"W.) For distances outside the Firth of Forth add 15 miles to Leith distances.</p> <p><b>GRANTON, SCOTLAND</b> (55°59'16"N., 3°13'13"W.) See Leith.</p> <p><b>GRANVILLE, FRANCE</b> (48°50'00"N., 1°36'15"W.) to:</p> <p><b>Junction Points*</b></p> <p>Bishop Rock, England, 267 Ile d'Ouessant, France, 158</p> <p><b>Ports</b></p> <p>Dover, England, 181 Le Havre, France, 173 Plymouth, England, 149</p> <p><b>GRAVESEND, ENGLAND</b> (51°26'45"N., 0°22'30"E.) Subtract 16 miles from London distances.</p> <p><b>GREENOCK, SCOTLAND</b> (55°57'00"N., 4°45'00"W.) Subtract 17 miles from Glasgow distances.</p> <p><b>GREENVILLE, LIBERIA</b> (4°59'30"N., 9°02'55"W.) to:</p>	<p><b>Junction Points*</b></p> <p>Cape of Good Hope, South Africa, 2,826 Ile d'Ouessant, France, 2,981</p> <p><b>Ports</b></p> <p>Dakar, Senegal, 831 Takoradi, Ghana, 461</p> <p><b>GRENA, DENMARK</b> (56°24'45"N., 10°56'20"E.) to:</p> <p><b>Junction Points*</b></p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 140 Skagens Odde, Denmark, 115</p> <p><b>Ports</b></p> <p>Gdynia, Poland, 361 Goteborg, Sweden, 102 Lubeck, Germany, 169</p> <p><b>GRIMSBY, ENGLAND</b> (53°36'00"N., 0°01'00"W.) Subtract 14 miles from Hull distances.</p> <p><b>GRIMSTAD, NORWAY</b> (58°20'20"N., 8°36'05"E.) to:</p> <p><b>Junction Points*</b></p> <p>Pentland Firth, Scotland, 399</p> <p><b>Ports</b></p> <p>Bergen, Norway, 250 London, England, 542 Oslo, Norway, 135</p> <p><b>GROTON, CONNECTICUT, U.S.A.</b> (41°21'30"N., 72°05'15"W.) Use New London distances.</p> <p><b>GUANICA, PUERTO RICO</b> (17°58'00"N., 66°55'30"W.) to:</p> <p><b>Ports</b></p> <p>Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 572 Santiago de Cuba, Cuba (south of Hispaniola), 584</p> <p><b>GUANTA, VENEZUELA</b> (10°14'43"N., 64°35'30"W.) Add 1 mile to Puerto la Cruz distances.</p> <p><b>GUANTANAMO, CUBA</b> (19°54'00"N., 75°11'00"W.) to:</p> <p><b>Junction Points*</b></p> <p>Bishop Rock, England (via Windward Passage), 3,714 Fastnet Rock, Ireland (via Windward Passage), 3,597 Inishtrahull, Ireland (via Windward Passage), 3,722 Panama, Panama, 752 Pentland Firth, Scotland, 3,869 Strait of Gibraltar, 3,737 Straits of Florida, 638 Yucatan Channel, 582</p>
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\* JUNCTION POINT.—See Preface for use of junction points

**Ports**

Argentia, Canada, 1,976  
 Arkhangel'sk, Russia, 5,156  
 Bahia Honda, Cuba, 643  
 Barranquilla, Colombia, 534  
 Belem, Brazil, 2,214  
 Boston, Massachusetts, U.S.A. (via Windward Passage, Crooked Island Passage, and Nantucket Light Buoy), 1,495  
 Brest, France, 3,784  
 Buenos Aires, Argentina, 5,278  
 Cap-Haitien, Haiti, 175  
 Cape Town, South Africa, 6,290  
 Cardenas, Cuba, 539  
 Cartagena, Colombia, 586  
 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, Guyana, 1,316  
 Gibraltar (via Turks Island Passage), 3,767  
 Halifax, Canada, 1,634  
 Hamilton, Bermuda, 992  
 Horta, Azores (via Mouchoir Passage), 2,666  
 Ivittuut, 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  
 La Habana, Cuba (via Old Bahama Channel), 600  
 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  
 Portlamar, Venezuela, 884  
 Port au Prince, Haiti, 179  
 Port of Spain, Trinidad, 987  
 Port Castries, St. Lucia, 922  
 Porto Grande, Cape Verde Islands, 2,853  
 Portsmouth, New Hampshire, U.S.A. (via Crooked Island Passage and Nantucket Light Buoy), 1,512  
 Puerto Cortes, Honduras, 770  
 Reykjavik, Iceland, 3,434  
 Rio de Janeiro, Brazil, 4,170  
 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 Nicolaashaven, Aruba, 544  
 St. John's, Antigua, 837  
 Tampico, Mexico, 1,297  
 Veracruz, Mexico, 1,228  
 Willemstad, Curacao, 595

**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  
 Anapala, Honduras, 1,167  
 Antofagasta, Chile, 1,470  
 Apra, Guam, 8,147  
 Arica, Chile, 1,251  
 Auckland, New Zealand, 6,087  
 Buenaventura, Colombia, 608  
 Caldera, Chile, 1,632  
 Callao, Peru, 712  
 Coquimbo, Chile, 1,781  
 Corinto, Nicaragua, 1,071  
 Dutch Harbor, Alaska, U.S.A., 5,552  
 Esmeraldas, Ecuador, 356  
 Guaymas, Mexico, 2,640  
 Ho Chi Minh, Vietnam (north of Luzon), 10,321  
 Hong Kong, China, 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  
 Monterey, California, U.S.A., 3,434  
 Noumea, New Caledonia, 6,686  
 Pago Pago, American Samoa, 5,450  
 Papeete, French Polynesia, 4,237  
 Pisco, Peru, 788  
 Puerto Bolivar, Ecuador, 64  
 Portland, Oregon, U.S.A., 4,169  
 Puntarenas, Costa Rica, 787  
 Qingdao, China, 8,880  
 Salaverry, Peru, 440  
 Salina Cruz, Mexico, 1,495  
 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  
 Shanghai, 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, Russia, 8,044

Wake Island, 6,843  
 Yokohama, Japan, 7,987

**GUAYMAS, MEXICO**  
 (27°55'00"N., 110°54'00"W.) to:

**Junction Points\***

Honshu, Japan, 6,030  
 Panama, Panama, 2,370  
 Punta Arenas, Chile, 5,401  
 Torres Strait, Australia, 7,234  
 Tsugaru-Kaikyo, Japan, 5,850  
 Wilson Promontory, Australia, 7,354

**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  
 Los Angeles, California, U.S.A., 1,158  
 Lota, Chile, 4,442  
 Mazatlan, Mexico, 388  
 Monterey, California, U.S.A., 1,410  
 Pisco, Peru, 3,227  
 Puntarenas, Costa Rica, 1,956  
 Salina Cruz, Mexico, 1,260  
 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  
 Valparaiso, Chile, 4,291

**GUIRIA, VENEZUELA**  
 (10°34'45"N., 62°16'15"W.) to:

**Junction Points\***

Bishop Rock, England, 3,598  
 Cape of Good Hope, South Africa, 5,396  
 Grand Banks South, 2,010  
 Ile d'Ouessant, France, 3,616  
 Panama, Panama, 1,200  
 Punta Arenas, Chile, 5,562  
 Strait of Gibraltar, 3,430  
 Straits of Florida, 2,099  
 Yucatan Channel, 1,471

**Ports**

Belem, Brazil, 1,226  
 La Guaira, Venezuela, 339  
 Recife, Brazil, 2,208  
 Rio de Janeiro, 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\***

Straits of Florida, 494  
 Yucatan Channel, 534

**Ports**

Belize, Belize, 838

Campeche, Mexico, 652  
 Cap-Haitien, Haiti, 1,145  
 Carmen, Mexico, 725  
 Cartagena, Colombia, 1,449  
 Cienfuegos, Cuba, 851  
 Colon, Panama, 1,370  
 La Habana, Cuba, 564  
 Pointe a Pitre, Guadeloupe (via Old Bahama Channel and Mona Passage), 1,823  
 Pointe a Pitre, Guadeloupe (via Virgin Passage and Old Bahama Channel), 1,822  
 Port au Prince, Haiti (via Old Bahama Channel and Windward Passage), 1,176  
 Tampico, Mexico, 725  
 Tuxpan, Mexico, 751  
 Veracruz, Mexico, 800

**GUNSAN, SOUTH KOREA**  
 (35°59'18"N., 126°43'00"E.) to:

**Ports**

Busan, South Korea, 376  
 Dalian, China, 294  
 Sasebo, Japan, 343  
 Shanghai, China, 457  
 Yeosu, South Korea, 245

**HABANA, CUBA**  
 (23°08'00"N., 82°20'30"W.) See La Habana, Cuba.

**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\***

Nord-Ostsee-Kanal (East Entrance), Germany, 72  
 Skagens Odde, Denmark, 216

**Ports**

Goteborg, Sweden, 203  
 Kobenhavn, Denmark, 175  
 Lubeck, Germany, 137

**HAIFA, ISRAEL**  
 (32°49'25"N., 35°00'00"E.) to:

**Junction Points\***

Port Said, Egypt, 171  
 Strait of Gibraltar, 2,031

**Ports**

Alexandria, Egypt, 295  
 Algiers, Algeria, 1,602  
 Alicante, Spain, 1,769  
 Ancona, Italy (South of Greece), 1,272  
 Ancona, Italy (via Corinth Canal), 1,248  
 Annaba, Algeria, 1,378  
 Banghazi, Libya, 783  
 Baniyas, Syria, 153  
 Banzart, Tunisia, 1,273

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

**40 HAINES, ALASKA, U.S.A.**

Barcelona, Spain, 1,699  
 Bari, Italy (south of Greece), 1,065  
 Bari, Italy (via Corinth Canal), 1,041  
 Beirut, Lebanon, 76  
 Brindisi, Italy (south of Greece), 1,007  
 Brindisi, Italy (via Corinth Canal), 983  
 Cartagena, Spain, 1,794  
 Ceuta, Morocco, 2,012  
 Civitavecchia, Italy, 1,321  
 Genova, Italy, 1,505  
 Gibraltar, 2,014  
 Iraklion, Kriti, 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, Egypt, 410  
 Messina, Sicily, 1,023  
 Napoli, Italy, 1,194  
 Odessa, Ukraine, 1,197  
 Oran, Algeria, 1,800  
 Palermo, Sicily, 1,139  
 Palma, Balearic Islands, 1,645  
 Piraeus, Greece, 650  
 Rijeka, Croatia (south of Greece), 1,342  
 Rijeka, Croatia (via Corinth Canal), 1,315  
 Savona, Italy, 1,515  
 Sayda, Lebanon, 49  
 Sibenik, Croatia (south of Greece), 1,214  
 Sibenik, Croatia (via Corinth Canal), 1,187  
 Siracusa, Sicily, 1,013  
 Split, Croatia (south of Greece), 1,199  
 Split, Croatia (via Corinth Canal), 1,172  
 Tarabulus, Lebanon, 118  
 Tarabulus, Libya, 1,109  
 Taranto, Italy (south of Greece), 1,020  
 Taranto, Italy (via Corinth Canal), 1,003  
 Thessaloniki, Greece, 786  
 Toulon, France, 1,565  
 Trieste, Italy (south of Greece), 1,375  
 Trieste, Italy (via Corinth Canal), 1,348  
 Tunis, Tunisia, 1,260  
 Valencia, Spain, 1,767  
 Valletta, Malta, 1,038  
 Venezia, Italy (south of Greece), 1,383  
 Venezia, Italy (via Corinth Canal), 1,359  
 Volos, Greece, 728  
 Yumurtalik, Turkey, 240

**HAINES, ALASKA, U.S.A.**  
 (59°13'55"N., 135°26'10"W.) to:

**Junction Points\***

Panama, Panama, 4,386  
 Punta Arenas, Chile, 7,545

**Ports**

Antofagasta, Chile, 6,145  
 Vancouver, Canada (via Queen Charlotte Sound), 822  
 Victoria, Canada, 861

**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  
 Ho Chi Minh, Vietnam, 802  
 Hong Kong, China, 477  
 Kobe, Japan, 1,833  
 Manila, Philippines, 936  
 Qui Nhon, Vietnam, 469  
 Sanya Gang, China, 253  
 Shanghai, China (via Pai-chieh Hsia, Steep Island Passage, and Hai-nan Tao), 1,285  
 Vinh Cam Ranh, Vietnam, 597

**HAKATA, 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

**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-Sakhalinskiy, Russia, 631  
 Apia, Samoa, 4,252  
 Apra, Guam, 1,739  
 Auckland, New Zealand, 5,104  
 Avarua, Cook Islands, 5,022  
 Bohang, South Korea, 665  
 Bukhta Shelikohova, Kuril Islands, Russia, 865  
 Busan, South Korea, 686  
 Cebu, Philippines (via outside route), 2,208  
 Cebu, Philippines (via Sea of Japan), 2,177  
 Chongjin, North Korea, 509  
 Dagu, China, 1,385  
 Dalian, China, 1,226  
 Dutch Harbor, Alaska, U.S.A., 2,228  
 Hachinohe, Japan, 108  
 Hakata, Japan, 709  
 Higashi-Iwase, Japan, 380  
 Hiroshima, Japan, 787  
 Hong Kong, China, 1,810  
 Honolulu, Hawaii, U.S.A., 3,314  
 Iloilo, Philippines (via Sea of Japan), 2,199  
 Incheon, South Korea, 1,080  
 Kakarta, Indonesia (east of Direction Island and Selat Gaspar), 3,468  
 Kaluit, Marshall Islands, 2,670  
 Kagoshima, Japan, 946  
 Kamaishi, Japan, 192  
 Kasatka, Japan, 407  
 Kimchaek, North 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  
 Kushiro, Japan, 210  
 Levuka, Fiji Islands, 4,271  
 Lo-hsing-ta Mao-ti, China, 1,429  
 Los Angeles, California, U.S.A., 4,576  
 Maizuru, Japan, 460  
 Manila, Philippines, 2,066  
 Matsuga-hana, Japan, 316  
 Midway Island, 2,198  
 Miike, Japan, 864  
 Mogpo, South Korea, 897  
 Nagasaki, Japan, 801  
 Nakhodka, Russia, 377  
 Nanao, Japan, 337  
 Nevel'sk, Russia, 389  
 Niigata, Japan, 247  
 Nome, Alaska, U.S.A., 2,347  
 Noumea, New Caledonia (via Canal Woodin and Canal de la Havannah), 4,176  
 Pago Pago, American Samoa, 4,326  
 Papeete, French Polynesia, 5,249  
 Petropavlovsk-Kamchatskiy, Russia, 1,075  
 Ponape, Caroline Islands, 2,298  
 Port Darwin, Australia (via Selat Sele), 3,422  
 Prince Rupert, Canada (north of Aleutian Islands), 3,487  
 Prince Rupert, Canada (south of Aleutian Islands), 3,569  
 Pabaul, Papua New Guinea, 2,894  
 Sumoi, Japan, 248  
 Skata, 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 at 50°N.), 3,982  
 Seward, Alaska, U.S.A. (via south of Aleutian Islands), 3,069  
 Shanghai, China, 1,166  
 Shimonoseki, Japan, 683  
 Shiogama, Japan, 281  
 Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,392  
 Sydney, Australia, 4,688  
 Tan-shui, Taiwan, 1,384  
 Tomari, Japan, 301  
 Tsuruga, Japan, 447  
 Uglegorsk, Russia, 536  
 Ulsan, South Korea, 661  
 Unggi, North Korea, 486  
 Valparaiso, Chile, 9,197  
 Vladivostok, Russia, 437  
 Weihai, China, 1,169  
 Weonsan, North Korea, 638  
 Xiamen, China, 1,559  
 Yantai, 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

**HALDIA, INDIA**  
 (22°00'30"N., 88°03'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,438  
 Cape Leeuwin, Australia, 3,740  
 Selat Lombok, Indonesia, 2,815  
 Port Said, Egypt (May-September, south of Socotra), 4,760  
 Port Said, Egypt (North of Socotra), 4,656  
 Port Said, Egypt (October-April, South of Socotra), 4,639  
 Singapore, 1,593  
 Selat Sunda, Indonesia, 2,084

**Ports**

Akyab, Sittwe Harbor, Burma, 46  
 Al Basrah, Iraq, 3,537  
 Assab, Ethiopia, 3,390  
 Belawan, Indonesia, 1,270  
 Bombay, India, 2,070  
 Chittagong, Bangladesh, 311  
 Colombo, Sri Lanka, 1,202  
 Dumai, Indonesia, 1,523  
 Fremantle, Australia, 3,637  
 Mombasa, Kenya, 3,647  
 Penang, Malaysia, 1,238  
 Yenbo, Saudi Arabia, 4,092  
 Zanzibar, Tanzania, 3,720

**HALIFAX, CANADA**  
 (44°39'00"N., 63°34'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,480  
 Cape of Good Hope, South Africa, 6,502  
 Fastnet Rock, Ireland, 2,364  
 Inishtrahull, Ireland, 2,462  
 Montreal, Canada (via Cabot Strait), 955  
 Montreal, Canada (via Strait of Canso), 895  
 Panama, Panama, 2,338  
 Pentland Firth, Scotland, 2,642  
 Punta Arenas, Chile, 6,799  
 Strait of Gibraltar, 2,708  
 Straits of Florida, 1,610  
 Yucatan Channel, 1,796

**Ports**

Argentia, Canada, 448  
 Arkhangel'sk, Russia, 3,663  
 Baltimore, Maryland, U.S.A., 911  
 Belem, Brazil, 2,904  
 Bocas del Toro, Panama, 2,369  
 Bordeaux, France, 2,786  
 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, 2,674  
 Cape Town, South Africa, 6,492  
 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  
 Guantanamo, Cuba, 1,634  
 Hamilton, Bermuda, 756

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



Ivittuut, Greenland, 1,380  
 Jacksonville, Florida, U.S.A., 1,255  
 Key West, Florida, U.S.A., 1,556  
 Kingston, Jamaica, 1,795  
 La Guaira, Venezuela, 2,060  
 La Habana, Cuba, 1,614  
 Limon, Costa Rica, 2,368  
 Lisboa, Portugal, 2,500  
 Miami, Florida, U.S.A., 1,413  
 Montevideo, Uruguay, 5,617  
 Murmansk, Russia, 3,368  
 New Haven, Connecticut, U.S.A., 540  
 New York, New York, U.S.A., 600  
 Norfolk, Virginia, U.S.A., 790  
 Paamiut (Frederickshaab), Greenland, 1,406  
 Parrsboro, Canada, 330  
 Philadelphia, Pennsylvania, U.S.A., 746  
 Ponta Delgada, Azores, 1,785  
 Port au Prince, Haiti, 1,671  
 Port of Spain, Trinidad, 2,059  
 Port Castries, St. Lucia, 1,850  
 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  
 Salvador, Brazil, 3,949  
 San Juan, Puerto Rico, 1,580  
 Santa Cruz de Tenerife, Canary Islands, 2,480  
 Santiago de Cuba, Cuba, 1,683  
 Santo Domingo, Dominican Republic, 1,709  
 Savannah, Georgia, U.S.A., 1,150  
 St. John, Canada, 278  
 St. John's, Canada, 531  
 Vigo, Spain, 2,454  
 Wilmington, North Carolina, U.S.A., 1,016

**HALMSTAD, SWEDEN**  
 (56°39'06"N., 12°50'36"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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.) See Helsingborg, Sweden.

**HALUL ISLAND, QATAR**  
 (25°40'25"N., 52°27'16"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,836  
 Cape Leeuwin, Australia, 5,172  
 Selat Lombok, Indonesia, 4,415  
 Port Said, Egypt, 3,018  
 Singapore, 3,557  
 Selat Sunda, Indonesia, 3,764

**Ports**

Assab, Ethiopia, 1,773  
 Belawan, Indonesia, 3,226  
 Calcutta, India, 3,234

Colombo, Sri Lanka, 2,011  
 Karachi, Pakistan, 819  
 Tulear, Madagascar, 3,488  
 Umm Said, Qatar, 73

**HAMBURG, GERMANY**  
 (53°32'30"N., 9°69'00"E.) to:

**Junction Points\***

Bishop Rock, England, 717  
 Ile d'Ouessant, France, 703  
 Nord-Ostsee-Kanal (East Entrance), Germany, 91  
 Pentland Firth, Scotland, 555  
 Skagens Odde, Denmark, 360

**Ports**

Aberdeen, Scotland, 473  
 Amsterdam, Netherlands, 274  
 Antwerp, 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 Havre, 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, 2,769  
 Cape of Good Hope, South Africa, 6,169  
 Fastnet Rock, Ireland, 2,651  
 Inishtrahull, Ireland, 2,749  
 Montreal, Canada, 1,621  
 Panama, Panama, 1,702  
 Pentland Firth, Scotland, 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  
 Belem, Brazil, 2,274  
 Boston, Massachusetts, U.S.A., 704  
 Bridgetown, Barbados, 1,208  
 Buenos Aires, Argentina, 5,211  
 Cardenas, Cuba, 1,119  
 Charlotte Amalie, Virgin Islands, 872  
 Cienfuegos, Cuba, 1,346  
 Colon, Panama (via Caicos

Passage), 1,659  
 Elizabeth Harbor, Bahamas, 813  
 Georgetown, Guyana, 1,591  
 Guantanamo, Cuba (via Caicos Passage), 992  
 Halifax, Canada, 756  
 Key West, Florida, U.S.A., 1,091  
 Kingston, Jamaica, 1,144  
 La Guaira, Venezuela, 1,335  
 La Habana, Cuba, 1,150  
 Limon, Costa Rica, 1,715  
 Manzanillo, 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, Suriname, 1,694  
 Philadelphia, Pennsylvania, U.S.A., 746  
 Plymouth, Montserrat, 966  
 Port au Prince, Haiti, 1,016  
 Port of Spain, Trinidad, 1,346  
 Port Castries, St. Lucia, 1,149  
 Portsmouth, New Hampshire, U.S.A., 723  
 Recife, Brazil, 3,038  
 Rio de Janeiro, Brazil, 4,110  
 Roseau, Dominica, 1,061  
 San Juan, Puerto Rico, 856  
 Santiago de Cuba, Cuba, 1,031  
 Santo Domingo, Dominican Republic, 992  
 Saint Nicolaashaven, Aruba, 1,263  
 St. Georges, Grenada, 1,256  
 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\***

Nord-Ostsee-Kanal (East Entrance), Germany, 747  
 Skagens Odde, Denmark, 797

**Ports**

Gdynia, Poland, 512  
 Riga, Latvia, 384  
 Stockholm, Sweden, 325

**HAMMERFEST, NORWAY**  
 (70°40'00"N., 23°41'00"E.) to:

**Ports**

Bergen, Norway, 817  
 Harstad, Norway, 200  
 Oslo, Norway, 1,187  
 Tromso, Norway, 124

**HAMPTON ROADS, VIRGINIA, U.S.A.**  
 (36°57'00"N., 76°22'00"W.) Subtract 6 miles from Norfolk distances.

**HAMRA, EGYPT**  
 (30°58'42"N., 28°52'12"E.) See Mersa Al Hamra.

**HANGO, FINLAND**  
 (59°49'03"N., 22°56'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 564  
 Skagens Odde, Denmark, 625

**Ports**

Gdynia, Poland, 356  
 Rantk-Peterburg, Russia, 233  
 Stockholm, Sweden, 178

**HANKOU, CHINA**  
 (30°34'00"N., 114°17'30"E.) Add 592 miles to Shanghai distances for arrival Ports outside the Chang Chiang (Yangtze River).

**Ports**

Banjing, China, 385  
 Shanghai, China, 592

**HARSTAD, NORWAY**  
 (68°45'15"N., 16°34'30"E.) to:

**Junction Points\***

Skagens Odde, Denmark, 911  
 U.S.A., 723

**Ports**

Bergen, Norway, 673  
 Hammerfest, Norway, 200

**HARTLEPOOL, ENGLAND**  
 (54°41'60"N., 1°11'30"W.) to:

**Junction Points\***

Bishop Rock, England, 594  
 Ile d'Ouessant, France, 579  
 Skagens Odde, Denmark, 438

**Ports**

Amsterdam, Netherlands, 260  
 Antwerp, 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  
 Antwerp, Belgium, 97  
 Bremerhaven, Germany, 309  
 Emden, Germany, 252  
 Esbjerg, Denmark, 338  
 Hamburg, Germany, 362  
 Wilhelmshaven, Germany, 296

**HAVANA, CUBA**  
 (23°08'00"N., 82°20'30"W.) See

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

## 42 HELSINGBORG, SWEDEN

La Habana.

**HELSINGBORG, SWEDEN**  
(56°02'30"N., 12°41'30"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 176  
Skagens Odde, Denmark, 128

**Ports**

Kristiansand, Norway, 220  
Oslo, Norway, 250  
Stockholm, Sweden, 436

**HELSINGOR, DENMARK**  
(56°02'00"N., 12°37'20"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 175  
Skagens Odde, Denmark, 127

**Ports**

Kristiansand, Norway, 219  
Oslo, Norway, 249  
Stockholm, Sweden (via Store Baelt), 629  
Stockholm, Sweden (via The Sound), 445

**HELSINKI, FINLAND**  
(60°09'20"N., 24°65'40"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 625  
Skagens Odde, Denmark (via Store Baelt), 817  
Skagens Odde, Denmark (via The Sound), 687

**Ports**

Gavle, Sweden, 292  
Gdynia, Poland, 415  
Kobenhavn, Denmark, 772  
Kotka, Finland, 99  
Norrkoping, Sweden, 307  
Ornskoldsvik, Sweden, 403  
Oulu, Finland, 598  
Oxelosund, Sweden, 268  
Sankt-Peterburg, Russia, 172  
Stockholm, Sweden, 239  
Uusikaupunki, Finland, 293

**HEYSHAM, ENGLAND**  
(54°03'00"N., 2°54'10"W.) to:

**Junction Points\***

Bishop Rock, England, 315  
Fastnet Rock, Ireland, 309  
Inishtrahull, Ireland, 216  
Pentland Firth, Scotland, 435

**Ports**

Ardrossan, Scotland, 173  
Belfast, Northern Ireland, 137  
Brest, France, 422  
Cardiff, Wales, 280  
Cobh, Ireland, 248  
Fishguard, Wales, 153  
Newport, Wales, 290  
Waterford, Ireland, 196

**HIGASHI-IWASE, JAPAN**  
(36°46'00"N., 137°14'00"E.) to:

**Ports**

Busan, South Korea, 492  
Hakodate, Japan, 380  
Shanghai, China, 966  
Shimonoseki, Japan, 466  
Vladivostok, Russia, 471

**HIGASHI-IWASE, JAPAN**  
(34°46'45"N., 134°38'00"E.) to:

**Ports**

Kobe, Japan, 34  
Kure, Japan, 126  
Nagasaki, Japan, 373  
Nagoya, Japan, 259  
Sakaide, Japan, 89  
Shimotsui, Japan, 88  
Yokohama, Japan, 368

**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

**HIROSHIMA, JAPAN**  
(34°20'45"N., 132°28'15"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via south of Mindanao), 2,908  
Panama, Panama (via east of Honshu), 8,167  
Punta Arenas, Chile, 9,551  
Singapore (east of Kyushu), 2,622  
Singapore (west of Kyushu), 2,637

**Ports**

Hakodate, Japan, 787  
Kobe, Japan, 179  
Nagasaki, Japan (via Kudako Suido), 285  
Nagasaki, Japan (via Moroshima Suido), 275  
Nagasaki, Japan (via Nuwashima Suido), 277  
Nagasaki, Japan (via Obatake Seto and north of Kasasa Jima), 264  
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

**HO CHI MINH, VIETNAM**  
(10°46'00"N., 106°42'15"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 1,408  
Panama, Panama, 10,017  
Singapore, 649  
Torres Strait, Australia, 2,629

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 3,105  
Apra, Guam, 2,304  
Beihai, China, 837  
Busan, South Korea, 1,999  
Cebu, Philippines (north of North Danger Reef, Via Mindoro Strait, and Jintotolo Channel), 1,152  
Chang-kan, China, 708  
Da Nang, Vietnam, 519  
Dutch Harbor, Alaska, U.S.A., 4,894  
Guayaquil, Ecuador, 10,321  
Haiphong, Vietnam, 802  
Hong Kong, China, 917  
Honolulu, Hawaii, U.S.A., 5,542  
Iloilo, Philippines, 1,051  
Incheon, South Korea, 2,057  
Iwakuni, Japan, 2,108  
Jakarta, Indonesia, 1,025  
Kodiak, Alaska, U.S.A., 5,484  
Kompong Som, Cambodia, 419  
Los Angeles, California (via San Bernardino Strait), 7,403  
Malakal, Palau Islands, 1,801  
Manila, Philippines, 907  
Midway Island, 4,421  
Mogpo, South Korea, 1,904  
Nampo, North Korea, 2,118  
Nha Trang Bay, Vietnam, 264  
Olongapo, Philippines, 872  
Pago Pago, American Samoa, 5,216  
Palembang, Indonesia, 869  
Papeete, French Polynesia, 6,443  
Petropavlovsk-Kamchatskiy, Russia (via Chetvertyy Kuril'sky Proлив, La Perouse Strait, and Korea Strait), 3,718  
Qingdao, China, 1,969  
Qui Nhon, Vietnam, 361  
San Diego, California, U.S.A., 7,267  
San Fernando, Philippines, 927  
San Francisco, California, U.S.A., 6,878  
Sanya Gang, China, 624  
Sitka, Alaska, U.S.A., 5,963  
Surabaya, Indonesia, 1,206  
Suva, Fiji Islands, 4,679  
Tanjung Uban, Indonesia, 633  
Truk, Caroline Islands (via San Bernardino Strait), 2,799  
Tso-Ying, Taiwan, 1,131  
Vladivostok, Russia, 2,501  
Wake Island, 3,580  
Weonsan, North Korea, 2,305  
Yokohama, Japan, 2,419  
Zhenjiang, China, 838

**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, Yemen, 6,598

Albany, Australia, 1,494  
Apia, Samoa, 2,773  
Apra, Guam, 3,683  
Auckland, New Zealand, 1,521  
Avartua, Cook Islands, 2,962  
Burnie Harbor, Australia, 332  
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  
Levuka, Fiji Islands, 2,239  
Melbourne, Australia, 472  
Midway Island, 4,740  
Noumea, New Caledonia, 1,604  
Pago Pago, American Samoa, 2,783  
Papeete, French Polynesia, 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  
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.

**HOLSTEINSBORG, GREENLAND**  
(60°56'42"N., 53°41'00"W.) See Sisimiut, Greenland.

**HOLYHEAD, WALES**  
(53°19'30"N., 4°38'00"W.) to:

**Junction Points\***

Bishop Rock, England, 232  
Fastnet Rock, 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

**HONAWAR, INDIA**  
(14°16'00"N., 74°25'50"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,458  
Cape Leeuwin, Australia, 3,775  
Port Said, Egypt, 3,087  
Singapore, 2,147

**Ports**

Ail Basrah, Iraq, 1,826  
Bombay, India, 306  
Calcutta, India, 1,817  
Colombo, Sri Lanka, 590

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

Darwin, Australia, 3,925  
Fremantle, Australia, 3,696  
Okha, India, 579  
Trincomalee, Sri Lanka, 979  
Victoria, Seychelles, 1,600

**HONFLEUR, FRANCE**  
(49°25'00"N., 0°14'00"E.) See Le Havre.

**HONG KONG, CHINA**  
(22°17'00"N., 114°10'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via Linapacan Strait), 2,029  
Panama, Panama, 9,195  
Singapore, 1,454  
Selat Sunda, Indonesia, 1,807  
Torres Strait, Australia, 2,725

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 2,250  
Apia, Samoa, 4,868  
Apra, Guam, 1,822  
Auckland, New Zealand, 5,060  
Avarua, Cook Islands, 5,674  
Beihai, China, 391  
Busan, South Korea, 1,144  
Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 960  
Chang-Kan, China, 408  
Da Nang, Vietnam, 520  
Dagu, China, 1,418  
Davao, Philippines, 1,382  
Dutch Harbor, Alaska, U.S.A., 4,026  
Funafuti, Tuvalu, 4,247  
Guayaquil, Ecuador, 9,505  
Haiphong, Vietnam (via West Lamma Channel and Hainan Strait), 477  
Hakodate, Japan, 1,810  
Ho Chi Minh, Vietnam (west of Parcel Islands), 917  
Honolulu, Hawaii, U.S.A., 4,857  
Hua-lien Kang, Taiwan, 518  
Incheon, South Korea, 1,202  
Jakarta, Indonesia, 1,782  
Jaluit, Marshall Islands, 3,370  
Kobe, Japan, 1,372  
Kodiak, Alaska, U.S.A., 4,616  
Levuka, Fiji Islands, 4,574  
Lo hsing-ta Mao-ti, China, 459  
Los Angeles, California, U.S.A., 6,380  
Manila, Philippines, 631  
Midway Island, 3,728  
Mogpo, South Korea, 1,049  
Nagasaki, Japan, 1,069  
Nampo, North Korea, 1,263  
Nha Trang Bay, Vietnam, 678  
Nikolayevsk-Na-Amure, Russia, 2,394  
Nome, Alaska, U.S.A., 4,145  
Noumea, New Caledonia, 4,107  
Olongapo, Philippines, 580  
Pago Pago, American Samoa, 4,948  
Papeete, French Polynesia, 6,132  
Peng-hu Kang Taiwan, 314  
Petropavlovsk-Kamchatskiy, Russia, 2,863  
Ponape, Caroline Islands, 2,710  
Port Darwin, Australia, 2,363  
Prince Rupert, Canada (north of Aleutian Islands), 5,286  
Prince Rupert, Canada (south of

Aleutian Islands), 5,367  
Qingdao, China, 1,120  
Qui Nhon, Vietnam, 592  
Rabaul, Papua New Guinea, 2,764  
San Diego, California, U.S.A., 6,439  
San Fernando, Philippines, 489  
San Francisco, California, U.S.A. (via Osumi Kaikyo), 6,044  
Sanmen Wen, China, 650  
Sanya Gang, 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  
Shanghai, China (via Steep Island and Pai-chieh Hsia), 824  
Shimonoseki, Japan, 1,179  
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,095  
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,191  
Su-ao Kang, Taiwan, 554  
Surabaya, Indonesia, 1,925  
Suva, Fiji Islands, 4,541  
Truk, Caroline Islands, 2,376  
Tso-ying, Taiwan, 343  
Valparaiso, Chile, 10,218  
Vinh Cam Ranh, Vietnam, 707  
Vladivostok, Russia, 1,646  
Wake Island, 2,940  
Weihai, China, 1,190  
Wenzhou, China, 595  
Weonsan, North Korea, 1,450  
Xiamen, China, 290  
Yantai, China, 1,224  
Yokohama, Japan, 1,585  
Zhenjiang, China, 245

**HONIARA, SOLOMON ISLANDS**  
(9°25'39"S., 159°57'51"E.) to:

**Junction Points\***

Panama, Panama (via Central Route), 7,469  
Punta Arenas, Chile, 6,502  
Torres Strait, Australia, 1,179  
Wilson Promontory, Australia, 2,072

**Ports**

Botany Bay, Australia, 1,605  
Burnie Harbor, Australia, 2,106  
Hobart, Tasmania, 2,218  
Melbourne, Australia, 2,166  
Rabaul, Papua New Guinea, 582  
Yokohama, Japan, 2,935  
Zamboanga, Philippines, 2,483

**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-Sakhalinskiy, Russia, 3,589  
Apia, Samoa, 2,260

Apra, Guam, 3,318  
Auckland, New Zealand, 3,820  
Avarua, Cook Islands, 2,553  
Baie Taio-Hae, Marquesa Islands, 2,102  
Bikini, Marshall Islands, 2,179  
Brisbane, Australia (via Northwest Channel), 4,117  
Brito, Nicaragua, 4,155  
Busan, South Korea, 3,973  
Butaritari, Gilbert Islands, 2,050  
Callao, Peru, 5,161  
Cebu, Philippines, 4,610  
Chimbote, Peru, 5,015  
Christmas Island, Line Islands, 1,161  
Dagu, China (via Osumi Kaikyo), 4,677  
Dagu, China (via Shimonoseki Kaikyo), 4,628  
Dalian, China, 4,531  
Dalian, China (via Shimonoseki Kaikyo), 4,470  
Dutch Harbor, Alaska, U.S.A., 2,040  
Eniwetak, Marshall Islands, 2,375  
Fanning Island, North Pacific, 1,056  
Funafuti, Tuvalu, 2,249  
Guayaquil, Ecuador, 4,853  
Hakodate, Japan, 3,314  
Ho Chi Minh, Vietnam, 5,542  
Hobart, Tasmania, 4,930  
Hong Kong, China, 4,857  
Hot Springs Bay, Alaska, U.S.A., 2,076  
Howland Island, 1,650  
Iloilo, Philippines, 4,632  
Incheon, South Korea (via Maenggol Suido and Bungo Suido), 4,323  
Incheon, South Korea (via Osumi Kaikyo), 4,385  
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  
Levuka, Fiji Islands, 2,730  
Lo-hsing-ta Mao-ti, China, 4,487  
Los Angeles, California, U.S.A., 2,228  
Malakal, Palau Islands, 3,997  
Manila, Philippines (north of Luzon), 4,869  
Manila, Philippines (via San Bernardino Strait), 4,767  
Midway Island, 1,149  
Mogpo, South Korea (via Changjuk Sudo and Mango Strait), 4,146  
Nagasaki, Japan, 3,986  
Naknek, Alaska, U.S.A., 2,404  
Nampo, North Korea, 4,417  
Nome, Alaska, U.S.A., 2,674  
Noumea, New Caledonia, 3,371  
Nukualafa, Tonga Islands, 2,749  
Ocean Island, 2,480  
Pago Pago, American Samoa, 2,276  
Papeete, French Polynesia, 2,381  
Petropavlovsk-Kamchatskiy, Russia, 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  
Qingdao, China, 4,456  
Rabaul, Papua New Guinea, 3,357

Raoul Island, Kermadec Islands, 3,246  
Rongelap, Marshall Islands, 2,114  
Rotoava, Iles Tuamotu, 2,358  
Saipan, Mariana Islands, 3,230  
Salina Cruz, Mexico, 3,580  
San Diego, California, U.S.A., 2,278  
San Francisco, California, U.S.A., 2,091  
Sandakan, Sabah, 5,044  
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  
Shanghai, China (via Osumi Kaikyo), 4,336  
Shanghai, China, 4,396  
Shimonoseki, Japan (via Bungo Suido), 3,854  
Sitka, Alaska, U.S.A., 2,386  
Surabaya, Indonesia, 5,598  
Suva, Fiji Islands, 2,776  
Sweeper Cove, Alaska, U.S.A., 1,945  
Sydney, Australia, 4,420  
Talara, Peru, 4,806  
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, Russia, 3,725  
Wake Island, 2,004  
Wellington, New Zealand, 4,113  
Whittier, Alaska, U.S.A., 2,474  
Weonsan, North Korea, 3,933  
Wotho, Marshall Islands, 2,187  
Wotje Island, Marshall Islands, 1,992  
Xiamen, China, 4,592  
Yap, Caroline Islands, 3,757  
Yantai, China (via Osumi Kaikyo), 4,483  
Yokohama, Japan (via rhumb line), 3,520  
Yokohama, Japan, 3,395

**HONSHU, JAPAN\***  
(35°00'00"N., 140°30'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 3,059  
Panama, Panama, 7,614  
Punta Arenas, Chile, 9,286  
Singapore, 2,879  
Sundra Strait, Indonesia, 3,171  
Torres Strait, Australia, 3,265  
Tsugaru-Kaikyo, Japan, 484  
Selat Wetar, Indonesia, 2,838  
Wilson Promontory, Australia, 4,881

**Ports**

Davao, Philippines, 1,986  
Honolulu, Hawaii, U.S.A., 3,311  
Kobe, Japan, 417  
San Francisco, California, U.S.A., 4,454  
Seattle, Washington, U.S.A., 4,155

**HORNEFORS, SWEDEN**  
(63°36'37"N., 19°55'29"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East

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

## 44 HORSENS, DENMARK

Entrance), Germany, 767  
Skagens Odde, Denmark (via The Sound), 828

**Ports**

Burea, Sweden, 122  
Helsinki, Finland, 383  
Reposaari, Finland, 143  
Sankt-Peterburg, Russia, 534  
Stockholm, Sweden, 315

**HORSSENS, DENMARK**  
(55°51'22"N., 9°52'30"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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, 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  
Christiansted, St. Croix, 2,259  
Colon, Panama, 3,260  
Corunna, Spain, 967  
Dakar, Senegal, 1,559  
El Ferrol del Caudillo, Spain, 970  
Funchal, Madeira Island, 677  
Georgetown, Guyana, 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  
Las Palmas, 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 of Spain, Trinidad, 2,461  
Port Castries, St. Lucia, 2,265  
Port Harcourt, Nigeria, 3,391  
Porto Grande, Cape Verde Islands, 1,316  
Puerto de Pasajes, Spain, 1,260  
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 Castelo, Portugal, 935  
Vigo, Spain, 938  
Vila Real de Santo Antonio, Portugal, 1,046  
Villagarcia, Spain, 946  
Willemstad, Curacao, 2,683

**HORTEN, NORWAY**  
(59°25'00"N., 10°29'50"E.)  
Subtract 30 1/2 miles from Oslo distances.

**HOSOSIMA KO, JAPAN**  
(32°26'38"N., 131°41'48"E.)  
Subtract 62 miles from Oita distances when traveling southbound and subtract 34 miles from Oita distances when traveling eastbound.

**HOUSTON, TEXAS, U.S.A.**  
(29°45'00"N., 95°17'20"W.) Add 47 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.) See Xiamen, China.

**HUA-LIEN KANG, TAIWAN**  
(23°58'30"N., 121°37'00"E.) to:

**Ports**

Busan, South Korea, 782  
Hong Kong, China, 518  
Manila, Philippines, 648  
Mingdao, China, 792  
Shanghai, China, 533

**HUANG-PU, CHINA**  
(23°05'42"N., 113°26'30"E.) See Huangpu.

**HUANG PU, CHINA**  
(23°05'42"N., 113°26'30"E.)  
Subtract 10 miles from Kuang-chou distances.

**HUDIKSVAL, SWEDEN**  
(61°44'00"N., 17°07'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 668  
Skagens Odde, Denmark (via The Sound), 730

**Ports**

Helsinki, Finland, 315  
Odense, Denmark, 701  
Porvoo, Finland, 342  
Rostock, Germany, 588  
Sankt-Peterburg, Russia, 458  
Tallinn, Estonia, 293  
Varberg, Sweden (via The Sound), 648

**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

**HUENEME, CALIFORNIA, U.S.A.**  
(34°09'00"N., 119°12'24"W.) See Port Hueneme.

**HULL, ENGLAND**  
(53°44'30"N., 0°18'00"W.) to:

**Junction Points\***

Bishop Rock, England, 531  
Ile d'Ouessant, France, 523  
Skagens Odde, Denmark, 462

**Ports**

Amsterdam, Netherlands, 212  
Antwerp, Belgium, 265  
Arkhangelsk, Russia, 1,926  
Bergen, Norway, 471  
Boulogne, France, 225  
Bremerhaven, Germany, 332  
Dikson, Russia, 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

**HUNGNAM, NORTH KOREA**  
(39°49'00"N., 127°37'00"E.) to:

**Ports**

Busan, South Korea, 328  
Hakodate, Japan, 623  
Korsakov, Sakhalin, Russia, 794  
Shimonoseki, Japan, 397  
Vladivostok, Russia, 298

**HUSNES, NORWAY**  
(59°52'00"N., 5°46'00"E.) to:

**Junction Points\***

Bishop Rock, England (via Dover Strait), 890  
Ile d'Ouessant, France (via Dover Strait), 876  
Nord-Ostsee-Kanal (East Entrance), Germany, 476  
Pentland Firth, Scotland, 129  
Skagens Odde, Denmark, 282

**Ports**

Aberdeen, Scotland, 540  
Amsterdam, Netherlands, 757  
Antwerp, Belgium, 882  
Brevik, Norway, 575  
Dunkerque, France, 858  
Hamburg, Germany, 729  
Hull, England, 700  
Narvik, Norway, 375  
Reykjavik, Iceland, 924  
Zeebrugge, Belgium, 824

**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, Russia, 1,531  
St. John's, Canada, 1,437

**HYERES, FRANCE**  
(43°05'00"N., 6°12'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,474  
Strait of Gibraltar, 725

**Ports**

Annaba, Algeria, 384  
Barcelona, Spain, 218  
Genova, Italy, 147

**IGARKA, RUSSIA**  
(67°28'00"N., 86°35'00"E.) Add 434 miles to Dikson distances.

**IJMUIDEN, NETHERLANDS**  
(52°28'00"N., 4°34'00"E.)  
Subtract 14 miles from Amsterdam distances.

**ILE D'OUessant, FRANCE \***  
(48°40'00"N., 5°30'00"W.) to:

**Junction Points\***

Bishop Rock, England, 80  
Cape of Good Hope, South Africa, 5,746  
Fastnet Rock, Ireland, 225  
Grand Banks South, 1,877  
Montreal, Canada (via Strait of Belle Isle), 2,901  
Nord-Ostsee-Kanal (East Entrance), Germany, 716  
Panama, Panama (via Mona Passage), 4,374  
Pentland Firth, Scotland, 872  
Punta Arenas, Chile, 6,986  
Skagens Odde, Denmark, 833  
Strait of Gibraltar, 918

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



**Ports**

Aberdeen, Scotland, 715  
 Agadir, Morocco, 1,136  
 Amsterdam, Netherlands, 465  
 Anecho, Togo, 3,704  
 Antwerp, Belgium, 441  
 Aviles, Spain, 307  
 Bata, Equatorial Guinea, 4,173  
 Bayonne, France, 345  
 Belem, Brazil, 3,748  
 Bergen, Norway, 894  
 Bilbao, Spain, 346  
 Bissau, Guinea-Bissau, 2,401  
 Bordeaux, France, 321  
 Bremerhaven, Germany, 647  
 Brest, France, 55  
 Buchanan, Liberia, 2,904  
 Buenos Aires, Argentina, 5,916  
 Cadiz, Spain, 894  
 Caen, France, 240  
 Calabar, Nigeria, 4,054  
 Calais, France, 321  
 Cape Town, South Africa, 5,743  
 Casablanca, Morocco, 960  
 Corunna, Spain, 331  
 Cotonou, Benin, 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 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  
 Oporto, Portugal, 494  
 Oslo, Norway, 944  
 Paramaribo, Suriname, 3,613  
 Plymouth, England, 117  
 Ponta Delgada, Azores, 1,101  
 Port Etienne, Mauritania, 1,826  
 Port Harcourt, Nigeria, 3,974  
 Porto Grande, Cape Verde Islands, 2,137  
 Portsmouth, England, 227  
 Puerto de Passajes, Spain, 340  
 Rabat, Morocco, 954  
 Recife, Brazil, 3,743

Rio de Janeiro, Brazil, 4,815  
 Rota, Spain, 885  
 Rotterdam, Netherlands, 444  
 Safi, Morocco, 1,023  
 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, Morocco, 1,196  
 Southampton, England, 223  
 St. Helena Island, 4,120  
 St. Malo, France, 141  
 St. Nazaire, France, 184  
 Stavanger, Norway, 823  
 Tema, Ghana, 3,597  
 Viana do Castelo, Portugal, 467  
 Victoria, Cameroon, 4,126  
 Vigo, Spain, 439  
 Vila Real de Santo Antonio, Portugal, 836  
 Villagarcia, Spain, 433  
 Wilhelmshaven, Germany, 639  
 Willemstad, Curacao, 3,821  
 Zeebrugge, Belgium, 380

**ILICHIVS'K, UKRAINE (BLACK SEA)**

(46°18'00"N., 30°45'46"E.) to:

**Junction Points\***

Port Said, Egypt, 1,168  
 Strait of Gibraltar (via Corinth Canal), 4,035  
 Strait of Gibraltar (south of Greece), 4,095

**Ports**

Alexandria, Egypt, 1,106  
 Beirut, Lebanon, 1,216  
 Constanta, Romania, 158  
 Haifa, Israel, 1,219  
 Iraklion, Kriti, 817  
 Istanbul, Turkey, 360  
 Napoli, Italy (via Corinth Canal), 1,298  
 Napoli, Italy (south of Greece), 1,361  
 Valencia, Spain (via Corinth Canal), 1,893  
 Valencia, Spain (south of Greece), 1,953

**ILIGAN, PHILIPPINES**

(8°13'50"N., 124°13'50"E.) to:

**Junction Points\***

Honshu, Japan, 1,843  
 Selat Lombok, Indonesia, 1,265  
 Panama, Panama, 9,449  
 Punta Arenas, Chile, 9,053  
 Singapore, 1,343  
 Selat Sunda, Indonesia, 1,587  
 Torres Strait, Australia, 1,953  
 Tsugaru-Kaikyo, Japan, 2,312  
 Selat Wetar, Indonesia, 1,351

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 2,763  
 Busan, Korea, 1,644  
 Manila, Philippines, 555  
 Nagasaki, Japan, 1,530  
 Puerto Princesa, Philippines, 365

San Francisco, California, U.S.A., 6,174  
 Vladivostok, Russia, 2,161

**ILO, PERU**

(17°38'09"S., 71°20'58"W.) to:

**Junction Points\***

Panama, Panama, 1,851  
 Punta Arenas, Chile, 2,341  
 Torres Strait, Australia, 8,347  
 Wilson Promontory, Australia (via 30°S.), 7,421  
 Wilson Promontory, Australia (via 40°S.), 7,160

**Ports**

Antofagasta, Chile, 367  
 Arica, Chile, 85  
 Callao, Peru, 503  
 Corinto, Nicaragua, 2,102  
 Pisco, Peru, 382  
 San Nicolas, Peru, 276  
 Supe Bay, Peru, 623  
 Talcahuano, Chile, 1,147  
 Valparaiso, Chile, 929

**ILOILO, PANAY, PHILIPPINES**

(10°42'00"N., 122°34'40"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 1,247  
 Panama, Panama, 9,235  
 Singapore (via Lumbucan Channel), 1,268

**Ports**

Apra, Guam, 1,366  
 Batangas, Philippines, 270  
 Cebu, Philippines, 176  
 Dagu, China, 1,929  
 Hakodate, Japan (via Sea of Japan), 2,199  
 Ho Chi Minh, Vietnam, 1,051  
 Honolulu, Hawaii, U.S.A., 4,632  
 Incheon, South Korea, 1,678  
 Jakarta, Indonesia (via Lumbucan Channel and Selat Gaspar), 1,476  
 Kobe, Japan, 1,623  
 Kota Kinabalu, Sabah, 501  
 Kuching, Sarawak, 948  
 Lo hsing-ta Mao-ti, China (via Balintang Channel), 1,073  
 Manila, Philippines (via Verde Island Passage), 361  
 Nagasaki, Japan, 1,428  
 Petropavlovsk-Kamchatskiy, Russia, 3,123  
 San Francisco, California, U.S.A., 6,168  
 Shanghai, China, 1,343  
 Shimonoseki, Japan, 1,569  
 Vladivostok, Russia, 2,048  
 Weihai, China, 1,701  
 Xiamen, China, 987  
 Yantai, China, 1,735  
 Yokohama, Japan, 1,784  
 Zamboanga, Philippines, 241

**ILULISSAT (JAKOBHAVN), 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

**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

**IMMINGHAM, ENGLAND**

(53°38'00"N., 0°11'00"W.)

Subtract 8 miles from Hull distances.

**INCHEON, SOUTH KOREA**

(37°28'00"N., 126°37'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 2,885  
 Panama, Panama, 8,474  
 Singapore, 2,560  
 Selat Sunda, Indonesia, 2,913  
 Selat Wetar, Indonesia (via Molucca Passage and Selat Manipa), 2,767

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia (via Maenggoi Sudo), 1,507  
 Apra, Guam (via Kaikyo Strait), 1,835  
 Bangkok, Thailand, 2,591  
 Bohang, South Korea, 51  
 Busan, South Korea, 402  
 Cebu, Philippine (via San Bernardino Strait), 1,656  
 Dagu, China, 465  
 Dalian, China, 290  
 Hakodate, Japan, 1,080  
 Ho Chi Minh, Vietnam, 2,057  
 Hong Kong, China, 1,202  
 Honolulu, Hawaii, U.S.A. (via Maenggoi Sudo and Bungo Suido), 4,323  
 Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,387  
 Iloilo, Philippines, 1,678  
 Jakarta, Indonesia, 2,894  
 Kobe, Japan, 733  
 Lianyungang, China, 389  
 Lo hsing-ta Mao-ti, China, 818  
 Manila, Philippines, 1,498  
 Masan, South Korea, 403  
 Misumi, Japan, 478  
 Mogpo, South Korea (via south of Kasa Do), 236  
 Mogpo, South Korea (via Myondo Suido), 189  
 Moji, Japan, 485  
 Nagasaki, Japan, 453  
 Nampo, North Korea, 216  
 Osaka, Japan, 721  
 Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait and Maenggoi Sudo), 2,120  
 Petropavlovsk-Kamchatskiy, Russia (via Osumi Kaikyo), 2,449  
 Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,136

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



**46 INISHTRAHULL, IRELAND**

Port Darwin, Australia (via Moluca Passage), 3,072  
 Qingdao, China, 333  
 Qinhuangdao China, 406  
 Sanmen Wen, China, 628  
 Shanghai, China (via Nan Shui-Tao), 503  
 Shimonoseki, Japan, 489  
 Su-ao Kang, Taiwan, 823  
 Tso-Ying, Taiwan, 975  
 Ulsan, South Korea, 435  
 Vladivostok, Russia (via Malmud Sudo), 911  
 Weihai, China, 238  
 Wenzhou, China, 723  
 Weonsan, North Korea (via Maenggol Sudo), 707  
 Xiamen, China, 943  
 Yantai, China, 273  
 Yokohama, Japan (via Maemul Sudo and Bungo Sudo), 1,016  
 Yokohama, Japan (via Naikai), 1,070

**INISHTRAHULL, IRELAND\***  
(55°25'00"N., 7°30'00"W.) to:**Junction Points\***

Bishop Rock, England, 395  
 Cape of Good Hope, South Africa, 6,141  
 Fastnet Rock, Ireland, 335  
 Grand Banks South, 1,809  
 Montreal, Canada (via Strait of Belle Isle), 2,545  
 Pentland Firth, Scotland, 272  
 Punta Arenas, Chile, 7,315  
 Strait of Gibraltar, 1,350

**Ports**

Adrossan, Scotland, 95  
 Argentina, Canada, 1,874  
 Arkhangel'sk, Russia, 1,900  
 Baltimore, Maryland, U.S.A., 3,190  
 Barrow in Furness, England, 186  
 Belem, Brazil, 3,972  
 Belfast, Northern Ireland, 97  
 Boston, Massachusetts, U.S.A., 2,723  
 Buenos Aires, Argentina, 6,243  
 Cairn Ryan, Scotland, 91  
 Charleston, South Carolina, U.S.A., 3,331  
 Charlotte Amalie, Virgin Islands, 3,427  
 Churchill, Canada (via 75 miles off Kap Farvel), 2,760  
 Cienfuegos, Cuba, 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, Guyana, 3,779  
 Glasgow, Scotland, 146  
 Goose Bay, Canada, 1,812  
 Guantanamo, Cuba, 3,690  
 Halifax, Canada, 2,406  
 Hamilton, Bermuda, 2,747  
 Holyhead, Wales, 181  
 Horta, Azores, 1,329  
 Ivittuut, Greenland (direct), 1,392  
 Ivittuut, Greenland (via 75 miles

off Kap Farvel), 1,450  
 Jacksonville, Florida, U.S.A., 3,499  
 Key West, Florida, U.S.A., 3,777  
 Kingston, Jamaica, 3,853  
 La Habana, Cuba, 3,843  
 Limerick, Ireland, 279  
 Lisboa, Portugal, 1,093  
 Liverpool, England, 210  
 Miami, Florida, U.S.A., 3,777  
 Milford Haven, Wales, 286  
 New Haven, Connecticut, U.S.A., 2,867  
 New London, Connecticut, U.S.A., 2,815  
 New York, New York, U.S.A., 2,896  
 Newport, Wales, 371  
 Norfolk, Virginia, U.S.A., 3,069  
 Philadelphia, Pennsylvania, U.S.A., 3,049  
 Port of Spain, Trinidad, 3,706  
 Port Au Prince, Haiti, 3,724  
 Port Castries, St. Lucia, 3,499  
 Port Talbot, Wales, 331  
 Providence, Rhode Island, U.S.A., 2,804  
 Qeqertarsuaq (Godhavn), Greenland (via 75 miles off Kap Farvel), 1,953  
 Qeqertarsuaq (Godhavn), Greenland, 1,901  
 Recife, Brazil, 4,071  
 Reykjavik, Iceland, 729  
 Rio de Janeiro, Brazil, 5,143  
 San Juan, Puerto Rico, 3,436  
 Santa Cruz de Tenerife, Canary Islands, 1,704  
 Santo Domingo, Dominican Republic, 3,621  
 St. John's, Canada, 1,720  
 Washington, D.C., U.S.A., 3,204  
 Waterford, Ireland, 276  
 Wilmington, North Carolina, 3,275

**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  
 Antwerp, 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

**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  
 Caldera, Chile, 420  
 Callao, Peru, 659  
 Coquimbo, Chile, 602  
 Corinto, Nicaragua, 2,247  
 Esmeraldas, Ecuador, 1,550  
 Guayaquil, Ecuador, 1,317  
 Guaymas, Mexico, 3,750  
 Lota, Chile, 1,033  
 Monterey, California, U.S.A., 4,540  
 Pisco, Peru, 560  
 Puntarenas, Costa Rica, 2,062  
 Salina Cruz, Mexico, 2,645  
 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

**IRAKLION, KRITI**  
(35°20'41"N., 25°08'24"E.) to:**Junction Points\***

Port Said, Egypt, 455  
 Strait of Gibraltar, 1,516

**Ports**

Al Latakia, Syria, 527  
 Alexandria, Egypt, 372  
 Algiers, Algeria, 1,087  
 Kalamai, Greece, 197  
 Khalkis, Greece, 210  
 Kyrenia, Cyprus, 406  
 La Spezia, Italy, 956  
 Limassol, Cyprus, 405  
 Livorno, Italy, 920  
 Malaga, Spain, 1,446  
 Marseille, France, 1,083  
 Matruh, Egypt, 308  
 Messina, Sicily, 510  
 Napoli, Italy, 681  
 Navplion, Greece, 237  
 Odessa, Ukraine, 793  
 Oran, Algeria, 1,284  
 Palermo, Sicily, 626  
 Palma, Balearic Islands, 1,130  
 Piraeus, Greece, 175  
 Rhodes, Greece, 171  
 Rijeka, Croatia, 831  
 Salamis, Greece, 190  
 Savona, Italy, 1,002  
 Siracusa, Sicily, 495  
 Split, Croatia, 689  
 Tarabulus, Libya, 630  
 Taranto, Italy, 509  
 Thessaloniki, Greece, 351  
 Toulon, France, 1,051  
 Trieste, Italy, 865  
 Tunis, Tunisia, 745  
 Valencia, Spain, 1,252  
 Valletta, Malta, 528  
 Venezia, Italy, 872  
 Volos, Greece, 292  
 Yumurtalik, Turkey, 540

**ISABEL DE SAGUA, CUBA**  
(22°57'00"N., 80°00'24"W.) to:**Junction Points\***

Straits of Florida, 195  
 Yucatan Channel, 329

**Ports**

Jacksonville, Florida, U.S.A., 507  
 La Habana, Cuba, 151  
 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, Egypt, 381  
 Strait of Gibraltar, 2,054

**Ports**

Beirut, Lebanon, 180  
 Constanta, Romania, 1,044  
 Istanbul, Turkey, 847  
 Izmir, Turkey, 652  
 Nice, France, 1,553  
 Patrai, Greece (south of Greece), 846  
 Patrai, Greece (via Corinth Canal), 748  
 Piraeus, Greece, 656  
 Pula, Croatia (south of Greece), 1,341  
 Pula, Croatia (via Corinth Canal), 1,301  
 Rostov-na-Donu, Russia, 1,483  
 Sete, France, 1,675  
 Sfax, Tunisia, 1,282  
 Tarabulus, Libya, 1,167  
 Thessaloniki, Greece, 784  
 Tubruq, Libya, 667

**ISLA DE PASCUA, SOUTH PACIFIC**  
(27°08'30"S., 109°26'30"W.) See Easter Island.**ISLAS JUAN FERNANDEZ, SOUTH PACIFIC**  
(33°38'00"S., 78°49'40"W.) to:**Ports**

Easter Island, 1,633  
 Honolulu, Hawaii, U.S.A., 5,595  
 Puerto Montt, Chile, 616  
 Valparaiso, Chile, 364

**ISTANBUL, TURKEY**  
(41°01'15"N., 28°59'09"E.) to:**Junction Points\***

Port Said, Egypt, 804  
 Strait of Gibraltar, 1,821

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

**Ports**

Alexandria, Egypt, 742  
 Alexandroupolis, Greece, 200  
 Algiers, Algeria (south of Greece), 1,393  
 Algiers, Algeria (via Corinth Canal), 1,376  
 Alicante, Spain, 1,560  
 Almeria, Spain, 1,659  
 Ancona, Italy (south of Greece), 1,058  
 Ancona, Italy (via Corinth Canal), 96  
 Annaba, Algeria, 1,168  
 Banghazi, Libya, 716  
 Banzart, Tunisia, 1,063  
 Barcelona, Spain, 1,486  
 Bari, Italy (south of Greece), 851  
 Bari, Italy (via Corinth Canal), 755  
 Bat'umi, Georgia, 591  
 Beirut, Lebanon, 896  
 Brindisi, Italy (south of Greece), 793  
 Brindisi, Italy (via Corinth Canal), 697  
 Cagliari, Sardinia, 1,133  
 Cartagena, Spain, 1,573  
 Catania, Sicily, 810  
 Ceuta, Morocco, 1,802  
 Civitavecchia, Italy (south of Greece), 1,107  
 Civitavecchia, Italy (via Corinth Canal), 1,066  
 Constanta, Romania, 201  
 Genova, Italy, 1,291  
 Gibraltar, 1,804  
 Haifa, Israel, 849  
 Iraklion, Kriti, 445  
 Iskenderun, Turkey, 847  
 Izmir, Turkey, 292  
 La Spezia, Italy, 1,256  
 Larnaca, Cyprus, 766  
 Livorno, Italy, 1,220  
 Malaga, Spain, 1,752  
 Marseille, France, 1,383  
 Mersin, Turkey, 789  
 Messina, Sicily, 810  
 Napoli, Italy, 981  
 Nice, France, 1,321  
 Novorossiysk, Russia, 460  
 Odessa, Ukraine, 352  
 Oran, Algeria, 1,590  
 Palermo, Sicily, 926  
 Palma, Balearic Islands, 1,446  
 Piraeus, Greece, 364  
 Pula, Croatia, 1,124  
 Rhodes, Greece, 445  
 Rijeka, Croatia (south of Greece), 1,128  
 Rijeka, Croatia (via Corinth Canal), 1,029  
 Rostov-na-Donu, Russia, 640  
 Savona, Italy, 1,301  
 Sete, France, 1,442  
 Sibenik, Croatia (south of Greece), 1,001  
 Sibenik, Croatia (via Corinth Canal), 902  
 Siracusa, Sicily, 798  
 Split, Croatia (south of Greece), 986  
 Split, Croatia (via Corinth Canal), 887  
 Tarabulus, Libya, 953  
 Taranto, Italy (south of Greece), 806  
 Taranto, Italy (via Corinth Canal), 717  
 Thessaloniki, Greece, 338  
 Toulon, France, 1,351  
 Trieste, Italy (south of Greece), 1,162

Trieste, Italy (via Corinth Canal), 1,063  
 Tunis, Tunisia, 1,050  
 Valencia, Spain, 1,558  
 Valletta, Malta, 837  
 Venezia, Italy (south of Greece), 1,169  
 Venezia, Italy (via Corinth Canal), 1,073  
 Volos, Greece, 329

**ITOZAKICHO, JAPAN**  
 (34°23'00"N., 133°06'00"E.):

**Ports**

Kobe, Japan, 113  
 Kure, Japan, 73  
 Sasebo, Japan, 271  
 Shimonoseki, Japan, 133  
 Shiogama, Japan, 662  
 Yokohama, Japan, 446

**IVITTUUT, GREENLAND**  
 (61°12'30"N., 48°10'00"W.):

**Junction Points\***

Bishop Rock, England, 1,608  
 Inishtrahull, Ireland, 1,392  
 Montreal, Canada, 1,472  
 Pentland Firth, Scotland, 1,440  
 Strait of Gibraltar, 2,283  
 Straits of Florida, 2,925

**Ports**

Argentina, Canada, 1,023  
 Arkhangel'sk, Russia, 2,573  
 Boston, Massachusetts, U.S.A., 1,731  
 Colon, Panama, 3,536  
 Guantanamo, Cuba, 2,873  
 Halifax, Canada, 1,380  
 Murmansk, Russia, 2,201  
 New York, New York, U.S.A., 1,933  
 Norfolk, Virginia, U.S.A., 2,116  
 Philadelphia, Pennsylvania, U.S.A., 2,086  
 Portsmouth, New Hampshire, U.S.A., 1,709  
 Qeqertarsuaq Godhavn, Greenland, 560  
 Reykjavik, Iceland, 887  
 San Juan, Puerto Rico, 2,720  
 St. John's, Canada, 849

**IWAKUNI, JAPAN**  
 (34°10'00"N., 132°17'00"E.):

**Ports**

Apra, Guam, 1,437  
 Ho Chi Minh, Vietnam, 2,108  
 Kobe, Japan, 166  
 Shimonoseki, Japan, 93  
 Yokohama, Japan, 497

**IZMIR, TURKEY**  
 (38°25'39"N., 21°07'58"E.):

**Junction Points\***

Port Said, Egypt, 608  
 Strait of Gibraltar (south of Greece), 1,667

**Ports**

Alexandria, Egypt, 547  
 Algiers, Algeria, 1,238

Alicante, Spain, 1,405  
 Ancona, Italy, 904  
 Annaba, Algeria, 1,014  
 Ashdod, Israel, 668  
 Banghazi, Libya, 561  
 Banzart, Tunisia, 909  
 Barcelona, Spain, 1,332  
 Bari, Italy, 697  
 Bat'umi, Georgia, 880  
 Beirut, Lebanon, 651  
 Brindisi, Italy, 639  
 Cartagena, Spain, 1,430  
 Ceuta, Morocco, 1,648  
 Ermoupolis, Greece, 158  
 Genova, Italy, 1,137  
 Gibraltar, 1,650

Haifa, Israel, 654  
 Iraklion, Kriti, 262  
 Ikenderun, Turkey, 652  
 Istanbul, Turkey, 292  
 Kavala, Greece, 209  
 Khalkis, Greece, 210  
 Kyrenia, Cyprus, 524  
 La Spezia, Italy, 1,101  
 Larnaca, Cyprus, 570  
 Limassol, Cyprus, 530  
 Livorno, Italy, 1,066  
 Malaga, Spain, 1,597  
 Marseille, France, 1,229  
 Mersin, Turkey, 594  
 Messina, Sicily, 655  
 Mitilini, Greece, 60  
 Napoli, Italy, 827  
 Navplion, Greece, 258  
 Odessa, Ukraine, 640  
 Oran, Algeria, 1,436  
 Palermo, Sicily, 772  
 Palma, Balearic Islands, 1,290  
 Piraeus, Greece, 210  
 Rethimnon, Kriti, 277  
 Rhodes, Greece, 256  
 Rijeka, Croatia (south of Greece), 974  
 Rijeka, Croatia (via Corinth Canal), 875  
 Salamis, Greece, 225  
 Savona, Italy, 1,147  
 Sibenik, Croatia (south of Greece), 846  
 Sibenik, Croatia (via Corinth Canal), 747  
 Siracusa, Sicily, 644  
 Soudha, Kriti, 281  
 Split, Croatia (south of Greece), 831  
 Split, Croatia (via Corinth Canal), 732  
 Tarabulus, Libya, 799  
 Taranto, Italy (south of Greece), 652  
 Taranto, Italy (via Corinth Canal), 56

Thessaloniki, Greece, 259  
 Toulon, France, 1,197  
 Trieste, Italy (south of Greece), 1,007  
 Trieste, Italy (via Corinth Canal), 908  
 Tunis, Tunisia, 896  
 Valencia, Spain, 1,403  
 Valletta, Malta, 683  
 Venezia, Italy (south of Greece), 1,015  
 Venezia, Italy (via Corinth Canal), 919  
 Volos, Greece, 226  
 Yumurtalik, Turkey, 639

**JACKSONVILLE, FLORIDA, U.S.A.**  
 (30°19'00"N., 81°39'00"W.):

**Junction Points\***

Bishop Rock, England, 3,527  
 Cape of Good Hope, South Africa, 6,862  
 Fastnet Rock, Ireland, 3,413  
 Inishtrahull, Ireland, 3,511  
 Montreal, Canada, 2,119  
 Panama, Panama, 1,559  
 Pentland Firth, Scotland, 3,691  
 Punta Arenas, Chile, 6,917  
 Strait of Gibraltar, 3,740  
 Straits of Florida, 523

**Ports**

Belem, Brazil, 2,773  
 Belize, Belize, 1,047  
 Bridgetown, Barbados, 1,617  
 Buenos Aires, Argentina, 5,841  
 Caibarien, Cuba, 526  
 Cape Town, South Africa, 6,854  
 Cartagena, Colombia, 1,395  
 Charlotte Amalie, Virgin Islands, 1,181  
 Colon, Panama (via Crooked Island Passage), 1,516  
 Colon, Panama (via Yucatan Channel), 1,535  
 Dakar, Senegal, 3,650  
 Elizabeth Harbor, Bahamas, 559  
 Georgetown, Guyana, 1,980  
 Guantanamo, Cuba (via Crooked Island Passage), 851  
 Halifax, Canada, 1,255  
 Isabel De Sagua, Cuba, 507  
 Kingston, Jamaica (via Crooked Island Passage), 1,016  
 La Habana, Cuba, 528  
 Las Palmas, 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 Rico, 1,146  
 Port of Spain, Trinidad, 1,685  
 Port Castries, St. Lucia, 1,520  
 Recife, Brazil, 3,668  
 Rio de Janeiro, Brazil, 4,740  
 San Juan, Puerto Rico, 1,121  
 Santiago de Cuba, Cuba (via Crooked Island Passage), 904  
 Santo Domingo, Dominican Republic, 1,166  
 Tampico, Mexico, 1,361

**JAKARTA, INDONESIA**  
 (6°06'00"S., 106°53'00"E.):

**Junction Points\***

Selat Lombok, Indonesia, 615  
 Port Said, Egypt, 5,293  
 Singapore, 525  
 Selat Sunda, Indonesia, 77  
 Torres Strait, Australia, 2,152  
 Selat Wetar, Indonesia, 1,247

**Ports**

Aleksandrovsk Sakhalinskiy, Russia, 3,942  
 Apra, Guam (via Makassar Strait), 2,639  
 Belawan, Indonesia, 864  
 Busan, South Korea, 2,836  
 Cebu, Philippines (via Lumbucan Channel), 1,563  
 Dagu, China, 3,088  
 Hakodate, Japan, 3,468  
 Ho Chi Minh, Vietnam, 1,025

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

## 48 JAKOBHAVN, GREENLAND

Hong Kong, China, 1,782  
Iloilo, Philippines (via Lumbungan Channel and Selat Gaspar), 1,476  
Incheon, South Korea, 2,865  
Kobe, Japan (via Balintang Channel), 2,987  
Kota Kinabalu, Sabah, 999  
Kuching, Sarawak, 627  
Malacca, Malaysia, 613  
Manila, Philippines (via Palawan Passage), 1,559  
Mogpo, North Korea, 2,741  
Nagasaki, Japan, 2,712  
Nampo, North Korea, 2,955  
Palembang, Indonesia, 358  
Petropavlovsk-Kamchatskiy, Russia (east of Japan and Balintang Channel), 4,530  
Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 4,555  
Port Darwin, Australia, 1,706  
Portland, Oregon, U.S.A. (via Balintang Channel), 7,415  
San Diego, California, U.S.A., 7,985  
San Francisco, California, U.S.A. (via Balintang Channel), 7,642  
San Francisco, California, U.S.A. (via Makassar Strait), 7,641  
Semarang, Indonesia, 236  
Shanghai, China, 2,522  
Shimonoseki, Japan, 2,838  
Sorido, Indonesia, 1,879  
Sukarnopura, Indonesia, 2,187  
Tanshui, Taiwan, 2,094  
Tjirebon, Indonesia, 156  
Vinh Cam Ranh, Vietnam, 1,103  
Vladivostok, Russia, 3,338  
Weihai, China, 2,860  
Weonsan, North Korea, 3,142  
Xiamen, China, 1,971  
Yantai, China, 2,894  
Yokohama, Japan, 3,194

**JAKOBHAVN, GREENLAND**  
(69°13'30"N., 51°05'30"W.) See Ilulissat, Greenland.

**JAKOBSTAD, FINLAND**  
(63°43'00"N., 22°41'30"E.) to:

**Ports**

Oulu, Finland, 133  
Vassa, 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, Tuvalu, 1,041  
Hakodate, Japan, 2,670  
Hobart, Tasmania (via Southeast Pass), 3,223  
Hong Kong, China (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-Kamchatskiy, Russia, 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  
Shanghai, 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

**JARVIS ISLAND, LINE ISLANDS**  
(0°22'30"S., 160°01'45"W.) to:

**Junction Points\***

Panama, Panama, 4,804

**Ports**

Christmas Island, Line Islands, 209  
Johnston Island, North Pacific, 1,173  
Pago Pago, American Samoa, 1,050

**JAZIREH-YE LAVAN, IRAN**  
(26°47'05"N., 53°20'15"E.) See Lavan Island.

**JAZIREH-YE SIRRI, IRAN**  
(25°54'25"N., 54°33'44"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,831  
Cape Leeuwin, Australia, 5,071  
Selat Lombok, Indonesia, 4,285  
Port Said, Egypt, 2,785  
Singapore, 3,518  
Selat Sunda, Indonesia, 3,667  
Torres Strait, Australia, 5,901

**Ports**

Belawan, Indonesia, 3,179  
Calcutta, India, 3,154  
Malacca, Malaysia, 3,382  
Port Darwin, Australia, 5,274  
Rangoon, Burma, 3,214  
Sabang, Indonesia, 2,913

**JERSEY CITY, NEW JERSEY, U.S.A.**  
(40°43'00"N., 74°02'00"W.) For ocean distances add 1 1/2 miles to New York distances.

**JIDDAH, SAUDI ARABIA**  
(21°28'00"N., 39°09'20"E.) to:

**Junction Points\***

Port Said, Egypt, 722

**Ports**

Aden, Yemen, 707  
Al Aqabah, Jordan, 573  
Massawa, Ethiopia, 364  
Port Sudan, Sudan, 161

**JINHAE, SOUTH KOREA**  
(35°08'40"N., 128°28'35"E.)  
Subtract 3 miles from Masan distances.

**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, Line Island, 1,137  
Fanning Island, 1,032  
Funafuti, Tuvalu, 1,654  
Honolulu, Hawaii, U.S.A., 717  
Jarvis Island, 1,173  
Kahului, Hawaii, U.S.A., 798  
Midway Island, 821  
Papeete, French Polynesia, 2,371  
San Francisco, California, U.S.A., 2,779  
Seattle, Washington, U.S.A., 3,018

**JOLO, PHILIPPINES**  
(6°03'30"N., 120°59'45"E.) to:

**Ports**

Batangas, Philippines, 480  
Manila, Philippines (via Apo West Pass), 550  
Sandakan, Sabah, 180  
Tacloban, Philippines, 442  
Zamboanga, Philippines, 85

**JUBAIL, SAUDI ARABIA**  
(27°01'00"N., 49°42'00"E.) See Al Jubayl.

**JUCARO, CUBA**  
(21°35'41"N., 78°51'15"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,559  
Grand Banks South, 2,240  
Panama, Panama, 764  
Punta Arenas, Chile, 6,730  
Strait of Gibraltar, 4,096  
Yucatan Channel, 362

**Ports**

Belize, British Honduras, 582  
Boston, Massachusetts, U.S.A., 1,788  
Cape Town, South Africa, 6,552  
Halifax, Canada, 1,991  
Port au Prince, Haiti, 465  
Rio de Janeiro, Brazil, 4,551  
Savannah, Georgia, U.S.A., 1,302

**JULIANEHAAB, GREENLAND**  
(60°43'00"N., 46°02'30"W.) See Qaqortoq, Greenland.

**JUNEAU, ALASKA, U.S.A.**  
(58°17'45"N., 134°25'00"W.) to:

**Ports**

Prince Rupert, Canada, 322  
Vancouver, Canada, 761

**KAGOSHIMA, JAPAN**  
(31°35'30"N., 130°33'50"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via south of Mindanao), 2,761  
Panama, Panama, 8,207  
Punta Arenas, Chile, 9,477  
Singapore (via Balintang Channel), 2,464  
Singapore, 2,401

**Ports**

Hakodate, Japan, 946  
Kamaishi, Japan, 875  
Kobe, Japan (via Bungo Suido), 422  
Kobe, Japan (via Tomogashima Suido), 379  
Komatsushima, Japan, 344  
Kure, Japan, 296  
Misumi, Japan, 184  
Nagasaki, Japan, 168  
Niigata, Japan, 318  
Shimonoseki, Japan (via Bungo Suido), 295  
Shimonoseki, Japan (west of Kyushu), 306  
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  
Seattle, Washington, U.S.A., 2,364  
Yokohama, Japan, 3,496

**KAKINADA, INDIA**  
(17°00'00"N., 82°20'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,023  
Selat Lombok, 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

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

**KALAMAI, GREECE**  
(37°01'02"N., 22°06'38"E.) to:

**Junction Points\***

Port Said, Egypt, 644  
Strait of Gibraltar, 1,370

**Ports**

Banghazi, Libya, 313  
Iraklion, Kriti, 197  
Messina, Sicily, 355  
Taranto, Italy, 351  
Tunis, Tunisia, 599

**KALI LIMENES, KRITI, GREECE**  
(34°55'45"N., 24°49'15"E.) to:

**Junction Points\***

Port Said, Egypt, 446  
Strait of Gibraltar, 1,504

**Ports**

Alexandria, Egypt, 338  
Algiers, Algeria, 1,071  
Alicante, Spain, 1,231  
Ashdod, Israel, 525  
Barcelona, Spain, 1,156  
Beirut, Lebanon, 533  
Cartagena, Spain, 1,57  
Ceuta, Morocco, 1,478  
Gemlik, Turkey, 528  
Istanbul, Turkey, 525  
Marseille, France, 1,005  
Moni Anchorage, Cyprus, 435  
Napoli, Italy, 671  
Tangier, Morocco, 1,505  
Trieste, Italy, 852

**KALININGRAD, RUSSIA**  
(54°42'30"N., 20°28'00"E.) Add  
21 1/2 miles to Baltiysk distances.

**KALMAR, SWEDEN**  
(56°39'45"N., 16°22'30"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 289  
Skagens Odde, Denmark (via Store  
Baelt), 470  
Skagens Odde, Denmark (via The  
Sound), 342

**Ports**

Drammen, Norway (via The  
Sound), 455  
Fredrikstad, Norway (via The  
Sound), 430  
Halden, Norway (via The Sound),  
430  
Moss, Norway (via The Sound),  
432  
Oslo, Norway (via Store Baelt),  
596  
Oslo, Norway (via The Sound),  
464

**KALUNDBORG, DENMARK**  
(55°40'07"N., 11°05'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 111  
Skagens Odde, Denmark, 141

**Ports**

Kobenhavn, Denmark, 115  
Stockholm, Sweden, 531  
Swinoujscie, Poland, 175

**KAMAISHI, JAPAN**  
(39°16'18"N., 141°53'36"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (south of  
Mindanao), 3,331  
Panama, Panama, 7,422  
Punta Arenas, Chile, 9,316  
Singapore (via Balintang  
Channel), 3,171

**Ports**

Hakodate, Japan, 192  
Kagoshima, Japan, 875  
Kobe, Japan, 631  
Nagasaki, Japan, 972  
Yokohama, Japan, 348

**KAMSAR, GUINEA**  
(10°39'00"N., 14°37'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,562  
Cape of Good Hope, South Africa,  
3,294  
Fastnet Rock, Ireland, 2,625  
Grand Banks South, 2,701  
Ile d'Ouessant, France, 2,520  
Inishtrahull, Ireland, 2,965  
Panama, Panama, 3,866  
Pentland Firth, Scotland, 3,187  
Punta Arenas, Chile, 5,172  
Strait of Gibraltar, 1,867  
Straits of Florida, 3,985  
Yucatan Channel, 4,145

**Ports**

Abidjan, Ivory Coast, 803  
Accra, Ghana, 1,077  
Buenos Aires, Argentina, 3,777  
Cape Town, South Africa, 3,273  
Casablanca, Morocco, 1,732  
Dakar, Senegal, 368  
Key West, Florida, U.S.A., 3,933  
Lisboa, Portugal, 1,882  
Monrovia, Liberia, 375  
Natal, Brazil, 1,576  
New York, New York, U.S.A.,  
3,633  
Norfolk, Virginia U.S.A., 3,667  
Port Harcourt, Nigeria, 1,475  
Porto Grande, Cape Verde Islands,  
713  
Takoradi, Ghana, 955

**KANDALAKSHA, RUSSIA**  
(67°08'00"N., 33°24'00"E.) Add  
101 miles to Arkhangel'sk  
distances.

**KANDLA, INDIA**  
(23°02'00"N., 70°13'30"E.) Add  
76 1/2 miles to Okha distances.

**KANEHOE 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

**KANGERLUARSORUSEQ, 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

**KANKESANTURAI, SRI LANKA**  
(9°49'25"N., 80°03'10"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,545  
Cape Leeuwin, Australia, 3,353  
Selat Lombok, Indonesia, 2,487  
Port Said, Egypt, 3,553  
Singapore, 1,543  
Selat Sunda, Indonesia, 1,852  
Torres Strait, Australia, 4,096

**Ports**

Bombay, India, 992  
Calcutta, India, 900  
Colombo, Sri Lanka, 196  
Karachi, Pakistan, 1,424  
Telukbayur, Indonesia, 1,376  
Trincomalee, Sri Lanka, 131

**KAO-HSIUNG KANG, TAIWAN**  
(22°37'00"N., 120°16'00"E.) to:

**Ports**

Chang-Kan, China, 811  
Nha Trang Bay, Vietnam, 895  
San Fernando, Philippines, 356  
Sanya Gang, China, 682  
Vinh Cam Ranh, Vietnam, 915

**KARACHI, PAKISTAN**  
(24°49'00"N., 66°58'20"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,658  
Cape Leeuwin, Australia, 4,512  
Port Said, Egypt, 2,865  
Singapore, 2,882  
Torres Strait, Australia (south of  
Java and Timor), 5,298

**Ports**

Aden, Yemen, 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, Sri Lanka, 1,344  
Durban, South Africa, 3,887  
Fremantle, Australia, 4,437

Galle, Sri Lanka, 1,393  
Madras, India, 1,908  
Malacca, Malaysia, 2,768  
Marmagao, India, 690  
Massawa, Ethiopia, 1,865  
Mombasa, Kenya, 2,361  
Okha, India, 194  
Penang, Malaysia, 2,595  
Port Darwin, Australia (south of  
Java and Timor Islands), 4,624  
Rangoon, Burma, 2,561  
Sabang, Indonesia, 2,284  
Tamatave, Madagascar, 2,788  
Trincomalee, Sri Lanka, 1,667

**KARDELJEVO, CROATIA**  
(43°03'00"N., 17°25'42"E.) See  
Ploce.

**KARLSHAMN, SWEDEN**  
(56°07'50"N., 14°53'38"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 228  
Skagens Odde, Denmark (via The  
Sound), 289

**Ports**

Hango, Finland, 378  
Horsens, Denmark (via The  
Sound), 284  
Kobenhavn, Denmark (via The  
Sound), 146  
Lubeck, Germany, 213  
Odense, Denmark, 282  
Sankt-Peterburg, Russia, 591  
Slagen, Norway (via The Sound),  
374  
Varberg, Sweden (via The Sound),  
371

**KARLSKRONA, SWEDEN**  
(56°10'00"N., 15°36'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 235  
Skagens Odde, Denmark, 295

**Ports**

Kobenhavn, Denmark, 148  
Sankt-Peterburg, Russia, 563  
Stockholm, Sweden, 270

**KASHIMA KO, JAPAN**  
(35°58'45"N., 140°42'35"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via  
south of Mindanao), 3,127  
Panama, Panama, 7,567  
Punta Arenas, Chile, 9,252  
Singapore (via Balintang  
Channel), 2,968

**Ports**

Aomori, Japan, 420  
Kobe, Japan, 423  
Nagoya, Japan, 288  
Shimonoseki, Japan, 613  
Yokohama, Japan, 144

**KASIM MARINE TERMINAL, INDONESIA**  
(1°18'00"S., 131°01'00"E.) to:

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

**50 KAUNAKAKAI, HAWAII, U.S.A.****Junction Points\***

Honshu, Japan, 2,724  
Selat Lombok, Indonesia, 1,260  
Panama, Panama, 9,108  
Singapore, 2,128  
Selat Sunda, Indonesia, 2,091  
Torres Strait, Australia, 1,030  
Selat Wetar, Indonesia, 741

**Ports**

Balikpapan, Indonesia, 998  
Busan, Korea, 2,384  
Hong Kong, Hong Kong, 1,832  
Kobe, Japan, 2,258  
Semarang, Indonesia, 1,391  
Ujung, Pandang, Indonesia, 842  
Vinh Cam Ranh, Vietnam, 1,669  
Wyndham, Australia, 870  
Yokohama, Japan, 2,342

**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, Egypt, 714  
Strait of Gibraltar (south of Greece), 1,706  
Strait of Gibraltar (via Corinth Canal), 1,689

**Ports**

Algiers, Algeria (south of Greece), 1,277  
Algiers, Algeria (via Corinth Canal), 1,260  
Beirut, Lebanon, 756  
Izmir, Turkey, 209  
Piraeus, Greece, 249  
Siracusa, Sicily (south of Greece), 682  
Siracusa, Sicily (via Corinth Canal), 656  
Thessaloniki, Greece, 160  
Volos, Greece, 162

**KAWASAKI, JAPAN**

(35°30'00"N., 139°45'00"E.) Use Yokohama distances.

**KEELUNG, TAIWAN**

(25°08'10"N., 121°44'00"E.) See Chi-Lung, Taiwan.

**KEFLAVIK, ICELAND**

(64°00'00"N., 22°33'25"W.) to:

**Junction Points\***

Pentland Firth, Scotland, 671  
Strait of Gibraltar, 1,947

**Ports**

Bergen, Norway, 875

Murmansk, Russia, 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, South Africa, 5,056  
Ile d'Ouessant, France, 954

**Ports**

Casablanca, Morocco, 69  
Dakar, Senegal, 1,389  
Tangier, Morocco, 1,117

**KERCH, GEORGIA**

(45°21'16"N., 36°28'40"E.) to:

**Junction Points\***

Port Said, Egypt, 1,238  
Strait of Gibraltar, 2,256

**Ports**

Almeria, Spain, 2,094  
Constanta, Romania, 370  
Istanbul, Turkey, 439  
Mersin, Turkey, 1,214  
Nice, France (south of Greece), 1,756  
Nice, France (via Corinth Canal), 1,714  
Patrai Greece (south of Greece), 1,047  
Patrai Greece (via Corinth Canal), 890  
Pula, Croatia (south of Greece), 1,543  
Pula, Croatia (via Corinth Canal), 1,444  
Rostov-na-Donu, Russia, 208  
Sete, France (south of Greece), 1,877  
Sete, France (via Corinth Canal), 1,836

**KERET, RUSSIA**

(66°17'00"N., 33°35'00"E.) Add 54 miles to Arkhangel'sk distances.

**KERKIRA, GREECE**

(39°37'45"N., 19°54'35"E.) to:

**Junction Points\***

Port Said, Egypt, 845  
Strait of Gibraltar, 1,324

**Ports**

Brindisi, Italy, 123  
Catania, Sicily, 290  
Dubrovnik, Croatia, 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

**KEY WEST, FLORIDA, U.S.A.**

(24°33'30"N., 81°48'30"W.) to:

**Junction Points\***

Bishop Rock, England, 3,783  
Fastnet Rock, Ireland, 3,783  
Inishrahull, Ireland, 3,767  
Montreal, Canada, 2,466  
Panama, Panama, 1,108  
Pentland Firth, Scotland, 4,000  
Strait of Gibraltar, 3,949  
Straits of Florida, 73  
Yucatan Channel, 251

**Ports**

Antilla, Cuba, 434  
Argentina, Canada, 1,953  
Arkhangel'sk, Russia, 5,150  
Baracoa, Cuba, 490  
Belem, Brazil, 2,603  
Belize, Belize (via main ship channel), 590  
Bridgetown, Barbados, 1,459  
Buenos Aires, Argentina, 5,712  
Campeche, 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), 1,130  
Cartagena, Colombia (via Yucatan Channel), 1,144  
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, Guyana, 1,818  
Guantanamo, Cuba (via Old Bahama Channel), 587  
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), 1,280  
La Habana, Cuba, 92  
Lisboa, Portugal, 3,765  
Nuevitas, Cuba, 331  
Pointe a Pitre, Guadeloupe, 1,296  
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  
Port of Spain, Trinidad (via Old Bahama Channel), 650  
Port Castries, St. Lucia, 1,358  
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 west end of Cuba), 796  
Santiago de Cuba, Cuba (via Windward Passage), 637  
Santo Domingo, Dominican Republic, 936  
Tampico, Mexico, 907  
Tuxpan, Mexico, 891  
Veracruz, Mexico, 869  
Willemstad, Curacao (via Windward Passage), 1,134

**KHALKIS, GREECE**

(38°27'40"N., 23°35'15"E.) to:

**Junction Points\***

Port Said, Egypt, 630  
Strait of Gibraltar, 1,562

**Ports**

Iraklion, Kriti, 210  
Izmir, Turkey, 210  
Volos, Greece, 88

**KHARG ISLAND, IRAN**

(29°13'34"N., 50°16'34"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,153  
Cape Leeuwin, Australia, 5,393  
Selat Lombok, Indonesia, 4,582  
Port Said, Egypt, 2,955  
Singapore, 3,768  
Selat Sunda, Indonesia, 3,993  
Torres Strait, Australia (south of Java), 6,151

**Ports**

Aden, Yemen, 1,087  
Belawan, Indonesia, 3,404  
Calcutta, India, 3,412  
Malacca, Malaysia, 3,612  
Port Darwin, Australia (south of Java), 5,480  
Rangoon, Burma, 3,417  
Sabang, Indonesia, 3,144

**KHAWR-AL-AMAYA, IRAQ**

(29°48'23"N., 48°48'20"E.)

Subtract 76 miles from Al Basrah.

**KHOLMSK, SAKHALIN, RUSSIA**

(47°03'00"N., 142°02'45"E.) to:

**Ports**

Bukhta Shelikohova, Kuril Islands, Russia, 707  
Matsuga-hana, Japan, 361  
Tomari, Japan, 314

**KHORRAMSHAHR, IRAN**

(30°25'30"N., 48°10'00"E.)

Subtract 181 1/2 miles from Al Basrah distances.

**KIEL, GERMANY**

(54°20'00"N., 10°09'30"E.) For distance via Fjord add 1 1/2 miles to Nord-Ostsee-Kanal (East Entrance). For distance via Nord-Ostsee-Kanal add 2 1/2 miles to

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



Nord-Ostsee-Kanal (East Entrance).

**KIIRE, JAPAN**

(31°24'42"N., 130°33'17"E.)  
Subtract 9 miles from Kagoshima distances.

**KIMCHAEK, NORTH KOREA**  
(40°39'15"N., 129°12'30"E.) to:**Ports**

Busan, South Korea, 351  
Hakodate, Japan, 540  
Maizuru, Japan, 431  
Shimonoseki, Japan, 421  
Vladivostok, Russia, 206  
Yeosu, South Korea, 439

**KIN WAN, JAPAN**

(26°24'00"N., 27°58'00"E.) to:

**Junction Points\***

Honshu Japan, 826  
Selat Lombok, Indonesia (south of Mindanao), 2,391  
Panama, Panama, 8,451  
Punta Arenas, Chile, 9,415  
Singapore (via Balintang Channel), 2,094  
Torres Strait, Australia, 2,640  
Tsugaru-Kaikyo, Japan, 1,189

**Ports**

Apia, Samoa, 4,266  
Auckland, New Zealand, 4,912  
Ho Chi Minh, Vietnam, 1,595  
Honolulu, Hawaii, U.S.A., 4,058  
Valparaiso, Chile, 9,788  
Wellington, New Zealand, 5,117

**KING'S LYNN, ENGLAND**

(52°45'30"N., 0°23'28"E.) to:

**Junction Points\***

Bishop Rock, England, 522  
Ile d'Ouessant, France, 516  
Nord-Ostsee-Kanal (East Entrance), Germany, 406  
Pentland Firth, Scotland, 401  
Skagens Odde, Denmark, 473

**Ports**

Amsterdam, Netherlands, 203  
Antwerp, Belgium, 450  
Bergen, Norway, 583  
Emden, Germany, 281  
Leith, Scotland, 263  
London, England, 233  
Oostende, Belgium, 206  
Wilhelmshaven, Germany, 319  
Zeebrugge, Belgium, 211

**KINGSTON, JAMAICA**

(17°57'30"N., 76°47'00"W.) to:

**Junction Points\***

Bishop Rock, England (via Windward Passage), 3,866  
Fastnet Rock, Ireland (via Windward Passage), 3,748  
Inishtrahull, Ireland, 3,852  
Panama, Panama, 594  
Pentland Firth, Scotland, 4,032  
Strait of Gibraltar, 3,891  
Straits of Florida (via Windward

Passage), 802  
Yucatan Channel, 550

**Ports**

Almirante, Panama, 657  
Moa, Cuba, 301  
Bahia de las Calderas, Dominican Republic, 378  
Baltimore, Maryland, U.S.A. (via Windward Passage), 1,401  
Baracoa, Cuba, 265  
Barahona, Dominican Republic, 364  
Barranquilla, Colombia, 442  
Belem, Brazil, 2,231  
Belize, Belize, 685  
Boca de Tanamo, Cuba, 318  
Bocas del Toro, Panama, 604  
Boston, Massachusetts, U.S.A., 1,657  
Brunswick, Georgia, U.S.A., 1,038  
Buenos Aires, Argentina, 5,295  
Cap-Haitien, Haiti, 326  
Cape Town, South Africa, 6,314  
Cardenas, Cuba, 703  
Carmen, Mexico, 1,056  
Cartagena, Colombia, 479  
Casilda, Cuba, 372  
Charleston, South Carolina, U.S.A. (via Windward Passage), 1,064  
Charlotte Amalie, Virgin Islands, 70  
Colon, Panama, 551  
Covenas, Colombia, 528  
Dakar, Senegal, 3,436  
Elizabeth Harbor, Bahamas, 498  
Funchal, Madeira Island, 3,349  
Georgetown, Guyana, 1,334  
Gonaives, Haiti, 263  
Guantanamo, Cuba, 180  
Halifax, Canada, 1,795  
Hamilton, Bermuda, 1,144  
Horta, Azores, 2,818  
Jacksonville, Florida, U.S.A. (via 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 Habana Cuba (via Windward Passage), 762  
La Habana, Cuba (via Yucatan Channel), 737  
La Romana, Dominican Republic, 47  
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 Windward Passage), 1,474  
Norfolk, Virginia, U.S.A. (via Windward Passage), 1,279  
Nuevitas, Cuba, 448  
Oranjestad, Aruba, 223  
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage), 1,446  
Pina, Panama, 578  
Pointe a Pitre, Guadeloupe, 910  
Port au Prince, Haiti, 277  
Port de Paix, Haiti, 432  
Port of Spain, Trinidad, 1,003  
Port Castries, St. Lucia, 950  
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 Colombia, Colombia, 438  
Puerto Cortes, Honduras, 671  
Puerto Vita, Cuba, 364  
Punta Cardon, Venezuela, 530  
Rio de Janeiro, Brazil, 4,194  
Rio Haina, Dominican Republic, 417  
San Juan, Puerto Rico (north of Hispaniola), 685  
San Juan, Puerto Rico (south of Hispaniola), 643  
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 Windward Passage), 1,063  
Sint Nicolaashaven, Aruba, 528  
St. John, Canada, 1,794  
St. John's, Antigua, 870  
St. Louis, Marie Galante, 903  
St. Marc, Haiti, 254  
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), 1,115  
Yarmouth, Canada, 1,710

**KINGSTOWN, ST. VINCENT**

(13°09'00"N., 61°14'00"W.) to:

**Ports**

Bridgetown, Barbados, 98  
Fernando de Noronha, 1,320  
Fort de France, Martinique, 89  
Hamilton, Bermuda, 1,185  
New York, New York, U.S.A., 1,791  
Port Castries, St. Lucia, 60

**KINUURA, JAPAN**

(34°48'14"N., 136°57'29"E.)  
Subtract 23 miles from Nagoya distances.

**KIRKENES, NORWAY**

(69°43'45"N., 30°02'00"E.) to:

**Ports**

Longyearbyen, Svalbard, 637  
Pechenga, Russia, 53

**KISKA, ALASKA, U.S.A.**

(51°59'00"N., 177°32'30"E.) to:

**Ports**

Anadyrskiy Zaliv, Russia, 804  
Apra, Guam, 2,822  
Bukhta Shelikhova, Kuril Islands, Russia, 863  
Hakodate, Japan, 1,656  
Honolulu, Hawaii, U.S.A., 2,185  
Kasatka, Japan, 1,274  
Matsuga-hana, Japan, 1,345  
Midway Island, 1,453  
Petropavlovsk-Kamchatskiy, Russia, 724  
Tomari, Japan, 1,406  
Yokohama, Japan, 1,997

**KISMAAYO, SOMALIA**

(0°23'56"S., 42°32'20"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,685  
Cape Leeuwin, Australia, 4,534  
Port Said, Egypt, 2,713  
Singapore, 3,791  
Selat Sunda, Indonesia, 3,812

**Ports**

Aden, Yemen, 1,326  
Bombay, India, 2,133  
Calicut, India, 2,106  
Colombo, Sri Lanka, 2,291  
Durban, South Africa, 1,940  
Madras, India, 2,841  
Tulear, Madagascar, 1,395

**KITIMAT, CANADA**

(53°59'25"N., 128°48'43"W.) to:

**Junction Points\***

Selat Lombok, Indonesia (via Makassar Strait), 6,930  
Panama, Panama, 4,304  
Punta Arenas, Chile, 7,264  
Singapore (via Balintang Channel), 7,030  
Selat Sunda, Indonesia (via Balintang Channel), 7,393

**Ports**

Anchorage, Alaska, 1,055  
Callao, Peru, 5,006  
Guaymas, Mexico, 2,510  
Honolulu, Hawaii, 2,399  
Los Angeles, California, U.S.A., 1,391  
Manila, Philippines (via Balintang Channel), 5,637  
Mollendo, Peru, 5,422  
Yokohama, Japan, 3,941

**KLAIPEDA, LITHUANIA**

(55°43'00"N., 21°07'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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 (via Store Baelt and south of Bornholm), 716  
Oxelosund, Sweden, 232  
Rostock, Germany, 347

**KLAKSIVIG, FAROE ISLANDS**

(62°14'28"N., 6°35'45"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,535  
Grand Banks South, 1,925  
Inishtrahull, Ireland, 410  
Montreal, Canada (via Strait of Belle Isle), 2,481

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

## 52 KOBE, JAPAN

Pentland Firth, Scotland, 233  
Punta Arenas, Chile, 7,887  
Skagens Odde, Denmark, 864  
Strait of Gibraltar, 1,789

**Ports**

Aberdeen, Scotland, 359  
Alesund, Norway, 355  
Bremerhaven, Germany, 570  
Dover, England, 746  
Le Havre, France, 851  
London, England, 781  
Murmansk, Russia, 1,164  
Reykjavik, Iceland, 482  
Torshavn, Faroe Islands, 16

**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-Sakhalinskiy, Russia, 1,384  
Apra, Guam, 1,386  
Auckland, New Zealand, 4,875  
Busan, South Korea, 361  
Cebu, Philippines (via San Bernardino Strait), 1,601  
Dagu, China (via Naikai), 1,034  
Dalian, China, 877  
Dutch Harbor, Alaska, U.S.A., 2,833  
Haiphong, Vietnam (via Osumi Kaikyo and Hainan Strait), 1,833  
Hakata, Japan, 304  
Hakodate, Japan, 816  
Hirohata, Japan, 34  
Hiroshima, Japan, 179  
Hong Kong, China (via Osumi Kaikyo), 1,372  
Honolulu, Hawaii, U.S.A., 3,669  
Iloilo, Philippines (via San Bernardino Strait), 1,623  
Imabari, Japan, 120  
Incheon, South Korea, 733  
Itozakicho, Japan, 113  
Iwakuni, Japan, 166  
Jakarta, Indonesia (via Balintang Channel), 2,987  
Kagoshima, Japan (via Bungo Suido), 422  
Kagoshima, Japan (via Tomogashima Suido), 379  
Kamaishi, Japan, 631  
Kushiro, Japan, 876  
Lo hsing-ta Mao-ti, China (via Osumi Kaikyo), 1,003  
Los Angeles, California, U.S.A., 5,185  
Manila, Philippines (via Balintang Channel), 1,563  
Miike, Japan, 462  
Nagasaki, Japan, 400  
Nagoya, Japan, 245  
Niihama, Japan, 113  
Pago Pago, American Samoa, 4,308  
Petropavlovsk-Kamchatskiy, Russia, 1,705  
Port Darwin, Australia (via Selat Sele), 2,901  
Portland, Oregon, U.S.A., 4,590  
Rajin, North Korea, 754  
Sakaide, Japan, 107

San Diego, California, U.S.A., 5,204  
San Francisco, California, U.S.A., 4,819  
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,527  
Seattle, Washington, U.S.A. (south of Aleutian Islands), 4,559  
Shanghai, China (via Naikai), 789  
Shanghai, China (via Osumi Kaikyo), 826  
Shimizu, Honshu, Japan, 279  
Shimonoseki, Japan, 241  
Sydney, Australia, 4,384  
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, Russia (via Naikai), 805  
Weihai, China (via Naikai), 806  
Xiamen, China (via Osumi Kaikyo), 1,117  
Yantai, China, 840  
Yokohama, Japan, 357

**KOBENHAVN, DENMARK**

(55°42'00"N., 12°36'06"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance) (via Store Baelt), Germany, 202  
Nord-Ostsee-Kanal (East Entrance) (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  
Lubeck, Germany, 148  
Oslo, Norway, 272  
Peenemunde, Germany, 128  
Riga, Latvia, 696  
Rostock, Germany, 231  
Sankt-Peterburg, Russia, 917  
Sassnitz, Germany, 95  
Stockholm, Sweden (via Store Baelt and Dalaro Kanal), 603  
Stockholm, Sweden (via Store Baelt and Sandotvarden), 646  
Stralsund, Germany, 81  
Travemunde, Germany (via Store Baelt), 234  
Travemunde, Germany (via The Sound), 139  
Veje, 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  
Guayaquil, Ecuador, 5,212  
Ho Chi Minh, Vietnam, 5,484  
Hong Kong, China, 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  
Noumea, New Caledonia, 5,281  
Pago Pago, American Samoa, 4,441  
Papeete, French Polynesia, 4,532  
Port Darwin, Australia, 5,859  
Qingdao, China, 3,975  
Shanghai, China, 3,967  
Surabaya, Indonesia, 6,086  
Suva, Fiji Islands, 4,853  
Sydney, Australia, 6,222  
Truk, Caroline Islands, 4,008  
Valparaiso, Chile, 6,803  
Vladivostok, Russia, 3,105  
Wake Island, 2,961  
Yokohama, Japan (north of Aleutian Islands), 3,141

**KOGE, DENMARK**

(55°27'15"N., 12°12'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 153  
Skagens Odde, Denmark, 161

**Ports**

Klaipeda, Lithuania, 350  
Swinoujscie, Poland, 156

**KOKKOLA, FINLAND**

(63°50'00"N., 23°08'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 836  
Skagens Odde, Denmark (via The Sound), 897

**Ports**

Halmstad, Sweden (via The Sound), 803  
Hamina, Finland, 554  
Helsinki, Finland, 498  
Kobenhavn, Denmark (via The Sound), 741  
Limhamn, Sweden (via The Sound), 741  
Rauma, Finland, 230  
Vassa, Finland, 115

**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\***

Nord-Ostsee-Kanal (East Entrance), Germany (via Lille Baelt), 83  
Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 152  
Skagens Odde, Denmark (via Store Baelt and Deep Water Route), 193

**Ports**

Goteborg, Sweden, 330  
Swinoujscie, Poland, 253

**KOLE, CAMEROON**

(4°12'30"N., 8°33'05"E.) to:

**Junction Points\***

Bishop Rock, England, 4,265  
Cape of Good Hope, South Africa, 2,646  
Fastnet Rock, Ireland, 4,175  
Grand Banks South, 4,326  
Ile d'Ouessant, France, 4,106  
Inishtrahull, Ireland, 4,438  
Panama, Panama, 5,329  
Pentland Firth, Scotland, 4,998  
Punta Arenas, Chile, 5,326  
Strait of Gibraltar, 3,853  
Straits of Florida, 5,501  
Yucatan Channel, 5,651

**Ports**

Abidjan, Ivory Coast, 761  
Kribi, Cameroon, 114  
Lagos, Nigeria, 361  
Libreville, Gabon, 255  
Lome, Togo, 460  
Pointe Noire, Congo, 612  
Tome, Sao Tome, 232

**KOMATSUSHIMA, JAPAN**

(34°01'00"N., 134°36'00"E.) to:

**Ports**

Aomori, Japan, 813  
Kagoshima, Japan, 344  
Kure, Japan, 217  
Osaka, Japan, 58  
Yokohama, Japan, 320

**KOMPONG SOM, CAMBODIA**

(10°39'00"N., 103°30'00"E.) to:

**Junction Points\***

Singapore, 638  
Selat Sunda, Indonesia, 1,096

**Ports**

Bangkok, Thailand, 300  
Ho Chi Minh, Vietnam, 419  
Makassar, Sulawesi, 1,584

**KONIYA, RYUKYU ISLANDS**

(28°08'30"N., 129°18'45"E.) to:

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

**Ports**

Honolulu, Hawaii, U.S.A., 3,948  
Midway Island, 2,799  
Port Moresby, Papua New Guinea,  
3,063  
Saipan, Mariana Islands, 1,199  
Wake Island, 2,107

**KOPER, SLOVENIA**  
(45°33'48"N., 13°42'15"E.) to:

**Junction Points\***

Port Said, Egypt (via south of  
Greece), 1,310  
Strait of Gibraltar, 1,682

**Ports**

Ajaccio, Corsica, 1,033  
Algiers, Algeria, 1,236  
Ashdod, Israel, 1,367  
Barcelona, Spain, 1,296  
Dhekelia, Cyprus, 1,283  
Famagusta, Cyprus, 1,313  
Istanbul, Turkey, 1,148  
Mersa El Hamra, Egypt, 1,155  
Messina, Sicily, Italy, 621  
Oran, Algeria, 1,432  
Ravenna, Italy, 91  
Tunis, Tunisia, 917  
Villefranche, France, 1,136

**KORSAKOV, SAKHALIN,  
RUSSIA**  
(46°37'30"N., 142°45'30"E.) to:

**Ports**

Bukhta Shelikhova, Kuril Islands,  
Russia, 618  
Matsuga-hana, Japan, 279  
Nevel'sk, Russia, 115  
Sovetskaya Gavan, Russia, 264  
Tomari, Japan, 239

**KORSOR, DENMARK**  
(55°20'07"N., 11°07'48"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 73  
Skagens Odde, Denmark, 162

**Ports**

Gdynia, Poland, 344  
Stockholm, Sweden, 524  
Swinoujscie, Poland, 239

**KOTA KINABALU,  
MALAYSIA**  
(6°00'32"N., 116°04'37"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via  
Balabac Strait), 1,362  
Panama, Panama (via Surigao  
Strait), 9,860  
Singapore, 807  
Selat Sunda, Indonesia, 1,031

**Ports**

Cebu, Philippines (via Balabac  
Strait), 589  
Ho Chi Minh, Vietnam, 761  
Honolulu, Hawaii, U.S.A. (via  
Surigao Strait), 5,092

Makassar, Sulawesi (via west of  
Palawan), 616  
Sandakan, Sabah (via Balabac  
Strait), 261  
Zamboanga, Philippines, 442

**KOTKA, FINLAND**  
(60°27'00"N., 26°59'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 694  
Skagens Odde, Denmark, 755

**Ports**

Helsinki, Finland, 99  
Riga, Latvia, 296  
Stockholm, Sweden, 311  
Vysotsk, Russia, 69

**KOVDA, RUSSIA**  
(66°42'00"N., 32°52'00"E.) Add  
76 1/2 miles to Arkhangel'sk  
distances.

**KPEME, TOGO**  
(6°11'22"N., 01°30'20"E.) to:

**Junction Points\***

Bishop Rock, England, 4,099  
Cape of Good Hope, South Africa,  
2,615  
Fastnet Rock, Ireland, 3,884  
Grand Banks South, 4,036  
Ile d'Ouessant, France, 3,815  
Inishtrahull, Ireland, 4,147  
Panama, Panama, 5,038  
Pentland Firth, Scotland, 4,707  
Punta Arenas, Chile, 5,180  
Strait of Gibraltar, 3,562  
Straits of Florida, 5,210  
Yucatan Channel, 5,360

**Ports**

Abidjan, Ivory Coast, 405  
Accra, Ghana, 159  
Cape Town, South Africa, 1,316  
New York, New York, U.S.A.,  
4,800  
Pointe Noire, Congo, 903  
Takoradi, Ghana, 255

**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

Malabo, Equatorial Guinea, 106  
Port Gentil, Gabon, 231  
Takoradi, Ghana, 704

**KRISTIANSAND, NORWAY**  
(58°08'30"N., 7°59'40"E.) to:

**Junction Points\***

Bishop Rock, England, 309  
Ile d'Ouessant, France, 794  
Pentland Firth, Scotland, 372  
Skagens Odde, Denmark, 92

**Ports**

Aberdeen, Scotland, 338  
Amsterdam, Netherlands, 381  
Antwerp, 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

**KRISTIANSUND, NORWAY**  
(63°06'40"N., 7°45'00"E.) to:

**Ports**

Bergen, Norway, 232  
Kristiansand, Norway, 447  
Oslo, Norway, 599  
Stavanger, Norway, 332

**KRISTINESTAD, FINLAND**  
(62°15'45"N., 21°22'30"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
entrance), Germany, 703  
Skagens Odde, Denmark (via the  
Sound), 764

**Ports**

Gdynia, Poland, 473  
Helsinki, Finland, 279  
Copenhagen, Denmark, 587  
Kotka, Finland, 342  
Oulu, Finland, 214  
Sankt-Peterburg, Russia, 433  
Stockholm, Sweden, 232

**KUNG THEP, THAILAND**  
See Bangkok.

**KUCHING, SARAWAK**  
(1°33'35"N., 110°20'35"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 974  
Singapore, 443

**Ports**

Iloilo, Philippines, 948  
Jakarta, Indonesia, 627  
Olongapo, Philippines, 992  
Zamboanga, Philippines, 863

**KUNSAN, JAPAN**  
(35°59'18"N., 126°43'00"E.) See  
Gunsan, South Korea.

**KURE, JAPAN**  
(34°14'00"N., 132°32'00"E.) to:

**Ports**

Apra, Guam, 1,460  
Hirohata, Japan, 126  
Imabari, Japan, 63  
Itozakicho, Japan, 73  
Kagoshima, Japan, 296  
Komatsushima, Japan, 217  
Niihara, Japan, 76  
Sakaide, Japan, 107  
Shimizu, Honshu, Japan, 141  
Shimonoseki, Japan, 116  
Tokuyama, Japan, 76  
Uno, Japan, 117  
Wakamatsu, Japan, 125  
Yokohama, Japan, 515

**KUSHIRO, JAPAN**  
(42°58'00"N., 144°21'30"E.) to:

**Ports**

Busan, South Korea, 876  
Hakodate, Japan, 210  
Kobe, Japan, 876  
Vladivostok, Russia, 624  
Yokohama, Japan, 594

**KWA IBO, NIGERIA**  
(4°21'40"N., 8°00'00"E.) See  
Qua Iboe.

**KYNDBY, DENMARK**  
(55°48'36"N., 11°52'48"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 164  
Skagens Odde, Denmark, 136

**Ports**

Gdynia, Poland, 334  
Stockholm, Sweden, 493  
Swinoujscie, Poland, 197

**KYOMIPO, NORTH KOREA**  
(38°44'00"N., 125°37'00"E.) Add  
16 miles to Nampo distances.

**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

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

## 54 LA GUAIRA, VENEZUELA

Puerto Cabezas, Nicaragua, 316

**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**Amuay, Venezuela, 276  
Baltimore, Maryland, U.S.A., 1,813  
Barranquilla, Colombia, 531  
Belize, Belize, 1,328  
Boston, Massachusetts, U.S.A., 1,955  
Campeche, Mexico, 1,635  
Carmen, Mexico, 1,714  
Cartagena, Colombia, 614  
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  
Guiría, 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  
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  
La Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,292  
New York, New York, U.S.A. (via Mona Passage), 1,848  
Norfolk, Virginia, U.S.A., 1,687  
Oranjestad, Aruba, 207  
Paramaribo, Suriname, 832  
Pedernales, Venezuela, 359  
Philadelphia, Pennsylvania, U.S.A., 1,838  
Pointe à Pitre, Guadeloupe, 467  
Port au Prince, Haiti, 801  
Port of Spain, Trinidad (south of Isla de Margarita), 329  
Port Castries, St. Lucia, 405  
Puerto la Cruz, Venezuela, 145  
Puerto Cortes, Honduras, 1,294  
Puerto Sucre, Venezuela, 205  
San Felix, Venezuela, 673  
San Juan del Norte, Nicaragua, 1,026  
San Juan, Puerto Rico, 506  
Santo Domingo, Dominican Republic, 502  
Savannah, Georgia, U.S.A. (via Mona Passage), 1,575  
Sint Nicolaashaven, Aruba, 207  
St. Georges, Grenada, 322  
St. John, Canada, 2,086  
Sydney, Canada, 2,215  
Tuxpan, Mexico, 1,923  
Veracruz, Mexico, 1,888  
Willemstad, Curacao, 150**LA HABANA, CUBA**  
(23°08'00"N., 82°20'30"W.) to:**Junction Points\***Cape of Good Hope, South Africa, 6,786  
Grand Banks South, 1,991  
Montreal, Canada (via Strait of Canso), 2,473  
Punta Arenas, Chile (east of South America), 6,800  
Strait of Gibraltar, 4,024  
Straits of Florida, 87  
Yucatan Channel, 186**Ports**Belem, Brazil, 2,654  
Belize, Belize, 528  
Boca de Tanamo, Cuba, 444  
Bocas del Toro, Panama, 981  
Bordeaux, France, 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, South Africa, 6,736  
Cardenas, Cuba, 88  
Carmen, Mexico, 639  
Cartagena, Colombia (via Old Bahama Channel), 1,142  
Charleston, South Carolina, U.S.A., 645  
Charlotte Amalie, Virgin Islands, 1,048  
Charlottetown, Canada, 1,846  
Cienfuegos, Cuba, 482  
Coatzacoalcos, Mexico (north of Banco de Campeche), 840  
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, Guyana, 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  
Isabel de Sagua, Cuba, 151  
Jacksonville, Florida, U.S.A., 528  
Key West, Florida, U.S.A., 92  
Kingston, Jamaica (via Windward Passage), 762  
Kingston, Jamaica (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., 992Nuevitas, Cuba, 344  
Pensacola, Florida, U.S.A., 515  
Philadelphia, Pennsylvania, U.S.A., 1,162  
Pointe à Pitre, Guadeloupe (via Mona Passage), 1,309  
Pointe à Pitre, Guadeloupe (via Virgin Passage), 1,308  
Ponce, Puerto Rico (via Old Bahama Channel and Mona Passage), 981  
Port au Prince, Haiti, 662  
Port of Spain, Trinidad (via Old Bahama Channel and Mona Passage), 1,494  
Port Arthur, Texas, U.S.A., 749  
Port Castries, St. Lucia (via Mona Passage), 1,370  
Progreso, Mexico, 430  
Puerto Barrios, Guatemala, 608  
Puerto Cabello, Venezuela (via Old Bahama Channel and Windward Passage), 1,260  
Puerto Manati, Cuba, 353  
Puerto Siboney, Cuba (via Yucatan Channel), 729  
Puerto Vita, Cuba, 400  
Recife, Brazil (via Old Bahama Channel and Mona Passage), 3,551  
Rio de Janeiro, Brazil, 4,623  
San Juan del Norte, Nicaragua (via inside), 871  
San Juan, Puerto Rico (via Old Bahama Channel), 978  
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  
St. Pierre, Martinique, 1,339  
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., 1,767**LA ISABEL DE SAGUA, CUBA**  
(22°57'00"N., 80°00'24"E.) See Isabel de Sagua, Cuba.**LA LIBERTAD, ECUADOR**  
(2°11'4"S., 80°55'00"W.) to:**Junction Points\***Panama, Panama, 674  
Punta Arenas, Chile, 3,258**Ports**Buenaventura, Colombia, 445  
Callao, Peru, 682  
Lobitos, Peru, 149  
Negritos, Peru, 158**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 NOUVELLE, FRANCE**  
(43°00'47"N., 3°04'25"E.) to:**Junction Points\***Port Said, Egypt, 1,582  
Strait of Gibraltar, 658**Ports**Alexandria, Egypt, 1,480  
Algiers, Algeria, 382  
Antibes, France, 208  
Barcelona, Spain, 132  
Famagusta, Cyprus, 1,617  
Genova, Italy, 295  
Haifa, Israel, 1,664  
Istanbul, Turkey, 1,453  
Marseille, France, 101  
Messina, Italy, 654  
Rhodes, Greece, 1,293  
Tarabulus, Libya, 802  
Yumurtalik, Turkey, 1,669**LA PALLICE, FRANCE**  
(46°09'36"N., 1°13'21"W.) to:**Junction Points\***Ile d'Ouessant, France, 245  
Strait of Gibraltar, 950**Ports**Bilbao, Spain, 214  
Bordeaux, France, 111  
Santander, Spain, 201  
St. Nazaire, France, 108**LA PAMPILLA, PERU**  
(11°55'00"S., 77°09'00"W.) See Callao.**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, Egypt, 1,391  
Strait of Gibraltar, 891\* **JUNCTION POINT.**—See Preface for use of junction points

**Ports**

Alexandria, Egypt, 1,280  
 Algiers, Algeria, 540  
 Alicante, Spain, 588  
 Ancona, Italy, 979  
 Annaba, Algeria, 463  
 Banghazi, Libya, 876  
 Banzart, Tunisia, 414  
 Barcelona, Spain, 383  
 Bari, Italy, 775  
 Beirut, Lebanon, 1,473  
 Brindisi, Italy, 717  
 Cagliari, Sardinia, 336  
 Cartagena, Spain, 640  
 Castellammare di Stabia, Italy, 308  
 Ceuta, Morocco, 872  
 Gibraltar, 873  
 Haifa, Israel, 1,469  
 Iraklion, Kriti, 956  
 Istanbul, Turkey (south of Greece), 1,256  
 Istanbul, Turkey (via Corinth Canal), 1,214  
 Izmir, Turkey (south of Greece), 1,101  
 Izmir, Turkey (via Corinth Canal), 1,060  
 Malaga, Spain, 821  
 Marseille, France, 231  
 Messina, Sicily, 450  
 Napoli, Italy, 302  
 Odessa, Ukraine (south of Greece), 1,604  
 Odessa, Ukraine (via Corinth Canal), 1,562  
 Oran, Algeria, 701  
 Palermo, Sicily, 395  
 Palma, Balearic Islands, 474  
 Piraeus, Greece (south of Greece), 942  
 Piraeus, Greece (via Corinth Canal), 860  
 Rijeka, Croatia, 1,049  
 Sibenik, Croatia, 923  
 Siracusa, Sicily, 521  
 Split, Croatia, 908  
 Tarabulus, Libya, 790  
 Taranto, Italy, 669  
 Thessaloniki, Greece (south of Greece), 1,150  
 Thessaloniki, Greece (via Corinth Canal), 1,109  
 Toulon, France, 199  
 Trieste, Italy, 1,083  
 Tunis, Tunisia, 448  
 Valencia, Spain, 538  
 Valletta, Malta, 554  
 Venezia, Italy, 1,093  
 Volos, Greece (south of Greece), 1,091  
 Volos, Greece (via Corinth Canal), 1,050

**LA UNION, EL SALVADOR**  
 (13°20'00"N., 87°49'00"W.) to:

**Junction Points\***

Panama, Panama, 748

**Ports**

Corinto, Nicaragua, 73  
 Golfofito, Costa Rica, 432  
 San Francisco, California, U.S.A., 2,586

**LAE, PAPUA 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 New Guinea, 2,635  
 Rabaul, Papua New Guinea, 448  
 Wellington, New Zealand, 2,635

**LAGOS, NIGERIA**  
 (6°27'00"N., 3°23'00"E.) to:

**Junction Points\***

Ile d'Ouessant, France, 3,746  
 Strait of Gibraltar, 3,100  
 Straits of Florida, 5,225

**Ports**

Accra, Ghana, 229  
 Baltimore, Maryland, U.S.A., 5,063  
 Benguela, Angola, 1,289  
 Boma, Congo, 977  
 Boston, Massachusetts, U.S.A., 4,774  
 Calabar, Nigeria, 391  
 Charleston, South Carolina, U.S.A., 5,065  
 Colon, Panama, 5,050  
 Douala, Cameroon, 442  
 Georgetown, Ascension Island, 1,375  
 Longji, Cameroon, 463  
 Malabo, Equatorial Guinea, 384  
 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, Congo, 851  
 Port of Spain, Trinidad, 3,950  
 Port Harcourt, Nigeria, 318  
 Porto Grande, Cape Verde Islands, 1,991  
 Sao Tome, Sao Tome, Gulf of Guinea, 422  
 Sekondi, Ghana, 317  
 Tema, Ghana, 216  
 Victoria, Cameroon, 410  
 Willemstad, Curacao, 4,359

**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**

Kingston, Jamaica, 1,190  
 La Habana, Cuba, 750  
 Veracruz, Mexico, 688

**LAND SKRONA, SWEDEN**  
 (55°52'08"N., 12°49'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 167  
 Skagens Odde, Denmark, 137

**Ports**

Oslo, Norway, 261

Stockholm, Sweden, 424  
 Szczecin, Poland, 170

**LARNACA, CYPRUS**  
 (34°54'44"N., 33°38'23"E.) to:

**Junction Points\***

Port Said, Egypt, 231  
 Strait of Gibraltar, 1,953

**Ports**

Al Latakia, Syria, 114  
 Beirut, Lebanon, 112  
 Constanta, Romania, 962  
 Istanbul, Turkey, 766  
 Izmir, Turkey, 570  
 Mersin, Turkey, 149  
 Nice, France, 1,457  
 Patrai, Greece (via south of Greece), 750  
 Patrai, Greece (via Corinth Canal), 658  
 Piraeus, Greece, 566  
 Pula, Croatia (via south of Greece), 1,245  
 Pula, Croatia (via Corinth Canal), 1,212  
 Rostov-na-Donu, Russia, 1,402  
 Sete, France, 1,579  
 Sfax, Tunisia, 1,163  
 Tarabulus, Libya, 1,050  
 Thessaloniki, Greece, 703

**LARNE, ENGLAND**  
 (54°52'00"N., 5°47'40"W.) to:

**Junction Points\***

Bishop Rock, England, 323  
 Fastnet Rock, Ireland, 312  
 Inishtrahull, Ireland, 86

**Ports**

Cardiff, Wales, 295  
 Cobh, Ireland, 251  
 Londonderry, Northern Ireland, 71  
 Milford Haven, Wales, 220  
 Stormoway, Scotland, 219  
 Workington, England, 85

**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 PALMAS, 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  
 Plymouth, England, 1,432  
 Ponta Delgada, Azores, 774  
 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

**LATCHI, CYPRUS**  
 (35°06'00"N., 32°27'00"E.) See Khrysohou Bay, Cyprus.

**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

**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

**LAVAN ISLAND, IRAN**  
 (26°47'05"N., 53°20'15"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,785  
 Cape Leeuwin, Australia, 5,121  
 Port Said, Egypt, 2,967  
 Singapore, 3,506  
 Selat Sunda, Indonesia, 3,713

**Ports**

Abadan, Iran, 349  
 Aden, Yemen, 1,578  
 Assab, Ethiopia, 1,722  
 Bandar Abbas, Iran, 198

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



## 56 LAZARO CARDENAS, MEXICO

Belawan, Indonesia, 3,175,  
Bombay, India, 1,198  
Calcutta, India, 3,183

**LAZARO CARDENAS,  
MEXICO**  
(17°55'44"N., 102°11'09"W.) to:

**Junction Points\***

Honshu, Japan, 6,026  
Panama, Panama, 1,568  
Punta Arenas, Chile, 4,681  
Torres Strait, Australia, 7,122  
Tsugaru-Kaikyo, Japan, 5,817  
Wilson Promontory, Australia,  
7,092

**Ports**

Amapala, Honduras, 988  
Ensenada, Mexico, 1,253  
Honolulu, Hawaii, U.S.A., 3,153  
Mollendo, Peru, 2,786  
Monterey, California, U.S.A.,  
1,637  
Talara, Peru, 1,832  
Valparaiso, Chile, 3,525

**LE HAVRE, FRANCE**  
(49°29'00"N., 0°06'00"E.) to:

**Junction Points\***

Bishop Rock, England, 263  
Ile d'Ouessant, France, 243  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 522  
Skagens Odde, Denmark, 554

**Ports**

Aberdeen, Scotland, 522  
Amsterdam, Netherlands, 273  
Antwerp, Belgium, 244  
Belfast, Northern Ireland, 542  
Bergen, Norway, 702  
Bremerhaven, Germany, 453  
Dartmouth, England, 151  
Dundee, Scotland, 505  
Dunkerque, France, 144  
Egersund, Norway, 589  
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  
Shoreham By Sea, England, 90  
St. Malo, France, 156  
Stavanger, Norway, 629  
Wilhelmshaven, Germany, 440  
Zeebrugge, Belgium, 186

**LE VERDON, FRANCE**  
(45°33'00"N., 1°02'30"W.)  
Subtract 50 miles from Bordeaux  
distances.

**LEGASPI PORT,  
PHILIPPINES**  
(13°09'00"N., 123°45'30"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 1,667  
Singapore, 1,611

**Ports**

Ho Chi Minh, Vietnam, 1,177  
Iloilo, Philippines, 226  
Manila, Philippines, 370

**LEITH, SCOTLAND**  
(55°59'00"N., 3°10'30"W.) to:

**Junction Points\***

Bishop Rock, England, 708  
Ile d'Ouessant, France, 696  
Skagens Odde, Denmark, 472

**Ports**

Amsterdam, Netherlands, 372  
Antwerp, 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**  
(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

**LERWICK, SCOTLAND**  
(60°07'10"N., 1°07'32"W.) to:

**Junction Points\***

Bishop Rock, England, 899  
Ile d'Ouessant, France, 881  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 568  
Pentland Firth, Scotland, 118  
Skagens Odde, Denmark, 123

**Ports**

Bergen, Norway, 204  
Drammen, Norway, 471  
Emden, Germany, 504  
Hull, England, 427  
Oslo, Norway, 481

**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, RUSSIA**  
(66°40'42"N., 34°22'00"E.) Add  
49 miles to Arkhangel'sk distances.

**LEVUKA, FIJI ISLANDS**  
(17°40'30"S., 178°51'15"E.) to:

**Junction Points\***

Panama, Panama (via Ndaveta  
Namuka), 6,288  
Punta Arenas, Chile, 5342  
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, China (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  
Noumea, New Caledonia (via  
Havannah Passage and Woodin  
Passage), 776  
Pago Pago, American Samoa, 643  
Papeete, French Polynesia, 1,831  
Petropavlovsk-Kamchatskiy,  
Russia, 4,518  
Ponape, Caroline Islands, 2,024  
Rabaul, Papua New Guinea, 1,836  
Rotoava, Iles Tuamotu, 2,060  
San Francisco, California, U.S.A.,  
4,705  
Seattle, Washington, U.S.A., 5,120  
Shanghai, China, 4,528  
Sydney, Australia, 1,779  
Valparaiso, Chile, 5,753  
Yokohama, Japan, 4,015

**LIANYUNGANG, CHINA**  
(34°44'30"N., 119°27'30"E.) to:

**Ports**

Dalian, China, 348  
Incheon, South Korea, 389  
Nagasaki, Japan, 558  
Shanghai, China, 414

**LIBREVILLE, GABON**  
(0°22'00"N., 9°25'00"E.) to:

**Ports**

Dakar, Senegal, 1,982  
Douala, Cameroon, 228  
Pointe Noire, Congo, 399

**LICATA, SICILY, ITALY**  
(37°05'15"N., 13°56'30"E.) to:

**Junction Points\***

Port Said, Egypt, 993  
Strait of Gibraltar, 958

**Ports**

Messina, Sicily, 173  
Tunis, Tunisia, 187  
Valletta, Malta, 78

**LIEN-YUN, CHINA**  
(33°44'30"N., 119°27'30"E.) See  
Lianyungang, China.

**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, Egypt, 208  
Strait of Gibraltar, 1,914

**Ports**

Alexandria, Egypt, 272  
Iraklion, Kriti, 405  
Izmir, Turkey, 530

**LIMERICK, IRELAND**  
(52°39'40"N., 8°38'15"W.) to:

**Junction Points\***

Fastnet Rock, Ireland, 157  
Inishtrahull, Ireland, 279  
Pentland Firth, Scotland, 538

**Ports**

Belfast, Northern Ireland (north of  
Ireland), 376  
Cobh, Ireland, 221

**LIMETREE BAY, ST. CROIX,  
VIRGIN ISLANDS**  
(17°40'39"N., 64°44'12"W.) to:

**Junction Points\***

Bishop Rock, England, 3,352  
Panama, Panama, 1,060  
Punta Arenas, Chile, 5,720  
Strait of Gibraltar, 3,305  
Straits of Florida, 1,126

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

**Ports**

Baltimore, Maryland, U.S.A., 1,454  
 Buenos Aires, Argentina, 4,648  
 Jacksonville, Florida, U.S.A., 1,216  
 Philadelphia, Pennsylvania, U.S.A., 1,474  
 Port of Spain, Trinidad, 470  
 Willemstad, Curacao, 428

**LIMHAMN, SWEDEN**  
 (55°35'30"N., 12°55'40"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 159  
 Skagens Odde, Denmark, 159

**Ports**

Oslo, Norway, 279  
 Stockholm, Sweden, 427  
 Swinoujscie, Poland, 128

**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  
 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, Guyana, 1,647  
 Halifax, Canada, 2,368  
 Hamilton, Bermuda (via Windward Passage), 1,715  
 Jacksonville, Florida, U.S.A., 1,589  
 Kingston, Jamaica, 605  
 La Habana, Cuba, 1,170  
 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  
 Port Castries, St. Lucia, 1,316  
 Puerto Cortes, Honduras, 623  
 San Juan, Puerto Rico (via Mona Passage), 1,119  
 Savannah, Georgia, U.S.A. (via Windward Passage), 1,636  
 Veracruz, Mexico, 1,338  
 Wilmington, North Carolina, U.S.A., 1,680

**LINGKAS, KALIMANTAN, INDONESIA**  
 (3°17'00"N., 117°35'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 830  
 Singapore, 1,286  
 Selat Sunda, Indonesia, 1,191

**Ports**

Manila, Philippines, 785  
 Tjilatjap, Indonesia, 1,217

**LISBOA, PORTUGAL**  
 (38°42'00"N., 9°08'00"W.) to:

**Junction Points\***

Bishop Rock, England, 710  
 Cape of Good Hope, South Africa, 5,152  
 Ile d'Ouessant, France, 666  
 Inishtrahull, Ireland, 1,093  
 Montreal, Canada, 3,032  
 Pentland Firth, Scotland, 1,341  
 Punta Arenas, Chile, 6,398  
 Strait of Gibraltar, 286  
 Straits of Florida, 3,823

**Ports**

Argentina, Canada, (via Cape Race), 2,101  
 Banjul, Gambia, 1,632  
 Belem, Brazil, 3,251  
 Bordeaux, France, 733  
 Boston, Massachusetts, U.S.A., 2,817  
 Buenos Aires, Argentina, 5,339  
 Cadiz, Spain, 253  
 Cape Town, South Africa, 5,134  
 Casablanca, Morocco, 324  
 Charleston, South Carolina, U.S.A., 3,385  
 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, Guyana, 3,264  
 Guantanamo, Cuba, 3,570  
 Halifax, Canada, 2,484  
 Horta, Azores, 917  
 Huelva, Spain, 235  
 Jacksonville, Florida, U.S.A., 3,539  
 Key West, Florida, U.S.A., 3,765  
 Kingston, Jamaica, 3,725  
 Las Palmas, Canary Islands, 712  
 Marin, Spain, 255  
 Monrovia, Liberia, 2,225  
 New York, New York, U.S.A., 2,980  
 Norfolk, Virginia, U.S.A., 3,129  
 Oporto, Portugal, 176  
 Philadelphia, Pennsylvania, U.S.A., 3,122  
 Ponta Delgada, Azores, 783  
 Port of Spain, Trinidad, 3,287  
 Port Castries, St. Lucia, 3,111  
 Porto Grande, Cape Verde Islands, 1,555  
 Praia, Da Vitoria, Terceira, 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 Castelo, Portugal, 210  
 Vigo, Spain, 247  
 Villa do Porto, Azores, 771  
 Villagarcia, Spain, 264

**LISBON, PORTUGAL**  
 (38°42'00"N., 9°08'00"W.) See Lisboa.

**LITTLE CREEK, VIRGINIA, U.S.A.**  
 (36°56'00"N., 76°10'40"W.)  
 Subtract 13 1/2 miles from Norfolk distances.

**LIVERPOOL, CANADA**  
 (44°02'30"N., 64°42'00"W.) to:

**Ports**

Boston, Massachusetts, U.S.A., 325  
 Colon, Panama, 2,244  
 Kingston, Jamaica, 1,752  
 New York, New York, U.S.A., 536  
 Norfolk, Virginia, U.S.A., 715  
 Philadelphia, Pennsylvania, U.S.A., 686  
 San Juan, Puerto Rico, 1,540  
 St. John, Canada, 212  
 Sydney, Canada, 293

**LIVERPOOL, ENGLAND**  
 (53°27'00"N., 3°01'00"W.) to:

**Junction Points\***

Bishop Rock, England, 297  
 Fastnet Rock, Ireland, 295  
 Inishtrahull, Ireland (north of Isle of Man), 210  
 Pentland Firth, Scotland (south of Isle of Man), 460  
 Pentland Firth, Scotland (via The Minch), 451

**Ports**

Antwerp, Belgium, 698  
 Ardrossan, Scotland, 180  
 Arkhangelsk, Russia, 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  
 Le Havre, France, 510  
 London, England, 659  
 Londonderry, Northern Ireland, 215  
 Milford Haven, Wales, 197  
 Murmansk, Russia, 1,703  
 Newport, Wales, 284  
 Port Talbot, Wales, 244  
 Southampton, England, 479  
 Swansea, Wales, 236  
 Waterford, Ireland, 189

**LIVORNO, ITALY**  
 (43°33'06"N., 10°17'45"E.) to:

**Junction Points\***

Port Said, Egypt, 1,355  
 Strait of Gibraltar, 887

**Ports**

Alexandria, Egypt, 1,244  
 Algiers, Algeria, 528  
 Alicante, Spain, 585  
 Anaba, Algeria, 431  
 Ancona, Italy, 946  
 Banghazi, Libya, 841  
 Banzart, Tunisia, 382  
 Barcelona, Spain, 386  
 Bari, Italy, 739  
 Beirut, Lebanon, 1,437  
 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, Kriti, 920  
 Istanbul, Turkey (south of Greece), 1,220  
 Istanbul, Turkey (via Corinth Canal), 1,178  
 Izmir, Turkey (south of Greece), 1,066  
 Izmir, Turkey (via Corinth Canal), 1,024  
 Malaga, Spain, 817  
 Marseille, France, 236  
 Messina, Sicily, 414  
 Napoli, Italy, 267  
 Nice, France, 134  
 Odessa, Ukraine (south of Greece), 1,568  
 Odessa, Ukraine (via Corinth Canal), 1,527  
 Oran, Algeria, 691  
 Palermo, Sicily, 359  
 Palma, Balearic Islands, 470  
 Piraievs, Greece (south of Greece), 906  
 Piraievs, Greece (via Corinth Canal), 825  
 Rijeka, Croatia, 1,013  
 Sete, France, 298  
 Sibenik, Croatia, 887  
 Siracusa, Sicily, 486  
 Split, Croatia, 872  
 Tarabulus, Libya, 754  
 Taranto, Italy, 634  
 Thessaloniki, Greece (south of Greece), 1,114  
 Thessaloniki, Greece (via Corinth Canal), 1,073  
 Toulon, France, 204  
 Trieste, Italy, 1,047  
 Tunis, Tunisia, 417  
 Valencia, Spain, 539  
 Valletta, Malta, 519  
 Venezia, Italy, 1,057  
 Villefranche, France, 133  
 Volos, Greece (south of Greece), 1,056  
 Volos, Greece (via Corinth Canal), 1,014

**LO-HSING-TA MAO-TI, CHINA**  
 (25°59'00"N., 119°26'30"E.) to:

**Junction Points\***

Singapore, 1,817

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,868  
 Apra, Guam, 1,617

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

## 58 LOBITO, ANGOLA

Busan, South Korea, 762  
 Cebu, Philippines (via Balintang Channel), 1,051  
 Dagu, China (via Steep Island Passage), 1,029  
 Dalian, China, 871  
 Hakodate, Japan, 1,429  
 Hong Kong, China, 459  
 Honolulu, Hawaii, U.S.A., 4,487  
 Iloilo, Philippines (via Balintang Channel), 1,073  
 Incheon, South Korea, 818  
 Kobe, Japan, 1,003  
 Manila, Philippines, 787  
 Mogpo, South Korea, 665  
 Nagasaki, Japan, 691  
 Nampo, North Korea, 879  
 Petropavlovsk-Kamchatskiy, Russia, 2,481  
 Qingdao, China (via Steep Island Passage), 715  
 Qinhuangdao, China, 977  
 Shanghai, China, 440  
 Shimonoseki, Japan, 799  
 Vladivostok, Russia, 1,264  
 Weihai, China (via Steep Island Passage), 801  
 Weonsan, North Korea, 1,068  
 Xiamen, China, 200  
 Yantai, China, 835  
 Yokohama, Japan, 1,217

**LOBITO, ANGOLA**  
 (12°20'00"S., 13°34'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 1,440  
 Ile d'Ouessant, France, 4,670

**Ports**

Accra, Ghana, 1,356  
 Luanda, Angola, 237  
 Pointe Noire, Congo, 473

**LOME, TOGO**  
 (6°07'00"N., 1°13'30"E.) to:

**Ports**

Malabo, Equatorial Guinea, 480  
 Monrovia, Liberia, 789  
 Pointe Noire, Congo, 910  
 Takoradi, Ghana, 200

**LONDON, ENGLAND**  
 (51°30'00"N., 0°01'00"E.) to:

**Junction Points\***

Bishop Rock, England, 413  
 Ile d'Ouessant, France, 397  
 Nord-Ostsee-Kanal (East Entrance), Germany, 439  
 Pentland Firth, Scotland, 536  
 Skagens Odde, Denmark, 554

**Ports**

Aberdeen, Scotland, 429  
 Alesund, Norway, 733  
 Amsterdam, Netherlands, 208  
 Antwerp, Belgium, 193  
 Arendal, Norway, 551  
 Arkhangel'sk, Russia, 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  
 Flekkefjorden, Norway, 479  
 Grimstad, Norway, 542  
 Hakonsvern, Norway, 616  
 Hamburg, Germany, 425  
 Hirtshals, Denmark, 541  
 Holyhead, Wales, 594  
 Hull, England, 240  
 Kristiansand, Norway, 514  
 Kragero, Norway, 582  
 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  
 Sandefjorden, Norway, 610  
 Seaham Harbor, England, 318  
 Shoreham By Sea, England, 161  
 Skien, Norway, 609  
 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 Rock, Ireland (west of Ireland), 371  
 Pentland Firth, Scotland, 310

**Ports**

Avonmouth, England, 384  
 Belfast, Northern 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, South Africa, 2,359

Ile d'Ouessant, France, 4,179

**Ports**

Lagos, Nigeria, 463  
 Matadi, Congo, 731

**LONGYEARBYEN, SVALBARD**  
 (78°14'30"N., 15°34'00"E.) to:

**Ports**

Arkhangel'sk, Russia, 1,051  
 Bergen, Norway, 1,124  
 Dikson, Russia, 1,148  
 Inverness, Scotland, 1,340  
 Kirkenes, Norway, 637  
 Murmansk, Russia, 695  
 Narvik, Norway, 659  
 Oslo, Norway, 1,482  
 Pechenga, Russia, 638  
 Reykjavik, Iceland (north of Iceland), 1,160  
 Reykjavik, Iceland (South of Iceland), 1,310  
 Tromso, Norway, 556  
 Trondheim, Norway, 943  
 Vardo, Norway, 586

**LOOP TERMINAL, GULF OF MEXICO, U.S.A.**  
 (28°52'11"N., 89°55'16"W.) to:

**Junction Points\***

Straits of Florida, 472  
 Yucatan Channel, 503

**Ports**

Campeche, Mexico, 545  
 La Habana, Cuba, 547  
 Tampico, Mexico, 602  
 Veracruz, Mexico, 679

**LORIENT, FRANCE**  
 (47°43'45"N., 3°21'51"W.) to:

**Junction Points\***

Bishop Rock, England, 202  
 Ile d'Ouessant, France, 107

**Ports**

Bilbao, Spain, 274

**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  
 Selat Sunda, Indonesia (via Makassar Strait), 7,976  
 Wilson Promontory, Australia, 6,879

**Ports**

Acapulco, Mexico, 1,501  
 Aleksandrovsk-Sakhalinskiy, Russia, 4,687  
 Antofagasta, Chile, 4,430  
 Apia, Samoa, 4,181  
 Arica, Chile, 4,219  
 Auckland, New Zealand, 5,658  
 Avarua, Cook Islands, 4,064

Baie Taio-Hae, Marquesa Islands, 2,858  
 Bangkok, Thailand (via Balintang Channel), 7,775  
 Brisbane, Australia, 6,274  
 Busan, South Korea, 5,229  
 Callao, Peru, 3,655  
 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  
 Ho Chi Minh, Vietnam (via San Bernardino Strait), 7,403  
 Hong Kong, China, 6,380  
 Honolulu, Hawaii, U.S.A., 2,228  
 Kobe, Japan, 5,185  
 Manila, Philippines (north of Luzon), 6,530  
 Manila, Philippines (via San Bernardino Strait), 6,588  
 Manzanillo, Mexico, 1,205  
 Mazatlan, Mexico, 1,011  
 Melbourne, Australia, 7,032  
 Nagasaki, Japan, 5,572  
 Nampo, North Korea, 5,711  
 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  
 Papeete, French Polynesia, 3,571  
 Pearl Harbor, Hawaii, U.S.A., 2,233  
 Petropavlovsk Kamchatskiy, Russia, 3,615  
 Prince Rupert, Canada, 1,432  
 Puerto Armuelles, Panama, 2,645  
 Puntarenas, Costa Rica, 2,499  
 Salina Cruz, Mexico, 1,803  
 San Jose, Guatemala, 2,054  
 Santa Rosalia, Mexico, 1,192  
 Seward, Alaska, U.S.A., 2,045  
 Shanghai, China, 5,810  
 Sitka, Alaska, U.S.A., 1,640  
 Surabaya, Indonesia (via Makassar Strait), 7,622  
 Suva, Fiji Islands, 4,788  
 Sydney, Australia, 6,511  
 Valparaiso, Chile, 4,808  
 Victoria, Canada, 1,091  
 Vladivostok, Russia, 4,981  
 Wellington, New Zealand, 5,857  
 Weonsan, North 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  
 Esmeraldas, Ecuador, 2,388  
 Guayaquil, Ecuador, 2,155  
 Guaymas, Mexico, 4,442  
 Iquique, Chile, 1,033

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

Monterey, California, U.S.A.,  
1,202

Pisco, Peru, 1,432  
Puntarenas, Costa Rica, 2,899  
Salina Cruz, Mexico, 3,430  
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

**LOWESTOFT, ENGLAND**  
(52°29'41"N., 1°47'06"E.) to:

**Junction Points\***

Bishop Rock, England, 418  
Ile d'Ouessant, France, 404  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 350  
Pentland Firth, Scotland, 424  
Skagens Odde, Denmark, 452

**Ports**

Aberdeen, Scotland, 320  
Bremerhaven, Germany, 279  
Calais, France, 90  
Emden, Germany, 221  
London, England, 110  
Rotterdam, Netherlands, 108  
Trondheim, Norway, 776  
Wilhelmshaven, Germany, 263  
Zeebrugge, Belgium, 94

**LUANDA, ANGOLA**  
(8°47'00"S., 13°15'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
1,627

**Ports**

Boma, Congo, 190  
Cape Town, South Africa, 1,601  
Georgetown, Ascension Island,  
1,657  
Lobito, Angola, 237  
New York, New York, U.S.A.,  
5,670  
Pointe Noire, Congo, 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\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 98  
Skagens Odde, Denmark, 263

**Ports**

Aalborg, Denmark (via Store  
Baelt), 248  
Abenra, Denmark, 131  
Assens, Denmark, 127  
Flensburg, Denmark, 102  
Flensburg, Germany, 131  
Fredericia, Denmark, 155  
Frederikshavn, Denmark, 155  
Gdynia, Poland, 328  
Grena, Denmark, 169

Inaderslev, Denmark, 137  
Kobenhavn, Denmark, 148  
Middlefart, Denmark, 149  
Naestved, Denmark, 136  
Stockholm, Sweden, 491  
Vejde, 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

**LULEA, SWEDEN**  
(65°34'30"N., 22°10'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 875  
Skagens Odde, Denmark (via Store  
Baelt), 1,067  
Skagens Odde, Denmark (via The  
Sound), 941

**Ports**

Bergen, Norway (via The Sound),  
1,247  
Oslo, Norway (via Store Baelt),  
1,195  
Oslo, Norway (via The Sound),  
1,062  
Stavanger, Norway (via The  
Sound), 1,172  
Trondheim, Norway (via The  
Sound), 1,543

**LYSEKIL, SWEDEN**  
(58°16'00"N., 11°26'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany (via Store  
Baelt), 267.  
Nord-Ostsee-Kanal (East  
Entrance), Germany (via The  
Sound), 340

**Ports**

Bergen, Norway, 330  
Flensburg, Germany, 270  
Fredericia, Denmark, 191  
Oslo, Norway, 114

**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 8 1/2 miles from Rotterdam  
distances.

**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 New Guinea,  
1,168  
Rabaul, Papua New Guinea, 1,871

**MACKENZIE, GUYANA**  
(6°00'00"N., 58°17'00"W.) Add  
66 miles to Georgetown distances.

**MADRAS, INDIA**  
(13°06'00"N., 80°18'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa  
(via east of Madagascar), 4,790  
Cape Leeuwin, Australia, 3,480  
Selat Lombok, Indonesia, 2,559  
Port Said, Egypt, 4,037  
Singapore, 1,583

**Ports**

Aden, Yemen, 2,650  
Belawan, Indonesia, 1,252  
Bombay, India, 1,482  
Calcutta, India, 769  
Colombo, Sri Lanka, 611  
Fremantle, Australia, 3,389  
Kakinada, India, 276  
Karachi, Pakistan, 1,908  
Malacca, Malaysia, 1,470  
Moulmein, Burma, 1,043  
Penang, Malaysia, 1,285  
Port Blair, Andaman Islands, 758  
Port Darwin, Australia, 3,483  
Port Dickson, Malaysia, 143  
Port Swettenham, Malaysia, 1,384  
Rangoon, Burma, 1,003  
Sabang, Indonesia, 994  
Trincomalee, Sri Lanka, 288  
Vishakhapatnam, India, 332

**MAGADAN, RUSSIA**  
(59°33'00"N., 150°45'00"E.) See  
Bukhta Nagayev.

**MAGALLANES, CHILE**  
(53°10'00"S., 70°54'00"W.) See  
Punta Arenas.

**MAHE, SEYCHELLES**  
(4°36'40"S., 55°29'00"E.) See

Victoria.

**MAHON, BALEARIC  
ISLANDS**  
(39°52'02"N., 4°18'45"E.) to:

**Junction Points\***

Port Said, Egypt, 1,472  
Strait of Gibraltar, 542

**Ports**

Alexandria, Egypt, 1,349  
Banghazi, Libya, 896  
Ceuta, Morocco, 388  
Genova, Italy, 340  
Malaga, Spain, 517  
Trieste, Italy, 1,314  
Tunis, Tunisia, 372

**MAIZURU, JAPAN**  
(35°31'00"N., 135°20'00"E.) to:

**Ports**

Akita, Japan, 352  
Bohang, South Korea, 313  
Busan, South Korea, 333  
Changjin, North Korea, 411  
Chongjin, North Korea, 463  
Hakodate, Japan, 460  
Kimchaek, North Korea, 431  
Nanao, Japan, 213  
Niigata, Japan, 256  
Sakata, Japan, 314  
Shanghai, China, 800  
Shimonoseki, Japan, 302  
Ulsan, South Korea, 315  
Unggi, North Korea, 474  
Vladivostok, Russia, 485  
Wakamatsu, Japan, 299

**MAJUNGA, MADAGASCAR**  
(15°44'00"S., 46°18'00"E.) to:

**Junction Points\***

Port Said, Egypt, 3,471  
Singapore, 3,845

**Ports**

Beira, Mozambique, 732  
Belawan, Indonesia, 3,512  
Fremantle, Australia, 4,132  
Malacca, Malaysia, 3,710  
Maputo, Mozambique, 1,034  
Penang, Malaysia, 3,557  
Port Darwin, Australia, 5,069  
Sabang, Indonesia, 3,246  
Tulear, Madagascar, 625

**MAKASSAR, SULAWESI**  
(5°08'00"S., 119°24'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 339  
Panama, Panama (via Selat Salajar  
and Selat Sagewin), 9,855  
Singapore (via Selat Riouw), 1,070  
Selat Sunda, Indonesia, 861  
Selat Wetar, Indonesia, 614

**Ports**

Bandjermasin, Kalimantan,  
Indonesia, 399  
Belawan, Indonesia, 1,439  
Davao, Philippines, 929  
Kompong Som, Cambodia, 1,584

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

## 60 MALABO, EQUATORIAL GUINEA

Manila, Philippines (via Mindoro Strait and Sibutu Passage), 1,232

Mogpo, South Korea, 2,483  
Semarang, Indonesia, 596  
Sorido, Indonesia, 1,180  
Sorong, Indonesia, 872  
Tanjung Uban, Indonesia, 1,075  
Tjirebon, Indonesia, 156  
Tso-ying, Taiwan, 1,757

**MALABO, EQUATORIAL GUINEA**

(3°45'30"N., 8°46'30"E.) to:

**Ports**

Boma, Congo, 689  
Georgetown, Ascension Island, 1,561  
Kribi, Cameroon, 106  
Lagos, Nigeria, 384  
Lome, Togo, 480  
St. Helena Island, 1,472

**MALACCA, MALAYSIA**

(2°10'00"N., 102°14'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,464  
Selat Lombok, Indonesia, 1,091  
Port Said, Egypt, 4,906  
Singapore, 117  
Selat Sunda, Indonesia, 619  
Torres Strait, Australia, 2,588

**Ports**

Aden, Yemen, 3,517  
Al Basrah, Iraq, 3,771  
Al Manamah, Bahrain, 3,534  
Albany, Australia, 2,602  
Beira, Mozambique, 4,405  
Belawan, Indonesia, 253  
Berbera, Somalia, 3,531  
Bombay, India, 2,327  
Bushehr, Iran, 3,590  
Calcutta, India, 1,523  
Calicut, India, 1,827  
Colombo, Sri Lanka, 1,458  
Dar es Salaam, Tanzania, 3,927  
Diego Garcia, Chagos Archipelago, 2,078  
Durban, South Africa, 4,757  
East London, South Africa, 4,967  
Fort Dauphin, Madagascar, 3,860  
Jakarta, Indonesia, 613  
Kakinada, India, 1,478  
Karachi, Pakistan, 2,768  
Madras, India, 1,470  
Majunga, Madagascar, 3,730  
Maputo, Mozambique, 4,654  
Mocambique, Mozambique, 3,965  
Mombasa, Kenya, 3,872  
Mosselbaai, South Africa, 5,269  
Penang, Malaysia, 252  
Port Louis, Mauritius, 3,215  
Rangoon, Burma, 986  
Sabang, Indonesia, 486  
Surabaya, Indonesia, 881  
Tamatave, Madagascar, 3,560  
Victoria, Seychelles, 2,952  
Zanzibar, Tanzania, 3,945

**MALAGA, SPAIN**

(3°42'44"N., 4°27'00"W.) to:

**Junction Points\***

Port Said, Egypt, 1,873

Strait of Gibraltar, 78

**Ports**

Alexandria, Egypt, 1,752  
Algiers, Algeria, 368  
Alicante, Spain, 248  
Ancona, Italy, 1,510  
Annaba, Algeria, 607  
Banghazi, Libya, 1,286  
Banzart, Tunisia, 699  
Barcelona, Spain, 464  
Bari, Italy, 1,303  
Beirut, Lebanon, 1,964  
Brindisi, Italy, 1,245  
Cartagena, Spain, 189  
Catania, Sicily, 1,012  
Derince, Turkey, 1,785  
Genova, Italy, 798  
Ghazaouet, Algeria, 158  
Haifa, Israel, 1,961  
Iraklion, Kriti, 1,446  
Istanbul, Turkey, 1,752  
Izmir, Turkey, 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, Ukraine, 2,100  
Oran, Algeria, 195  
Palermo, Sicily, 870  
Palma, Balearic Islands, 401  
Piraeus, Greece (south of Greece), 1,438  
Piraeus, Greece (via Corinth Canal), 1,381  
Rijeka, Croatia, 1,578  
Savona, Italy, 783  
Sibenik, Croatia, 1,452  
Siracusa, Sicily, 985  
Split, Croatia, 1,436  
Tarabulus, Libya, 1,024  
Taranto, Italy, 1,198  
Tarragona, Spain, 431  
Thessaloniki, Greece, 1,646  
Toulon, France, 652  
Trieste, Italy, 1,611  
Valencia, Spain, 334  
Valletta, Malta, 928  
Venezia, Italy, 1,621  
Villa Sanjurjo, Morocco, 93  
Volos, 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  
Ho Chi Minh, Vietnam, 1,801  
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  
Surabaya, Indonesia, 1,656  
Suva, Fiji Islands, 3,041  
Yokohama, Japan, 1,731

**MALDOGADO, URUGUAY**

(3°56'00"S., 55°00'00"W.) to:

**Junction Points\***

Panama, Panama, 5,352  
Punta Arenas, Chile, 1,321

**Ports**

Santos, Brazil, 1,172

**MALMO, SWEDEN**

(55°37'00"N., 13°00'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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

**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.

**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**

(41°37'15"N., 15°55'30"E.) to:

**Junction Points\***

Port Said, Egypt, 1,045  
Strait of Gibraltar, 1,419

**Ports**

Ancona, Italy, 195  
Dubrovnik, Croatia, 117  
Durres, Albania, 161

**MANGALORE, INDIA**

(12°55'32"N., 74°48'00"E.) See New Mangalore.

**MANITSOQ, 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

**MANILA, PHILIPPINES**

(14°35'00"N., 120°58'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via Sibutu Passage), 1,514  
Panama, Panama (north of Luzon), 9,347  
Panama, Panama (via San Bernardino Strait), 9,370  
Singapore, 1,330  
Selat Sunda, Indonesia (via Palawan Passage and Selat Gaspar), 1,578  
Torres Strait, Australia (via Basilan Strait), 2,193

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 2,507  
Ambon, Indonesia, 1,260  
Apra, Guam (north of Luzon), 1,742  
Apra, Guam (via San Bernardino Strait), 1,499  
Balikpapan, Kalimantan, Indonesia (via Sibutu Passage), 1,057  
Bangkok, Thailand, 1,435  
Busan, South Korea, 1,402  
Cebu, Philippines, 404  
Chimu Wan, Ryukyu Islands, 947  
Da Nang, Vietnam, 758  
Dagu, China (east of Taiwan), 1,722  
Dagu, China (via Formosa Strait), 1,732  
Dalian, China (east of Taiwan), 1,561  
Dalian, China (via Formosa Strait), 1,571  
Davao, Philippines, 831  
Dutch Harbor, Alaska, U.S.A. (north of Luzon), 4,233  
Guayaquil, Ecuador, 9,615  
Haiphong, Vietnam (South of Hainan Tao), 936  
Hakodate, Japan, 2,066  
Ho Chi Minh, Vietnam, 907  
Hong Kong, China, 631  
Honolulu, Hawaii, U.S.A. (north of Luzon), 4,869  
Honolulu, Hawaii, U.S.A. (via San Bernardino Strait), 4,767  
Hua-Lien Kang, Taiwan, 648  
Iloilo, Philippines (via Verde Island Passage and Jintotolo Channel), 361  
Incheon, South Korea, 1,498  
Jakarta, Indonesia (via Palawan Passage), 1,559  
Jolo, Philippines, 550  
Kiska, Alaska, U.S.A., 3,664  
Kobe, Japan (via Balintang Channel), 1,563  
Kodiak, Alaska, U.S.A., 4,823  
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  
Makassar, Sulawesi (via Sibutu

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



Passage), 1,232  
 Malakal, Palau Islands (via San Bernardino Strait), 1,044  
 Midway Island (north of Luzon), 3,752  
 Midway Island (via San Bernardino Strait), 3,685  
 Mogpo, South Korea, 1,338  
 Moji, Japan, 1,436  
 Nagasaki, Japan, 1,298  
 Nakagusuku, Ryukyu Islands, 935  
 Nampo, North Korea, 1,559  
 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  
 Papeete, French Polynesia, 5,728  
 Peng-hu Kang, Taiwan, 606  
 Petropavlovsk-Kamchatskiy, Russia (via Chetvertuy Kuril'sky Proлив and La Perouse Strait), 3,117  
 Port Darwin, Australia (via Basilan Strait and Selat Manipa), 1,834  
 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  
 Pulpandan, Philippines, 363  
 Qingdao, China, 1,422  
 Rabaul, Papua New Guinea, 2,281  
 San Diego, California, U.S.A., 6,604  
 San Fernando, Philippines, 207  
 San Francisco, California (via San Bernardino Strait), 6,299  
 San Francisco, California, U.S.A. (via Balintang Channel), 6,221  
 Sanya Gang, 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  
 Seward, Alaska, U.S.A. (north of Luzon and south of Aleutian Islands), 5,046  
 Shanghai, China (east of Taiwan), 1,156  
 Shanghai, China (via Formosa Strait), 1,166  
 Shimonoseki, Japan, 1,424  
 Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,302  
 Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,370  
 Su-ao Kang, Taiwan, 684  
 Surabaya, Indonesia, 1,540  
 Suva, Fiji Islands, 4,048  
 Tandjung Uban, Indonesia, 1,328  
 Tarakan, Indonesia, 785  
 Truk, Caroline Islands, 1,994  
 Tso-Ying, Taiwan, 552  
 Valparaiso, Chile (via San Bernardino Strait), 9,710  
 Vinh Cam Ranh, Vietnam, 710  
 Vladivostok, Russia, 1,912  
 Wake Island, Pacific, 2,772  
 Weihai, China (east of Taiwan), 1,498  
 Weihai, China (via Formosa Strait), 1,508  
 Weonsan, North Korea, 1,708  
 Wotje Island, Marshall Islands, 3,027  
 Xiamen, China, 662  
 Yantai, China (east of Formosa), 1,532  
 Yap, Caroline Islands, 1,154

Yokohama, Japan (via Balintang Channel), 1,758  
 Zamboanga, Philippines, 532

**MANZANILLO, CUBA**  
 (20°21'00"N., 77°09'00"W.) to:

**Junction Points\***

Panama, Panama, 732  
 Yucatan Channel, 482

**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

**MAPUTO, MOZAMBIQUE**  
 (25°58'30"S., 32°34'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 1,057  
 Port Said, Egypt, 4,348  
 Singapore, 4,769

**Ports**

Aden, Yemen, 2,973  
 Beira, Mozambique, 476  
 Belawan, Indonesia, 4,436  
 Durban, South Africa, 307  
 Fremantle, Australia, 4,283  
 Majunga, Madagascar, 1,034  
 Malacca, Malaysia, 4,654  
 Mombasa, Kenya, 1,508  
 Penang, Malaysia, 4,481  
 Port Darwin, Australia, 5,539  
 Port Louis, Mauritius, 1,448  
 Sabang, Indonesia, 4,170  
 Tamatave, Madagascar, 1,242  
 Zanzibar, Tanzania, 1,388

**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

**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  
 La 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

**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°36'0"N., 122°16'00"W.) Add 22 miles to San Francisco distances.

**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, Honduras, 437

**MARIN, PONTE VEDRA BAY, SPAIN**  
 (42°24'00"N., 8°43'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 437  
 Strait of Gibraltar, 517

**Ports**

Bilbao, Spain, 387  
 Horta, Azores, 944  
 Lisboa, Portugal, 255

**MARMAGA, INDIA**  
 (15°25'00"N., 73°47'30"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,447  
 Port Said, Egypt, 3,078  
 Singapore, 2,217

**Ports**

Bombay, India, 235  
 Colombo, Sri Lanka, 671  
 Karachi, Pakistan, 690  
 Okha, India, 533  
 Trincomalee, Sri Lanka, 968

**MARSA AL BURAYQA, LIBYA**  
 (30°28'15"N., 19°32'45"E.) to:

**Junction Points\***

Port Said, Egypt, 782  
 Strait of Gibraltar, 1,408

**Ports**

Alexandria, Egypt, 640  
 Barcelona, Spain, 1,056  
 Beirut, Lebanon, 903  
 Genova, Italy, 986  
 Haifa, Israel, 881  
 Messina, Sicily, 503  
 Palma, Balearic Islands, 1,009  
 Venezia, Italy, 1,014  
 Volvos, Greece, 655

**MARSAXLOKK, MALTA**  
 (35°48'54"N., 14°33'06"E.) to:

**Junction Points\***

Port Said, Egypt, 942  
 Strait of Gibraltar, 1,017

**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, Egypt, 1,518  
 Strait of Gibraltar, 711

**Ports**

Ajaccio, Corsica, 188  
 Alexandria, Egypt, 1,407  
 Algiers, Algeria, 410  
 Alicante, Spain, 406  
 Ancona, Italy, 1,109  
 Annaba, Algeria, 409  
 Banghazi, Libya, 1,004  
 Baniyas, Syria, 1,610  
 Banzart, Tunisia, 428  
 Barcelona, Spain, 189  
 Bari, Italy, 902  
 Bat'umi, Georgia (south of Greece), 1,970  
 Bat'umi, Georgia (via Corinth Canal), 1,929  
 Beirut, Lebanon, 1,600  
 Bonifacio, Corsica, 213  
 Brindisi, Italy, 844  
 Cagliari, Sardinia, 360  
 Cartagena, Spain, 460

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

**62 MASAN, SOUTH KOREA**

Catania, Sicily, 627  
 Ceuta, Morocco, 692  
 Civitavecchia, Italy, 316  
 Famagusta, Cyprus, 1,558  
 Genova, Italy, 204  
 Gibraltar, 693  
 Haifa, Israel, 1,596  
 Iraklion, Kriti, 1,083  
 Istanbul, Turkey (south of Greece), 1,383  
 Istanbul, Turkey (via Corinth Canal), 1,342  
 Izmir, Turkey (south of Greece), 1,229  
 Izmir, Turkey (via Corinth Canal), 1,187  
 La Spezia, Italy, 231  
 Livorno, Italy, 236  
 Mahon, Balearic Islands, 219  
 Malaga, Spain, 641  
 Messina, Sicily, 577  
 Napoli, Italy, 456  
 Odessa, Ukraine (south of Greece), 1,731  
 Odessa, Ukraine (via Corinth Canal), 1,690  
 Oran, Algeria, 536  
 Palermo, Sicily, 495  
 Palma, Balearic Islands, 300  
 Piraeus, Greece (south of Greece), 1,069  
 Piraeus, Greece (via Corinth Canal), 988  
 Port Vendres, France, 109  
 Port Vecchio di Piombino, Italy, 247  
 Rijeka, Croatia, 1,176  
 Savona, Italy, 189  
 Sayda, Lebanon, 1,596  
 Sibenik, Croatia, 1,050  
 Siracusa, Sicily, 649  
 Skikda, Algeria, 398  
 Split, Croatia, 1,035  
 Tarabulus, Lebanon, 1,613  
 Tarabulus, Libya, 745  
 Taranto, Italy, 797  
 Thessaloniki, Greece (south of Greece), 1,278  
 Thessaloniki, Greece (via Corinth Canal), 1,236  
 Trieste, Italy, 1,210  
 Tunis, Tunisia, 476  
 Valencia, Spain, 347  
 Valletta, Malta, 637  
 Venezia, Italy, 1,220  
 Viareggio, Italy, 238  
 Volos, Greece (south of Greece), 1,219  
 Volos, Greece (via Corinth Canal), 1,177

**MASAN, SOUTH KOREA**  
 (35°11'00"N., 128°35'00"E.) to:

**Ports**

Dalian, China, 546  
 Incheon, South Korea, 403  
 Shimonoseki, Japan, 146  
 Tsuruga, Japan, 385  
 Vladivostok, Russia, 542

**MASBATE, PHILIPPINES**  
 (12°22'47"N., 123°36'50"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 1,479  
 Panama, Panama, 9,223  
 Punta Arenas, Chile, 9,067  
 Singapore, 1,492  
 Selat Sunda, Indonesia, 1,755

**Ports**

Cebu, Philippines, 183  
 Ho Chi Minh, Vietnam, 1,065  
 Honolulu, Hawaii, U.S.A. (via San Bernardino Strait), 4,492  
 Kota Kinabalu, Malaysia (via Balabac Strait), 684  
 Sandakan, Sabah, 584  
 Zamboanga, Philippines, 406

**MASNEDSUND, DENMARK**  
 (55°59'48"N., 11°52'36"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 149  
 Skagens Odde, Denmark, 122

**Ports**

Gdynia, Poland, 330  
 Stockholm, Sweden, 531  
 Swinoujscie, Poland, 193

**MASSAWA, ETHIOPIA**  
 (15°36'45"N., 39°28'30"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,341  
 Cape Leeuwin, Australia, 5,345  
 Port Said, Egypt, 1,041  
 Singapore, 4,020  
 Torres Strait, Australia (via Eight Degree Channel), 6,420

**Ports**

Aden, Yemen, 400  
 Al Aqabah, Jordan, 897  
 Al Basrah, Iraq, 2,372  
 Bombay, India, 2,050  
 Calcutta, India, 3,695  
 Colombo, Sri Lanka, 2,481  
 Jiddah, Saudi Arabia, 364  
 Karachi, Pakistan, 1,865  
 Mombasa, Kenya, 2,006  
 Port Darwin, Australia (via One and Half Degree Channel), 5,749  
 Port Sudan, Sudan, 306  
 Rangoon, Burma, 3,705

**MATADI, CONGO**  
 (5°49'00"S., 13°27'00"E.) to:

**Ports**

Bata, Equatorial Guinea, 663  
 Calabar, Nigeria, 818  
 Cape Town, South Africa, 1,827  
 Longji, Cameroon, 731  
 Mayumba, Gabon, 282  
 Port Nolloth, South Africa, 1,559  
 Swakopmund, 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**

Belize, Belize, 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  
 Torres Strait, Australia, 8,324  
 Wilson Promontory, Australia (via 30°S.), 7,398  
 Wilson Promontory, Australia (via 40°S.), 7,154

**Ports**

Antofagasta, Chile, 423  
 Callao, Peru, 462

**MATHEW TOWN, GREAT INAGUA ISLAND**  
 (20°57'30"N., 73°40'40"W.) to:

**Junction Points\***

Fastnet Rock, Ireland, 3,467

**Ports**

Belize, Belize, 902  
 New York, New York, U.S.A. (via Crooked Island Passage), 1,205

**MATRUH, EGYPT**  
 (31°22'30"N., 27°14'30"E.) to:

**Junction Points\***

Port Said, Egypt, 281  
 Strait of Gibraltar, 1,695

**Ports**

Banghazi, Libya, 267  
 Haifa, Israel, 410  
 Iraklion, Kriti, 308

**MAYAQUEZ, PUERTO RICO**  
 (18°13'21"N., 67°11'50"W.) to:

**Junction Points\***

Bishop Rock, England, 3,504  
 Cape of Good Hope, South Africa, 5,823  
 Fastnet Rock, Ireland, 3,409  
 Grand Banks South, 1,752  
 Ile d'Ouessant, France, 3,536  
 Panama, Panama, 910  
 Punta Arenas, Chile, 5,991  
 Strait of Gibraltar, 3,471  
 Straits of Florida, 968

**Ports**

Abraham Bay, Bahamas, 411  
 Belem, Brazil, 1,688  
 Dakar, Senegal, 2,960  
 Freetown, Sierra Leone, 3,293  
 Georgetown, Guyana, 938  
 Halifax, Canada, 1,628  
 Horta, Azores, 2,419  
 New York, New York, U.S.A., 1,527  
 Portland, Maine, U.S.A., 1,535

**MAYPORT, FLORIDA, U.S.A.**  
 (30°23'42"N., 81°25'54"W.)  
 Subtract 18 miles from Jacksonville distances.

**MAZATLAN, MEXICO**  
 (23°10'15"N., 106°26'30"W.) to:

**Junction Points\***

Panama, Panama, 2,006

**Ports**

Acapulco, Mexico, 595  
 Amapala, Honduras, 1,350  
 Champerico, Guatemala, 1,078  
 Guaymas, Mexico, 388  
 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

**MEGARA, GREECE**  
 (37°58'37"N., 23°21'33"E.) to:

**Junction Points\***

Port Said, Egypt, 617  
 Strait of Gibraltar (south of Greece), 1,541

**Ports**

Algiers, Algeria, 1,077  
 Alicante, Spain, 1,240  
 Arzew, Algeria, 1,253  
 Barcelona, Spain, 1,162  
 Cagliari, Sardinia, 814  
 Kerch, Ukraine, 801  
 La Spezia, Italy, 942  
 Navarino Bay, Greece, 194  
 Split, Croatia, 684  
 Tangier, Morocco, 1,511  
 Toulon, France, 1,036  
 Tubruq, Libya, 368

**MELBOURNE, AUSTRALIA**  
 (37°49'15"S., 144°56'00"E.) to:

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

**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, 3,223  
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  
Loumea, New Caledonia, 1,595  
Pago Pago, American Samoa, 2,851  
Papeete, French Polynesia, 3,691  
Penang, Malaysia, 4,181  
Ponape, Caroline Islands, 3,078  
Port Lincoln, Australia, 588  
Port Pirie, Australia, 689  
Portland, Australia, 206  
Pabaul, Papua New Guinea, 2,408  
Rapid Bay, Australia, 458  
San Francisco, California, U.S.A., 6,970  
Seattle, Washington, U.S.A., 7,332  
Whyalla, Australia, 665

**MELILLA, MOROCCO**  
(35°17'30"N., 2°56'00"W.) to:

**Junction Points\***

Port Said, Egypt, 1,821  
Strait of Gibraltar, 153

**Ports**

Alicante, Spain, 224  
Arzew, Algeria, 145  
Ceuta, Morocco, 131  
Malaga, Spain, 116  
Mers el Kebir, Algeria, 154  
Mostaganem, Algeria, 119  
Oran, Algeria, 120  
Villa Sanjurjo, Morocco, 64

**MENTON, FRANCE**  
(43°46'30"N., 7°30'40"E.) to:

**Junction Points\***

Port Said, Egypt, 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, Egypt, 1,714  
Strait of Gibraltar, 252

**Ports**

Alicante, Spain, 160  
Malaga, Spain, 194  
Melilla, Morocco, 119

**MERSA AL HAMRA, EGYPT**  
(30°58'42"N., 28°52'12"E.) to:

**Junction Points\***

Port Said, Egypt, 211  
Strait of Gibraltar, 1,778

**Ports**

Ajaccio, Corsica, 1,197  
Algiers, Algeria, 1,347  
Alicante, Spain, 1,510  
Argostolion, Greece, 603  
Bari, Italy, 849  
Bat'umi, Georgia, 1,298  
Es Sider, Libya, 612  
Haifa, Israel, 346  
Izmir, Turkey, 524  
Malaga, Spain, 1,708  
Palma, Balearic Islands, 1,383  
Tuapse, Russia, 1,203  
Tunis, Tunisia, 1,004  
Volos, Greece, 605

**MERSIN, TURKEY**  
(36°47'26"N., 34°38'07"E.) to:

**Junction Points\***

Port Said, Egypt, 358  
Strait of Gibraltar, 1,996

**Ports**

Al Latakia, Syria, 94  
Beirut, Lebanon, 179  
Constanta, Romania, 986  
Istanbul, Turkey, 789  
Izmir, Turkey, 594  
Kerch, Ukraine, 1,214  
Larnaca, Cyprus, 149  
Nice, France, 1,495  
Patrai, Greece (south of Greece), 789  
Patrai, Greece (via Corinth Canal), 690  
Piraeus, Greece, 598  
Pula, Croatia (south of Greece), 1,260  
Pula, Croatia (via Corinth Canal), 1,244  
Rostov-na-Donu, Russia, 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, Egypt, 945  
Strait of Gibraltar, 1,049

**Ports**

Alexandria, Egypt, 834  
Algiers, Algeria, 621  
Alicante, Spain, 776  
Ancona, Italy, 536  
Annaba, Algeria, 401

As Sukhayrah, Tunisia, 406  
Banghazi, Libya, 430  
Banzart, Tunisia, 364  
Barcelona, Spain, 681  
Bari, Italy, 329  
Beirut, Lebanon, 1,027  
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  
Genova, Italy, 492  
Gibraltar, 1,031  
Haifa, Israel, 1,023  
Iraklion, Kriti, 510  
Istanbul, Turkey (south of Greece), 810  
Istanbul, Turkey (via Corinth Canal), 768  
Izmir, Turkey (south of Greece), 655  
Izmir, Turkey (via Corinth Canal), 614  
Kalamai, Greece, 355  
La Spezia, Italy, 450  
Licata, Sicily, 173  
Livorno, Italy, 414  
Malaga, Spain, 979  
Marsaxlokk, Malta, 164  
Marseille, France, 577  
Napoli, Italy, 175  
Nice, France, 515  
Odessa, Ukraine (south of Greece), 1,158  
Odessa, Ukraine (via Corinth Canal), 1,116  
Oran, Algeria, 818  
Palermo, Sicily, 120  
Palma, Balearic Islands, 639  
Piraeus Greece (south of Greece), 496  
Piraeus Greece (via Corinth Canal), 414  
Pozzuoli, Italy, 177  
Preveza, Greece, 274  
Rethimnon, Kriti, 479  
Rijeka, Croatia, 603  
Salerno, Italy, 158  
Savona, Italy, 496  
Sete, France, 636  
Sibenik, Croatia, 477  
Siracusa, Sicily, 75  
Soudha, Kriti, 473  
Split, Croatia, 462  
Tarabulus, Libya, 344  
Taranto, Italy, 223  
Thessaloniki, Greece (south of Greece), 704  
Thessaloniki, Greece (via Corinth Canal), 663  
Toulon, France, 546  
Trapani, Sicily, 177  
Trieste, Italy, 637  
Tunis, Tunisia, 302  
Valencia, Spain, 764  
Valletta, Malta, 156  
Venezia, Italy, 647  
Volos Greece (south of Greece), 645  
Volos Greece (via Corinth Canal), 604

**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, 3,634  
Cape of Good Hope, South Africa, 6,685  
Fastnet Rock, Ireland, 3,578  
Inishtrahull, Ireland, 3,618  
Pentland Firth, Scotland, 3,856  
Straits of Florida, 217  
Yucatan Channel, 387

**Ports**

Belize, Belize, 734  
Charlotte Amalie, Virgin Islands, 991  
Cienfuegos, Cuba (via Windward Passage), 947  
Cienfuegos, Cuba (via Yucatan Channel), 671  
Colon, Panama (via Windward Passage), 1,249  
Colon, Panama (via Yucatan Channel), 1,214  
Elizabeth Harbor, Bahamas, 354  
Georgetown, Guyana, 1,788  
Guantanamo, Cuba, 582  
Halifax, Canada, 1,413  
Hamilton, Bermuda, 956  
Kingston, Jamaica, 746  
La Habana, Cuba, 216  
Nassau, Bahamas, 191  
Pointe a Pitre, Guadeloupe, 1,247  
Port au Prince, Haiti, 643  
Port of Spain, Trinidad, 1,482  
Port Castries, St. Lucia, 1,352  
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\***

Nord-Ostsee-Kanal (East Entrance), 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 POINT.**—See Preface for use of junction points

## 64 MIKE, JAPAN

**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  
Brisbane, Australia, 3,757  
Callao, Peru, 6,280  
Christmas Island, Line Islands,  
1,949  
Dutch Harbor, Alaska, U.S.A.,  
1,651  
Funafuti, Tuvalu, 2,220  
Guayaquil, Ecuador, 5,944  
Hakodate, Japan, 2,198  
Ho Chi Minh, Vietnam, 4,421  
Hobart, Tasmania, 4,740  
Hong Kong, China, 3,728  
Honolulu, Hawaii, U.S.A., 1,149  
Jaluit, Marshall Islands, 1,534  
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  
Levuka, Fiji Islands, 2,833  
Manila, Philippines (north of  
Luzon), 3,752  
Manila, Philippines (via San  
Bernardino Strait), 3,685  
Nagasaki, Japan, 2,830  
Noumea, New Caledonia, 3,207  
Pago Pago, American Samoa,  
2,593  
Papeete, French Polynesia, 3,190  
Petropavlovsk-Kamchatskiy,  
Russia, 1,831  
Ponape, Caroline Islands, 1,882  
Port Darwin, Australia (via Selat  
Sele), 4,188  
Qingdao, China, 3,303  
Rabaul, Papua New Guinea, 2,688  
San Diego, California, U.S.A.,  
3,097  
San Francisco, California, U.S.A.,  
2,792  
Seattle, Washington, U.S.A., 2,817  
Shanghai, China, 3,184  
Sitka, Alaska, U.S.A., 2,473  
Surabaya, 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, Russia, 2,612  
Wake Island, Pacific, 1,034  
Yokohama, Japan, 2,250

**MIKE, JAPAN**

(33°00'40"N., 130°25'05"E.) to:

**Ports**

Hakodate, Japan, 864  
Kobe, Japan, 462  
Nagasaki, Japan, 82  
Shimonoseki, Japan, 222  
Yokohama, Japan (via Bungo  
Suido), 766  
Yokohama, Japan (via Osumi  
Kaikyo), 725

**MILAZZO, SICILY, ITALY**  
(38°13'00"N., 15°15'00"E.) to:**Junction Points\***

Port Said, Egypt, 973  
Strait of Gibraltar, 1,025

**Ports**

Napoli, Italy, 54  
Palermo, Sicily, 97  
Taranto, Italy, 316

**MILFORD HAVEN, WALES**  
(51°42'00"N., 5°02'00"W.) to:**Junction Points\***

Bishop Rock, England, 129  
Fastnet Rock, Ireland, 178  
Inishtrahull, Ireland, 286

**Ports**

Belfast, Northern 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  
Nuevitas, Cuba, 363  
San Juan, Puerto Rico, 714

**MILNER BAY, AUSTRALIA**  
(13°56'30"S., 136°25'00"E.) to:**Junction Points\***

Cape of Good Hope, South  
Africa, 6,656  
Cape Leeuwin, Australia, 2,557  
Honsu, Japan, 3,295  
Port Said, Egypt (via South of  
Java), 7,269  
Torres Strait, Australia, 375  
Tetar Passage, Indonesia, 728

**Ports**

Belawan, Indonesia, 2,736  
Geraldton, Australia, 2,220  
Hong Kong, China (via Basilan  
Strait), 2,656  
Manila, Philippines (via San  
Bernardino Strait), 2,310  
Port Darwin, Australia, 683  
Tjilatjap, Indonesia, 1,838  
Zamboanga, Philippines (via North  
of Celebes), 1,602

**MINA ABD ALLAH, KUWAIT**  
(29°01'00"N., 48°12'00"E.) to:**Junction Points\***

Cape of Good Hope, South  
Africa, 5,101  
Cape Leeuwin, Australia, 5,437  
Port Said, Egypt, 3,283  
Singapore, 3,822

**Ports**

Aden, Yemen, 1,894  
Bombay, India, 1,514

**MINA AL AHMADI, KUWAIT**  
(29°04'00"N., 48°10'00"E.) to:**Junction Points\***

Cape of Good Hope, South  
Africa, 5,104  
Cape Leeuwin, Australia, 5,440  
Port Said, Egypt, 3,286  
Singapore, 3,825

**Ports**

Abadan, Iraq, 110  
Al Basrah, Iraq, 140  
Bandar Abbas, Iraq, 497  
Bandar Mahshahr, Iraq, 128  
Bombay, India, 1,517  
Cochin, India, 1,993  
Ras Bahregan, Iraq, 116

**MINA RAYSUT, OMAN**  
(16°56'58"N., 54°02'00"E.) to:**Junction Points\***

Cape of Good Hope, South  
Africa, 3,991  
Cape Leeuwin, Australia, 4,791  
Selat Lombok, Indonesia, 4,049  
Port Said, Egypt, 1,979  
Singapore, 3,178  
Selat Sunda, Indonesia, 3,409  
Torres Strait, Australia, 5,627

**Ports**

Aden, Yemen, 601  
Al Basrah, Iraq, 1,460  
Bombay, India, 1,081  
Calcutta, India, 2,566  
Colombo, Sri Lanka, 1,628  
Fremantle, Australia, 4,767  
Penang, Malaysia, 2,878  
Rangoon, Burma, 2,794

**MINA SAQR, UNITED ARAB  
EMIRATES**  
(26°00'08"N., 56°01'54"E.) to:**Junction Points\***

Cape of Good Hope, South  
Africa, 4,766  
Cape Leeuwin, Australia, 4,933  
Selat Lombok, Indonesia, 4,176  
Port Said, Egypt, 2,568  
Singapore, 3,380  
Selat Sunda, Indonesia, 3,559  
Torres Strait, Australia, 5,764

**Ports**

Aden, Yemen, 1,531  
Belawan, Indonesia, 3,114  
Bombay, India, 1,069  
Fremantle, Australia, 4,937  
Penang, Malaysia, 3,150

**MINA SAUD, KUWAIT**  
(28°45'00"N., 48°24'00"E.) to:**Junction Points\***

Cape of Good Hope, South  
Africa, 5,082

Cape Leeuwin, Australia, 5,418  
Port Said, Egypt, 3,264  
Singapore, 3,803

**Ports**

Aden, Yemen, 1,873  
Bombay, India, 1,495

**MINA SULMAN, BAHRAYN**  
(26°17'00"N., 50°32'30"E.) See  
Al Manamah.**MINATITLAN, MEXICO**  
(18°00'00"N., 94°32'00"W.) Add  
18 miles to Coatzacoalcos  
distances.**MIRAGOANE, HAITI**  
(18°27'30"N., 73°06'00"W.) to:**Ports**

Kingston, Jamaica, 243  
San Juan, Puerto Rico, 526  
Santo Domingo, Dominican  
Republic, 407

**MISUMI, JAPAN**  
(32°36'00"N., 130°28'00"E.) to:**Ports**

Chi-lung, Taiwan, 654  
Hakata, Japan, 161  
Incheon, South Korea, 478  
Kagoshima, Japan, 184  
Shanghai, China, 490

**MITILINI, GREECE**  
(39°06'13"N., 26°33'23"E.) to:**Junction Points\***

Port Said, Egypt, 592  
Strait of Gibraltar (south of  
Greece), 1,528  
Strait of Gibraltar (via Corinth  
Canal), 1,631

**Ports**

Iraklion, Greece, 229  
Iskenderun, Turkey, 612  
Izmir, Turkey, 84  
Mersin, Turkey, 551  
Piraeus, Greece, 191  
Thessaloniki, Greece, 232

**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

**MOBILE, ALABAMA, U.S.A.**  
(30°42'30"N., 88°02'30"W.) to:**Junction Points\***

Straits of Florida, 471  
Yucatan Channel, 558

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

**Ports**

Belize, Belize, 845  
 Bocas del Toro, Panama, 1,340  
 Campeche, Mexico, 674  
 Carmen, Mexico, 749  
 Cartagena, Colombia, 1,450  
 Coatzacoalcos, Mexico, 834  
 Colon, Panama, 1,371  
 La Habana, Cuba, 553  
 Limon, Costa Rica, 1,292  
 Puerto Barrios, Guatemala, 950  
 Puerto Cortes, Honduras, 915  
 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, South Africa, 1,807  
 Port Said, Egypt, 3,522  
 Singapore, 4,080

**Ports**

Beira, Mozambique, 476  
 Belawan, Indonesia, 3,747  
 Dar es Salaam, Tanzania, 533  
 Fremantle, Australia (north of Madagascar), 4,367  
 Malacca, Malaysia, 3,965  
 Mtwara, Tanzania, 327  
 Penang, Malaysia, 3,792  
 Port Darwin, Australia (via 20 miles north of Scott Reef), 5,304  
 Sabang, Indonesia, 3,481  
 Tulear, Madagascar, 532  
 Victoria, Seychelles, 1,085

**MOCAMEDES, ANGOLA**

(15°11'20"S., 12°08'15"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 1,239  
 Ile d'Ouessant, France, 4,697

**Ports**

Lagos, Nigeria, 1,399  
 Porto Grande, Cape Verde Islands, 2,939  
 Walvisbaai, Namibia, 518

**MOENGO, SURINAME**

(5°37'42"N., 54°24'39"W.) Add 88 1/2 miles to Paramaribo distances.

**MOGADISHU, SOMALIA**

(2°01'21"N., 45°21'02"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,855  
 Port Said, Egypt, 2,493  
 Singapore, 3,611

**Ports**

Aden, Yemen, 1,106  
 Mombasa, Kenya, 502

**MOGPO, SOUTH KOREA**

(34°46'45"N., 126°23'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 2,725  
 Singapore, 2,407  
 Selat Sunda, Indonesia, 2,760  
 Selat Wetar, Indonesia (via Molucca Passage), 2,632

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,330  
 Balikpapan, Kalimantan, Indonesia, 2,308  
 Bangkok, Thailand, 2,438  
 Busan, South Korea, 225  
 Dagu, China (south of Kasa Do), 536  
 Dalian, China (south of Kasa Do), 377  
 Hakodate, Japan, 897  
 Ho Chi Minh, Vietnam, 1,904  
 Hong Kong, China, 1,049  
 Honolulu, Hawaii, U.S.A., 4,146  
 Incheon, South Korea (south of Ka Do), 236  
 Incheon, South Korea (via Myondo Do), 189  
 Jakarta, Indonesia, 2,741  
 Lo hsing-ta Mao-ti, China, 665  
 Makassar, Sulawesi, 2,483  
 Manila, Philippines (east of Taiwan), 1,338  
 Nagasaki, Japan, 261  
 Nampo, North Korea (south of Kasa Do), 320  
 Nampo, North Korea (via Myondo Sudo), 288  
 Osaka, Japan, 544  
 Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 1,943  
 Petropavlovsk-Kamchatskiy, Russia (via Myongyangdo), 1,923  
 Port Darwin, Australia, 2,916  
 Qingdao, China, 336  
 Qinhuangdao China (south of Kasa Do), 484  
 San Francisco, California, U.S.A., 5,125  
 Shanghai, China (via South Channel), 369  
 Tongyeong, South Korea, 189  
 Vladivostok, Russia, 726  
 Weihai, China (south of Kasa Do), 308  
 Weonsan, North Korea, 530  
 Xiamen, China, 790  
 Yantai, China (south of Kasa Do), 342  
 Yeosu, South Korea, 151  
 Yokohama, Japan, 838

**MOHAMMEDIA, MOROCCO**

(33°42'52"N., 7°23'52"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,951  
 Ile d'Ouessant, France, 944

**Ports**

Dakar, Senegal, 1,338  
 Tangier, Morocco, 158

**MOI RANA, NORWAY**

(66°18'31"N., 14°06'57"E.) to:

**Junction Points\***

Bishop Rock, England (via Dover Strait), 1,382  
 Ile d'Ouessant, France, 1,367  
 Nord-Ostsee-Kanal (East Entrance), Germany, 971  
 Pentland Firth, Scotland, 685  
 Skagens Odde, Denmark, 776

**Ports**

Bergen, Norway, 474  
 Brevik, Norway, 762  
 Hammerfest, Norway, 433  
 Hull, England, 908  
 Oslo, Norway, 824  
 Reykjavik, Iceland, 1,010  
 Zeebrugge, Belgium, 1,018

**MOJI, JAPAN**

(33°6'30"N., 130°57'30"E.) to:

**Ports**

Busan, South Korea, 123  
 Dalian, China, 633  
 Incheon, South Korea, 485  
 Manila, Philippines, 1,436  
 Nagasaki, Japan, 152  
 Tianjin, China, 840  
 Ulgorsk, Russia, 1,100  
 Yantai, China, 600

**MOKPO, SOUTH KOREA**

(34°46'45"N., 126°23'00"E.) See Mogpo.

**MOLDE, NORWAY**

(62°44'06"N., 7°10'00"E.) to:

**Junction Points\***

Pentland Firth, Scotland, 412  
 Skagens Odde, Denmark, 492

**Ports**

Bergen, Norway, 201  
 Reykjavik, Iceland, 875

**MOMBASA, KENYA**

(4°03'30"S., 39°41'15"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,472  
 Port Said, Egypt, 3,006  
 Singapore, 3,987

**Ports**

Aden, Yemen, 1,619  
 Beira, Mozambique, 1,146  
 Belawan, Indonesia, 3,654  
 Bombay, India, 2,404  
 Calcutta, India (via One and Half Degree Channel), 3,703  
 Colombo, Sri Lanka, 2,555  
 Durban, South Africa, 1,718  
 Fremantle, Australia, 4,564  
 Karachi, Pakistan, 2,361  
 Malacca, Malaysia, 3,872  
 Maputo, Mozambique, 1,508  
 Massawa, Ethiopia, 2,006  
 Mogadishu, Somalia, 502  
 Penang, Malaysia, 3,699  
 Port Darwin, Australia, 5,434

Rangoon, Burma, 3,714  
 Sabang, Indonesia, 3,388  
 Tanga, Tanzania, 69

**MON FALCONE, ITALY**

(46°45'56"N., 13°33'45"E.) See Trieste.

**MONACO, MONACO**

(43°44'00"N., 7°26'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,450  
 Strait of Gibraltar, 792

**Ports**

Barcelona, Spain, 280  
 Napoli, Italy, 363  
 Palma, Balearic Islands, 377

**MONI ANCHORAGE, CYPRUS**

(34°41'44"N., 33°11'11"E.) to:

**Junction Points\***

Port Said, Egypt, 219  
 Strait of Gibraltar, 1,931

**Ports**

Alexandria, Egypt, 274  
 Algiers, Algeria, 1,482  
 Benghazi, Libya, 692  
 Barcelona, Spain, 1,567  
 Bari, Italy, 946  
 Brindisi, Italy, 890  
 Cartagena, Spain, 1,675  
 Derince, Turkey, 731  
 Izmir, Turkey, 510  
 Marseille, France, 1,480  
 Tangier, Morocco, 1,917  
 Tunis, Tunisia, 1,140  
 Yumurtalik, Turkey, 186

**MONOPOLI, ITALY**

(40°67'20"N., 17°18'30"E.) to:

**Junction Points\***

Port Said, Egypt, 953  
 Strait of Gibraltar, 1,346

**Ports**

Ancona, Italy, 239  
 Durres, Albania, 100  
 Split, Croatia, 173

**MONROVIA, LIBERIA**

(6°20'00"N., 10°49'00"W.) to:

**Ports**

Anecho, Togo, 850  
 Cotonou, Benin, 893  
 Dakar, Senegal, 693  
 Freetown, Sierra Leone, 264  
 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, Congo, 1,525  
 Port of Spain, Trinidad, 3,045  
 Porto Grande, Cape Verde Islands, 1,069  
 Sekondi, Ghana, 599  
 Takoradi, Ghana, 597

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



## 66 MONTEGO BAY, JAMAICA

**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  
Santa Cruz del Sur, Cuba, 134  
Santiago de Cuba, Cuba, 154**MONTEVIDEO, URUGUAY**  
(34°54'30"S., 56°13'30"W.) to:**Junction Points\***Bishop Rock, England, 5,834  
Cape of Good Hope, South  
Africa, 3,591  
Ile d'Ouessant, France, 5,802  
Montreal, Canada, 6,344  
Panama, Panama, 5,379  
Punta Arenas, Chile, 1,300  
Strait of Gibraltar, 5,178  
Straits of Florida, 5,598  
Yucatan Channel, 5,609**Ports**Angra dos Reis, Brazil, 1,031  
Bahia Blanca, Argentina, 466  
Baltimore, Maryland, U.S.A.,  
5,831  
Boston, Massachusetts, U.S.A.,  
5,728  
Bridgetown, Barbados, 4,096  
Brunswick, Georgia, U.S.A., 5,731  
Cape Town, South Africa, 3,608  
Charleston, South Carolina,  
U.S.A., 5,708  
Charlotte Amalie, Virgin Islands,  
4,530  
Charlottetown, Canada, 5,717  
Colon, Panama, 5,267  
Georgetown, Ascension Island,  
2,824  
Georgetown, Guyana, 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  
Port Castries, St. Lucia, 4,261  
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  
Salvador, Brazil, 1,735  
Santos, Brazil, 893  
Savannah, Georgia, U.S.A., 5,740  
St. Helena Island, 2,936  
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 (via Strait  
of Belle Isle), 2,681Fastnet Rock, Ireland (via Strait of  
Belle Isle), 2,539  
Grand Banks South, 1,335  
Ile d'Ouessant, France (via Strait  
of Belle Isle), 2,901  
Inishtrahull, Ireland (via Strait of  
Belle Isle), 2,545  
Panama, Panama (via Crooked  
Island Passage and Windward  
Passage), 3,204  
Pentland Firth, Scotland (via Strait  
of Belle Isle), 2,641  
Straits of Florida (via Cabot  
Strait), 2,531  
Straits of Florida (via Strait of  
Canso), 2,467**Ports**Argentina, Canada, 943  
Baltimore, Maryland, U.S.A.,  
1,820  
Belem Brazil (via Cabot Strait),  
3,680  
Belize Belize (via Straits of  
Florida), 3,034  
Bordeaux, France (via Cape  
Race), 3,171  
Boston, Massachusetts, U.S.A.,  
1,309  
Brunswick, Georgia, U.S.A., 2,074  
Buenos Aires, Argentina (via  
Cabot Strait), 6,455  
Cadiz, Spain, 3,110  
Cape Town, South Africa (via  
Cabot Strait), 7,118  
Charleston, South Carolina, U.S.A.  
(via Strait of Canso), 2,000  
Charlotte Amalie, Virgin Islands  
(via Strait of Canso), 2,405  
Charlottetown, Canada, 698  
Colon, Panama (via Strait of  
Canso), 3,126  
Dakar, Senegal, 3,562  
Freetown, Sierra Leone, 4,019  
Funchal, Madeira Island, 2,877  
Georgetown, Guyana, 3,108  
Halifax, Canada (via Cabot Strait),  
958  
Hamilton, Bermuda (via Strait of  
Canso), 1,621  
Horta, Azores (via Cabot Strait),  
2,145  
Ivittuut, Greenland (via Strait of  
Belle Isle), 1,472  
Jacksonville, Florida, U.S.A. (via  
Cabot Strait), 2,199  
Key West, Florida, U.S.A. (via  
Straits of Florida), 2,468  
La Guaira, Venezuela (via Strait of  
Canso), 2,941  
La Habana, Cuba (via Straits of  
Florida), 2,528  
Lisboa, Portugal (via Cape Race),  
2,941  
Maracaibo, Venezuela (via Mona  
Passage), 2,995  
Montevideo, Uruguay, 6,344  
Murmansk, Russia, 3,870  
New York, New York, U.S.A.,  
1,516  
Norfolk, Virginia, U.S.A. (via  
Cabot Strait), 1,697  
Paamiut (Frederikshaab),  
Greenland, 1,901  
Panama, Panama (via Crooked  
Island Passage), 3,204  
Paramaribo, Suriname, 3,184  
Philadelphia, Pennsylvania, U.S.A.  
(via Cabot Strait), 1,665  
Ponta Delgada, Azores, 2,283  
Port of Spain, Trinidad (via CabotStrait), 2,901  
Port Castries, St. Lucia (via Strait  
of Canso), 2,642  
Portland, Maine, U.S.A., 1,206  
Punta Arenas, Chile (via Cabot  
Strait), 7,527  
Qaqortog (Julianehaab), Greenland  
(via Strait of Belle Isle), 1,470  
Recife, Brazil (via Cabot Strait),  
4,283  
Reykjavik, Iceland (via Strait of  
Belle Isle), 2,130  
Rio de Janeiro, Brazil, 5,342  
Salvador, Brazil, 4,656  
San Juan del Norte, Nicaragua (via  
Strait of Canso and Crooked  
Island Passage), 3,220  
Santa Cruz de Tenerife, Canary  
Islands, 3,011  
Santo Domingo, Dominican  
Republic (via Cabot Strait),  
2,579  
Santos, Brazil, 5,544  
Savannah, Georgia, U.S.A., 2,078  
Shelburne, Canada, 1,050  
St. John's, Canada (via Cape  
Race), 1,038  
Vigo, Spain (via Cape Race),  
2,873  
Willemstad, Curacao (via Cabot  
Strait), 2,866**MONTROSE, SCOTLAND**  
(56°42'15"N., 2°25'40"W.) to:**Junction Points\***Bishop Rock, England, 706  
Ile d'Ouessant, France, 698  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 489  
Pentland Firth, Scotland, 152  
Skagens Odde, Denmark, 433**Ports**Amsterdam, Netherlands, 372  
Antwerp, Belgium, 457  
Bremerhaven, Germany, 431  
Dundee, Scotland, 30  
Oostende, Belgium, 393  
Rotterdam, Netherlands, 385  
Wilhelmshaven, Germany, 423  
Zeebrugge, Belgium, 398**MOREHEAD CITY, NORTH  
CAROLINA, U.S.A.**  
(34°39'10"N., 76°40'33"W.) to:**Junction Points\***Cape of Good Hope, South  
Africa, 6,763  
Grand Banks South, 1,335  
Montreal, Canada, 1,861  
Panama, Panama, 1,670  
Punta Arenas, Chile, 6,864  
Strait of Gibraltar, 3,392  
Straits of Florida, 793**Ports**Cape Town, South Africa, 6,752  
Georgetown, Guyana, 2,121  
Halifax, Canada, 885  
Hamilton, Bermuda, 611  
Limon, Costa Rica, 1,730  
Monrovia, Liberia, 4,028  
Port of Spain, Trinidad, 1,966  
San Juan, Puerto Rico, 1,123**MORMUGAO, INDIA**  
(15°25'00"N., 73°47'30"E.) See  
Marmagao, India.**MORRO REDONDO,  
MEXICO**  
(28°03'20"N., 115°10'16"W.) to:**Junction Points\***Honshu, Japan, 5,088  
Panama, Panama, 2,593  
Punta Arenas, Chile, 5,505  
Torres Strait, Australia, 6,543  
Tsugaru-Kaikyo, Japan, 4,883  
Wilson Promontory, Australia,  
6,812**Ports**Amapala, Honduras, 1,952  
Ensenada, Mexico, 241  
Honolulu, Hawaii, U.S.A., 2,351  
Monterey, California, U.S.A., 635  
Talara, Peru, 2,831  
Valparaiso, Chile, 4,515**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**MOSKAL'VO, RUSSIA**  
(53°34'00"N., 142°29'00"E.) to:**Ports**Aleksandrovsk-Sakhalinskiy,  
Russia, 230  
Bukhta, Russia, 472  
Yokohama, Japan, 1,453**MOSS, NORWAY**  
(59°26'18"N., 10°39'30"E.)  
Subtract 19 miles from Oslo  
distances.**MOSSELBAAL, SOUTH  
AFRICA**  
(34°10'00"S., 22°09'00"E.) to:**Junction Points\***Cape of Good Hope, South  
Africa, 206  
Singapore, 5,384**Ports**Belawan, Indonesia, 5,051  
Fremantle, Australia, 4,525  
Malacca, Malaysia, 5,269  
Penang, Malaysia, 5,096  
Port Darwin, Australia, 5,929  
Sabang, Indonesia, 4,785**MOSSELBAY, SOUTH  
AFRICA**  
(34°10'00"S., 22°09'00"E.) See  
Mosselbaai.**MOSTAGANEM, ALGERIA**  
(35°56'12"N., 0°04'22"E.) to:\* **JUNCTION POINT.**—See Preface for use of junction points

**Junction Points\***

Port Said, Egypt, 1,678  
Strait of Gibraltar, 283

**Ports**

Algiers, Algeria, 172  
Alicante, Spain, 148  
Melilla, Morocco, 154

**MOURILYAN, AUSTRALIA**  
(17°36'08"S., 146°07'59"E.) See  
Innisfail.

**MTWARA, TANZANIA**

(10°15'30"S., 40°13'04"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
2,111  
Port Said, Egypt, 3,265  
Singapore, 4,042

**Ports**

Dar es Salaam, Tanzania, 230  
Mocambique, Mozambique, 327

**MUBARRAZ ISLAND,  
UNITED ARAB EMIRATES**  
(24°26'55"N., 53°32'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
5,078  
Cape Leeuwin, Australia, 5,170  
Selat Lombok, Indonesia, 4,372  
Port Said, Egypt, 2,969  
Singapore, 3,549  
Selat Sunda, Indonesia, 3,774  
Torres Strait, Australia, 5,994

**Ports**

Aden, Yemen, 1,743  
Al Basrah, Iraq, 474  
Belawan, Indonesia, 3,257  
Bombay, India, 1,226  
Calcutta, India, 2,957  
Fremantle, Australia, 5,086  
Penang, Malaysia, 3,250  
Port Darwin, Australia, 5,333

**MURMANSK, RUSSIA**  
(68°58'30"N., 33°03'00"E.) to:

**Junction Points\***

Montreal, Canada, 3,870

**Ports**

Akureyri, Iceland, 1,256  
Bergen, Norway, 1,105  
Boston, Massachusetts, U.S.A.,  
3,719  
Dikson, Russia, 1,025  
Gronnedal, Greenland, 2,395  
Halifax, Canada, 3,368  
Hvalfjorður, Iceland, 1,531  
Ivittuut, Greenland (direct), 2,201  
Ivittuut, Greenland (via 75 miles  
off Kap Farvel), 2,310  
Keflavik, Iceland, 1,503  
Liverpool, England, 1,703  
Longyearbyen, Svalbard, 695  
Mys Chelyuskin, Russia, 1,390  
New York, New York, U.S.A.  
(north of Iceland), 3,844

New York, New York, U.S.A.  
(south of Iceland), 3,948  
Nuuk (Godthab), Greenland, 2,598  
Oslo, Norway, 1,450  
Philadelphia, Pennsylvania,  
U.S.A., 4,042  
Portland, Maine, U.S.A., 3,677  
Reykjavik, Iceland (north of  
Iceland), 1,501  
Reykjavik, Iceland (south of  
Iceland), 1,529  
Seyðisfjörður, Iceland, 1,173  
Stavanger, Norway, 1,199  
Qaanaaq (Thule), Greenland, 3,462  
Trondheim, Norway, 875

**MURORAN, JAPAN**  
(42°19'20"N., 140°58'40"E.) to:

**Ports**

Bukhta Shelikhova, Kuril Islands,  
Russia, 859  
Hachinohe, Japan, 123  
Hakodate, Japan, 64  
Kastka, Japan, 401  
Kawasaki, Japan, 551  
Matsuga-hana, Japan, 310  
Moji, Japan (via Shimonoseki  
Strait), 736  
Osaka, Japan, 834  
Sasebo, Japan (via Korean Strait),  
831  
Shimonoseki, Japan, 736  
Tokyo, Japan, 557  
Tomari, Japan, 295

**MUTRAH, OMAN**  
(23°38'13"N., 58°34'50"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,487  
Cape Leeuwin, Australia, 4,760  
Selat Lombok, Indonesia, 3,982  
Port Said, Egypt, 2,289  
Singapore, 3,207  
Selat Sunda, Indonesia, 3,364  
Torres Strait, Australia, 5,590

**Ports**

Aden, Yemen, 1,254  
Al Basrah, Iraq, 847  
Belawan, Indonesia, 2,866  
Karachi, Pakistan, 496  
Malacca, Malaysia, 3,068  
Penang, Malaysia, 2,902

**MYRTLE GROVE,  
LOUISIANA, U.S.A.**  
(29°38'32"N., 89°56'50"W.)  
Subtract 34 miles from New  
Orleans distances.

**NAESTVED, DENMARK**  
(55°13'33"N., 11°45'24"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 74  
Skagens Odde, Denmark, 212

**Ports**

Gdynia, Poland, 383  
Goteborg, Sweden, 1,396  
Lubeck, Germany, 136

**NAGASAKI, JAPAN**  
(32°44'30"N., 129°52'15"E.) to:

**Junction Points\***

Panama, Panama (east of Honshu),  
8,299  
Panama, Panama (west of  
Honshu), 8,200  
Punta Arenas, Chile, 9,567  
Singapore (east of Taiwan), 2,413  
Singapore (via Formosa Strait),  
2,427

**Ports**

Aleksandrovsk-Sakhalinskiy,  
Russia, 1,253  
Apia, Samoa, 4,414  
Apra, Guam, 1,445  
Auckland, New Zealand (via  
Koshiki Kaikyo and  
Tanegashima Kaikyo), 4,930  
Auckland, New Zealand (via  
Tokara Kaikyo), 4,963  
Avarua, Cook Islands, 5,219  
Busan, South Korea, 163  
Cebu, Philippines (via San  
Bernardino Strait), 1,406  
Dagu, China, 754  
Dutch Harbor, Alaska, U.S.A.  
(south of Kyushu), 3,181  
Dutch Harbor, Alaska, U.S.A. (via  
Tsugaru-Kaikyo), 3,011  
Hakata, Japan, 121  
Hakodate, Japan, 801  
Hirohata, Japan, 373  
Hiroshima, Japan (via Kudako  
Suido), 285  
Hiroshima, Japan (via Moroshima  
Suido), 275  
Hiroshima, Japan (via Nuwashima  
Suido), 277  
Hiroshima, Japan (via Obatake  
Seto and north of Kasasa Jima),  
264  
Hong Kong, China, 1,069  
Honolulu, Hawaii, U.S.A., 3,986  
Iloilo, Philippines, 1,428  
Incheon, South Korea, 453  
Jakarta, Indonesia, 2,712  
Jaluit, Marshall Islands, 2,808  
Kagoshima, Japan, 168  
Kamaishi, Japan, 972  
Kobe, Japan, 400  
Kochi, Japan, 363  
Levuka, Fiji Islands (via  
Tanegashima Kaikyo), 4,260  
Lianyungang, China, 558  
Lo hsing-ta Mao-ti, China, 691  
Los Angeles, California, U.S.A.,  
5,572  
Manila, Philippines, 1,298  
Midway Island, 2,830  
Miiike, Japan, 82  
Mogpo, South Korea, 261  
Moji, Japan, 152  
Noumea, New Caledonia (via  
Bougainville Strait), 3,967  
Pago Pago, American Samoa,  
4,489  
Papeete, French Polynesia, 5,572  
Petropavlovsk-Kamchatskiy,  
Russia (via La Perouse Strait),  
1,845  
Petropavlovsk-Kamchatskiy,  
Russia (via Osumi Kaikyo),  
2,039  
Petropavlovsk-Kamchatskiy,  
Russia (via Tsugaru Strait),  
1,858  
Ponape, Caroline Islands, 2,256  
Port Darwin, Australia (via Selat

Sele), 2,785  
Qinhuangdao China, 702  
Rabaul, Papua New Guinea, 2,612  
San Francisco, California, U.S.A.  
(via Osumi Strait), 5,151  
San Francisco, California, U.S.A.  
(via Tsugaru Strait), 5,030  
Seattle, Washington, U.S.A. (via  
Tsugaru Strait and north of  
Aleutian Islands), 4,705  
Seattle, Washington, U.S.A. (via  
Tsugaru Strait and south of  
Aleutian Islands), 4,765  
Shanghai, China, 463  
Shimonoseki, Japan, 159  
Sydney, Australia, 4,439  
Valparaiso, Chile, 9,806  
Vladivostok, Russia, 657  
Weihai, China, 526  
Weonsan, North Korea, 452  
Xiamen, China, 810  
Yantai, China, 560  
Yokohama, Japan (via Osumi  
Kaikyo), 691

**NAGOYA, JAPAN**  
(35°05'00"N., 136°53'00"E.) to:

**Ports**

Apra, Guam, 1,378  
Hachinohe, Japan, 577  
Hirohata, Japan, 259  
Imabari, Japan, 341  
Kawasaki, Japan, 218  
Kobe, Japan, 245  
Kure, Japan, 412  
Moji, Japan, 433  
Nagasaki, Japan (via Osumi  
Strait), 577  
Shimizu, Honshu, 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  
Busan, South Korea, 550  
Chi-lung, Taiwan, 337  
Hachinohe, Japan, 1,239  
Shanghai, China, 479  
Shimonoseki, Japan, 530

**NAJKIN, NORTH KOREA**  
(42°14'00"N., 130°18'00"E.) to:

**Ports**

Kobe, Japan, 754  
Tongyeong, South Korea, 501  
Ulsan, South Korea, 418  
Yeosu, South Korea, 535

**NAKAGUSUKU, OKINAWA  
JIMA, RYUKYU ISLANDS**  
(26°17'00"N., 127°53'00"E.) to:

**Ports**

Apra, Guam, 1,216  
Dagu, China, 1,026  
Manila, Philippines, 935  
Shanghai, China, 515  
Yokohama, Japan, 839

**NAKHODKA, RUSSIA**  
(42°49'07"N., 132°53'52"E.) to:

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

**68 NAKNEK, ALASKA, U.S.A.****Ports**

Busan, South Korea, 508  
Hakodate, Japan, 62  
Shanghai, 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\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 46  
Skagens Odde, Denmark, 213

**Ports**

Gdynia, Poland, 335  
Goteborg, Sweden, 201  
Swinoujscie, Poland, 190

**NAMPO, NORTH KOREA**  
(38°43'00"N., 125°25'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 2,946  
Singapore, 2,621  
Selat Sunda, Indonesia, 2,974  
Selat Wetar, Indonesia (via Selat  
Manipa), 2,861

**Ports**

AleksandrovsK-Sakhalinskiy,  
Russia, 1,601  
Bangkok, Thailand (outer bar),  
2,652  
Busan, South Korea (via Maenggol  
Sudo), 496  
Dagu, China, 369  
Dalian, China, 180  
Ho Chi Minh, Vietnam, 2,118  
Hong Kong, China, 1,263  
Honolulu, Hawaii, U.S.A., 4,417  
Incheon, South Korea, 216  
Jakarta, Indonesia, 2,955  
Lo hsing-ta Mao-ti, China, 879  
Los Angeles, California, U.S.A.,  
5,711  
Manila, Philippines, 1,559  
Mogpo, South Korea (south of  
Kasa Do), 320  
Mogpo, South Korea (via Myondo  
Sudo), 288  
Petropavlovsk-Kamchatskiy,  
Russia, 2,214  
Qingdao, China, 309  
Qinhuangdao China, 307  
Shanghai, China, 561  
Shantou, China, 1,113  
Vladivostok, Russia, 997  
Weihai, China, 172  
Weonsan, North Korea (via  
Maenggol Sudo), 801  
Xiamen, China, 1,004

Yantai, China, 205  
Yokohama, Japan, 1,109

**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

**NAN-CHING, CHINA**  
(32°06'00"N., 118°44'00"E.) See  
Nanjing, China.

**NANAIMO, CANADA**  
(49°10'00"N., 123°55'45"W.) to:

**Ports**

Bellingham, Washington, U.S.A.,  
76  
New Westminster, 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**

Busan, South Korea, 476  
Hakodate, Japan, 337  
Maizuru, Japan, 213  
Shimonoseki, Japan, 453  
Vladivostok, Russia, 460

**NANCHITAL, MEXICO**  
(18°00'00"N., 94°27'00"W.) Add  
3 miles to Coatzacoalcos distances.

**NANJING, CHINA**  
(32°06'00"N., 118°44'00"E.) Add  
177 miles to Shanghai distances.

**NANORTALIK, GREENLAND**  
(60°08'30"N., 45°14'35"W.) to:

**Junction Points\***

Pentland Firth, Scotland, 1,291  
Strait of Gibraltar, 2,138

**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.

**NAPIEIR, NEW ZEALAND**  
(39°28'00"S., 176°57'21"E.) to:

**Junction Points\***

Panama, Panama, 6,441  
Punta Arenas, Chile, 4,490  
Torres Strait, Australia (via Cook  
Strait), 2,827  
Wilson Promontory, Australia (via  
Cook Strait), 1,547

**Ports**

Apia, Samoa, 1,710  
Auckland, New Zealand (via Vitiā  
and Surigao Straits), 4,532  
Callao, Peru, 5,660  
Los Angeles, California, U.S.A.,  
5,684  
San Francisco, California, U.S.A.,  
5,731  
Suva, Fiji Islands, 1,341  
Sydney, Australia (via Cook  
Strait), 1,436  
Yokohama, Japan (via  
Bougainville Strait), 5,086

**NAPLES, ITALY**  
(40°50'19"N., 14°16'20"E.) See  
Napoli.

**NAPOLI, ITALY**  
(40°50'19"N., 14°16'20"E.) to:

**Junction Points\***

Port Said, Egypt, 1,116  
Strait of Gibraltar, 1,001

**Ports**

Al Latakia, Syria, 1,191  
Alexandria, Egypt, 1,005  
Algiers, Algeria, 582  
Alicante, Spain, 723  
Ancona, Italy, 707  
Annaba, Algeria, 388  
Banghazi, Libya, 602  
Banzart, Tunisia, 300  
Barcelona, Spain, 559  
Bari, Italy, 500  
Basti, Corsica, 258  
Beirut, Lebanon, 1,198  
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, Kriti, 681  
Istanbul, Turkey (south of  
Greece), 981  
Istanbul, Turkey (via Corinth  
Canal), 940  
Izmir, Turkey (south of Greece),  
827  
Izmir, Turkey (via Corinth Canal),  
785  
La Spezia, Italy, 302  
Livorno, Italy, 267  
Malaga, Spain, 932  
Marseille, France, 456  
Messina, Sicily, 175  
Monaco, Monaco, 363  
Nice, France, 369  
Odessa, Ukraine (south of  
Greece), 1,329  
Odessa, Ukraine (via Corinth  
Canal), 1,288  
Olbia, Sardinia, 222  
Oran, Algeria, 775  
Palermo, Sicily, 170  
Palma, Balearic Islands, 582  
Patrai, Greece, 485  
Piraeus, Greece (south of  
Greece), 667  
Piraeus, Greece (via Corinth  
Canal), 586  
Port Vendres, France, 521

Porto di Milazzo, Sicily, 54  
Porto Vecchio di Piombino, Italy,  
227  
Reggio Di Calabria, Sicily, 179  
Rijeka, Croatia, 775  
Savona, Italy, 350  
Sete, France, 515  
Sibenik, Croatia, 648  
Siracusa, Sicily, 247  
Split, Croatia, 633  
Tarabulus, Libya, 516  
Taranto, Italy, 395  
Thessaloniki, Greece (south of  
Greece), 876  
Thessaloniki, Greece (via Corinth  
Canal), 834  
Toulon, France, 424  
Trapani, Italy, 198  
Trieste, Italy, 808  
Tunis, Tunisia, 313  
Valencia, Spain, 690  
Valletta, Malta, 327  
Venezia, Italy, 818  
Villa San Giovanni, Italy, 173  
Villefranche, France, 369  
Volos, Greece (south of Greece),  
817  
Volos, Greece (via Corinth Canal),  
775

**NARSARSUAQ,  
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  
Ile d'Ouessant, France, 1,498

**Ports**

Aberdeen, England, 869  
Antwerp, Belgium, 1,211  
Bergen, Norway, 824  
Bremerhaven, Germany, 1,058  
Dundee, England, 920  
Le Havre, France, 1,304  
Leith, England, 948  
London, England, 1,215  
Longyearbyen, Svalbard, 659  
Oslo, Norway, 993  
Pechenga, Russia, 500  
Philadelphia, Pennsylvania,  
U.S.A., 3,911  
Rotterdam, Netherlands, 1,139  
Stavanger, Norway, 713  
Stockholm, Sweden, 1,612  
Teesport, England, 993  
Trondheim, Norway, 408

**NASIPIT, PHILIPPINES**  
(8°59'27"N., 125°20'03"E.) to:

**Junction Points\***

Honshu, Japan, 1,770  
Selat Lombok, Indonesia, 1,332

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

Panama, Panama, 9,376  
 Punta Arenas, Chile, 8,880  
 Singapore, 1,410  
 Selat Sunda, Indonesia, 1,655  
 Torres Strait, Australia, 1,783

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 2,706  
 Ho Chi Minh, Vietnam, 1,166  
 Honolulu, Hawaii, U.S.A., 4,471  
 Manila, Philippines, 633  
 Tarakan, Indonesia, 1,070  
 Vladivostok, Russia, 2,124  
 Weonsan, Korea, 1,976

**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  
 Hamilton, Bermuda, 829  
 Jacksonville, Florida, U.S.A. (via Northeast Providence Channel), 456  
 Kingston, Jamaica, 667  
 La Habana, Cuba, 390  
 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  
 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\***

Ile d'Ouessant, France, 3,619  
 Punta Arenas, Chile, 3,400  
 Strait of Gibraltar, 3,003

**Ports**

Belem, Brazil, 954  
 Bissau, Guinea-Bissau, 1,604  
 Buenos Aires, Argentina, 2,329  
 Dakar, Senegal, 1,620  
 El Ferrol del Caudillo, Spain, 3,312  
 Freetown, Sierra Leone, 1,569  
 Galway, Ireland, 3,786  
 Georgetown, Guyana, 1,630  
 Lagos, Nigeria, 2,425  
 Monrovia, Liberia, 1,629

New York, New York, U.S.A., 3,532  
 Paramaribo, Suriname, 1,476  
 Rio de Janeiro, Brazil, 1,228  
 St. John's, Canada, 3,341

**NAVARINO BAY, GREECE**  
 (36°54'12"N., 21°40'43"E.) to:

**Junction Points\***

Port Said, Egypt, 655  
 Strait of Gibraltar, 1,337

**Ports**

Alexandria, Egypt, 539  
 Algiers, Algeria, 902  
 Alicante, Spain, 1,065  
 Ashdod, Israel, 719  
 Bari, Italy, 350  
 Beirut, Lebanon, 715  
 Cannes, France, 1,210  
 Dhckelia, Cyprus, 635  
 Es Sider, Libya, 413  
 Iskenderun, Turkey, 501  
 Limassol, Cyprus, 598  
 Moni Anchorage, Cyprus, 603  
 Tangier, Morocco, 1,336  
 Tarabulus, Lebanon, 728

**NAVLAKHI, INDIA**  
 (22°57'52"N., 70°26'32"E.)  
 Subtract 90 miles from Okha distances.

**NAVPLION, GREECE**  
 (37°33'45"N., 22°47'00"E.) to:

**Junction Points\***

Port Said, Egypt, 617  
 Strait of Gibraltar, 1,484

**Ports**

Iraklion, Kriti, 237  
 Izmir, Turkey, 258  
 Piraievs, Greece, 142

**NEGAPPATTINAM, INDIA**  
 (10°46'00"N., 79°55'00"E.) to:

**Junction Points\***

Singapore, 1,568

**Ports**

Colombo, Sri Lanka, 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

**NEVELS'K, RUSSIA**  
 (46°40'00"N., 141°51'00"E.) to:

**Ports**

Akita, Japan, 450

Hakodate, Japan, 389  
 Korsakov, Sakhalin, Russia, 115  
 Niigata, Japan, 549  
 Otaru, Japan, 213

**NEW AMSTERDAM, GUYANA**  
 (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**

Halifax, Canada, 540  
 La Habana, Cuba, 1,280

**NEW LONDON, CONNECTICUT, U.S.A.**  
 (41°21'30"N., 72°05'30"W.) to:

**Junction Points\***

Bishop Rock, England, 2,849  
 Fastnet Rock, Ireland, 2,727  
 Inishtrahull, Ireland, 2,831  
 Pentland Firth, Scotland, 3,041  
 Strait of Gibraltar, 3,106

**Ports**

Bordeaux, France, 3,153  
 Hamilton, Bermuda, 667

**NEW MANGALORE, INDIA**  
 (12°5'32"N., 74°48'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,523  
 Cape Leeuwin, Australia, 3,695  
 Selat Lombok, Indonesia, 2,939  
 Port Said, Egypt, 3,091  
 Singapore, 2,124  
 Selat Sunda, Indonesia, 2,308  
 Torres Strait, Australia, 4,549

**Ports**

Al Basrah, Iraq, 1,907  
 Bombay, India, 402  
 Calcutta, India, 1,487  
 Colombo, Sri Lanka, 495  
 Okha, India, 659  
 Trincomalee, Sri Lanka, 703  
 Victoria, Seychelles, 1,562

**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**

Barranquilla, Colombia, 1,458  
 Belize, Belize (via South Pass), 850  
 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  
 Coatzacoalcos, Mexico, 801  
 Colon, Panama, 1,389  
 La Habana, Cuba (via South Pass), 602  
 Maracaibo, Venezuela (via South Pass), 1,629  
 Matanzas, Cuba, 641  
 Progreso, Mexico, 556  
 Puerto Barrios, Guatemala, 961  
 Puerto Cortes, Honduras (via South Pass), 916  
 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 PLYMOUTH, NEW ZEALAND**  
 (39°02'08"S., 174°02'30"E.) to:

**Junction Points\***

Panama, Panama, 6,712  
 Punta Arenas, Chile (via 50°S), 4,690  
 Torres Strait, Australia, 2,502  
 Wilson Promontory, Australia, 1,282

**Ports**

Hobart, Tasmania, 1,213  
 Kobe, Japan (via Bougainville Strait), 4,946  
 Melbourne, Australia (via west of Timor), 1,410  
 Suva, Fiji Islands, 1,317  
 Sydney, Australia, 1,124  
 Yokohama, Japan (via Bougainville Strait), 4,881

**NEW WESTMINSTER, CANADA**  
 (49°12'00"N., 122°54'30"W.) to:

**Ports**

Nanaimo, Canada, 47  
 Port Angeles, 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 POINT.—See Preface for use of junction points

**70 NEWARK, NEW JERSEY, U.S.A.****Junction Points\***

Bishop Rock, England, 2,937  
 Cape of Good Hope, South Africa, 6,814  
 Fastnet Rock, Ireland, 2,815  
 Inishtrahull, Ireland, 2,919  
 Montreal, Canada, 1,516  
 Panama, Panama (via Windward Passage), 2,016  
 Pentland Firth, Scotland, 3,120  
 Punta Arenas, Chile, 6,916  
 Strait of Gibraltar, 3,180  
 Straits of Florida, 1,237  
 Yucatan Channel, 1,366

**Ports**

Abraham Bay, Bahamas, 1,115  
 Antilla, Cuba, 1,226  
 Argentina, Canada, 1,009  
 Arkhangel'sk, Russia (Clear of general maximum winter solid pack ice in the vicinity of Iceland), 4,320  
 Arkhangel'sk, Russia, 4,216  
 Bahia de Samana, Dominican Republic, 1,328  
 Bahia Blanca, Argentina, 6,154  
 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, Saint Kitts and Nevis, 1,531  
 Belem, Brazil, 3,015  
 Bilbao, Spain, 3,160  
 Bocas del Toro, Panama (via Crooked Island Passage), 2,048  
 Boma, Congo, 5,591  
 Bordeaux, France, 3,241  
 Brest, France, 3,022  
 Bridgetown, Barbados, 1,829  
 Buenos Aires, Argentina, 5,871  
 Cadiz, Spain, 3,155  
 Cap-Haitien, Haiti, 1,283  
 Cape Town, South Africa, 6,786  
 Cartagena, Colombia (via Crooked Island Passage), 1,853  
 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), 1,682  
 Colon, Panama (via Crooked Island Passage), 1,974  
 Colon, Panama (via Yucatan Channel), 2,176  
 Corunna, Spain, 2,917  
 Dakar, Senegal, 3,335  
 Elizabeth Harbor, Bahamas, 1,048  
 Fernando de Noronha, 3,517  
 Fort de France, Martinique (via Anegada Channel), 1,717  
 Fort Liberte, Haiti, 1,283  
 Fortaleza, Brazil, 3,304  
 Freetown, Sierra Leone, 3,757  
 Funchal, Madeira Island, 2,761  
 Georgetown, Ascension Island, 4,395  
 Georgetown, Guyana, 2,317  
 Gibara, Cuba (via Crooked Island Passage), 1,216  
 Gonaives, Haiti, 1,328

Grand Turk, Grand Turk Island, 1,167  
 Guantanamo, Cuba (via Crooked Island Passage), 1,312  
 Halifax, Canada, 600  
 Hamilton, Bermuda, 697  
 Horta, Fayal, Azores, 2,098  
 Isabel Segunda, Isla de Vieques, 1,430  
 Ivittuut, Greenland, 1,933  
 Jacmel, Haiti, 1,489  
 Kingston, Jamaica (via Crooked Island Passage), 1,474  
 Kingstown, St. Vincent, 1,791  
 La Ceiba, Honduras, 1,743  
 La Guaira, Venezuela (via Mona Passage), 1,848  
 La Habana, Cuba, 1,186  
 Lagos, Nigeria, 4,883  
 Las Cayes, Haiti, 1,447  
 Las Palmas, Canary Islands, 2,965  
 Las Piedras, Venezuela, 1,796  
 Limon, Costa Rica (via Crooked Island Passage), 2,047  
 Lisboa, Portugal, 2,980  
 Liverpool, Canada, 536  
 Luanda, Angola, 5,670  
 Luderitz Bay, Namibia, 6,393  
 Maracaibo, Venezuela, 1,890  
 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, Russia (north of Iceland), 3,844  
 Murmansk, Russia (south of Iceland), 3,948  
 Nassau, Bahamas (via Northwest Providence Channel), 962  
 Natal, Brazil, 3,541  
 Nuevitas, Cuba (via Crooked Island Passage), 1,274  
 Oporto, Portugal, 2,953  
 Paamiut (Frederikshaab), Greenland, 1,959  
 Paramaribo, Suriname, 2,334  
 Parrsboro, Canada, 591  
 Plymouth, Montserrat, 1,574  
 Pointe a Pitre, Guadeloupe, 1,652  
 Ponce, Puerto Rico (via Mona Passage), 1,462  
 Ponta Delgada, Azores, 2,246  
 Porlamar, Venezuela (via Virgin Passage), 1,879  
 Port au Prince, Haiti (via Crooked Island Passage), 1,372  
 Port of Spain, Trinidad (via Virgin Passage), 1,939  
 Port Antonio, Jamaica (via Crooked Island Passage), 1,423  
 Port Castries, St. Lucia, 1,747  
 Porto Grande, Cape Verde Islands, 2,913  
 Praia Da Vitoria, Terceira, Azores, 2,173  
 Progreso, 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  
 Qaqortoq (Julianehaab), Greenland, 1,911  
 Recife, Brazil, 3,698  
 Reykjavik, Iceland, 2,495

Rio de Janeiro, Brazil, 4,770  
 Roosevelt Roads, Puerto Rico, 1,429  
 Salvador, Brazil, 4,089  
 San Juan del Norte, Nicaragua (via Crooked Island Passage), 2,032  
 San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,047  
 San Juan, Puerto Rico, 1,399  
 Santa Barbara de Samana, Dominican Republic, 1,334  
 Santa Cruz de Tenerife, Canary Islands, 2,936  
 Santa Marta, Colombia (via Crooked Island Passage), 1,783  
 Santiago de Cuba, Cuba (via Crooked Island Passage), 1,362  
 Santo Domingo, Dominican Republic, 1,489  
 Santos, Brazil, 4,957  
 Sint Nicolaashaven, Aruba (via Mona Passage), 1,761  
 Sint Nicolaashaven, Aruba (via Windward Passage), 1,805  
 St. John, Canada (via Vineyard Sound and Long Island Sound), 486  
 St. John, Canada (Nantucket Light Buoy), 545  
 St. John's, Canada, 1,093  
 St. John's, Antigua (via Anegada Channel), 1,572  
 St. Pierre, Martinique (via Anegada Channel), 1,705  
 Sydney, Canada, 808  
 Vigo, Spain, 2,914  
 Villa do Porto, Azores, 2,279  
 Vitoria, Brazil, 4,507  
 Walvisbaai, Namibia, 6,228  
 Willemstad, Curacao, 1,771  
 Yarmouth, Canada (Nantucket Light Buoy), 464  
 Yarmouth, Canada (via Pollok Rip Channel), 440

**NEWARK, NEW JERSEY, U.S.A.**  
 (40°42'00"N., 74°09'00"W.) See Port Newark.

**NEWCASTLE, AUSTRALIA**  
 (32°55'30"S., 151°47'00"E.) to:

**Junction Points\***

Panama, Panama, 7,654

**Ports**

Los Angeles, California, U.S.A., 6,456  
 Portland, Oregon, U.S.A., 6,833  
 San Francisco, California, U.S.A., 6,467

**NEWCASTLE, CANADA**  
 (47°00'04"N., 65°34'00"W.) Add 4 miles to Chatham distances.

**NEWCASTLE, ENGLAND**  
 (54°58'00"N., 1°35'00"W.) to:

**Junction Points\***

Bishop Rock, England, 616  
 Ile d'Ouessant, France, 604  
 Nord-Ostsee-Kanal (East Entrance), Germany, 439  
 Pentland Firth, Scotland, 265  
 Skagens Odde, Denmark, 445

**Ports**

Amsterdam, Netherlands, 286  
 Antwerp, Belgium, 351  
 Bergen, Norway, 403  
 Bremerhaven, Germany, 374  
 Dunkerque, France, 307  
 Egersund, Norway, 329  
 Emden, Germany, 329  
 Esbjerg, Denmark, 349  
 Hamburg, Germany, 424  
 Hull, England, 143  
 Kristiansand, Norway, 376  
 Le Havre, France, 411  
 London, England, 325  
 Oostende, Belgium, 291  
 Oslo, Norway, 528  
 Plymouth, England, 524  
 Santo Domingo, Dominican Republic, 1,489  
 Rotterdam, Netherlands, 285  
 Southampton, England, 421  
 Stavanger, Norway, 349  
 Wilhelmshaven, Germany, 367  
 Zeebrugge, Belgium, 289

**NEWPORT, RHODE ISLAND, U.S.A.**

(41°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 Rock, Ireland, 258  
 Inishtrahull, Ireland, 371

**Ports**

Cardiff, Wales, 16  
 Cobh, Ireland, 210  
 Cork, Ireland, 220  
 Dover, England, 439  
 Dublin, Ireland, 219  
 Falmouth, England, 191  
 Limerick, Ireland, 418  
 Liverpool, England, 284  
 Manchester, England, 324  
 Plymouth, England, 224  
 Portsmouth, England, 341  
 Southampton, England, 339  
 Waterford, Ireland, 170

**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 Ho Chi Minh distances.

**NHA TRANG BAY, VIETNAM**  
 (12°15'00"N., 109°13'00"E.) to:

**Junction Points\***

Singapore, 769

**Ports**

Ho Chi Minh, Vietnam, 264  
 Hong Kong, China, 678  
 Kao-hsiung Kang, Taiwan, 895  
 Manila, Philippines, 706

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



**NICE, FRANCE**  
(43°41'40"N., 7°17'07"E.) to:

**Junction Points\***

Port Said, Egypt, 1,456  
Strait of Gibraltar, 788

**Ports**

Ajaccio, Corsica, 138  
Almeria, Spain, 627  
Cagliari, Sardinia, 354  
Civitavecchia, Italy, 220  
Constanta, Romania (south of Greece), 1,518  
Constanta, Romania (via Corinth Canal), 1,476  
Genova, Italy, 89  
Iraklion, Kriti, 1,012  
Iskenderun, Turkey, 1,553  
Istanbul, Turkey (south of Greece), 1,321  
Istanbul, Turkey (via Corinth Canal), 1,279  
Izmir, Turkey, 1,160  
Kerch, Ukraine (south of Greece), 1,756  
Kerch, Ukraine (via Corinth Canal), 1,714  
Larnaca, Cyprus, 1,457  
Livorno, Italy, 134  
Marsaxlokk, Malta, 596  
Mersin, Turkey, 1,495  
Messina, Sicily, 515  
Milos, Greece, 970  
Napoli, Italy, 369  
Patrai, Greece, 825  
Sant Antioco Ponti, Sardinia, 310  
Thessaloniki, Greece, 1,210  
Valletta, Malta, 592

**NIIGATA, JAPAN**  
(37°58'00"N., 139°04'00"E.) to:

**Junction Points\***

Panama, Panama, (via Tsugaru-Kaikyo), 7,648  
Punta Arenas, Chile (via Tsugaru Kaikyo), 9,687  
Singapore, 2,976

**Ports**

Busan, South Korea, 516  
Hakodate, Japan, 247  
Incheon, South Korea, 894  
Kawasaki, Japan (via Balintang Channel), 762  
Maizuru, Japan, 256  
Muroran, Japan (via Balintang Channel), 293  
Nagoya, Japan (via Balintang Channel), 906  
Nevel'sk, Russia, 549  
Osaka, Japan (via Shimonoseki Strait), 743  
Shimonoseki, Japan, 492  
Vladivostok, Russia, 453

**NIKISKI, ALASKA, U.S.A.**  
(60°40'30"N., 151°24'30"W.) to:

**Junction Points\***

Panama, Panama, 5,055  
Punta Arenas, Chile, 7,947

**Ports**

Antofagasta, Chile, 6,572  
Callao, Peru, 5,794

Manzanillo, Mexico, 3,351  
Mollendo, Peru, 6,213  
Quepos, Costa Rica, 4,665  
Victoria, Canada, 1,311

**NIKOLAYEVSK-NA-AMURE, RUSSIA**

(53°07'30"N., 140°43'00"E.) to:

**Junction Points\***

Panama, Panama (via Unimak Pass), 7,296

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia (via South Channel), 162  
Bukhta Shelikhova, Kuril Islands, Russia (north of Sakhalin), 677  
Dagu, China, 1,961  
Hong Kong, China (via South Channel), 2,394  
Matsuga-hana, Japan, 741  
Pago Pago, American Samoa (via Nemuro Strait and La Perouse Strait), 4,913  
Qingdao, China, 1,750  
San Francisco, California, U.S.A. (via Unimak Pass), 4,099  
Seattle, Washington, U.S.A. (via Unimak Pass), 3,748  
Shanghai, China, 1,742  
Sovetskaya Gavan, Russia (via South Channel), 276  
Tomari, Japan, 694  
Xiamen, China (via South Channel), 2,138  
Zaliv Urkt, Russia (north of Sakhalin), 209

**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  
Callao, Peru, 6,578  
Cordova, Alaska, U.S.A., 1,409  
Hakodate, Japan, 2,347  
Hong Kong, China, 4,145  
Honolulu, Hawaii, U.S.A. (via Unimak Pass), 2,674  
Los Angeles, California, U.S.A., 2,968  
Manila, Philippines, 4,379  
Pago Pago, American Samoa, 4,748  
Petropavlovsk-Kamchatskiy, Russia, 1,317  
Pevek, Russia, 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

**NORD-OSTSEE-KANAL (EAST ENTRANCE), GERMANY\***

(54°22'00"N., 10°09'00"E.) to:

**Junction Points\***

Bishop Rock, England, 727  
Ile d'Ouessant, France, 716  
Pentland Firth, Scotland, 565  
Skagens Odde, Denmark, 224

**Ports**

Aalborg, Denmark, 207  
Aarhus, Denmark, 131  
Aabenra, Denmark, 66  
Amsterdam, Netherlands, 291  
Antwerp, Belgium, 398  
Assens, Denmark, 65  
Baltiysk, Russia, 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  
Falborg, 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  
Hango, Denmark, 140  
Haderslev, Denmark, 72  
Halmsted, Sweden, 188  
Hamburg, Germany, 91  
Hamina, Finland, 747  
Hango, Finland, 564  
Helsingborg, Sweden, 176  
Helsingor, Denmark, 175  
Helsinki, Finland, 625  
Horsens, Denmark, 131  
Kalmar, Sweden, 289  
Kalundborg, Denmark, 111  
Karlshamn, 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  
Limhamn, Sweden, 159  
London, England, 439  
Lubeck, Germany, 99  
Lulea, Sweden, 875  
Malmo, Sweden, 205  
Masnedund, 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  
Ornskoldsvik, Sweden, 733  
Oulu, Finland, 918  
Oxelund, Sweden, 420  
Peenemunde, Germany, 155  
Pitea, Sweden, 864  
Plymouth, England, 639  
Porkkala, Finland, 647  
Portland, England, 565  
Portsmouth, England, 515  
Randers, Denmark, 188

Rauma, Finland, 678  
Riga, Latvia, 555  
Ronne, Denmark, 175  
Rostock, Germany, 92  
Rotterdam, Netherlands, 323  
Ruch'i, Russia, 766  
Sankt-Peterburg, Russia, 779  
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  
Umea, Sweden, 751  
Uusikaupunki, Finland, 624  
Vaa, Finland, 744  
Veje, Denmark, 106  
Ventspils, Latvia, 434  
Wilhelmshaven, Germany, 126  
Wismar, Germany, 84  
Zeebrugge, Belgium, 354

**NORDENHAM, GERMANY**  
(53°29'00"N., 8°29'40"E.) Add 5 1/2 miles to Bremerhaven distances.

**NORFOLK, VIRGINIA, U.S.A.**  
(36°51'00"N., 76°18'00"W.) to:

**Junction Points\***

Bishop Rock, England, 3,101  
Cape of Good Hope, South Africa, 6,802  
Fastnet Rock, Ireland, 2,979  
Inishtrahull, Ireland, 3,083  
Montreal, Canada (via Cabot Strait), 1,700  
Panama, Panama (via Windward Passage), 1,825  
Pentland Firth, Scotland, 3,280  
Punta Arenas, Chile, 6,900  
Strait of Gibraltar, 3,335  
Straits of Florida (via outer route), 980  
Yucatan Channel, 1,165

**Ports**

Argentina, Canada, 1,189  
Arkhangel'sk, Russia, 4,399  
Banes, Cuba (via Crooked Island Passage), 1,018  
Belem, Brazil, 2,832  
Belize, Belize, 1,503  
Bocas del Toro, Panama (via Crooked Island Passage), 1,853  
Bordeaux, France, 3,405  
Buenos Aires, Argentina, 5,786  
Cadiz, Spain, 3,303  
Cape Town, South Africa, 6,790  
Cartagena, Colombia (via Crooked Island Passage), 1,658  
Charlotte Amalie, Virgin Islands, 1,296  
Cienfuegos, Cuba (via Windward Passage), 1,482  
Coatzacoalcas, Mexico, 1,736  
Colon, Panama (via Crooked Island Passage), 1,779  
Dakar, Senegal, 3,408  
Elizabeth Harbor, Bahamas, 848  
Fort de France, Martinique, 1,597  
Freetown, Sierra Leone, 3,821  
Funchal, Madeira Island, 2,907  
Georgetown, Guyana, 2,090

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

## 72 NORRKOPING, SWEDEN

Guantanamo, Cuba, 1,117  
 Halifax, Canada, 790  
 Hamilton, Bermuda, 683  
 Iittuut, Greenland, 2,116  
 Kingston, Jamaica (via Crooked Island Passage), 1,279  
 La Guaira, Venezuela, 1,677  
 La Habana, Cuba (southbound, outside), 985  
 Lagos, Nigeria, 4,941  
 Las Palmas, Canary Islands, 3,130  
 Limon, Costa Rica (via Crooked Island Passage), 1,852  
 Lisboa, Portugal, 3,129  
 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, 2,401  
 Port au Prince, Haiti, 1,178  
 Port Antonio, Jamaica (via Crooked Island Passage), 1,228  
 Port Castries, St. Lucia, 1,720  
 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  
 Recife, Brazil, 3,651  
 Reykjavik, Iceland, 2,677  
 Rio de Janeiro, Brazil, 4,723  
 Salvador, Brazil, 4,042  
 San Juan del Norte, Nicaragua (via Straits of Florida), 1,846  
 San Juan del Norte, Nicaragua (via Windward Passage), 1,837  
 San Juan, Puerto Rico, 1,252  
 Santa Cruz de Tenerife, Canary Islands, 3,057  
 Santa Marta, Colombia (via Crooked Island Passage), 1,588  
 Santiago de Cuba, Cuba, 1,167  
 Santo Domingo, Dominican Republic, 1,329  
 Santos, Brazil, 4,910  
 Sint Nicolaashaven, Aruba (via Mona Passage), 1,600  
 Sint Nicolaashaven, Aruba (via Windward Passage), 1,611  
 St. John, Canada, 731  
 St. John's, Canada, 1,277  
 Sydney, Canada, 996  
 Takoradi, Ghana, 4,620  
 Vigo, Spain, 3,099  
 Willemstad, Curacao, 1,611  
 Yarmouth, Canada, 656

**NORRKOPING, SWEDEN**  
 (58°36'00"N., 16°12'54"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 459  
 Skagens Odde, Denmark, 520

**Ports**

Helsinki, Finland, 307  
 Riga, Latvia, 300  
 Stockholm, Sweden, 143

**NOUADHIBOU, MAURITANIA**  
 (20°52'40"N., 17°00'12"W.) to:

**Junction Points\***

Bishop Rock, England, 1,812  
 Cape of Good Hope, South Africa, 4,379  
 Fastnet Rock, Ireland, 1,865  
 Grand Banks South, 2,104  
 Ile d'Ouessant, France, 1,770  
 Inishtrahull, Ireland, 2,133  
 Panama, Panama, 3,697  
 Pentland Firth, Scotland, 2,437  
 Punta Arenas, Chile, 5,296  
 Strait of Gibraltar, 1,160  
 Straits of Florida, 3,667  
 Yucatan Channel, 3,985

**Ports**

Accra, Ghana, 1,756  
 Boma, Congo, 2,666  
 Casablanca, Morocco, 936  
 Dakar, Senegal, 373  
 Freetown, Sierra Leone, 850  
 Galway, Ireland, 1,979  
 Greenville, Liberia, 1,166  
 Lisboa, Portugal, 1,149  
 Monrovia, Liberia, 1,061  
 Port of Spain, Trinidad, 2,634  
 Tangier, Morocco, 1,085  
 Vigo, Spain, 1,352

**NOUAKCHOTT, MAURITANIA**  
 (18°02'02"N., 16°02'02"W.) to:

**Junction Points\***

Bishop Rock, England, 2,044  
 Cape of Good Hope, South Africa, 4,248  
 Fastnet Rock, Ireland, 2,068  
 Grand Banks South, 2,275  
 Ile d'Ouessant, France, 1,971  
 Inishtrahull, Ireland, 2,335  
 Panama, Panama, 3,752  
 Pentland Firth, Scotland, 2,637  
 Punta Arenas, Chile, 5,164  
 Strait of Gibraltar, 1,329  
 Straits of Florida, 3,777  
 Yucatan Channel, 4,052

**Ports**

Accra, Ghana, 1,605  
 Boma, Congo, 4,250  
 Cape Town, South Africa, 5,547  
 Casablanca, Morocco, 1,114  
 Dakar, Senegal, 217  
 Freetown, Sierra Leone, 699  
 Galway, Ireland, 2,167  
 Lagos, Nigeria, 1,823  
 New York, New York, U.S.A., 3,256  
 Port of Spain, Trinidad, 2,674  
 Qua Iboe, Nigeria, 2,078  
 Recife, Brazil, 1,252  
 Sassandra, Ivory Coast, 1,250  
 Vigo, Spain, 1,530  
 Villa Cisneros, Western Sahara, 367

**NOUMEA, NEW CALEDONIA**  
 (22°16'30"S., 166°27'00"E.) to:

**Junction Points\***

Panama, Panama, 6,982  
 Punta Arenas, Chile (composite sailing with 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  
 Baie Taio-Hae, Marquesa Islands, 3,183  
 Baker Island, 1,707  
 Bowen, Australia, 1,342  
 Brisbane, Australia, 807  
 Cairns Harbor, Australia, 1,250  
 Callao, Peru, 6,541  
 Dagu, China, 4,667  
 Dunedin, New Zealand, 1,552  
 Dutch Harbor, Alaska, U.S.A., 4,857  
 Funafuti, Tuvalu, 1,132  
 Guayaquil, Ecuador, 6,686  
 Hakodate, Japan (via Canal Woodin and Canal de la Havannah), 4,176  
 Hobart, Tasmania, 1,604  
 Hong Kong, China, 4,107  
 Honolulu, Hawaii, U.S.A., 3,371  
 Kodiak, Alaska, U.S.A., 5,281  
 Lae, Papua 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  
 Pago Pago, American Samoa (via Kandavu Passage), 1,416  
 Papeete, French Polynesia, 2,497  
 Petropavlovsk-Kamchatskiy, Russia, 4,587  
 Ponape, Caroline Islands, 1,892  
 Port Augusta, Australia, 2,179  
 Qingdao, China, 4,416  
 Rabaul, Papua New Guinea, 1,383  
 Raoul, Kermadec Islands, 957  
 Rockhampton, Australia, 902  
 Rotoava, Iles Tuamotu, 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  
 Shanghai, China, 4,185  
 Sitka, Alaska, U.S.A., 5,613  
 Suva, Fiji Islands, 734  
 Sydney, Australia, 1,069  
 Talomako, Vanuatu, 524  
 Townsville, Australia, 1,155  
 Truk, Caroline Islands, 2,068  
 Valparaiso, Chile, 6,115  
 Vladivostok, Russia, 4,590  
 Wake Island, Pacific, 2,551  
 Wallaroo, Australia, 2,099  
 Wotje Island, Marshall Islands, 1,972  
 Xiamen, China, 4,031  
 Yap Island, Caroline Islands, 2,568  
 Yokohama, Japan (via Bougainville Strait), 3,837

**NOVOROSIYSK, RUSSIA**  
 (44°43'00"N., 037°47'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,260  
 Strait of Gibraltar (south of Greece), 2,277  
 Strait of Gibraltar (via Corinth Canal), 2,260

**Ports**

Bat'umi, Georgia, 255  
 Constanta, Romania, 403  
 Istanbul, Turkey, 460  
 Odessa, Ukraine, 369  
 Thessaloniki, Greece, 794

**NUEVA GERONA, CUBA**  
 (21°55'00"N., 82°48'00"W.)  
 Subtract 82 miles from Surgidero de Batabano distances.

**NUEVA PALMIRA, URUGUAY**  
 (33°52'54"S., 58°25'28"W.) Add 155 miles to Montevideo 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 Florida Strait), 1,187  
 Boston, Massachusetts, U.S.A., 1,447  
 Caibarien, Cuba, 181  
 Casilda, Cuba (via Windward Passage), 610  
 Charleston, South Carolina, U.S.A., 750  
 Cienfuegos, Cuba, 649  
 Fort de France, Martinique, 1,035  
 Fort Liberté, Haiti, 339  
 Gibara, Cuba, 82  
 Guantanamo, Cuba, 284  
 Hamilton, Bermuda, 988  
 Hopetown, Bahamas, 452  
 Isabel de Sagua, Cuba, 212  
 Key West, Florida, U.S.A., 331  
 Kingston, Jamaica, 448  
 La Habana, Cuba, 344  
 Manzanillo, Cuba (via Windward Passage), 531  
 Mariel, Cuba, 366  
 Miller Anchorage, Bahamas, 363  
 Nassau, Bahamas, 454  
 New York, New York, U.S.A. (via Florida Strait), 1,264  
 Nicao, Cuba, 132  
 Norfolk, Virginia, U.S.A. (via Florida Strait), 1,064  
 Philadelphia, Pennsylvania, U.S.A. (via Florida Strait), 1,235  
 Port au Prince, Haiti, 348  
 Port Antonio, Jamaica, 398  
 Puerto Cayo Mao, Cuba, 154  
 San Juan, Puerto Rico, 663  
 Santa Lucia, Cuba, 447  
 Santo Domingo, Dominican Republic, 632  
 St. Marc, Haiti, 306

**NUKUALOFA, TONGA ISLANDS**  
 (21°07'30"S., 175°12'00"W.) to:

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

**Junction Points\***

Panama, Panama, 5,953

**Ports**

Apia, Samoa, 509  
 Apra, Guam, 3,202  
 Auckland, New Zealand, 1,099  
 Brisbane, Australia, 1,827  
 Burnie Harbor, Australia, 2,318  
 Fremantle, Australia (via Bass Strait), 3,970  
 Geelong, Australia, 2,420  
 Hobart, Tasmania, 2,328  
 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, French Polynesia, 1,468  
 Ponape, Caroline Islands, 2,341  
 Port Kembla, Australia, 1,981  
 Suva, Fiji islands, 416

**NUUK (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

**NYKOBING, DENMARK**  
 (55°54'48"N., 11°40'42"E.) Add  
 12 miles to Masnedund distances.

**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, French Polynesia, 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\***

Nord-Ostsee-Kanal (East  
 Entrance), Germany, 117  
 Skagens Odde, Denmark, 126

**Ports**

Gdynia, Poland, 438  
 Stockholm, Sweden, 609  
 Swinoujscie, Poland, 293

**ODESSA, UKRAINE**

(46°29'47"N., 30°44'40"E.) to:

**Junction Points\***

Port Said, Egypt, 1,152  
 Strait of Gibraltar, 2,169

**Ports**

Alexandria, Egypt, 1,090  
 Algiers, Algeria, 1,741  
 Alicante, Spain, 1,908  
 Ancona, Italy (south of Greece), 1,407  
 Ancona, Italy (via Corinth Canal), 1,310  
 Annaba, Algeria, 1,516  
 Banghazi, Libya, 1,064  
 Banzart, Tunisia, 1,411  
 Barcelona, Spain (south of Greece), 1,737  
 Barcelona, Spain (via Corinth Canal), 1,793  
 Bari, Italy (south of Greece), 1,200  
 Bari, Italy (via Corinth Canal), 1,103  
 Bat'umi, Georgia, 569  
 Beirut, Lebanon, 1,194  
 Brindisi, Italy, 1,142  
 Cartagena, Spain, 1,932  
 Ceuta, Morocco, 2,150  
 Civitavecchia, Italy (south of Greece), 1,456  
 Civitavecchia, Italy (via Corinth Canal), 1,414  
 Constanta, Romania, 186  
 Genova, Italy (south of Greece), 1,639  
 Genova, Italy (via Corinth Canal), 1,598  
 Gibraltar (south of Greece), 2,152  
 Gibraltar (via Corinth Canal), 2,135  
 Haifa, Israel, 1,197  
 Iraklion, Kritis, 793  
 Istanbul, Turkey, 352  
 Izmir, Turkey, 640  
 La Spezia, Italy (south of Greece), 1,604  
 La Spezia, Italy (via Corinth Canal), 1,562  
 Livorno, Italy (south of Greece), 1,568  
 Livorno, Italy (via Corinth Canal), 1,527  
 Malga, Spain, 2,100  
 Marseille, France (south of Greece), 1,731  
 Marseille, France (via Corinth Canal), 1,690  
 Messina, Sicily (south of Greece), 1,158  
 Messina, Sicily (via Corinth Canal), 1,116  
 Napoli, Italy (south of Greece), 1,329  
 Napoli, Italy (via Corinth Canal), 1,288  
 Novorossiysk, Russia, 369  
 Oran, Algeria, 1,938  
 Palermo, Sicily (south of Greece), 1,274  
 Palermo, Sicily (via Corinth Canal), 1,232  
 Palma, Balearic Islands (south of

Greece), 1,792

Palma, Balearic Islands (via Corinth Canal), 1,751  
 Piraeus, Greece, 712  
 Rijeka, Croatia (south of Greece), 1,476  
 Rijeka, Croatia (via Corinth Canal), 1,377  
 Savona, Italy (south of Greece), 1,650  
 Savona, Italy (via Corinth Canal), 1,608  
 Sibenik, Croatia (south of Greece), 1,349  
 Sibenik, Croatia (via Corinth Canal), 1,250  
 Siracusa, Sicily (south of Greece), 1,146  
 Siracusa, Sicily (via Corinth Canal), 1,120  
 Split, Croatia (south of Greece), 1,334  
 Split, Croatia (via Corinth Canal), 1,235  
 Tarabulus, Libya, 1,301  
 Taranto, Italy (south of Greece), 1,154  
 Taranto, Italy (via Corinth Canal), 1,065  
 Thessaloniki, Greece, 686  
 Toulon, France (south of Greece), 1,699  
 Toulon, France (via Corinth Canal), 1,658  
 Trieste, Italy (south of Greece), 1,510  
 Trieste, Italy (via Corinth Canal), 1,411  
 Tunis, Tunisia, 1,399  
 Valencia, Spain (south of Greece), 1,906  
 Valencia, Spain (via Corinth Canal), 1,876  
 Valletta, Malta, 1,185  
 Venezia, Italy (south of Greece), 1,518  
 Venezia, Italy (via Corinth Canal), 1,421  
 Volos, Greece, 677

**OITA, JAPAN**

(33°17'00"N., 131°40'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via south of Mindanao), 2,843  
 Panama, Panama (via east of Honshu), 8,101  
 Punta Arenas, Chile, 9,485  
 Singapore (east of Kyushu), 2,556

**Ports**

Aomori, Japan, 773  
 Hiroshima, Japan, 92  
 Kobe, Japan, 214  
 Kokura, Japan, 86  
 Nagoya, Japan, 381  
 Shimonoseki, Japan, 81  
 Ube, Japan, 69  
 Yokohama, Japan, 489  
 Yokoshima, Japan, 116  
 Yokosuka, Japan, 483

**OKHA, INDIA**

(22°28'30"N., 69°05'15"E.) to:

**Junction Points\***

Port Said, Egypt, 2,887

**Ports**

Bombay, India, 341  
 Colombo, Sri Lanka, 1,183  
 Karachi, Pakistan, 194  
 Garmgao, India, 533

**OKHA, SAKHALIN, RUSSIA**

(53°34'00"N., 143°05'00"E.) to:

**Ports**

Bukhta, Nagayeva, Russia, 441  
 Nikolayevsk-Na-Amure, Russia (north of Sakhalin), 209

**OLBIA, SARDINIA**

(40°55'18"N., 9°31'24"E.) to:

**Junction Points\***

Port Said, Egypt, 1,278  
 Strait of Gibraltar, 828

**Ports**

Banzart, 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  
 Ho Chi Minh, Vietnam, 872  
 Hong Kong, China, 580  
 Kuching, Sarawak, 992  
 Pago Pago, American Samoa (via San Bernardino Strait), 4,622

**OLYMPIA, WASHINGTON, U.S.A.**

(47°03'06"N., 122°54'18"W.) Add 44 miles to Seattle distances.

**ONEGA, RUSSIA**

(63°54'00"N., 38°06'00"E.) Add 102 miles to Arkhangel'sk distances.

**OOSTENDE, BELGIUM**

(51°14'00"N., 2°55'00"E.) to:

**Junction Points\***

Bishop Rock, England, 400  
 Ile d'Ouessant, France, 365  
 Nord-Ostsee-Kanal (East Entrance), Germany, 364  
 Pentland Firth, Scotland, 509  
 Skagens Odde, Denmark, 489

**Ports**

Aberdeen, Scotland, 406  
 Amsterdam, Netherlands, 117  
 Antwerp, 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

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

## 74 OPORTO, PORTUGAL

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  
 Plymouth, England, 288  
 Portland, England, 214  
 Portsmouth, England, 174  
 Rotterdam, Netherlands, 86  
 Southampton, England, 192  
 Stavanger, Norway, 488  
 Wilhelmshaven, Germany, 286

**OPORTO, PORTUGAL**  
 (41°08'30"N., 8°41'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 494  
 Strait of Gibraltar, 432

**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

**OPUA, NEW ZEALAND**  
 (35°18'50"S., 174°07'25"E.) to:

**Junction Points\***

Panama, Panama, 6,675  
 Punta Arenas, Chile (via 50°S),  
 4,760  
 Torres Strait, Australia, 2,472  
 Wilson Promontory, Australia,  
 1,419

**Ports**

Auckland, New Zealand, 115  
 Chimbote, Peru, 5,911  
 Hobart, Tasmania, 1,431  
 Honolulu, Hawaii, U.S.A., 3,753  
 Los Angeles, California, 5,625  
 Seattle, Washington, U.S.A., 6,218  
 Yokohama, Japan, 4,742

**ORAN, ALGERIA**  
 (35°42'52"N., 0°38'00"W.) to:

**Junction Points\***

Port Said, Egypt, 1,711  
 Strait of Gibraltar, 282

**Ports**

Alcudia, Balearic Islands, 281  
 Alexandria, Egypt, 1,590  
 Algeciras, Spain, 229  
 Algiers, Algeria, 205  
 Alicante, Spain, 159  
 Ancona, Italy, 1,349  
 Annaba, Algeria, 444  
 Banghazi, Libya, 1,124  
 Banzart, Tunisia, 538  
 Barcelona, Spain, 365  
 Bari, Italy, 1,142

Beirut, Lebanon, 1,803  
 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, Kriti, 1,284  
 Istanbul, Turkey (south of  
 Greece), 1,590  
 Istanbul, Turkey (via Corinth  
 Canal), 1,573  
 Izmir, Turkey (south of Greece),  
 1,436  
 Izmir, Turkey (via Corinth Canal),  
 1,418  
 La Spezia, Italy, 701  
 Livorno, Italy, 691  
 Malaga, Spain, 195  
 Marseille, France, 536  
 Melilla, Morocco, 120  
 Messina, Sicily, 818  
 Napoli, Italy, 775  
 Odessa, Ukraine, 1,939  
 Palermo, Sicily, 709  
 Palma, Balearic Islands, 281  
 Piraeus, Greece (south of  
 Greece), 1,276  
 Piraeus, Greece (via Corinth  
 Canal), 1,219  
 Rijeka, Croatia, 1,417  
 Savona, Italy, 672  
 Sibenik, Croatia, 1,290  
 Siracusa, Sicily, 823  
 Skikda, Algeria, 398  
 Split, Croatia, 1,275  
 Tarabulus, Libya, 862  
 Taranto, Italy, 1,037  
 Tarragona, Spain, 336  
 Thessaloniki, Greece, 1,484  
 Toulon, France, 545  
 Trieste, Italy, 1,450  
 Tunis, Tunisia, 589  
 Valencia, Spain, 238  
 Valletta, Malta, 774  
 Venezia, Italy, 1,460  
 Volos, Greece (south of Greece),  
 1,426  
 Volos, Greece (via Corinth Canal),  
 1,408

**ORANGE, TEXAS, U.S.A.**  
 (30°05'20"N., 93°44'00"W.) Add  
 20 miles to Port Arthur distances.

**ORANJESTAD, ARUBA**  
 (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 NAVARINOU,  
 GREECE**  
 (36°54'12"N., 21°40'43"E.) See  
 Navarino Bay.

**ORMOS SOUDHAS, KRITI**  
 (35°29'30"N., 24°04'45"E.) See  
 Soudha.

**ORNSKOLDSVIK, SWEDEN**  
 (63°16'37"N., 18°44'20"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
 Entrance), 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-Sakhalinskiy,  
 Russia, 1,394  
 Incheon, South Korea, 721  
 Komatsushima, Japan, 58  
 Mogpo, South Korea, 544  
 Pago Pago, American Samoa,  
 4,307  
 Petropavlovsk-Kamchatskiy,  
 Russia, 1,709  
 Shimotsui, Japan, 116  
 Vladivostok, Russia, 815  
 Weonsan, North 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  
 Ile d'Ouessant, France, 946  
 Nord-Ostsee-Kanal (East  
 Entrance), Germany (via Store  
 Baelt), 368  
 Nord-Ostsee-Kanal (East  
 Entrance), Germany (via The  
 Sound), 441  
 Pentland Firth, Scotland, 524  
 Skagens Odde, Denmark, 131

**Ports**

Aarhus, Denmark, 255  
 Aberdeen, Scotland, 490  
 Amsterdam, Netherlands, 522  
 Antwerp, Belgium, 630  
 Arendal, Norway, 120  
 Baltiysk, Russia (via Store Baelt),  
 668

Baltiysk, Russia (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  
 Farsund, Norway, 198  
 Flekkefjorden, Norway, 219  
 Fredrikstad, Norway, 57  
 Gdansk, Poland (via Store Baelt),  
 657  
 Gdansk, Poland (via The Sound),  
 540  
 Goteborg, Sweden, 159  
 Hakonsvern, Norway, 371  
 Halmstad, Sweden, 225  
 Hamburg, Germany, 461  
 Hammerfest, Norway, 1,187  
 Helsingborg, Sweden, 250  
 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, 539  
 Landskrona, Sweden, 261  
 Larvik, Norway, 72  
 Le Havre, France, 752  
 Leith, Scotland, 76  
 Lillesand, Norway, 144  
 Limhamn, Sweden, 279  
 London, England, 650  
 Longyearbyen, Svalbard, 1,482  
 Lulea, Sweden (via Store Baelt),  
 1,192  
 Lulea, Sweden (via The Sound),  
 1,063  
 Malmo, Sweden, 278  
 Mandal, Norway, 177  
 Murmansk, Russia, 1,469  
 Narvik, Norway, 988  
 Newcastle, England, 528  
 Ostende, 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  
 Sankt-Peterburg, Russia (via Store  
 Baelt), 1,095  
 Sankt-Peterburg, Russia (via The  
 Sound), 963  
 Southampton, England, 763  
 Stavanger, Norway, 294  
 Stockholm, Sweden (via  
 Huvudskar), 683  
 Stockholm, Sweden (via  
 Sandhamnsleden), 689  
 Stockholm, Sweden (via Store  
 Baelt), 819

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



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), 465  
 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, Russia (via Store Baelt), 1,047  
 Vysotsk, Russia (via The Sound), 92  
 Wilhelmshaven, Germany, 421  
 Zeebrugge, Belgium, 586

**OSTRICA, LOUISIANA, U.S.A.**  
 (29°21'49"N., 89°31'16"W.)  
 Subtract 62 miles from New Orleans distances.

**OTAGO HARBOR, NEW ZEALAND**  
 (45°44'47"S., 170°43'28"E.) See Port Chalmers.

**OTARU, JAPAN**  
 (43°12'00"N., 141°01'00"E.) to:

**Ports**

Bukhta Shelikhova, Kuril Islands, Russia, 784  
 Matsuga-hana, Japan, 435  
 Nevel'sk, Russia, 213  
 Rumoi, Japan, 57  
 Shanghai, China, 1,233  
 Tomari, Japan, 387  
 Unggi, Korea, 188

**OUESSANT, ILE DE FRANCE**  
 (48°40'00"N., 5°30'00"W.) See Ile d'Ouessant.

**OULU, FINLAND**  
 (65°02'00"N., 25°23'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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\***

Nord-Ostsee-Kanal (East Entrance), Germany, 420

Skagens Odde, Denmark, 481

**Ports**

Gdynia, Poland, 266  
 Helsinki, Finland, 268  
 Klaipeda, Lithuania, 232

**PAAMIUT (FREDERIKSHAAB), GREENLAND**  
 (61°59'00"N., 49°43'00"W.) to:

**Junction Points\***

Montreal, Canada, 1,901  
 Panama, Panama, 3,558

**Ports**

Baltimore, Maryland, U.S.A., 2,261  
 Halifax, Canada, 1,406  
 New York, New York, U.S.A., 1,959

**PADANG, INDONESIA**  
 (1°00'00"S., 100°22'00"E.) See Telukbayur.

**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-Sakhalinskiy, Russia (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  
 Brisbane, Australia, 2,221  
 Busan, South Korea (via Bungo Suido), 4,561  
 Canton, Phoenix Islands, 711  
 Chimbote, Peru, 5,389  
 Christmas Island, Line Islands, 1,256  
 Dagu, China, 5,194  
 Dalian, China, 5,035  
 Dutch Harbor, Alaska, U.S.A., 4,132  
 Guayaquil, Ecuador, 5,450  
 Hakodate, Japan, 4,326  
 Ho Chi Minh, Vietnam, 5,216  
 Hobart, Tasmania, 2,783  
 Hong Kong, China, 4,948  
 Honolulu, Hawaii, U.S.A., 2,276  
 Howland Island, 989  
 Jilut, Marshall Islands, 1,700  
 Jarvis Island, 1,050  
 Kobe, Japan, 4,308  
 Kodiak, Alaska, U.S.A., 4,441  
 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-Na-Amure, Russia (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  
 Papeete, French Polynesia, 1,236  
 Petropavlovsk-Kamchatskiy, Russia, 4,350  
 Ponape, Caroline Islands, 2,266  
 Portland, Oregon, U.S.A., 4,525  
 Prince Rupert, Canada, 4,652  
 Qingdao, China, 4,969  
 Salina Cruz, Mexico, 4,839  
 San Diego, California, U.S.A., 4,176  
 San Francisco, California, U.S.A., 4,130  
 Seattle, Washington, U.S.A., 4,611  
 Seward, Alaska, U.S.A., 4,589  
 Shanghai, 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  
 Truk, Caroline Islands, 2,603  
 Valparaiso, Chile, 5,378  
 Vancouver, Canada, 4,637  
 Victoria, Canada, 4,563  
 Vladivostok, Russia, 4,739  
 Wake Island, 2,436  
 Wellington, New Zealand, 1,847  
 Weonsan, North Korea, 4,816  
 Wotje Island, Marshall Islands, 1,856  
 China, 4,819  
 Xiamen, Marshall Islands, 1,700  
 Yokohama, Japan, 4,135

**PALEMBANG, INDONESIA**  
 (3°00'00"S., 104°45'00"E.) to:

**Junction Points\***

Singapore, 304  
 Selat Sunda, Indonesia, 362

**Ports**

Ho Chi Minh, Vietnam, 869  
 Jakarta, Indonesia, 358  
 Surabaya, Indonesia, 638

**PALERMO, SICILY, ITALY**  
 (38°07'43"N., 13°22'12"E.) to:

**Junction Points\***

Port Said, Egypt, 1,061  
 Strait of Gibraltar, 940

**Ports**

Alexandria, Egypt, 950  
 Algeciras, Spain, 924  
 Algiers, Algeria, 513  
 Alicante, Spain, 667  
 Ancona, Italy, 652  
 Annaba, Algeria, 292  
 Augusta, Sicily, 187  
 Benghazi, Libya, 547  
 Banzart, Tunisia, 192  
 Barcelona, Spain, 574  
 Bari, Italy, 445  
 Beirut, Lebanon, 1,143

Brindisi, Italy, 387  
 Cagliari, Sardinia, 221  
 Cartagena, Spain, 697  
 Catania, Sicily, 170  
 Ceuta, Morocco, 921  
 Civitavecchia, Italy, 253  
 Genova, Italy, 431  
 Gibraltar, 922  
 Haifa, Israel, 1,139  
 Iraklion, Kriti, 626  
 Istanbul, Turkey (south of Greece), 926  
 Istanbul, Turkey (via Corinth Canal), 884  
 Izmir, Turkey (south of Greece), 772  
 Izmir, Turkey (via Corinth Canal), 730  
 La Spezia, Italy, 395  
 Livorno, Italy, 359  
 Malaga, Spain, 870  
 Marseille, France, 495  
 Messina, Sicily, 120  
 Napoli, Italy, 170  
 Odessa, Ukraine (south of Greece), 1,274  
 Odessa, Ukraine (via Corinth Canal), 1,232  
 Oran, Algeria, 709  
 Palma, Balearic Islands, 531  
 Piraeus, Greece (south of Greece), 612  
 Piraeus, Greece (via Corinth Canal), 531  
 Porto di Milazzo, Sicily, 97  
 Reggio Di Calabria, Sicily, 124  
 Rijeka, Croatia, 719  
 Salerno, Italy, 167  
 Savona, Italy, 434  
 Sibenik, Croatia, 593  
 Siracusa, Sicily, 192  
 Split, Croatia, 578  
 Tarabulus, Libya, 460  
 Taranto, Italy, 339  
 Terracina, Italy, 191  
 Thessaloniki, Greece (south of Greece), 820  
 Thessaloniki, Greece (via Corinth Canal), 779  
 Toulon, France, 464  
 Trieste, Italy, 753  
 Tunis, Tunisia, 193  
 Valencia, Spain, 656  
 Valletta, Malta, 242  
 Venezia, Italy, 763  
 Villa San Giovanni, Italy, 118  
 Volos, Greece (south of Greece), 761  
 Volos, Greece (via Corinth Canal), 720

**PALM BEACH, FLORIDA, U.S.A.**  
 (26°46'18"N., 80°01'32"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,771  
 Grand Banks South, 1,743  
 Montreal, Canada, 2,360  
 Panama, Panama, 1,312  
 Punta Arenas, Chile, 6,920  
 Strait of Gibraltar, 3,824  
 Straits of Florida, 300

**Ports**

Accra, Ghana, 4,937  
 Casablanca, Morocco, 3,709  
 Dakar, Senegal, 3,585  
 Halifax, Canada, 1,336  
 Hamilton, Bermuda, 862

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



## 76 PALMA, BALEARIC ISLANDS

Kingston, Jamaica, 836  
La Habana, Cuba, 302  
Nassau, Bahamas, 328

### PALMA, BALEARIC ISLANDS

(39°53'52"N., 2°38'17"E.) to:

#### Junction Points\*

Port Said, Egypt, 1,555  
Strait of Gibraltar, 471

#### Ports

Alexandria, Egypt, 1,435  
Alicante, Spain, 173  
Almeria, Spain, 308  
Ancona, Italy, 1,170  
Annaba, Algeria, 307  
Banghazi, Libya, 970  
Banzart, Tunisia, 384  
Barcelona, Spain, 140  
Bari, Italy, 963  
Beirut, Lebanon, 1,648  
Bejaia, Algeria, 212  
Brindisi, Italy, 905  
Cannes, France, 357  
Cartagena, Spain, 222  
Ceuta, Morocco, 452  
Genova, Italy, 448  
Gibraltar, 453  
Haifa, Israel, 1,645  
Iraklion, Kriti, 1,130  
Istanbul, Turkey (south of Greece), 1,446  
Istanbul, Turkey (via Corinth Canal), Izmir, Turkey (south of Greece), 1,290  
Izmir, Turkey (via Corinth Canal), 1,248  
La Spezia, Italy, 474  
Livorno, Italy, 470  
Malaga, Spain, 401  
Marseille, France, 300  
Menton, France, 382  
Messina, Sicily, 639  
Monaco, Monaco, 377  
Napoli, Italy, 582  
Odessa, Ukraine (south of Greece), 1,792  
Odessa, Ukraine (via Corinth Canal), 1,751  
Oran, Algeria, 281  
Palermo, Sicily, 531  
Piraeus, Greece (via Corinth Canal), 1,049  
Piraeus (south of Greece), 1,131  
Rijeka, Croatia, 1,238  
Sant'Antioco, Sardinia, 298  
Savona, Italy, 433  
Sibenik, Croatia, 1,112  
Siracusa, Sicily, 668  
Split, Croatia, 1,096  
St. Raphael, France, 347  
Tarabulus, Libya, 708  
Taranto, Italy, 858  
Tarragona, Spain, 131  
Thessaloniki, Greece (south of Greece), 1,339  
Thessaloniki, Greece (via Corinth Canal), 1,297  
Toulon, France, 308  
Trieste, Italy, 1,271  
Tunis, Tunisia, 435  
Valencia, Spain, 146  
Valletta, Malta, 619  
Venezia, Italy, 1,281  
Volos, Greece (south of Greece), 1,280  
Volos, Greece (via Corinth Canal), 1,238

### PALUA, VENEZUELA

(8°21'45"N., 62°41'30"W.)

Subtract 2 miles from Puerto Ordaz distances.

### PANAMA, PANAMA\*

(8°53'00"N., 79°31'00"W.) to:

#### Junction Points\*

Bishop Rock, England (via Mona Passage), 4,388  
Cape of Good Hope, South Africa, 6,466  
Fastnet Rock, Ireland (via Mona Passage), 4,247  
Grand Banks South, 2,555  
Honshu, Japan, 7,614  
Ile d'Ouessant, France (via Mona Passage), 4,374  
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  
Tsugaru-Kaikyo, Japan, 8,004  
Wilson Promontory, Australia (via Cook Strait), 7,842  
Wilson Promontory, Australia (via Foveaux Strait), 7,770  
Yucatan Channel, 855

#### Ports

Abraham Bay, Bahamas, 922  
Acajutla, El Salvador, 833  
Acapulco, Mexico, 1,426  
Almirante, Panama, 198  
Amapala, Honduras, 745  
Amuay, Venezuela, 678  
Angra dos Reis, Brazil, 4,557  
Antilla, Cuba, 887  
Antofagasta, Chile, 2,140  
Apia, Samoa, 5,710  
Apra, Guam, 7,988  
Arica, Chile, 1,921  
Auckland, New Zealand, 6,516  
Avarua, Cook Islands, 5,092  
Bahia de Samana, Dominican Republic, 1,015  
Bahia Blanca, Argentina, 5,776  
Bahia de las Calderas, Dominican Republic, 810  
Baie Taio-Hae, Marquesa Islands, 3,826  
Moa, Cuba, 853  
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  
Belize, Belize, 859  
Bikini, Marshall Islands, 4,915  
Boca de Tanamo, Cuba, 869  
Bocas del Toro, Panama, 187  
Bordeaux, France (via Mona Passage), 4,641  
Boston, Massachusetts, U.S.A. (via Crooked Island 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  
Cabedelo, Brazil, 3,149

Caibarien, Cuba, 1,138  
Caldera, Chile, 2,302  
Caleta Olivia, Argentina, 6,204  
Callao, Peru, 1,350  
Campeche, Mexico, 1,210  
Cap-Haitien, Haiti, 860  
Cape Town, South Africa, 6,508  
Carmen, Mexico, 1,289  
Cartagena, Colombia, 324  
Casilda, Cuba, 792  
Catia la Mar, Venezuela, 873  
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  
Christmas Island, Line Islands, 4,751  
Cienfuegos, Cuba, 815  
Coatzacoalcos, Mexico, 1,420  
Colon, Panama, 44  
Comodoro Rivadavia, Argentina, 6,185  
Coquimbo, Chile, 2,448  
Corinto, Nicaragua, 683  
Covenas, Colombia, 308  
Dagu, China (via Osumi Kaikyo), 9,002  
Dagu, China (via Tsugaru-Kaikyo), 8,786  
Dakar, Senegal, 3,738  
Dalian, China (via Osumi Kaikyo), 8,843  
Dalian, China (via Tsugaru-Kaikyo), 8,627  
Dutch Harbor, Alaska, U.S.A., 5,246  
Enderbury Island, Phoenix Islands, 5,599  
Eniwetak, Marshall Islands, 7,086  
Ensenada, Mexico, 2,791  
Esmeraldas, Ecuador, 472  
Fanning Island, 4,805  
Fort de France, Martinique, 1,202  
Fort Liberte, Haiti, 881  
Funafuti, Tuvalu, 6,217  
Galveston, Texas, U.S.A., 1,536  
Georgetown, Guyana, 1,558  
Golfito, Costa Rica, 334  
Gonaives, Haiti, 805  
Guantanamo, Cuba, 732  
Guayaquil, Ecuador, 824  
Guaymas, Mexico, 2,370  
Guiria, Venezuela, 1,200  
Gulfport, Mississippi, U.S.A. (northbound), 1,431  
Hakodate, Japan, 7,417  
Halifax, Canada, 2,338  
Hamilton, Bermuda, 1,702  
Hilo, Hawaii, U.S.A., 4,527  
Ho Chi Minh, Vietnam, 10,017  
Hobart, Tasmania, 7,630  
Hong Kong, China, 9,195  
Honolulu, Hawaii, U.S.A., 4,685  
Iloilo, Philippines, 9,235  
Incheon, South Korea, 8,474  
Iquique, Chile, 1,987  
Isabel Segunda, Isla de Vieques, 1,060  
Jacksonville, Florida, U.S.A., 1,559  
Jaluit, Marshall Islands, 6,666  
Jarvis Island, 1,173  
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  
La Ceiba, Honduras, 709  
La Guaira, Venezuela, 884  
La Libertad, Ecuador, 674  
La Libertad, El Salvador, 806  
La Palma, Panama, 104  
La Romana, Dominican Republic, 889  
La Union, El Salvador, 748  
Les Cayes, Haiti, 688  
Levuka, Fiji Islands, 6,288  
Limon, Costa Rica, 234  
Los Angeles, California, U.S.A., 2,913  
Lota, Chile, 2,825  
Luca, Jamaica, 579  
Makassar, Sulawesi (via Selat Sagewin and Selat Salajar), 9,855  
Malakal, Palau Islands, 8,674  
Manila, Philippines (via Balintang Channel), 9,347  
Manila, Philippines (via San Bernardino Strait), 9,370  
Manzanillo, Cuba, 732  
Mar del Plata, Argentina, 5,543  
Maracaibo, Venezuela, 737  
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  
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, Guyana, 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-Na-Amure, Russia (south of Aleutian Islands), 7,293  
Nikolayevsk-Na-Amure, Russia (via Unimak Passage), 7,296  
Nome, Alaska, U.S.A., 5,834  
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  
Paamiut (Frederikshaab), Greenland, 3,558  
Pago Pago, American Samoa, 5,656  
Papeete, French Polynesia, 4,493  
Paramaribo, Suriname, 1,691  
Paranagua, Brazil, 4,607

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

Pearl Harbor, Hawaii, U.S.A., 4,692  
 Pedregal, Panama, 308  
 Petropavlovsk-Kamchatskiy, Russia, 6,492  
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage.), 1,989  
 Pisco, Peru, 1,458  
 Pointe a Pitre, Guadeloupe, 1,211  
 Ponape, Caroline Islands, 7,321  
 Ponce, Puerto Rico, 976  
 Port au Prince, Haiti, 817  
 Port Antonio, Jamaica, 625  
 Port Castries, St. Lucia, 1,203  
 Port Hueneme, California, U.S.A., 2,958  
 Port Limon, Costa Rica, 218  
 Port Newark, New Jersey, U.S.A., 2,021  
 Port Pirie, Australia, 8,467  
 Port of Spain, Trinidad, 1,202  
 Portland, Maine, U.S.A. (via Crooked Island 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 de Hierro, Venezuela, 1,192  
 Puerto la Cruz, Venezuela, 1,016  
 Puerto Armuelles, Panama, 306  
 Puerto Barrios, Guatemala, 823  
 Puerto Bolivar, 774  
 Puerto Cabello, Venezuela, 845  
 Puerto Cabezas, Nicaragua, 390  
 Puerto Cortez, Honduras, 776  
 Puerto Deseado, Argentina, 6,222  
 Puerto Madryn, Argentina, 6,012  
 Puerto Manati, Cuba, 959  
 Puerto Montt, Chile, 3,177  
 Puerto Padre, Cuba, 948  
 Puerto Sandino, Nicaragua, 649  
 Puerto Sucre, Venezuela, 1,035  
 Puerto Vita, Cuba, 915  
 Punta Cardon, Venezuela, 674  
 Puntarenas, Costa Rica, 471  
 Quepos, Costa Rica, 415  
 Qingdao, China, 8,575  
 Rabaul, Papua New Guinea, 7,807  
 Raoul Island, Kermadec Islands, 6,125  
 Rio Gallegos, Argentina, 6,455  
 Rio Haina, Dominican Republic, 845  
 Roosevelt Roads, Puerto Rico, 1,054  
 Rotoava, Iles Tuamotu, 4,256  
 Salaverry, Peru, 1,109  
 Salina Cruz, Mexico, 1,170  
 Salvador, Brazil, 3,741  
 San Antonio, Chile, 2,644  
 San Diego, California, U.S.A., 2,843  
 San Felix, Venezuela, 1,535  
 San Francisco, California, U.S.A., 3,245  
 San Jose, Guatemala, 886  
 San Juan del Sur, Nicaragua, 590  
 San Juan, Peru, 1,590  
 San Juan, Puerto Rico, 1,036  
 San Lorenzo, Honduras, 762  
 Santa Barbara, California, U.S.A., 2,980  
 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  
 Seward, Alaska, U.S.A., 4,916  
 Shanghai, China (via Osumi Kaikyo), 8,648  
 Shanghai, China (via Tsugaru-Kaikyo), 8,566  
 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  
 St. Gorges, Grenada, 1,161  
 St. John, Canada, 2,361  
 St. John's, Canada, 2,742  
 St. Marc, Haiti, 796  
 Suva, Fiji Islands, 6,325  
 Swan Island, Honduras, 605  
 Sweeper Cove, Alaska, U.S.A., 5,586  
 Sydney, Australia, 7,674  
 Talara, Peru, 826  
 Talcahuano, Chile, 2,805  
 Taltal, Chile, 2,225  
 Tampico, Mexico, 1,528  
 Tela, Honduras, 749  
 Tocopilla, Chile, 2,068  
 Truk, Caroline Islands, 7,685  
 Turbo, Colombia, 311  
 Turiama, 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, Russia (north of Aleutian Islands, and La Perouse Strait), 7,757  
 Vladivostok, Russia (south of Aleutian Islands, and La Perouse Strait), 7,739  
 Vladivostok, Russia (via Tsugaru-Kaikyo), 7,833  
 Vladivostok, Russia, 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  
 Weonsan, North Korea, 8,038  
 Wothe, Marshall Islands, 4,882  
 Xiamen, China (via Osumi Kaikyo), 8,943  
 Xiamen, China (via Tsugaru-Kaikyo), 8,959  
 Yokohama, Japan, 7,682  
 Zamboanga, Philippines, 9,431

**PANAMBURU, INDIA**  
 (12°57'00"N., 74°48'20"E.) See  
 New Mangalore.

**PANJANG, INDONESIA**  
 (6°28'22"S., 105°18'58"E.) to:

**Junction Points\***

Cape Leeuwin, Australia, 1,829  
 Selat Lombok, Indonesia, 718  
 Singapore, 574  
 Selat Sunda, Indonesia, 51  
 Torres Strait, Australia, 2,259

**Ports**

Cebu, Philippines (via Balabac Strait), 1,654  
 Ho Chi Minh, Vietnam (via Gaspar

Strait), 1,096  
 Kota Kinabalu, Malaysia (via Gaspar Strait), 1,063  
 Masbate, Philippines (via Gaspar Strait), 1,738  
 Sandakan, Sabah (via Balabac and Gaspar Straits), 1,363  
 Tawau, Malaysia (via Makasar), 345

**PANSIO, FINLAND**  
 (60°26'12"N., 22°08'54"E.) Use  
 Turku distances.

**PAPEETE, TAHITI, FRENCH POLYNESIA**  
 (17°32'00"S., 149°34'00"W.) to:

**Junction Points\***

Panama, Panama, 4,493  
 Punta Arenas, Chile, 4,233  
 Torres Strait, Australia, 4,053  
 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  
 Baie Taio-Hae, Marquesa Islands, 761  
 Brisbane, Australia, 3,234  
 Callao, Peru, 4,192  
 Chimbote, Peru, 4,157  
 Christmas Island, Line Islands, 1,266  
 Dagu, China, 6,281  
 Dutch Harbor, Alaska, U.S.A., 4,400  
 Funafuti, Tuvalu, 1,910  
 Guayaquil, Ecuador, 4,237  
 Hakodate, Japan, 5,249  
 Ho Chi Minh, Vietnam, 6,443  
 Hobart, Tasmania, 3,563  
 Hong Kong, China, 6,132  
 Honolulu, Hawaii, U.S.A., 2,381  
 Johnston Island, 2,371  
 Kodiak, Alaska, U.S.A., 4,532  
 Levuka, Fiji Islands, 1,831  
 Los Angeles, California, U.S.A., 3,671  
 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  
 Pago Pago, American Samoa, 1,236  
 Petropavlovsk-Kamchatskiy, Russia, 5,009  
 Ponape, Caroline Islands, 3,430  
 Qingdao, China, 6,046  
 Rabaul, Papua New Guinea, 3,527  
 Raoul Island, Kermadec Islands, 1,706  
 Rotoava, Iles Tuamotu, 244  
 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  
 Shanghai, China, 5,907  
 Sitka, Alaska, U.S.A., 4,537  
 Suva, Fiji Islands, 1,838  
 Sydney, Australia, 3,308

Truk, Caroline Islands, 3,788  
 Valparaiso, Chile, 4,254  
 Vladivostok, Russia, 5,663  
 Wake Island, 3,401  
 Wellington, New Zealand, 2,348  
 Xiamen, China, 6,001  
 Yap Island, Caroline Islands, 4,585  
 Yokohama, Japan, 5,140

**PARADIP, INDIA**  
 (20°15'10"N., 86°42'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,352  
 Cape Leeuwin, Australia, 3,667  
 Selat Lombok, Indonesia, 2,707  
 Port Said, Egypt, 4,241  
 Singapore, 1,529  
 Selat Sunda, Indonesia, 2,084  
 Torres Strait, Australia, 4,297

**Ports**

Aden, Yemen, 2,789  
 Akyab, Burma, 349  
 Bombay, India, 1,727  
 Calcutta, India, 186  
 Colombo, Sri Lanka, 969  
 Port Darwin, Australia, 3,634  
 Rangoon, Burma, 724  
 Tuticorin, India, 883

**PARAMARIBO, SURINAME**  
 (5°49'20"N., 55°09'00"W.) to:

**Junction Points\***

Bishop Rock, England, 3,602  
 Fastnet Rock, Ireland, 3,554  
 Ile d'Ouessant, France, 3,613  
 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

**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  
 Dakar, Senegal, 2,315  
 Georgetown, Guyana, 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 POINT.**—See Preface for use of junction points

## 78 PARANAM, SURINAME

**Junction Points\***

Cape of Good Hope, South Africa, 3,496  
Panama, Panama, 4,607  
Punta Arenas, Chile, 2,001

**Ports**

Montevideo, Uruguay, 797  
Santos, Brazil, 163

**PARANAM, SURINAME**  
(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

**PASADENA, TEXAS, U.S.A.**  
(29°43'00"N., 95°13'00"W.)  
Subtract 5 miles from Houston  
distances.

**PASAJES DE SAN JUAN,  
SPAIN**  
(43°19'30"N., 1°55'00"W.) See  
Puerto de Pasajes.

**PASCAGOULA, MISSISSIPPI,  
U.S.A.**  
(30°21'00"N., 88°34'00"W.) to:

**Junction Points\***

Straits of Florida, 469  
Yucatan Channel, 554

**Ports**

Campeche, Mexico, 676  
Coatzacoalcos, Mexico, 860  
Tampico, Mexico, 780

**PATRAL, GREECE**  
(38°15'08"N., 21°43'53"E.) to:

**Junction Points\***

Port Said, Egypt (south of  
Greece), 762  
Port Said, Egypt (via Corinth  
Canal), 690  
Strait of Gibraltar, 1,350

**Ports**

Civitavecchia, Italy, 612  
Constanta, Romania (via Corinth  
Canal), 653  
Constanta, Romania (south of  
Greece), 811  
Derince, Turkey (south of  
Greece), 648  
Derince, Turkey (via Corinth  
Canal), 489  
Iskenderun, Turkey (south of  
Greece), 846  
Iskenderun, Turkey (via Corinth  
Canal), 748

Kerch, Ukraine (south of Greece),  
1,049  
Kerch, Ukraine (via Corinth  
Canal), 890  
Kerkira, Greece, 138  
Larnaca, Cyprus (south of  
Greece), 750  
Larnaca, Cyprus (via Corinth  
Canal), 658  
Mersin, Turkey (south of Greece),  
789  
Mersin, Turkey (via Corinth  
Canal), 690  
Napoli, Italy, 485  
Nice, France, 825  
Pula, Croatia, 555

**PAULILLAC, FRANCE**  
(45°12'00"N., 0°43'45"W.)  
Subtract 24 1/2 miles from  
Bordeaux 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, Line Islands,  
1,157  
Eniwetak, Marshall Islands, 2,347  
Jaluit, Marshall Islands, 2,101  
Los Angeles, California, U.S.A.,  
2,233  
San Diego, California, U.S.A.,  
2,285

**PECHENGA, RUSSIA**  
(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

**PEI-HAI, CHINA**  
(20°29'00"N., 109°02'00"E.) See  
Beihai, China.

**PEMBA, MOZAMBIQUE**  
(12°58'14"S., 40°29'23"E.) See  
Porto Amelia.

**PENANG, MALAYSIA**  
(5°25'00"N., 100°21'00"E.) to:

**Junction Points\***

Cape of Good Hope, South  
Africa, 5,291  
Port Said, Egypt, 4,733  
Singapore, 367

**Ports**

Aden, Yemen, 3,344  
Akyab, Burma, 1,215  
Al Basrah, Iraq, 3,598  
Al Manamah, Bahrain, 3,361  
Bassein, Burma, 786  
Beira, Mozambique (north of

Madagascar), 4,232  
Berbera, Somalia (South of  
Socotra), 3,358  
Bombay, India, 2,154  
Bushehr, Iran, 3,417  
Calcutta, India, 1,294  
Calicut, India, 1,654  
Chalna, Bangladesh, 1,228  
Chittagong, Bangladesh, 1,167  
Colombo, Sri Lanka, 1,285  
Dar es Salaam, Tanzania, 3,754  
Diego Garcia, Chagos  
Archipelago, 1,905  
Durban, South Africa, 4,584  
East London, South Africa, 4,794  
Fort Dauphin, Madagascar, 3,687  
Kakinada, India, 1,273  
Karachi, Pakistan, 2,595  
Madras, India, 1,283  
Majunga, Madagascar, 3,557  
Malacca, Malaysia, 252  
Maputo, Mozambique (South of  
Madagascar), 4,481  
Melbourne, Australia, 4,181  
Mocambique, Mozambique, 3,792  
Mombasa, Kenya, 3,699  
Mosselbaai, South Africa, 5,096  
Phuket, Thailand, 187  
Port Elizabeth, South Africa, 4,921  
Port Louis, Mauritius, 3,042  
Port Swettenham, Malaysia, 172  
Rangoon, Burma, 757  
Sabang, Indonesia, 313  
Tamatave, Madagascar, 3,387  
Tanga, Tanzania (north of Pempa  
Island), 3,749  
Telukbayur, Indonesia, 931  
Victoria, Seychelles, 2,779  
Zanzibar, Tanzania, 3,772

**PENARTH, WALES**  
(51°26'45"N., 3°10'00"W.)  
Subtract 1 mile from Cardiff  
distances.

**PENNINGTON TERMINAL,  
NIGERIA**  
(4°14'40"N., 5°36'45"E.) to:

**Junction Points\***

Bishop Rock, England, 4,092  
Cape of Good Hope, South  
Africa, 2,434  
Fastnet Rock, Ireland, 3,998  
Grand Banks South, 4,065  
Ile d'Ouessant, France, 3,929  
Inishtrahull, Ireland, 4,262  
Panama, Panama, 5,153  
Pentland Firth, Scotland, 4,821  
Punta Arenas, Chile, 5,214  
Strait of Gibraltar, 3,676  
Straits of Florida, 5,325  
Yucatan Channel, 5,474

**Ports**

Abidjan, Ivory Coast, 585  
Accra, Ghana, 356  
Boma, Congo, 762  
Cape Town, South Africa, 2,405  
Dakar, Senegal, 1,712  
Freetown, Sierra Leone, 1,250  
Jacksonville, Florida, U.S.A.,  
5,246  
Lisboa, Portugal, 3,235  
Monrovia, Liberia, 1,030  
New York, New York, U.S.A.,  
4,974  
Port of Spain, Trinidad, 4,023  
Recife, Brazil, 2,533  
Tangier, Morocco, 3,171

Villa Cisneros, Western Sahara,  
2,274

**PENSACOLA, FLORIDA,  
U.S.A.**  
(30°24'00"N., 87°13'00"W.) to:

**Junction Points\***

Straits of Florida, 431  
Yucatan Channel, 531

**Ports**

Belize, Belize, 826  
Campeche, Mexico, 670  
Carmen, Mexico, 745  
Cienfuegos, Cuba, 825  
Coatzacoalcos, Mexico, 836  
Colon, Panama, 1,344  
La Habana, Cuba, 515  
Limon, Costa Rica, 1,265  
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, South  
Africa, 6,389  
Fastnet Rock, Ireland (east of  
Ireland), 625  
Fastnet Rock, Ireland (west of  
Ireland), 578  
Grand Banks South, 1,998  
Ile d'Ouessant, France, 872  
Inishtrahull, Ireland, 272  
Montreal, Canada (via Strait of  
Belle Isle), 2,614  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 565  
Punta Arenas, Chile, 7,563  
Skagens Odde, Denmark, 450  
Strait of Gibraltar, 1,598  
Straits of Florida, 4,012

**Ports**

Aasiaat (Egedesminde),  
Greenland, 1,925  
Akureyri, Iceland, 702  
Amsterdam, Netherlands, 481  
Antwerp, Belgium, 553  
Ardrossan, Scotland, 282  
Arendal, Norway, 452  
Argentia, Canada, 2,012  
Arkhangel'sk, Russia, 1,663  
Avonmouth, England, 624  
Baltimore, Maryland, U.S.A.,  
3,365  
Barrow in Furness, England, 427  
Belem, Brazil, 4,219  
Belfast, Northern Ireland, 341  
Bergen, Norway, 296  
Berlevag, Norway, 1,150  
Blyth, England, 290  
Boston, Massachusetts, U.S.A.,  
2,900  
Bremerhaven, Germany, 507  
Buenos Aires, Argentina, 6,491  
Cairn Ryan, Scotland, 340  
Camp Lloyd, Greenland, 1,828  
Cardiff, Wales, 609  
Charleston, South Carolina,  
U.S.A., 3,506  
Charlotte Amalie, Virgin Islands,  
3,616  
Churchill, Canada (via 75 miles off

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

Kap Farvel), 2,820  
 Cienfuegos, Cuba, 4,229  
 Cobh, Ireland, 578  
 Colon, Panama (via Mona Passage), 4,594  
 Dakar, Senegal, 2,794  
 Den Helder, Netherlands, 447  
 Douglas, Isle of Man, 397  
 Dublin, Ireland, 427  
 Dundee, Scotland, 179  
 Dunkerque, France, 525  
 Egersund, Norway, 298  
 Emden, Germany, 484  
 Esbjerg, Denmark, 443  
 Farsund, Norway, 332  
 Fishguard, Wales, 497  
 Fleetwood, England, 437  
 Flekkefjorden, Norway, 325  
 Fredrikstad, Norway, 531  
 Freetown, Sierra Leone, 3,272  
 Funchal, Madeira Island, 1,714  
 Georgetown, Guyana, 4,001  
 Glasgow, Scotland (via The Minch), 384  
 Guantánamo, Cuba, 3,864  
 Hakonsværn, Norway, 287  
 Halifax, Canada, 2,580  
 Hamburg, Germany, 555  
 Hamilton, Bermuda, 2,921  
 Hirtshals, Denmark, 429  
 Holyhead, Wales, 422  
 Horta, Azores, 1,575  
 Hvalfjörður, Iceland, 660  
 Ilulissat (Jakobshavn), Greenland, 1,972  
 Ivittuut, Greenland (direct), 1,440  
 Ivittuut, Greenland (via 75 miles off Kap Farvel), 1,510  
 Jacksonville, Florida, U.S.A., 3,677  
 Kangerluarsuaq, Greenland, 1,597  
 Keflavík, Iceland, 671  
 Key West, Florida, U.S.A., 3,952  
 Kingston, Jamaica, 4,027  
 Kragerø, Norway, 441  
 Kristiansand, Norway, 371  
 La Habana, Cuba, 4,018  
 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  
 London, England, 536  
 Londonderry, Northern Ireland, 310  
 Mandal, Norway, 351  
 Maniitsoq, Greenland, 1,700  
 Methil, Scotland, 246  
 Miami, Florida, U.S.A., 3,821  
 Middlesbrough, England, 326  
 Molde, Norway, 412  
 Mosjøen, Norway, 651  
 Namsos, Norway, 615  
 Nanortalik, Greenland, 1,291  
 Narsarsuaq, Greenland, 1,384  
 New London, Connecticut, U.S.A., 2,990  
 New York, New York, U.S.A., 3,071  
 Newcastle, England, 265  
 Norfolk, Virginia, U.S.A., 3,244  
 Nuuk (Godthab), Greenland, 1,630  
 Oostende, Belgium, 509  
 Oslo, Norway, 524  
 Philadelphia, Pennsylvania, U.S.A., 3,224  
 Port au Prince, Haiti, 3,898  
 Port of Spain, Trinidad, 3,913  
 Port Castries, St. Lucia, 3,704

Providence, Rhode Island, U.S.A., 2,979  
 Qaanaaq (Thule), Greenland, 2,456  
 Qasigiannuit, Greenland, 1,963  
 Recife, Brazil, 4,319  
 Reykjavík, Iceland, 687  
 Rio de Janeiro, Brazil, 5,391  
 Risør, Norway, 429  
 Rosyth, Scotland, 263  
 Rotterdam, Netherlands, 495  
 San Juan, Puerto Rico, 3,645  
 Sandefjorden, Norway, 518  
 Santa Cruz de Tenerife, Canary Islands, 1,952  
 Savannah, Georgia, U.S.A., 3,594  
 Seaham Harbor, England, 259  
 Seydhisfjörður, Iceland, 500  
 Shoreham By Sea, England, 633  
 Sisimiut, Greenland, 1,802  
 Skien, Norway, 466  
 Stornoway, Scotland, 54  
 Sunderland, England, 304  
 Swansea, Wales, 578  
 Tonsberg, Norway, 532  
 Torshavn, Faroe Islands, 224  
 Tvedestrand, Norway, 421  
 Upernavik, Greenland, 2,164  
 Vardo, Norway, 1,253  
 Washington, D.C., U.S.A., 3,379  
 Wilhelmshaven, Germany, 501  
 Wilmington, North Carolina, U.S.A., 3,450  
 Zeebrugge, Belgium, 505

**PEPEL, SIERRA LEONE**  
 (8°34'58"N., 13°04'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,688  
 Cape of Good Hope, South Africa, 3,594  
 Fastnet Rock, Ireland, 2,753  
 Grand Banks South, 2,828  
 Ile d'Ouessant, France, 2,648  
 Inishtrahull, Ireland, 3,053  
 Panama, Panama, 3,977  
 Pentland Firth, Scotland, 3,383  
 Punta Arenas, Chile, 5,042  
 Strait of Gibraltar, 1,991  
 Straits of Florida, 4,118  
 Yucatan Channel, 4,257

**Ports**

Accra, Ghana, 924  
 Boston, Massachusetts, U.S.A., 3,681  
 Cristobal, Panama, 3,991  
 Dakar, Senegal, 479  
 Freetown, Sierra Leone, 11  
 Galway, Ireland, 2,937  
 Lagos, Nigeria, 1,142  
 Lisboa, Portugal, 2,002  
 Lomé, Togo, 1,019  
 Natal, Brazil, 1,580  
 New York, New York, U.S.A., 3,752  
 Port of Spain, Trinidad, 2,866  
 Takoradi, Ghana, 818

**PERTH, AUSTRALIA**  
 (31°57'30"S., 115°51'00"E.) Add  
 12 miles to Fremantle distances.

**PETERSBURG, ALASKA, U.S.A.**  
 (56°58'56"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-KAMCHATSKIY, RUSSIA**  
 (53°00'00"N., 158°38'00"E.) to:

**Junction Points\***

Panama, Panama (via Unimak Pass), 6,492  
 Singapore (east of Japan and via Balintang Channel), 4,241  
 Singapore (east of Japan and via Osumi Kaikyo and Formosa Strait), 4,293  
 Singapore (via Pervyy Kuril'skiy Proliv and La Perouse Strait), 4,194  
 Singapore (via Tsugaru-Kaikyo and Formosa Strait), 4,227  
 Selat Sunda, Indonesia (via Soya Strait), 4,574  
 Selat Wetar, Australia (via Dampier Strait and Selat Manipa), 4,106

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 1,158  
 Apia, Samoa, 4,292  
 Apra, Guam, 2,475  
 Auckland, New Zealand, 5,466  
 Avarua, Cook Islands, 4,951  
 Bangkok, Thailand, outer bar (via La Perouse Strait), 4,252  
 Bukhta Nagayeva, Russia, 864  
 Busan, South Korea (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 1,731  
 Cebu, Philippines, 3,101  
 Dagu, China (via La Perouse Strait), 2,419  
 Dagu, China (via Tsugaru-Kaikyo), 2,444  
 Dalian, China (via La Perouse Strait), 2,260  
 Dalian, China (via Tsugaru-Kaikyo), 2,285  
 Dutch Harbor, Alaska, U.S.A., 1,249  
 Hakodate, Japan, 1,075  
 Ho Chi Minh, Vietnam (via Chetvertyy Kuril'skiy Proliv, La Perouse Strait and Korea Strait), 3,718  
 Hong Kong, China (via Osumi Kaikyo), 2,938  
 Hong Kong, China (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,863  
 Hong Kong, China (via Tsugaru-Kaikyo), 2,870  
 Honolulu, Hawaii, U.S.A., 2,762  
 Iloilo, Philippines, 3,123  
 Incheon, South Korea (via La Perouse Strait and Maenggol Sudo), 2,120  
 Incheon, South Korea (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,114  
 Incheon, South Korea (via Tsugaru-Kaikyo), 2,138  
 Jakarta, Indonesia (east of Japan,

and via Balintang Channel), 4,530  
 Jakarta, Indonesia (via La Perouse Strait), 4,555  
 Jaluit, Marshall Islands, 2,883  
 Kiska, Alaska, U.S.A., 724  
 Kobe, Japan, 1,705  
 Levuka, Fiji Islands, 4,518  
 Lo Hsing-ta Mao-ti, China (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,481  
 Los Angeles, California, U.S.A., 3,615  
 Manila, Philippines (east of Japan and via Balintang Channel), 3,112  
 Manila, Philippines (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 3,117  
 Manila, Philippines (via San Bernardino Strait), 3,256  
 Manila, Philippines (via Tsugaru-Kaikyo), 3,124  
 Matsuga-hana, Japan, 765  
 Midway Island, Pacific, 1,831  
 Mogpo, South Korea (via La Perouse Strait and Changjuk Sudo), 1,943  
 Mogpo, South Korea (via Myongyango), 1,923  
 Nagasaki, Japan (via La Perouse Strait), 1,845  
 Nagasaki, Japan (via Osumi Kaikyo), 2,039  
 Nagasaki, Japan (via Tsugaru-Kaikyo), 1,858  
 Nampo, North Korea, 2,214  
 Nome, Alaska, U.S.A., 1,317  
 Noumea, New Caledonia, 4,587  
 Osaka, Japan (via Kii Suido), 1,709  
 Pago Pago, American Samoa, 4,350  
 Papeete, French Polynesia, 5,009  
 Ponape, Caroline Islands, 2,762  
 Prince Rupert, Canada (via Unimak Pass), 2,504  
 Qingdao, China (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,215  
 Qinhuangdao, China (via Chetvertyy Kuril'skiy Proliv, La Perouse Strait, and Maenggol Sudo), 2,360  
 Rabaul, Papua New Guinea, 3,555  
 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  
 Shanghai, China (via La Perouse Strait), 2,200  
 Shanghai, China (via Tsugaru-Kaikyo), 2,224  
 Shimomoseki, Japan (via Tsugaru-Kaikyo), 1,739  
 Sitka, Alaska, U.S.A., 2,314  
 Suva, Fiji Islands, 4,460  
 Tomari, Japan, 822  
 Vladivostok, Russia (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 1,348  
 Weihai, China (via Maenggol Sudo), 2,192  
 Weihai, China (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,215  
 Weonsan, North Korea, 1,609  
 Xiamen, China (via La Perouse Strait), 2,596

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



**80 PEVEK, RUSSIA**

Xiamen, China (via Osumi Kaikyo), 2,684  
 Xiamen, China (via Tsugaru-Kaikyo), 2,617  
 Yantai, China (via Maenggol Sudo), 2,226  
 Yantai, China (via Chetvertvy Kuril'skiy Proliv and La Perouse Strait), 2,249  
 Yantai, China (via Tsugaru-Kaikyo), 2,263  
 Yokohama, Japan, 1,422

**PEVEK, RUSSIA**  
 (69°43'40"N., 170°28'00"E.) to:

**Ports**

Ambarchik, Russia, 201  
 Nome, Alaska, U.S.A., 700  
 Provideniya, Russia, 719  
 Tiksi, Russia., 854

**PHILADELPHIA, PENNSYLVANIA, U.S.A.**  
 (39°57'00"N., 75°08'00"W.) to:

**Junction Points\***

Bishop Rock, England, 3,092  
 Cape of Good Hope, South Africa, 6,874  
 Fastnet Rock, Ireland, 2,985  
 Inishtrahull, Ireland, 3,083  
 Montreal, Canada (via Cabot Strait), 1,671  
 Panama, Panama, 1,989  
 Pentland Firth, Scotland, 3,263  
 Punta Arenas, Chile, 6,994  
 Strait of Gibraltar, 3,320  
 Straits of Florida, 1,150  
 Yucatan Channel (outside route), 1,336

**Ports**

Antilla, Cuba, 1,197  
 Argentia, Canada, 1,159  
 Arkhangel'sk, Russia, 4,369  
 Bahia Blanca, Argentina, 6,201  
 Banes, Cuba (via Crooked Island Passage), 1,188  
 Baracoa, Cuba, 1,198  
 Belem, Brazil, 2,950  
 Bocas del Toro, Panama, 2,020  
 Bordeaux, France, 3,406  
 Brest, France, 3,183  
 Bridgetown, Barbados, 1,839  
 Buenos Aires, Argentina, 5,918  
 Cadiz, Spain, 3,286  
 Cap-Haitien, Haiti, 1,245  
 Cape Town, South Africa, 6,861  
 Cardenas, Cuba, 1,124  
 Cartagena, Colombia (via Crooked Island Passage), 1,825  
 Charlotte Amalie, Virgin Islands, 1,434  
 Charlottetown, Canada, 982  
 Cienfuegos, Cuba (via Crooked Island Passage), 1,654  
 Colon, Panama (via Crooked Island Passage), 1,946  
 Dakar, Senegal, 3,441  
 Elizabeth Harbor, Bahamas, 1,018  
 Fort de France, Martinique (via Aneгада Channel), 1,724  
 Freetown, Sierra Leone, 3,862  
 Funchal, Madeira Island, 2,901  
 Georgetown, Ascension Island, 4,469  
 Georgetown, Guyana, 2,223  
 Guantanamo, Cuba, 1,284

Halifax, Canada, 746  
 Hamilton, Bermuda, 746  
 Ivittuut, Greenland, 2,086  
 Jacmel, Haiti, 1,461  
 Kingston, Jamaica (via Crooked Island Passage), 1,446  
 La Guaira, Venezuela, 1,838  
 La Habana, Cuba, 1,156  
 Lagos, Nigeria, 4,985  
 Las Piedras, Venezuela, 1,786  
 Les Cayes, Haiti, 1,419  
 Limon, Costa Rica (via Crooked Island Passage), 2,019  
 Lisboa, Portugal, 3,112  
 Liverpool, Canada, 686  
 Maracaibo, Venezuela (via Windward Passage), 1,849  
 Matanzas, Cuba, 1,147  
 Montecristi, Dominican Republic, 1,250  
 Montevideo, Uruguay, 5,804  
 Murmansk, Russia, 4,042  
 Narvik, Norway, 3,880  
 Nassau, Bahamas, 930  
 Nuevitas, Cuba, 1,243  
 Paramaribo, Suriname, 2,327  
 Parrsboro, Canada, 743  
 Pointe a Pitre, Guadeloupe, 1,658  
 Ponce, Puerto Rico, 1,454  
 Ponta Delgada, Azores, 2,388  
 Porlamar, Venezuela (via Virgin Passage), 1,878  
 Port au Prince, Haiti (via Crooked Island Passage), 1,343  
 Port of Spain, Trinidad, 1,938  
 Port Antonio, Jamaica (via Crooked Island Passage), 1,395  
 Port Castries, St. Lucia, 1,753  
 Porto Grande, Cape Verde Islands, 3,011  
 Puerto la Cruz, Venezuela, 1,900  
 Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,774  
 Puerto Cabello, Venezuela (via Mona Passage), 1,845  
 Puerto Cortes, Honduras, 1,739  
 Puerto Sucre, Venezuela, 1,907  
 Recife, Brazil, 3,745  
 Reykjavik, Iceland, 2,648  
 Rio de Janeiro, Brazil, 4,817  
 Salvador, Brazil, 4,136  
 San Juan del Norte, Nicaragua (via Crooked Island Passage), 2,004  
 San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,017  
 San Juan, Puerto Rico, 1,395  
 Santa Cruz de Tenerife, Canary Islands, 3,062  
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,755  
 Santander, Spain, 3,272  
 Santiago de Cuba, Cuba (via Crooked Island Passage), 1,334  
 Santo Domingo, Dominican Republic, 1,480  
 Santos, Brazil, 5,004  
 Sint Nicolaashaven, Aruba, 1,732  
 St. Georges, Grenada, 1,848  
 St. Helena Island, 5,169  
 St. John, Canada (via Nantucket Light Buoy), 698  
 St. John, Canada (via Vineyard Sound), 673  
 St. John's, Canada, 1,254  
 Sydney, Canada, 958  
 Vigo, Spain, 3,066  
 Vitoria, Brazil, 4,554  
 Walvisbaai, Namibia, 6,318  
 Willemstad, Curacao, 1,762

Yarmouth, Canada, 616

**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 157 1/2 miles to Ho Chi Minh distances.

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

**Junction Points\***

Port Said, Egypt, 4,629  
 Singapore, 538

**Ports**

Calcutta, India, 1,124  
 Colombo, Sri Lanka, 1,192  
 Penang, Malaysia, 187

**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  
 San Juan, Puerto Rico, 1,219

**PIRAIEVS, GREECE**  
 (37°56'26"N., 23°38'08"E.) to:

**Junction Points\***

Port Said, Egypt, 599  
 Strait of Gibraltar (south of Greece), 1,508  
 Strait of Gibraltar (via Corinth Canal), 1,451

**Ports**

Alexandria, Egypt, 515  
 Algiers, Algeria (south of Greece), 1,079  
 Algiers, Algeria (via Corinth Canal), 1,022  
 Alicante, Spain (south of Greece), 1,246  
 Alicante, Spain (via Corinth Canal), 1,186  
 Ancona, Italy (south of Greece), 745  
 Ancona, Italy (via Corinth Canal), 608  
 Annaba, Algeria (south of Greece), 854  
 Annaba, Algeria (via Corinth Canal), 797  
 Antalya, Turkey, 383  
 Banghazi, Libya, 404  
 Banzart, Tunisia (south of Greece), 749  
 Banzart, Tunisia (via Corinth Canal), 692  
 Barcelona, Spain (south of

Greece), 1,172  
 Barcelona, Spain (via Corinth Canal), 1,091  
 Bari, Italy (south of Greece), 538  
 Bari, Italy (via Corinth Canal), 402  
 Beirut, Lebanon, 647  
 Brindisi, Italy (south of Greece), 480  
 Brindisi, Italy (via Corinth Canal), 343  
 Cagliari, Sardinia (south of Greece), 820  
 Cagliari, Sardinia (via Corinth Canal), 738  
 Cannes, France (south of Greece), 1,023  
 Cannes, France (via Corinth Canal), 942  
 Cartagena, Spain (south of Greece), 1,271  
 Cartagena, Spain (via Corinth Canal), 1,214  
 Ceuta, Morocco (south of Greece), 1,488  
 Ceuta, Morocco (via Corinth Canal), 1,431  
 Durrës, Albania, 339  
 Ermoupolis, Greece, 84  
 Famagusta, Cyprus, 604  
 Fethiye, Turkey, 305  
 Genova, Italy (south of Greece), 978  
 Genova, Italy (via Corinth Canal), 896  
 Gibraltar (south of Greece), 1,490  
 Gibraltar (via Corinth Canal), 1,433  
 Haifa, Israel, 650  
 Iraklion, Kriti, 175  
 Iskenderun, Turkey, 656  
 Istanbul, Turkey, 364  
 Izmir, Turkey, 210  
 Kavala, Greece, 249  
 La Spezia, Italy (south of Greece), 942  
 La Spezia, Italy (via Corinth Canal), 860  
 Larnaca, Cyprus, 566  
 Livorno, Italy (south of Greece), 906  
 Livorno, Italy (via Corinth Canal), 825  
 Malaga, Spain (south of Greece), 1,438  
 Malaga, Spain (via Corinth Canal), 1,381  
 Marseille, France (south of Greece), 1,069  
 Marseille, France (via Corinth Canal), 988  
 Mersin, Turkey, 598  
 Messina, Sicily (south of Greece), 496  
 Messina, Sicily (via Corinth Canal), 414  
 Mitilini, Greece, 191  
 Napoli, Italy (south of Greece), 667  
 Napoli, Italy (via Corinth Canal), 586  
 Navplion, Greece, 142  
 Odessa, Ukraine, 712  
 Oran, Algeria (south of Greece), 1,276  
 Oran, Algeria (via Corinth Canal), 1,219  
 Palermo, Sicily (south of Greece), 612  
 Palermo, Sicily (via Corinth Canal), 531  
 Palma, Balearic Islands (south of Greece), 1,131

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



Palma, Balearic Islands (via Corinth Canal), 1,049  
 Preveza, Greece, 197  
 Rethimnon, Kriti, 151  
 Rhodes, Greece, 261  
 Rijeka, Croatia (south of Greece), 814  
 Rijeka, Croatia (via Corinth Canal), 675  
 Sarande, Albania, 253  
 Savona, Italy (south of Greece), 988  
 Savona, Italy (via Corinth Canal), 906  
 Sibenik, Croatia (south of Greece), 687  
 Sibenik, Croatia (via Corinth Canal), 548  
 Siracusa, Sicily (south of Greece), 484  
 Siracusa, Sicily (via Corinth Canal), 418  
 Soudha, Kriti, 159  
 Split, Croatia (south of Greece), 672  
 Split, Croatia (via Corinth Canal), 533  
 Tarabulus, Libya, 640  
 Taranto, Italy (south of Greece), 493  
 Taranto, Italy (via Corinth Canal), 363  
 Thessaloniki, Greece, 259  
 Toulon, France (south of Greece), 1,038  
 Toulon, France (via Corinth Canal), 956  
 Trieste, Italy (south of Greece), 848  
 Trieste, Italy (via Corinth Canal), 709  
 Tubruq, Libya, 359  
 Tunis, Tunisia (south of Greece), 737  
 Tunis, Tunisia (via Corinth Canal), 680  
 Valencia, Spain (south of Greece), 1,244  
 Valencia, Spain (via Corinth Canal), 1,174  
 Valletta, Malta, 524  
 Venezia, Italy (south of Greece), 856  
 Venezia, Italy (via Corinth Canal), 719  
 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  
 Esmeraldas, Ecuador, 1,021  
 Guayaquil, Ecuador, 788  
 Guaymas, Mexico, 3,227  
 Iquique, Chile, 560  
 Lota, Chile, 1,432  
 Monterey, California, U.S.A., 4,017  
 Puntarenas, Costa Rica, 1,533  
 Salina Cruz, Mexico, 2,117  
 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\***

Nord-Ostsee-Kanal (East Entrance), Germany, 864  
 Skagens Odde, Denmark, 925

**Ports**

Gdynia, Poland, 678  
 Sankt-Peterburg, Russia, 678  
 Stockholm, Sweden, 402

**PLOCE, CROATIA**  
 (43°03'00"N., 17°25'42"E.) to:

**Junction Points\***

Port Said, Egypt, 1,132  
 Strait of Gibraltar, 1,487

**Ports**

Ancona, Italy, 167  
 Durres, Albania, 214  
 Rijeka, Croatia, 230

**PLYMOUTH, ENGLAND**  
 (50°21'40"N., 4°09'10"W.) to:

**Junction Points\***

Bishop Rock, England, 106  
 Ile d'Ouessant, France, 117  
 Nord-Ostsee-Kanal (East Entrance), Germany, 639  
 Skagens Odde, Denmark, 756

**Ports**

Aberdeen, Scotland, 638  
 Amsterdam, Netherlands, 390  
 Antwerp, 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, 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

**POHANG, SOUTH KOREA**  
 (36°02'42"N., 129°23'30"E.) See Bohang, South Korea.

**POINT COMFORT, TEXAS, U.S.A.**  
 (28°35'44"N., 96°33'51"W.) to:

**Junction Points\***

Straits of Florida, 797  
 Yucatan Channel, 761

**Ports**

Campeche, Mexico, 601  
 Coatzacoalcos, Mexico, 650

**POINTE A PITRE, GUADELOUPE**  
 (16°14'00"N., 61°32'30"W.) to:

**Junction Points\***

Panama, Panama, 1,211  
 Straits of Florida (via Mona Passage), 1,348  
 Straits of Florida (via Virgin Passage), 1,347  
 Yucatan Channel (south of Hispaniola), 1,410

**Ports**

Baltimore, Maryland, U.S.A., 1,653  
 Barranquilla, Colombia, 857  
 Basse-Terre, Guadeloupe, 31  
 Belize, Belize, 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  
 Charleston, South Carolina, U.S.A., 1,443  
 Charlotte Amalie, Virgin Islands, 267  
 Cienfuegos, Cuba, 1,204  
 Colon, Panama, 1,168  
 Fort de France, Martinique, 108  
 Georgetown, Guyana, 606  
 Guantanamo, Cuba, 879

Gulfport, Mississippi, U.S.A. (via Virgin Passage), 1,822  
 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  
 La Habana, Cuba (via Virgin Passage), 1,308  
 Miami, Florida, U.S.A., 1,247  
 New York, New York, U.S.A., 1,652  
 Norfolk, Virginia, U.S.A., 1,527  
 Paramaribo, Suriname, 737  
 Philadelphia, Pennsylvania, U.S.A., 1,658  
 Plymouth, Montserrat, 84  
 Port au Prince, Haiti (south of Hispaniola), 945  
 Port of Spain, Trinidad, 358  
 Port Castries, St. Lucia, 141  
 Puerto Cabello, Venezuela, 520  
 Roseau, Dominica, 60  
 San Juan del Norte, Nicaragua, 1,345  
 San Juan, Puerto Rico, 333  
 Santo Domingo, Dominican Republic, 520  
 Sint Nicolaashaven, Aruba, 550  
 St. John's, Antigua (east of Guadeloupe), 107  
 St. John's, Antigua (west of Guadeloupe), 110  
 Tuxpan, Mexico, 2,094  
 Willemstad, Curacao, 517

**POINTE NOIRE, CONGO**  
 (4°47'00"S., 11°50'00"E.) to:

**Ports**

Accra, Ghana, 952  
 Banjul, Gambia, 2,175  
 Boma, 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, Sao Tome, Gulf of Guinea, 436  
 Sekondi, Ghana, 997  
 Takoradi, Ghana, 1,001

**POLYARNYY, RUSSIA**  
 (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

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

## 82 PONCE, PUERTO RICO

Callao, Peru, 7,515  
 Hakodate, Japan, 2,298  
 Hobart, Tasmania, 3,130  
 Hong Kong, China, 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  
 Pago Pago, American Samoa, 2,266  
 Papeete, French Polynesia, 3,430  
 Petropavlovsk-Kamchatskiy, Russia, 2,762  
 Rabaul, Papua New Guinea, 853  
 San Francisco, California, U.S.A., 4,641  
 Seattle, Washington, U.S.A., 4,696  
 Shanghai, 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  
 Jacksonville, Florida, U.S.A., 1,146  
 Key West, Florida, U.S.A., 969  
 La Habana, Cuba (via Old Bahama Channel and Mona Passage), 981  
 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  
 Ile d'Ouessant, France, 1,101  
 Montreal, Canada, 2,331  
 Strait of Gibraltar, 964  
 Straits of Florida, 3,052

### Ports

Baltimore, Maryland, U.S.A., 2,529  
 Banjul, Gambia, 1,551  
 Belem, Brazil, 2,678  
 Bordeaux, France, 1,256  
 Boston, Massachusetts, U.S.A., 2,088  
 Buenos Aires, Argentina, 4,975  
 Cadiz, Spain, 931  
 Cap-Haitien, Haiti, 2,646  
 Cape Town, 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, 1,774  
 Horta, Azores, 153  
 Huelva, Spain, 914  
 Las Palmas, Canary Islands, 774  
 Lisboa, Portugal, 783  
 New York, New York, U.S.A., 2,247  
 Norfolk, Virginia, U.S.A., 2,398  
 Oporto, Portugal, 815  
 Philadelphia, Pennsylvania, 2,388  
 Porto Grande, Cape Verde Islands, 1,253  
 Recife, Brazil, 2,803  
 Rio de Janeiro, Brazil, 3,875  
 San Juan, Puerto Rico, 2,412  
 Santa Cruz de Tenerife, Canary Islands, 740  
 Santo Domingo, Dominican Republic, 2,620  
 St. John's, Canada, 1,326  
 Vigo, Spain, 828

**POOLE, ENGLAND**  
 (50°43'00"N., 1°59'33"W.) to:

### Junction Points\*

Bishop Rock, England, 204  
 Ile d'Ouessant, France, 190  
 Nord-Ostsee-Kanal (East Entrance), Germany, 550  
 Pentland Firth, Scotland, 686  
 Skagens Odde, Denmark, 690

### Ports

Aberdeen, Scotland (via The Sound), 549  
 Caen, France, 113  
 Dover, England, 134  
 Hull, England, 338  
 Leith, Scotland, 525  
 Oostende, Belgium, 193  
 Southampton, England, 34

**PORKKALA, FINLAND**  
 (59°59'06"N., 24°28'06"E.) to:

### Junction Points\*

Nord-Ostsee-Kanal (East Entrance), 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, Colombia, 785  
 Colon, Panama, 1,012  
 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**  
 (34°50'30"S., 138°30'00"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 5,754  
 Cape Leeuwin, Australia, 1,165  
 Selat Sunda, Indonesia, 2,980  
 Wilson Promontory, Australia, 537

### Ports

Albany, Australia, 1,024  
 Botany Bay, Australia, 957  
 Bunbury, Australia, 1,260  
 Dampier, Australia, 2,182  
 Durban, South Africa, 5,160  
 Fremantle, Australia, 1,343  
 Geelong, Australia, 518  
 Hobart, Tasmania, 756  
 Melbourne, Australia, 512  
 Newcastle, Australia, 1,028  
 Port Darwin, Australia, 3,136  
 Port Kembla, Australia, 928  
 Port Pirie, Australia, 274  
 Strahan, Australia, 593  
 Whyalla, Australia, 256

**PORT ALICE, CANADA**  
 (50°22'56"N., 127°27'12"W.) to:

### Junction Points\*

Panama, Panama, 4,057  
 Punta Arenas, Chile, 7,017  
 Singapore (via Balintang Channel), 6,989  
 Torres Strait, Australia, 6,076  
 Wilson Promontory, Australia, 7,074

### Ports

Anchorage, Alaska, 1,160  
 Callao, Peru, 4,800  
 Guaymas, Mexico, 2,304  
 Honolulu, Hawaii, 2,281  
 Los Angeles, California, 1,185  
 Manila, Philippines (via Balintang Channel), 5,684  
 Mollendo, Peru, 5,216  
 Yokohama, Japan, 3,988

**PORT AMELIA, MOZAMBIQUE**  
 (12°58'14"S., 40°29'23"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 2,078  
 Cape Leeuwin, Australia, 4,546  
 Selat Lombok, Indonesia, 4,442  
 Port Said, Egypt, 3,558  
 Singapore, 4,099  
 Selat Sunda, Indonesia, 3,887  
 Torres Strait, Australia, 5,976

### Ports

Antsirana, Madagascar, 572  
 Belawan, Indonesia, 3,777  
 Manakara, Madagascar, 1,230  
 Port Darwin, Australia, 5,341  
 Sabang, Indonesia, 3,459  
 Tulcar, Madagascar, 651  
 Victoria, Seychelles, 1,018

**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  
 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), 1,395  
 Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,012

**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

Cienfuegos, Cuba (via Yucatan Peninsula), 976  
 Coatzacoalcos, Mexico, 708

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

Colon, Panama, 1,485  
La Habana, Cuba, 749  
Nuevitas, Cuba, 1,055  
Santiago de Cuba, Cuba (via Yucatan Peninsula), 1,231  
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, 3,725  
Fastnet Rock, Ireland (via Windward Passage), 3,622  
Inishtrahull, Ireland (via Windward Passage), 3,750  
Panama, Panama, 817  
Pentland Firth, Scotland, 3,903  
Strait of Gibraltar, 3,757  
Straits of Florida, 701  
Yucatan Channel, 741

**Ports**

Baltimore, Maryland, U.S.A., 1,301  
Barranquilla, Colombia, 592  
Belem, Brazil, 2,258  
Belize, Belize (north of Jamaica), 933  
Belize, Belize (south of Jamaica), 953  
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  
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  
Halifax, Canada, 1,671  
Hamilton, Bermuda, 1,016  
Jacmel, Haiti, 271  
Key West, Florida, U.S.A. (via Old Bahama Channel), 650  
Kingston, Jamaica, 277  
La Guaira, Venezuela, 801  
La Habana, Cuba, 662  
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), 1,343  
Pointe a Pitre, Guadeloupe (south of Hispaniola), 945  
Pointe a Pitre, Guadeloupe (via Windward Passage and Mona Passage), 889  
Port Castries, St. Lucia (via Windward Passage and Mona Passage), 950  
Port of Spain, Trinidad, 1,053

Puerto Cabello, Venezuela, 769  
Rio de Janeiro, Brazil, 4,221  
San Juan del Norte, Nicaragua, 840  
San Juan, Puerto Rico, 552  
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, South Africa, 5,075  
Port Said, Egypt, 4,353  
Singapore, 929

**Ports**

Calcutta, India, 775  
Madras, India, 758

**PORT 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**

Baltimore, Maryland, U.S.A., 1,741  
Belem, Brazil, 1,265  
Belize, Belize, 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, Guyana, 482  
Guantanamo, Cuba, 922  
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  
La Habana, Cuba (via Mona Passage), 1,370  
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  
Salvador, Brazil, 2,593  
San Juan del Norte, Nicaragua, 1,344  
San Juan, Puerto Rico (west of Saint Croix and Virgin Passage), 418  
Santo Domingo, Dominican Republic, 578  
Savannah, Georgia, U.S.A., 1,548  
Sint Nicolaashaven, Aruba, 532  
St. John's, Antigua, 204  
St. Pierre, Martinique, 46  
Sydney, Canada, 1,967  
Tuxpan, Mexico, 2,136  
Willemstad, Curacao, 489

**PORT CHALMERS, NEW ZEALAND**  
(45°48'47"S., 170°37'43"E.) to:

**Junction Points\***

Panama, Panama, 6,659  
Punta Arenas, Chile, 4,548  
Torres Strait, Australia, 2,815  
Torres Strait, Australia (via Cook Strait), 2,942  
Wilson Promontory, Australia, 1,201

**Ports**

Auckland, New Zealand (via east of New Zealand), 840  
Hobart, Tasmania, 1,061  
Melbourne, Australia (via Banks Strait), 1,339  
Noumea, New Caledonia (via Cook Strait), 1,545

**PORT DARWIN, AUSTRALIA**  
(12°28'30"S., 130°50'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,100  
Cape Leeuwin, Australia, 1,978  
Selat Lombok, Indonesia (south of Pulau Roti), 926  
Port Said, Egypt (via south of Java), 6,743  
Selat Sunda, Indonesia (via south of Java), 1,623  
Torres Strait, Australia (via Clarence Strait and Dundas Strait), 735  
Selat Wetar, Indonesia (via west of Bathurst Island), 326

**Ports**

Aden, Yemen (via south of Java), 5,356  
Al Basrah, Iraq, 5,650  
Al Manamah, Bahrain, 5,390  
Albany, Australia, 2,152  
Aleksandrovsk-Sakhalinskiy, Russia, 4,041  
Ambon, Indonesia, 579  
Apra, Guam (via Selat Sele), 1,925  
Beira, Mozambique, 5,553  
Berbera, Somalia, 5,384  
Bombay, India, 4,193  
Bunbury, Australia, 1,906  
Busan, South Korea, 2,937  
Bushehr, Iran, 5,446  
Calicut, India, 3,683  
Colombo, Sri Lanka, 3,320  
Dagu, China, 3,363  
Dalian, China, 3,204  
Dar es Salaam, Tanzania, 5,428  
Diego Garcia, Chagos Archipelago, 3,483  
Durban, South Africa, 5,561  
Dutch Harbor, Alaska, U.S.A., 5,332  
East London, South Africa, 5,673  
El Ferrol del Caudillo, Spain, 1,843  
Fort Dauphin, Madagascar, 4,775  
Fremantle, Australia, 1,847  
Geraldton, Australia, 1,638  
Hakodate, Japan (via Selat Sele), 3,422  
Hong Kong, China, 2,363  
Incheon, South Korea (via Molluca Passage), 3,072  
Jakarta, Indonesia, 1,706  
Karachi, Pakistan, 4,653  
Kobe, Japan (via Selat Sele), 2,901  
Kodiak, Alaska, U.S.A., 5,859  
Madras, India, 3,483  
Majunga, Madagascar, 5,069  
Manila, Philippines, 1,834  
Maputo, Mozambique, 5,539  
Massawa, Ethiopia (via south of Java), 5,747  
Midway Island, 4,188  
Mocambique, Mozambique, 5,304  
Mogpo, South Korea, 2,916  
Mombasa, Kenya, 5,434  
Mosselbaai, South Africa, 5,929  
Nagasaki, Japan (via Selat Sele), 2,785  
Port Elizabeth, South Africa, 5,767  
Port Louis, Mauritius (north of Scott Reef), 4,252  
Port Louis, Mauritius (south of Scott Reef), 4,246  
Qingdao, China, 3,062  
San Diego, California, U.S.A., 7,297  
San Francisco, California, U.S.A., 6,984  
Seattle, Washington, U.S.A., 6,892

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

## 84 PORT DES GALETS, REUNION ISLAND

Shanghai, China, 2,804  
 Shimonoseki, Japan (via Selat Sele), 2,883  
 Sitka, Alaska, U.S.A., 6,338  
 Tamatave, Madagascar, 4,702  
 Tanga, Tanzania, 5,466  
 Tjilatjap, Indonesia, 1,321  
 Truk, Caroline Islands (via Selat Sele), 2,142  
 Victoria, Seychelles, 4,494  
 Vinh Cam Ranh, Vietnam, 2,169  
 Vladivostok, Russia (via Higashi Suido), 3,426  
 Vladivostok, Russia (via Selat Sele), 3,445  
 Wake Island, 3,187  
 Weonsan, North Korea, 3,242  
 Wyndham, Australia, 274  
 Xiamen, China, 2,411  
 Yampi Sound, Australia, 1,457  
 Yokohama, Japan (via Selat Sele), 2,989  
 Zamboanga, Philippines, 1,303  
 Zanzibar, Tanzania, 5,452

**PORT DES GALETS,  
 REUNION ISLAND**  
 (20°55'15"S., 55°17'30"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,120  
 Cape Leeuwin, Australia, 3,241  
 Port Said, Egypt, 3,747  
 Singapore, 3,450

**Ports**

Durban, South Africa, 1,418

**PORT ETIENNE,  
 MAURITANIA**  
 (20°40'00"N., 17°04'12"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,018  
 Ile d'Ouessant, France, 1,826

**Ports**

Casablanca, Morocco, 1,032  
 Dakar, Senegal, 394

**PORT EVERGLADES,  
 FLORIDA, U.S.A.**  
 (26°05'36"N., 80°04'48"W.) See Fort Lauderdale.

**PORT GENTIL, GABON**  
 (0°43'00"S., 8°47'30"E.) to:

**Ports**

Boma, Congo, 470  
 Cabinda, Cabinda, 393  
 Douala, Cameroon, 29  
 Kribi, Cameroon, 231  
 Pointe Noire, Congo, 341

**PORT HARCOURT, NIGERIA**  
 (4°46'15"N., 7°00'12"E.) to:

**Junction Points\***

Ile d'Ouessant, France, 3,974

**Ports**

Freetown, Sierra Leone, 1,397

Horta, Azores, 3,391  
 Lagos, Nigeria, 318  
 Luanda, Angola, 941  
 Pointe Noire, Congo, 677

**PORT HEDLAND,  
 AUSTRALIA**  
 (20°17'45"S., 118°34'50"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,225  
 Cape Leeuwin, Australia, 1,104  
 Selat Lombok, Indonesia, 715  
 Port Said, Egypt, 6,187  
 Selat Sunda, Indonesia, 1,208  
 Torres Strait, Australia, 1,637

**Ports**

Aden, Yemen, 4,800  
 Bombay, India, 3,702  
 Busan, South Korea (via west of Timor and Korea Strait), 3,484  
 Colombo, Sri Lanka, 2,833  
 Fremantle, Australia, 972  
 Geraldton, Australia, 769  
 San Francisco, California, U.S.A. (via west of Timor), 7,646

**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 KAMSAR, GUINEA**  
 (10°39'00"N., 14°37'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,560  
 Cape of Good Hope, South Africa, 3,294  
 Fastnet Rock, Ireland, 2,625  
 Grand Banks South, 2,701  
 Ile d'Ouessant, France, 2,520  
 Inishtrahull, Ireland, 2,925  
 Panama, Panama, 3,863  
 Pentland Firth, Scotland, 3,256  
 Punta Arenas, Chile, 5,098  
 Strait of Gibraltar, 1,867  
 Straits of Florida, 3,984  
 Yucatan Channel, 4,143

**Ports**

Abidjan, Ivory Coast, 834  
 Agadir, Morocco, 1,422  
 Belem, Brazil, 2,171  
 Bordeaux, France, 2,493  
 Buenos Aires, Argentina, 3,747  
 Cape Town, South Africa, 3,274  
 Dakar, Senegal, 330  
 Freetown, Sierra Leone, 153  
 Galway, Ireland, 2,692  
 Libreville, Gabon, 1,652  
 Monrovia, Liberia, 372  
 New York, New York, U.S.A., 3,634  
 San Juan, Puerto Rico, 3,018  
 Tangier, Morocco, 1,788

Villa Cisneros, Western Sahara, 892

**PORT KELANG, MALAYSIA**  
 (3°00'00"N., 101°24'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,369  
 Port Said, Egypt, 4,817  
 Singapore, 220

**Ports**

Aden, Yemen, 3,430  
 Akyab, Sittwe Harbor, Burma, Bombay, India, 2,238  
 Chittagong, Bangladesh, 1,311  
 Rangoon, Burma, 911  
 Trincomalee, Sri Lanka, 1,253

**PORT KEMBLA, AUSTRALIA**  
 (34°28'30"S., 150°53'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 3,388  
 Torres Strait, Australia, 1,817

**Ports**

Hobart, Tasmania, 593  
 Nukualofa, Tonga Islands, 1,987  
 Wellington, New Zealand, 1,229

**PORT LAVACA, TEXAS,  
 U.S.A.**  
 (28°35'44"N., 96°33'51"W.) See Point Comfort.

**PORT LEGASPI,  
 PHILIPPINES**  
 (13°09'00"N., 123°45'30"E.) See Legaspi Port.

**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 of Good Hope, South Africa, 2,266  
 Cape Leeuwin, Australia, 3,165  
 Singapore, 3,333  
 Torres Strait, Australia, 4,933

**Ports**

Aden, Yemen, 2,341  
 Albany, Australia, 3,340  
 Beira, Mozambique, 1,448  
 Belawan, Indonesia, 2,997  
 Bombay, India, 2,517  
 Calcutta, India, 3,212  
 Colombo, Sri Lanka, 2,098  
 Durban, South Africa, 1,560

Fort Dauphin, Madagascar, 654  
 Fremantle, Australia (north of Mauritius), 3,202  
 Fremantle, Australia (south of Mauritius), 3,217  
 Malacca, Malaysia, 3,215  
 Maputo, Mozambique, 1,448  
 Penang, Malaysia, 3,042  
 Port Adelaide, Australia, 4,323  
 Port Darwin, Australia (north of Scott Reef), 4,252  
 Port Darwin, Australia (south of Scott Reef), 4,246  
 Sabang, Indonesia, 2,731  
 Tamatave, Madagascar, 474  
 Victoria, Seychelles, 943  
 Wellington, New Zealand, 5,900  
 Zanzibar, Tanzania, 1,388

**PORT MORESBY, PAPUA  
 NEW GUINEA**  
 (9°28'45"S., 147°08'40"E.) to:

**Junction Points\***

Panama, Panama, 8,292  
 Punta Arenas, Chile (via 50°S.), 6,897  
 Torres Strait, Australia, 339  
 Wilson Promontory, Australia, 2,287

**Ports**

Gladstone Harbor, Australia, 1,389  
 Koniya, Ryukyu Islands, 3,063  
 Lae, Papua New Guinea, 1,044  
 Mackay, Australia, 1,168  
 Port Pirie, Australia, 2,754  
 Townsville, Australia, 595

**PORT NADOR, MOROCCO**  
 (35°17'00"N., 2°56'00"W.) See Melilla.

**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 4 1/2 miles to New York distances.

**PORT OF SPAIN, TRINIDAD**  
 (10°38'45"N., 61°31'00"W.) to:

**Junction Points\***

Bishop Rock, England, 3,603  
 Cape of Good Hope, 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**

Baltimore, Maryland, U.S.A., 1,918  
 Barcelona, Venezuela, 218  
 Basseterre, Saint Kitts and Nevis, 419

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



- Belem, Brazil, 1,212  
 Belize, Belize, 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, South Africa, 5,387  
 Carmen, Mexico, 1,992  
 Cartagena, Colombia, 932  
 Carupano, Venezuela, 109  
 Catia la Mar, Venezuela, 335  
 Charleston, South Carolina, U.S.A., 1,682  
 Charlotte Amalie, Virgin Islands, 518  
 Cienfuegos, Cuba, 1,310  
 Coatzacoalcos, Mexico, 2,137  
 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, Guyana (via Serpents Mouth), 376  
 Guantanamo, Cuba, 987  
 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  
 La Habana, Cuba (via Old Bahama Channel and Mona Passage), 1,494  
 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, Guyana, 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, Suriname, 546  
 Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,938  
 Pointe a Pitre, Guadeloupe, 358  
 Port au Prince, Haiti, 1,053  
 Port Castries, St. Lucia (east of Grenadine Islands), 231  
 Port Castries, St. Lucia (west of Grenadine Islands), 230  
 Portsmouth, New Hampshire, U.S.A., 2,024  
 Puerto la Cruz, Venezuela, 214  
 Puerto Cabello, Venezuela, 395  
 Puerto Cortes, Honduras, 1,599  
 Puerto Sucre, Venezuela, 200  
 Punta Cardon, Venezuela, 574  
 Rio de Janeiro, Brazil, 3,271  
 Roosevelt Roads, Puerto Rico, 525  
 San Juan del Norte, Nicaragua, 1,342  
 San Juan, Puerto Rico, 574  
 Santa Cruz de Tenerife, Canary Islands, 2,804  
 Santo Domingo, Dominican Republic, 681  
 Savannah, Georgia, U.S.A., 1,714  
 Sint Nicolaashaven, Aruba, 515  
 St. Georges, Grenada, 102  
 St. John, Canada, 2,113  
 St. John's, Canada, 2,288  
 St. John's, Antigua, 411  
 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 PIRIE, AUSTRALIA**  
 (33°10'20"S., 138°00'45"E.) to:
- Junction Points\***
- Panama, Panama, 8,467  
 Singapore, 3,564
- Ports**
- Melbourne, Australia, 689  
 Port Adelaide, Australia, 246  
 Port Moresby, Papua New Guinea, 2,754
- PORT RAYSUT, OMAN**  
 (16°56'58"N., 54°02'00"E.) See Mina Raysut.
- PORT REFUGE, COCOS ISLANDS**  
 (12°05'20"S., 96°51'54"E.) to:
- Junction Points\***
- Cape of Good Hope, South Africa, 4,428  
 Cape Leeuwin, Australia, 1,678  
 Selat Lombok, Indonesia, 1,132  
 Selat Sunda, Indonesia, 647
- Ports**
- Colombo, Sri Lanka, 1,539
- PORT ROYAL, JAMAICA**  
 (17°56'00"N., 76°51'00"W.)  
 Subtract 5 miles from Kingston distances.
- PORT SAN CARLOS, FALKLAND ISLANDS**  
 (51°30'00"S., 59°00'00"W.) See Stanley, Falkland Islands.
- PORT SAID, EGYPT\***  
 (31°16'00"N., 32°19'00"E.) to:
- Junction Points\***
- Cape of Good Hope, South Africa, 5,340  
 Cape Leeuwin, Australia, 6,389  
 Selat Lombok, Indonesia, 5,892  
 Singapore, 5,035  
 Strait of Gibraltar, 1,943  
 Selat Sunda, Indonesia (via Eight Degree Channel), 5,224  
 Selat Sunda, Indonesia (via One and Half Degree Channel), 5,335  
 Torres Strait, Australia (via Eight Degree Channel), 7,423  
 Torres Strait, Australia (via One and Half Degree Channel), 7,409
- Ports**
- Ad Damman, Saudi Arabia, 3,142  
 Aden, Yemen, 1,400  
 Ajaccio, Corsica, 1,355  
 Akyab, Burma, 4,672  
 Al Aqabah, Jordan, 380  
 Al Basrah, Iraq, 3,371  
 Al Latakia, Syria, 310  
 Al Manamah, Bahrain, 3,132  
 Alcudia, Balearic Islands, 1,536  
 Alexandria, Egypt, 164  
 Alexandroupolis, Greece, 699  
 Algeciras, Spain, 1,927  
 Algiers, Algeria, 1,514  
 Alicante, Spain, 1,680  
 Almeria, Spain, 1,780  
 Ancona, Italy, 1,206  
 Annaba, Algeria, 1,289  
 Antalya, Turkey, 346  
 Arzew, Algeria, 1,692  
 As Sukhayrah, Tunisia, 1,156  
 Ashdod, Israel, 126  
 Assab, Ethiopia, 1,258  
 Augusta, Sicily, 932  
 Bandar Abbas, Iran, 2,842  
 Bandar Khomeini, Iran, 3,322  
 Banghazi, Libya, 673  
 Baniyas, Syria, 299  
 Banzart, Tunisia, 1,184  
 Barcelona, Spain, 1,600  
 Bari, Italy, 999  
 Barletta, Italy, 1,023  
 Bassein, Burma, 4,638  
 Bastia, Corsica, 1,337  
 Bat'umi, Georgia, 1,391  
 Beaulieu, France, 1,453  
 Beira, Mozambique, 3,990  
 Beirut, Lebanon, 230  
 Bejaia, Algeria, 1,423  
 Belawan, Indonesia, 4,668  
 Bombay, India, 3,046  
 Bonifacio, Corsica, 1,307  
 Brindisi, Italy, 941  
 Bunbury, Australia, 6,343  
 Bur Safaga, Egypt, 310  
 Cagliari, Sardinia, 1,255  
 Calcutta, India, 4,691  
 Cannes, France, 1,472  
 Cartagena, Spain, 1,705  
 Catania, Sicily, 942  
 Ceuta, Morocco, 1,923  
 Chalna, Bangladesh, 4,705  
 Chioggia, Italy, 1,307  
 Chittagong, Bangladesh, 4,739  
 Civitavecchia, Italy, 1,243  
 Cochin, India, 3,237  
 Colombo, Sri Lanka, 3,481  
 Constanta, Romania, 1,000  
 Dar es Salaam, Tanzania, 3,238  
 Darnah, Libya, 514  
 Derince, Turkey, 837  
 Djibouti, Djibouti, 1,374  
 Dubrovnik, Croatia, 1,038  
 Dumai, Indonesia, 4,943  
 Durban, South Africa, 4,567  
 Dures, Albania, 951  
 East London, South Africa, 4,830  
 Ermoupolis, Greece, 535  
 Famagusta, Cyprus, 257  
 Fethiye, Turkey, 375  
 Fort Dauphin, Madagascar, 4,035  
 Fremantle, Australia, 6,310  
 Gaeta, Italy, 1,150  
 Genova, Italy, 1,426  
 Ghazouet, Algeria, 1,784  
 Gibraltar, 1,925  
 Golfe-Juan, France, 1,462  
 Haifa, Israel, 171  
 Hyeres, Greece, 1,474  
 Iraklion, Kriti, 455  
 Iskenderun, Turkey, 381  
 Istanbul, Turkey, 804  
 Izmir, Turkey, 608  
 Jakarta, Indonesia, 5,293  
 Jiddah, Saudi Arabia, 722  
 Kalamai, Greece, 644  
 Karachi, Pakistan, 2,865  
 Kavala, Greece, 714  
 Kerch, Ukraine, 1,238  
 Kerkira, Greece (south of Greece), 848  
 Kerkira, Greece (via Corinth Canal), 826  
 Khalkis, Greece, 630  
 Kyrenia, Cyprus, 297  
 La Spezia, Italy, 1,391  
 Larnaca, Cyprus, 231  
 Licata, Sicily, 993  
 Limassol, Cyprus, 208  
 Livorno, Italy, 1,355  
 Madras, India (north of Socotra), 4,037  
 Mahon, Balearic Islands, 1,484  
 Majunga, Madagascar, 3,471  
 Malacca, Malaysia, 4,891  
 Malaga, Spain, 1,873  
 Manfredonia, Italy, 1,045  
 Maputo, Mozambique, 4,348  
 Marmagao, India, 3,078  
 Marsaxlokk, Malta, 942  
 Marseille, France, 1,518  
 Massawa, Ethiopia, 1,041  
 Matruh, Egypt, 281  
 Melilla, Morocco, 1,821  
 Menton, France, 791  
 Mers el Kebir, Algeria, 1,714  
 Mersin, Turkey, 359  
 Messina, Sicily, 945  
 Mina al Ahmadi, Kuwait, 3,286  
 Mina Abd Allah, Kuwait, 3,283  
 Mina Az Zawr, Kuwait, 3,264  
 Mocambique, Mozambique, 3,522  
 Mogadishu, Somalia, 2,493  
 Mombasa, Kenya, 3,006  
 Monaco, Monaco, 1,450  
 Monopoli, Italy, 953  
 Mostaganem, Algeria, 1,678  
 Mtwara, Tanzania, 3,265  
 Napoli, Italy, 1,116  
 Navplion, Greece, 613  
 Nice, France, 1,456  
 Novorossiysk, Russia, 1,260  
 Odessa, Ukraine, 1,152  
 Okha, India, 2,887  
 Olbia, Sardinia, 1,278  
 Oran, Algeria, 1,711  
 Palermo, Sicily, 1,061  
 Palma, Balearic Islands, 1,555  
 Patrai, Greece (via south of Greece), 762  
 Patrai, Greece (via Corinth Canal), 690  
 Penang, Malaysia, 4,733  
 Phuket, Thailand, 4,629  
 Piraeus, Greece, 599  
 Ploce, Croatia, 1,132  
 Port des Galets, Reunion Islands, 3,747  
 Port Blair, Andaman Islands, 4,353  
 Port Darwin, Australia (via Eight Degree Channel), 6,764  
 Port St. Louis du Rhone, France, 1,535  
 Port Sudan, Sudan, 788  
 Port Swettenham, Malaysia, 4,817  
 Port Vendres, France, 1,583  
 Porto Empedocle, Sicily, 1,017  
 Porto Vecchio di Piombino, Italy, 1,315  
 Pozzuoli, Italy, 1,118  
 Preveza, Greece, 806  
 Pula, Croatia (south of Greece), 1,256  
 Pula, Croatia (via Corinth Canal), 1,244  
 Qabis, Tunisia, 1,149  
 Rangoon, Burma, 4,696  
 Ras as Sidr, Egypt, 112

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



**86 PORT ST. LOUIS DU RHONE, FRANCE**

Ras Gharib, Egypt, 187  
 Ras Tannurah, Saudi Arabia, 3,162  
 Reggio Di Calabria, Sicily, 939  
 Rethimnon, Kriti, 489  
 Rhodes, Greece, 376  
 Rijeka, Croatia (south of Greece), 1,276  
 Rijeka, Croatia (via Corinth Canal), 1,263  
 Rostov-na-Donu, Russia, 1,440  
 Sabang, Indonesia, 4,422  
 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', Ukraine, 1,105  
 Sfax, Tunisia, 1,131  
 Shengjin, Albania, 988  
 Sibenik, Croatia (south of Greece), 1,148  
 Sibenik, Croatia (via Corinth Canal), 1,136  
 Simons Bay, South Africa, 5,315  
 Siracusa, Sicily, 924  
 Skikda, Algeria, 1,337  
 Soudha, Kriti, 507  
 Sousse, Tunisia, 1,133  
 Split, Croatia, 1,133  
 St. Raphael, France, 1,475  
 Suakin, Sudan, 813  
 Tamatave, Madagascar, 3,584  
 Tanga, Tanzania, 3,068  
 Tarabulus, Lebanon, 268  
 Tarabulus, Libya, 998  
 Taranto, Italy, 954  
 Tarragona, Spain, 1,634  
 Terracina, Italy, 1,162  
 Thessaloniki, Greece, 741  
 Toulon, France, 1,486  
 Trapani, Sicily, 1,100  
 Trieste, Italy, 1,310  
 Tubruq, Libya, 445  
 Tulear, Madagascar, 3,966  
 Tunis, Tunisia, 1,172  
 Umm Said, Qatar, 3,091  
 Valencia, Spain, 1,679  
 Valletta, Malta, 946  
 Venezia, Italy, 1,317  
 Viareggio, Italy, 1,716  
 Villa San Giovanni, Italy, 944  
 Villa Sanjurjo, Morocco, 1,868  
 Villefranche, France, 1,455  
 Vlores, Albania, 973  
 Volos, Greece, 683  
 Yumurtalik, Turkey, 372  
 Zadar, Croatia, 1,214

**PORT ST. LOUIS DU RHONE, FRANCE**  
(43°23'00"N., 4°48'00"E.) to:**Junction Points\***

Port Said, Egypt, 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, Egypt, 788

**Ports**

Aden, Yemen, 668  
 Assab, Ethiopia, 524  
 Bur Safaga, Egypt, 508  
 Jiddah, Saudi Arabia, 161  
 Massawa, Ethiopia, 306

**PORT SULPHUR, LOUISIANA, U.S.A.**  
(29°28'36"N., 89°41'09"W.)  
 Subtract 50 miles from New Orleans distances.**PORT SWETTENHAM, MALAYA, MALAYSIA**  
(3°00'00"N., 101°23'00"E.) to:**Junction Points\***

Port Said, Egypt, 4,817  
 Singapore, 210

**Ports**

Calcutta, India, 1,444  
 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 TARANAKI, NEW ZEALAND**  
(39°02'08"S., 174°02'30"E.) See New Plymouth.**PORT TOWNSEND, WASHINGTON, U.S.A.**  
(48°06'30"N., 122°45'00"W.)  
 Subtract 36 miles from Seattle distances.**PORT WALCOT, AUSTRALIA**  
(20°31'58"S., 117°14'00"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 5,137  
 Cape Leeuwin, Australia, 1,005  
 Port Said, Egypt, 6,170  
 Selat Lombok, Indonesia, 707  
 Selat Sunda, Indonesia, 3,346  
 Selat Wetar, Indonesia, 942  
 Torres Strait, Australia, 1,662

**Ports**

Al Basrah, Iraq, 5,133  
 Fremantle, Australia, 873  
 Geraldton, Australia, 671  
 Mombasa, Kenya, 4,624  
 Port Darwin, Australia, 953  
 Victoria, Seychelles, 3,730  
 Zanzibar, Tanzania, 4,796

**PORT-VENDRES, FRANCE**  
(42°31'30"N., 3°07'00"E.) to:**Junction Points\***

Port Said, Egypt, 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**

Hobart, Tasmania, 540  
 Melbourne, Australia, 206  
 Port Adelaide, Australia, 321

**PORTLAND, ENGLAND**  
(50°35'00"N., 2°26'00"W.) to:**Junction Points\***

Bishop Rock, England, 181  
 Nord-Ostsee-Kanal (East Entrance), Germany, 565  
 Skagens Odde, Denmark, 682

**Ports**

Aberdeen, Scotland, 564  
 Amsterdam, Netherlands, 316  
 Antwerp, 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), 2,241  
 Pentland Firth, Scotland, 2,910  
 Punta Arenas, Chile, 6,949  
 Straits of Florida, 1,450

**Ports**

Belize, Belize, 1,967

Buenos Aires, Argentina, 5,873  
 Cape Town, 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, Russia, 3,677  
 Recife, Brazil, 3,700  
 Rio de Janeiro, Brazil, 4,772  
 Salvador, Brazil, 4,091  
 San Juan, Puerto Rico, 1,531  
 Santos, Brazil, 4,959  
 St. John, Canada, 215  
 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  
 Dalian, China, 5,240  
 Guayaquil, Ecuador, 4,169  
 Honolulu, Hawaii, U.S.A., 2,332  
 Jakarta, Indonesia (via Balintang Channel and composite), 7,415  
 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  
 Valparaiso, Chile, 5,764  
 Vancouver, Canada, 371  
 Vladivostok, Russia (north of the Aleutian Islands), 4,278  
 Wellington, New Zealand, 6,327  
 Yokohama, Japan, 4,323

**PORTO ALEGRE, BRAZIL**  
(30°02'00"S., 51°14'00"W.) to:**Junction Points\***

Cape of Good Hope, South Africa, 3,625  
 Panama, Panama, 5,148  
 Punta Arenas, Chile, 1,686

**Ports**

Montevideo, Uruguay, 482  
 Santos, Brazil, 758

**PORTO DI BARLETTA, ITALY**  
(41°20'00"N., 16°17'30"E.) to:**Junction Points\***

Port Said, Egypt, 1,023

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

Strait of Gibraltar, 1,398

#### Ports

Ancona, Italy, 199  
Dubrovnik, Croatia, 113  
Taranto, Italy, 232

**PORTO DI BRINDISI, ITALY**  
(40°38'38"N., 17°57'03"E.) See Brindisi.

**PORTO EMPEDOCLE, SICILY, ITALY**  
(37°16'30"N., 13°32'00"E.) to:

#### Junction Points\*

Port Said, Egypt, 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, South Africa, 3,958

Ile d'Ouessant, France, 2,137  
Strait of Gibraltar, 1,539  
Straits of Florida, 3,308

#### Ports

Accra, Ghana, 1,760  
Baltimore, Maryland, U.S.A., 3,095  
Banjul, Gambia, 553  
Bissau, Guinea-Bissau, 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 Janeiro, Brazil, 2,687  
Santa Cruz de Tenerife, Canary Islands, 849  
Sao Tome, Sao Tome, Gulf of Guinea, 2,208  
Savannah, Georgia, U.S.A., 3,169  
Sidi Ifni, Morocco, 1,117  
St. Louis, Senegal, 496  
Sydney, Canada, 2,503  
Takoradi, Ghana, 1,673  
Tangier, Morocco, 1,536  
Vigo, Spain, 1,737  
Villa Cisneros, Western Sahara, 650  
Wilmington, North Carolina,

U.S.A., 3,057

**PORTO VECCHIO DI PIOMBINO, ITALY**  
(42°56'00"N., 10°33'00"E.) to:

#### Junction Points\*

Port Said, Egypt, 1,315  
Strait of Gibraltar, 897

#### Ports

Genova, Italy, 116  
Marseille, France, 247  
Napoli, Italy, 227

**PORTOVESME, ITALY**  
(39°11'31"N., 8°22'29"E.) to:

#### Junction Points\*

Port Said, Egypt, 1,298  
Strait of Gibraltar, 701

#### Ports

Alexandria, Egypt, 1,160  
Barcelona, Spain, 311  
Beirut, Lebanon, 1,387  
Istanbul, Turkey, 1,336  
Marseille, France, 282  
Trieste, Italy, 2,700

**PORTSMOUTH, ENGLAND**  
(50°48'00"N., 1°06'40"W.) to:

#### Junction Points\*

Bishop Rock, England (via Needles Channel), 225  
Ile d'Ouessant, France, 227  
Nord-Ostsee-Kanal (East Entrance), Germany, 515  
Skagens Odde, Denmark, 632

#### Ports

Aberdeen, Scotland, 514  
Amsterdam, Netherlands, 266  
Antwerp, 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, South Africa, 6,732  
Straits of Florida, 1,461

Yucatan Channel, 1,612

#### Ports

Argentina, Canada, 779  
Arkhangel'sk, Russia, 3,992  
Belem, Brazil, 2,959  
Cartagena, Colombia, 2,053  
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, Guyana, 2,284  
Guantanamo, Cuba (via Crooked Island Passage), 1,512  
Halifax, Canada, 359  
Hamilton, Bermuda, 723  
Ivittuut, Greenland, 1,709  
Kingston, Jamaica, 1,655  
Port Castries, St. Lucia, 1,822  
Port of Spain, Trinidad, 2,024  
Reykjavik, Iceland, 2,271  
San Juan, Puerto Rico, 1,507  
St. John, Canada, 248  
Sydney, Canada, 576

**PORVOO, FINLAND**  
(60°18'00"N., 25°33'00"E.) to:

#### Junction Points\*

Nord-Ostsee-Kanal (East Entrance), Germany, 660  
Skagens Odde, Denmark (via The Sound), 722

#### Ports

Halmstad, Sweden (via The Sound), 644  
Hamina, Finland, 83  
Helsinki, Finland, 56  
Kobenhavn, Denmark (via The Sound), 582  
Kokkola, Finland, 525  
Lulea, Sweden, 584  
Varberg, Sweden (via The Sound), 666

**POTI, GEORGIA**  
(42°09'51"N., 41°38'35"E.) to:

#### Junction Points\*

Port Said, Egypt, 1,399  
Strait of Gibraltar (via Corinth Canal), 4,266  
Strait of Gibraltar (south of Greece), 4,326

#### Ports

Alexandria, Egypt, 1,337  
Beirut, Lebanon, 1,448  
Constanta, Romania, 581  
Haifa, Israel, 1,450  
Iraklion, Kriti, 1,049  
Istanbul, Turkey, 591  
Napoli, Italy (via Corinth Canal), 1,530  
Napoli, Italy (south of Greece), 1,593  
Valencia, Spain (via Corinth Canal), 2,125  
Valencia, Spain (south of Greece), 2,185

**POWELL RIVER, CANADA**  
(49°52'00"N., 124°34'00"W.) to:

#### Junction Points\*

Selat Lombok, Indonesia (via Makassar Strait), 7,218  
Panama, Panama, 4,107  
Punta Arenas, Chile, 7,067  
Singapore (via Balintang Channel), 7,281  
Selat Sunda, Indonesia (via Balintang Channel), 7,645

#### Ports

Anchorage, Alaska, U.S.A. (via Queen Charlotte Sound), 1,278  
Auckland, New Zealand, 6,244  
Brisbane, Australia, 6,543  
Chimbote, Peru, 4,642  
Guaymas, Mexico, 2,333  
Honolulu, Hawaii, U.S.A., 2,476  
Sydney, Australia, 6,879  
Tokyo, Japan (via Queen Charlotte Sound), 4,123

**POZZUOLI, ITALY**  
(40°49'30"N., 14°07'00"E.) to:

#### Junction Points\*

Port Said, Egypt, Strait of Gibraltar, 995

#### Ports

Civitavecchia, Italy, 147  
Messina, Sicily, 177  
Tunis, Tunisia, 308

**PRAIA DA VITORIA, 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

**PREVEZA, GREECE**  
(38°57'15"N., 20°45'20"E.) to:

#### Junction Points\*

Port Said, Egypt, 806  
Strait of Gibraltar, 1,319

#### Ports

Durres, Albania, 181  
Messina, Sicily, 274  
Piraeus, Greece (via Corinth Canal), 197

**PRIMORSK, RUSSIA**  
(60°21'30"N., 28°36'00"E.) Via Ostrov Rondo pilot station. Subtract 1 mile from Vysotsk distances.

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

## 88 PRINCE RUPERT, CANADA

**PRINCE RUPERT, CANADA**  
(54°19'00"N., 130°20'00"W.) to:**Junction Points\***

Panama, Panama, 4,303  
Punta Arenas, Chile, 7,247  
Singapore, 6,683

**Ports**

Apra, Guam, 4,586  
Auckland, New Zealand, 6,209  
Callao, Peru, 5,047  
Dutch Harbor, Alaska, U.S.A.,  
1,274  
Hakodate, Japan (alternate route,  
north of Aleutian Islands), 3,487  
Hakodate, Japan (south of Aleutian  
Islands), 3,525  
Hong Kong, China (alternate route,  
north of Aleutian Islands), 5,286  
Hong Kong, China (south of  
Aleutian Islands), 5,323  
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  
Nanaimo, Canada, 453  
New Westminster, Canada, 492  
Nome, Alaska, U.S.A., 1,846  
Pago Pago, American Samoa,  
4,652  
Petropavlovsk-Kamchatskiy  
Russia (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 (alternate route,  
north of Aleutian Islands), 3,810  
Yokohama, Japan (south of  
Aleutian Islands), 3,827

**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  
La 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

**PROVIDENCE, RHODE  
ISLAND, U.S.A.**

(41°48'30"N., 71°24'00"W.) to:

**Junction Points\***

Bishop Rock, England, 2,841  
Fastnet Rock, Ireland, 2,719  
Inishtrahull, Ireland, 2,823

Pentland Firth, Scotland, 3,047  
Strait of Gibraltar, 3,122

**Ports**

Bordeaux, France, 3,145

**PROVIDENIYA, RUSSIA**

(64°22'00"N., 173°17'30"W.) to:

**Ports**

Anadyrskiy Zaliv, Russia, 254  
Pevek, Russia, 719  
Tiksi, Russia, 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 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  
Kingston, Jamaica, 715  
La Habana, Cuba, 608  
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**

Baltimore, Maryland, U.S.A.,  
1,818  
Belize, Belize, 1,289  
Boston, Massachusetts, U.S.A. (via  
Mona Passage), 1,976  
Campeche, Mexico, 1,595  
Cap-Haitien, Haiti, 752

Charlotte Amalie, Virgin Islands,  
506  
Cienfuegos, Cuba, 1,015  
Colon, Panama, 802  
Galveston, Texas, U.S.A., 1,899  
Key West, Florida, U.S.A. (via Old  
Bahama Channel and Windward  
Passage), 1,248  
Kingston, Jamaica, 697  
La Habana, Cuba (via Old Bahama  
Channel and Windward  
Passage), 1,260  
Paramaribo, Suriname, 887  
Philadelphia, Pennsylvania, U.S.A.  
(via Mona Passage), 1,845  
Pointe a Pitre, Guadeloupe, 520  
Port au Prince, Haiti, 769  
Port Castries, St. Lucia, 465  
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  
La Ceiba, Honduras, 316  
Oranjestad, St. Eustatius, 1,195

**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  
Buenos Aires, Argentina, 5,909  
Cartagena, Colombia, 854  
Charlotte Amalie, Virgin Islands,  
1,343  
Colon, Panama, 733  
Dakar, Senegal, 4,077  
Galveston, Texas, U.S.A., 1,001  
Georgetown, Guyana, 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., 1,568  
Philadelphia, Pennsylvania,  
U.S.A., 1,739  
Port Castries, St. Lucia, 1,578  
Port of Spain, Trinidad, 1,599  
Recife, Brazil, 3,737  
Rio de Janeiro, Brazil, 4,813  
San Juan, Puerto Rico, 1,284  
Savannah, Georgia, U.S.A., 1,189  
St. John's, Antigua, 1,511  
Swan Island, Honduras, 254  
Tampico, Mexico, 993  
Veracruz, Mexico, 948

**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 DE LA LUZ,  
CANARY ISLANDS**(28°08'30"N., 15°25'00"W.) See  
Las Palmas.**PUERTO DE PASAJES, SPAIN**  
(43°19'30"N., 1°55'00"W.) to:**Junction Points\***

Ile d'Ouessant, France, 340  
Strait of Gibraltar, 894

**Ports**

Bordeaux, France, 178  
El Ferrol del Caudillo, Spain, 300  
Horta, Azores, 1,260

**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

**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 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

**PUERTO MANATI, CUBA**  
(21°21'40"N., 76°49'20"W.) to:**Junction Points\***

Panama, Panama, 959  
Straits of Florida, 397

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

**Ports**

La Habana, Cuba, 353  
New York, New York, U.S.A.,  
1,244  
San Juan, Puerto Rico, 639

**PUERTO MIRANDA,  
VENEZUELA**  
(10°45'30"N., 71°33'15"W.)  
Subtract 8 1/2 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  
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

**Ports**

Maracaibo, Venezuela, 834  
Matanzas, Cuba, 330  
San Juan, Puerto Rico, 625

**PUERTO 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

**PUERTO PRINCESA,  
PHILIPPINES**  
(9°44'31"N., 118°43'26"E.) to:

**Junction Points\***

Honshu, Japan, 2,044  
Selat Lombok, Indonesia, 1,168  
Panama, Panama, 9,742  
Punta Arenas, Chile, 9,346  
Singapore, 1,060  
Selat Sunda, Indonesia, 1,373  
Torres Strait, Australia, 1,906

**Ports**

Alexandrovsk-Sakhalinskiy,  
Russia, 2,800  
Ho Chi Minh, Vietnam, 836  
Manila, Philippines, 364  
Shanghai, China, 1,622  
Vladivostok, Russia, 2,217

**PUERTO SANDINO,  
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.) See  
Boca de Tanamo, Cuba.

**PUERTO VITA, CUBA**  
(21°04'45"N., 75°57'08"W.) to:

**Junction Points\***

Straits of Florida, 455

**Ports**

Charleston, South Carolina,  
U.S.A., 814  
New York, New York, U.S.A.,  
1,224  
Nuevitas, Cuba, 90  
Port Antonia, Jamaica, 315

**PULA, CROATIA**  
(44°52'08"N., 13°50'07"E.) to:

**Junction Points\***

Port Said, Egypt, 1,256  
Strait of Gibraltar, 1,628

**Ports**

Catania, Sicily, 594  
Constanta, Romania (south of  
Greece), 1,305  
Constanta, Romania (via Corinth  
Canal), 1,206  
Iskenderun, Turkey (south of  
Greece), 1,341  
Iskenderun, Turkey (via Corinth  
Canal), 1,301  
Istanbul, Turkey, 1,124  
Kerch, Ukraine (south of Greece),  
1,543  
Kerch, Ukraine (via Corinth  
Canal), 1,444

Larnaca, Cyprus, 1,245  
Mersin, Turkey, 1,260  
Patrai, Greece, 555  
Rostov-na-Donu, Russia (south of  
Greece), 1,745  
Rostov-na-Donu, Russia (via  
Corinth Canal), 1,646  
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, South Africa,  
4,262  
Fastnet Rock, Ireland, 7,051  
Grand Banks South, 6,440  
Honshu, Japan, 9,286  
Ile d'Ouessant, France, 6,986  
Inishtrahull, Ireland, 7,315  
Montreal, Canada, 7,515  
Panama, Panama, 3,932  
Pentland Firth, Scotland, 7,563  
Strait of Gibraltar, 6,352  
Straits of Florida, 6,783  
Torres Strait, Australia (via 30°S.  
and Raine Island entrance),  
7,217  
Tsugaru-Kaikyo, Japan, 9,449  
Wilson Promontory, Australia (via  
Foveaux Strait and 49°S.), 5,820  
Wilson Promontory, Australia (via  
30°S. and Cook Strait), 7,460  
Wilson Promontory, Australia (via  
60°S.), 5,305  
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  
30°S.), 6,132  
Auckland, New Zealand (via  
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 30°S.),  
7,369  
Brisbane, Australia (via 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, South Africa, 4,279  
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  
Coquimbo, Chile, 1,623  
Corinto, Nicaragua, 4,180  
Dagu, China (north of Marshall  
Islands), 10,843  
Dakar, Senegal, 4,928  
Dalian, China, 10,687  
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, Guyana, 5,030  
Guayaquil, Ecuador, 3,307  
Guaymas, Mexico, 5,401  
Hakodate, Japan (via 30°S.), 9,672  
Halifax, Canada, 6,799  
Hamilton, Bermuda, 6,273  
Honolulu, Hawaii, U.S.A. (via  
30°S.), 6,414  
Iquique, Chile, 2,201  
Jacksonville, Florida, U.S.A.,  
6,879  
Jaluit, Marshall Islands, 6,815  
Kobe, Japan (via 30°S.), 9,872  
La Habana, Cuba (via Old Bahama  
Channel and east of South  
America), 6,742  
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  
Mar del Plata, Argentina, 1,112  
Matarani, Peru, 2,380  
Midway Island, 7,382  
Monterey, California, U.S.A.,  
6,113  
Montevideo, Uruguay (via west of  
English Bank), 1,300  
Nagasaki, Japan (via 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, 5,527  
Pago Pago, American Samoa,  
5,181  
Papeete, French Polynesia, 4,233  
Paranagua, Brazil, 2,001  
Philadelphia, Pennsylvania,  
U.S.A., 6,978  
Pisco, Peru, 2,578  
Ponape, Caroline Islands, 7,260  
Port Castries, St. Lucia, 5,451  
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 Deseado, Argentina, 440  
Puerto Madryn, Argentina, 760  
Puerto Montt, Chile, 992  
Puntarenas, Costa Rica, 4,010  
Quequen, Argentina, 1,053  
Rabaul, Papua New Guinea (via  
30°S.), 7,980  
Recife, Brazil, 3,252  
Rio de Janeiro, Brazil, 2,238

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

**90 PUNTA CARDON, VENEZUELA**

Rio Gallegos, Argentina, 202  
 Rio Grande, Argentina, 220  
 Salina Cruz, Mexico, 4,478  
 Salvador, Brazil, 2,920  
 San Antonio, Chile, 1,410  
 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  
 Shanghai, China (via 30°S), 10,465  
 Shimonoseki, Japan (via 30°S), 10,038  
 Sitka, Alaska, U.S.A., 7,455  
 St. John's, Canada, 6,735  
 Suva, Fiji Islands, 5,444  
 Sydney, Australia (via 30°S. and north of New Zealand), 7,301  
 Sydney, Australia (via 60°S.), 5,398  
 Talcahuano, Chile, 1,269  
 Tocopilla, Chile, 2,177  
 Valparaiso, Chile, 1,432  
 Vancouver, Canada, 6,978  
 Wellington, New Zealand (via 30°S.), 6,141  
 Wellington, New Zealand (via 50°S.), 4,634  
 Wilmington, North Carolina, U.S.A., 6,853  
 Xiamen, China, 10,537  
 Yokohama, Japan (via 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.

**PUNTA PALMAS DEL SUR, VENEZUELA**  
 (10°24'28"N., 71°33'18"W.) Add 15 miles to Maracaibo distances.

**PUNTARENAS, COSTA RICA**  
 (9°68'00"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  
 Los Angeles, California, U.S.A., 2,499  
 Lota, Chile, 2,899  
 Monterey, California, U.S.A., 2,751  
 Pisco, Peru, 1,533  
 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

**PUNAS, SOUTH KOREA**  
 (35°06'00"N., 129°03'00"E.) See Busan, South Korea.

**QAANAAQ (THULE), GREENLAND**  
 (76°32'52"N., 68°62'30"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

**QABIS, TUNISIA**  
 (33°53'64"N., 10°07'30"E.) to:

**Junction Points\***

Port Said, Egypt, 1,149  
 Strait of Gibraltar, 1,073

**Ports**

Tarabulus, Libya, 174  
 Tunis, Tunisia, 302  
 Valletta, Malta, 232

**QAQORTOQ (JULIANEHAB), GREENLAND**  
 (60°43'00"N., 46°02'30"W.) to:

**Junction Points\***

Montreal, Canada (via Strait of Belle Isle), 1,470

**Ports**

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

**QASIGIANGUIT, 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

**QEQERTARSUAQ (GODHAVN), GREENLAND**  
 (69°14'00"N., 53°32'00"W.) to:

**Junction Points\***

Inishtrahull, Ireland (via 75 miles off Kap Farvel), 1,953  
 Inishtrahull, Ireland, 1,901

**Ports**

Ivittuut, Greenland, 560  
 Reykjavik, Iceland (via 75 miles off Kap Farvel), 1,483  
 Reykjavik, Iceland, 1,396

**QINGDAO, CHINA**  
 (36°05'30"N., 120°19'00"E.) to:

**Junction Points\***

Panama, Panama, 8,575  
 Singapore, 2,466

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,602  
 Apra, Guam, 1,900  
 Auckland, New Zealand, 5,378  
 Busan, South Korea, 497  
 Dagu, China, 436  
 Dalian, China, 277  
 Dutch Harbor, Alaska, U.S.A., 3,385  
 Guayaquil, Ecuador, 8,880  
 Ho Chi Minh, Vietnam, 1,969  
 Hong Kong, China, 1,120  
 Honolulu, Hawaii, U.S.A., 4,456  
 Hua-lien Kang, Taiwan, 792  
 Incheon, South Korea, 333  
 Kodiak, Alaska, U.S.A., 3,975  
 Lo hsing-ta Mao-ti, China, 715  
 Manila, Philippines, 1,422  
 Midway Island, 3,303  
 Mogpo, South Korea, 336  
 Nampo, North Korea, 309  
 Nikolayevsk-Na-Amure, Russia, 1,750  
 Noumea, New Caledonia, 4,416  
 Pago Pago, American Samoa, 4,969  
 Papeete, French Polynesia, 6,046  
 Petropavlovsk-Kamchatskiy, Russia, 2,215  
 Port Darwin, Australia, 3,062  
 Qinhuangdao, China, 381  
 Rabaul, Papua New Guinea, 3,043  
 San Diego, California, U.S.A., 5,805  
 San Francisco, California, U.S.A., 5,403  
 Sanmen Wen, China, 528  
 Shanghai, China, 401  
 Sitka, Alaska, U.S.A., 4,454  
 Su-ao Kang, Taiwan, 756  
 Surabaya, Indonesia, 2,864  
 Suva, Fiji Islands, 4,662  
 Sydney, Australia, 4,871  
 Tai-tung Kang, Taiwan, 870

Truk, Caroline Islands, 2,459  
 Valparaiso, Chile, 10,274  
 Vladivostok, Russia, 998  
 Wake Island, 2,614  
 Weihai, China, 205  
 Weonsan, South Korea, 802  
 Yantai, China, 239  
 Yokohama, Japan, 1,160  
 Yongjia, China, 623

**QINHUANGDAO, CHINA**  
 (39°55'00"N., 119°36'30"E.) to:

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,755  
 Busan, South Korea, 650  
 Dagu, China, 131  
 Dalian, China, 145  
 Incheon, South Korea, 406  
 Lo hsing-ta Mao-ti, China (via Steep Island Pass), 977  
 Mogpo, South Korea (south of Kasa Do), 484  
 Nagasaki, Japan, 702  
 Nampo, North Korea, 307  
 Petropavlovsk-Kamchatskiy, Russia, 2,368  
 Qingdao, China, 381  
 Shanghai, China, 668  
 Vladivostok, Russia (via Maenggol Sudo), 1,151  
 Weihai, China, 191  
 Weonsan, South Korea, 995  
 Xiamen, China, 1,114  
 Yantai, China, 168

**QUA IBOE, NIGERIA**  
 (4°21'40"N., 8°00'00"E.) to:

**Junction Points\***

Bishop Rock, England, 4,258  
 Cape of Good Hope, South Africa, 2,658  
 Fastnet Rock, Ireland, 4,164  
 Grand Banks South, 4,315  
 Ile d'Ouessant, France, 4,095  
 Inishtrahull, Ireland, 4,427  
 Panama, Panama, 5,319  
 Pentland Firth, Scotland, 4,987  
 Punta Arenas, Chile, 5,316  
 Strait of Gibraltar, 3,502  
 Straits of Florida, 5,490  
 Yucatan Channel, 5,640

**Ports**

Abidjan, Ivory Coast, 725  
 Accra, Ghana, 504  
 Cape Town, South Africa, 2,384  
 Cotonou, Dahomey, 377  
 Lagos, Nigeria, 334  
 Libreville, Gabon, 254  
 New York, New York, U.S.A., 5,121  
 Philadelphia, Pennsylvania, U.S.A., 7,399  
 Sao Tome, Sao Tome, 246  
 Takoradi, Ghana, 587

**QUEPOS, COSTA RICA**  
 (9°25'00"N., 84°10'00"W.) to:

**Junction Points\***

Panama, Panama, 415

**Ports**

Acapulco, Mexico, 1,043

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



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  
Selat Sunda, Indonesia, 1,241

**Ports**

Haiphong, Vietnam, 469  
Ho Chi Minh, Vietnam, 361  
Hong Kong, China, 592

**QUINFUGUENA, ANGOLA**  
(6°19'28"S., 12°14'20"E.) to:

**Junction Points\***

Bishop Rock, England, 4,518  
Cape of Good Hope, South Africa,  
1,777  
Fastnet Rock, Ireland, 4,534  
Grand Banks South, 4,669  
Ile d'Ouessant, France, 4,465  
Inishtrahull, Ireland, 4,798  
Panama, Panama, 5,672  
Pentland Firth, Scotland, 5,357  
Punta Arenas, Chile, 4,985  
Strait of Gibraltar, 4,213  
Straits of Florida, 5,844  
Yucatan Channel, 5,994

**Ports**

Abidjan, Ivory Coast, 1,197  
Boma, Congo, 56  
Cape Town, South Africa, 1,727  
Dakar, Senegal, 2,261  
Freetown, Sierra Leone, 1,799  
Georgetown, Ascension Island,  
1,590  
Lisboa, Portugal, 3,784  
Moni Matadi, Congo, 78  
New York, New York, U.S.A.,  
5,528  
Pointe Noire, Congo, 97  
Port Harcourt, Nigeria, 745  
Porto Grande, Cape Verde Islands,  
2,630  
Tangier, Morocco, 3,720  
Vigo, Spain, 3,988

**QUONSET POINT, RHODE ISLAND, U.S.A.**  
(41°35'00"N., 71°24'00"W.)  
Subtract 13 miles from Providence distances.

**RA'S AL KHAFJI, SAUDI ARABIA**  
(28°24'00"N., 48°33'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
5,078

Cape Leeuwin, Australia, 5,414  
Port Said, Egypt, 3,260  
Singapore, 3,799

**Ports**

Aden, Yemen, 1,871  
Bombay, India, 1,491

**RA'S AS SIDR, EGYPT**  
(29°34'36"N., 32°42'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
5,189  
Port Said, Egypt, 112  
Singapore, 4,902

**Ports**

Aden, Yemen, 1,282

**RA'S GHARIB, EGYPT**  
(28°20'30"N., 33°07'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
5,114  
Port Said, Egypt, 187  
Singapore, 4,827

**Ports**

Aden, Yemen, 1,207

**RA'S SHUKHAYR, EGYPT**  
(28°07'04"N., 33°19'04"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
5,200  
Cape Leeuwin, Australia, 6,094  
Selat Lombok, Indonesia, 5,557  
Port Said, Egypt, 203  
Singapore, 4,848  
Selat Sunda, Indonesia, 5,057  
Torres Strait, Australia, 7,226

**Ports**

Aden, Yemen, 1,191  
Assab, Ethiopia, 1,055  
Calcutta, India, 4,488  
Kharg Island, Iran, 2,993  
Massawa, Ethiopia, 857

**RA'S TANNURAH, SAUDI ARABIA**  
(26°39'00"N., 50°10'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,980  
Cape Leeuwin, Australia, 5,316  
Port Said, Egypt, 3,162  
Singapore, 3,701

**Ports**

Al Basrah, Iraq, 295

**RABAUL, PAPUA NEW GUINEA**  
(4°12'30"S., 152°12'00"E.) to:

**Junction Points\***

Panama, Panama, 7,807

Punta Arenas, Chile (via 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  
Dagu, China, 3,294  
Hakodate, Japan, 2,894  
Hong Kong, China, 2,764  
Honolulu, Hawaii, U.S.A., 3,355  
Lae, Papua 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  
Papeete, French Polynesia, 3,527  
Petropavlovsk-Kamchatskiy,  
Russia, 3,555  
Ponape, Caroline Islands, 853  
Qingdao, China, 3,043  
Rotoava, Iles Tuamotu, 3,743  
San Francisco, California, U.S.A.,  
5,396  
Seattle, Washington, U.S.A., 5,509  
Sorong, New Guinea, 1,304  
Sydney, Australia, 1,844  
Talomako, Vanuatu, 1,104  
Valparaiso, Chile, 7,461  
Wallaroo Australia, 2,911  
Whyalla, Australia, 2,957  
Xiamen, China, 2,659  
Yap Islands, Caroline Islands,  
1,196  
Yokohama, Japan, 2,526

**RABIGH, SAUDI ARABIA**  
(22°43'58"N., 38°58'05"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,932  
Cape Leeuwin, Australia, 5,732  
Selat Lombok, Indonesia, 5,194  
Port Said, Egypt, 650  
Singapore, 4,374  
Selat Sunda, Indonesia, 4,568  
Torres Strait, Australia, 6,788

**Ports**

Aden, Yemen, 754  
Al Jubayl, Saudi Arabia, 2,679  
Assab, Ethiopia, 633  
Bombay, India, 2,403  
Massawa, Ethiopia, 428  
Port Darwin, Australia, 6,119  
Penang, Malaysia, 4,077  
Port Sudan, 212  
Rangoon, Burma, 4,077

**RADA DI VADO, ITALY**  
(44°16'00"N., 8°27'00"E.) Use  
Savona distances.

**RANDERS, DENMARK**  
(56°27'48"N., 10°03'48"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), 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 of Good Hope, South Africa  
(east of Madagascar), 5,443  
Cape Leeuwin, Australia (west of  
Sumatra), 3,359  
Port Said, Egypt, 4,696  
Singapore, 1,109

**Ports**

Aden, Yemen, 3,309  
Al Basrah, Iraq, 3,603  
Al Manamah, Bahrain, 3,329  
Belawan, Indonesia, 803  
Bombay, India, 2,139  
Bushehr, Iran, 3,425  
Calcutta, India, 787  
Colombo, Sri Lanka, 1,268  
Fremantle, Australia (west of  
Sumatra), 3,248  
Karachi, Pakistan, 2,561  
Madras, India, 1,003  
Malacca, Malaysia, 986  
Massawa, Ethiopia, 3,701  
Mombasa, Kenya, 3,714  
Penang, Malaysia, 757  
Sabang, Indonesia, 664  
Zanzibar, Tanzania, 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, French Polynesia, 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  
Selat Sunda, Indonesia, 2,946

**Ports**

Albany, Australia, 990  
Hobart, Tasmania, 719  
Melbourne, Australia, 458

**RAS AL KETHIB, YEMEN**  
(14°55'58"N., 42°53'50"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,398

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

## 92 RAS AL MISHAB, SAUDI ARABIA

Cape Leeuwin, Australia, 5,198  
Selat Lombok, Indonesia, 4,660  
Port Said, Egypt, 1,149  
Singapore, 3,840  
Selat Sunda, Indonesia, 4,034  
Torres Strait, Australia, 6,254

### Ports

Aden, Yemen, 220  
Al Jubayl, Saudi Arabia, 2,145  
Assab, Ethiopia, 116  
Massawa, Ethiopia, 203

**RAS AL MISHAB, SAUDI ARABIA**  
(28°10'06"N., 48°42'37"E.) See Bandar Al Mishab.

**RAS AL UNUF, LIBYA**  
(30°31'45"N., 18°34'30"E.) to:

### Junction Points\*

Port Said, Egypt, 807  
Strait of Gibraltar, 1,367

### Ports

Alexandria, Egypt, 656  
Barcelona, Spain, 1,015  
Genova, Italy, 832  
Iskenderun, Turkey, 970  
Kerkira, Greece, 549  
Limassol, Cyprus, 808  
Messina, Italy, 478  
Tangier, Morocco, 1,364  
Trieste, Italy, 990

**RAS SILATA, LEBANON**  
(34°16'45"N., 35°39'00"E.) See Shikka.

**RASHIN, NORTH KOREA**  
(42°14'00"N., 130°18'00"E.) See Najkin.

**RAUMA, FINLAND**  
(61°07'30"N., 21°26'15"E.) to:

### Junction Points\*

Nord-Ostsee-Kanal (East Entrance), Germany, 678

### Ports

Peenemunde, Germany, 555  
Stockholm, Sweden, 230  
Turku, Finland, 98  
Vaasa, Finland, 160

**RAVENNA, ITALY**  
(44°22'30"N., 12°12'24"E.) to:

### Junction Points\*

Port Said, Egypt, 1,287  
Strait of Gibraltar (via Strait of Messina), 1,652  
Strait of Gibraltar (via Strait of Sicily), 1,688

### Ports

Ajaccio, Corsica, 1,005  
Alexandria, Egypt, 1,159  
Ancona, Italy, 71  
Beirut, Lebanon, 1,335  
Ceuta, Morocco, 1,613  
Haifa, Israel, 1,331  
Izmir, Turkey, 967

Kherson, Ukraine, 1,542  
Megara, Greece, 813  
Palma, Balearic Islands, 1,226  
Split, Croatia, 203  
Tarabulus, Libya, 884  
Yumurtalik, Turkey, 1,336

**RECIFE, BRAZIL**  
(8°03'00"S., 34°52'00"W.) to:

### Junction Points\*

Bishop Rock, England, 3,775  
Cape of Good Hope, South Africa, 3,324  
Ile d'Ouessant, France, 3,743  
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

### 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, South Africa, 3,318  
Charleston, South Carolina, U.S.A., 3,624  
Charlotte Amalie, Virgin Islands, 2,471  
Charlottetown, Canada, 3,658  
Colon, Panama, 3,212  
Dakar, Senegal, 1,717  
Fernando de Noronha, 300  
Fortaleza, Brazil, 425  
Freetown, Sierra Leone, 1,632  
Georgetown, Ascension Island, 1,226  
Georgetown, Guyana, 1,781  
Guiria, Venezuela, 2,208  
Halifax, Canada, 3,558  
Hamilton, Bermuda, 3,038  
Jacksonville, Florida, U.S.A., 3,636  
Key West, Florida, U.S.A., 3,488  
La Habana, Cuba, 3,499  
Las Palmas, 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  
Port Castries, St. Lucia, 2,151  
Portland, Maine, U.S.A., 3,700  
Puerto Cortes, Honduras, 3,737  
Salvador, Brazil, 399  
San Juan, Puerto Rico (outside all islands), 2,609  
Savannah, Georgia, U.S.A., 3,681  
St. John's, Canada, 3,491  
Sydney, Canada, 3,553  
Vigo, Spain, 3,346  
Washington, D.C., U.S.A., 3,787

**REGGIO DI CALABRIA, ITALY**  
(38°07'35"N., 15°39'00"E.) to:

### Junction Points\*

Port Said, Egypt, 939  
Strait of Gibraltar, 1,052

### Ports

Banghazi, Libya, 425  
Napoli, Italy, 179  
Palermo, Sicily, 124

**RETHIMNON, KRITI**  
(35°22'30"N., 24°28'00"E.) to:

### Junction Points\*

Port Said, Egypt, 489  
Strait of Gibraltar, 1,485

### Ports

Izmir, Turkey, 277  
Messina, Sicily, 479  
Piraeus, Greece, 151

**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

Aasiaat (Egedesminde), Greenland, 1,371  
Alesund, Norway, 848  
Argentina, Canada, 1,584  
Arkhangel'sk, Russia (north of Iceland), 1,874  
Arkhangel'sk, Russia (south of Iceland), 1,901  
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  
Churchill, Canada (via 75 miles off Kap Farvel), 2,290  
Colon, Panama, 4,098  
Frederiksdal, Greenland, 714  
Glasgow, Scotland, 860  
Goose Bay, Canada, 1,332  
Guantanamo, Cuba, 3,434  
Halifax, Canada, 1,941  
Ilulissat (Jakobshavn), Greenland, 1,418  
Iokan'ga, Russia, 1,646  
Ivittuut, Greenland (via 75 miles off Kap Farvel), 980  
Ivittuut, Greenland, 887  
Kangerluarsoruseq, Greenland, 1,043  
Longyearbyen, Svalbard (north of Iceland), 1,160  
Longyearbyen, Svalbard (south of Iceland), 1,310  
Maniitsoq, Greenland, 1,146  
Molde, Norway, 875  
Mosjoen, Norway, 1,023  
Murmansk, Russia (north of

Iceland), 1,501  
Murmansk, Russia (south of Iceland), 1,529  
Namsos, Norway, 1,018  
Nanortalik, Greenland, 737  
Narsarsuaq, Greenland, 830  
New York, New York, U.S.A., 2,495  
Norfolk, Virginia, U.S.A., 2,677  
Nuuk (Godthab), Greenland, 1,076  
Oslo, Norway, 1,173  
Pechenga, Russia, 1,460  
Philadelphia, Pennsylvania, U.S.A., 2,648  
Portsmouth, New Hampshire, U.S.A., 2,271  
Qanaaq (Thule), Greenland, 1,898  
Qaqortoq (Julianeab), Greenland (via 75 miles off Kap Farvel), 892  
Qaqortoq (Julianeab), Greenland, 795  
Qasigiannuit, Greenland, 1,278  
Qeqertarsuaq (Godhavn), Greenland (via 75 miles off Kap Farvel), 1,483  
Qeqertarsuaq (Godhavn), Greenland, 1,396  
Qutdligssat, Greenland, 1,552  
Ritenbenk, Greenland, 1,581  
Shelburne, Canada, 2,047  
Sisimiut, Greenland, 1,248  
St. John's, Canada, 1,416  
Stornoway, Scotland, 647  
Torshavn, Faroe Islands, 516  
Trondheim, Norway, 969  
Upernavik, Greenland, 1,610

**RHODES, GREECE**  
(36°27'00"N., 28°13'54"E.) to:

### Junction Points\*

Port Said, Egypt, 377  
Strait of Gibraltar, 1,664

### Ports

Algiers, Algeria, 1,224  
Barcelona, Spain, 1,309  
Beirut, Lebanon, 393  
Brindisi, Italy, 626  
Cannes, France, 1,163  
Ceuta, Morocco, 1,631  
Haifa, Israel, 394  
Iraklion, Kriti, 171  
Istanbul, Turkey, 445  
Izmir, Turkey, 256  
Kerch, Georgia, 863  
Messina, Sicily, Italy, 639  
Piraeus, Greece, 261  
Tarabulus, Libya, 780  
Thessaloniki, Greece, 388  
Venezia, Italy, 1,008

**RIBADEO, SPAIN**  
(43°33'25"N., 7°01'50"W.) to:

### Junction Points\*

Bishop Rock, England, 372  
Cape of Good Hope, South Africa, 6,031  
Fastnet Rock, Ireland, 479  
Grand Banks South, 1,865  
Ile d'Ouessant, France, 313  
Inishtrahull, Ireland, 764  
Montreal, Canada (via Strait of Belle Isle), 3,060  
Panama, Panama, 4,338  
Pentland Firth, Scotland, 1,096

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

Punta Arenas, Chile, 6,788  
Strait of Gibraltar, 725

#### Ports

Baltimore, Maryland, U.S.A., 3,215  
Belem, Brazil, 3,519  
Cape Town, South Africa, 5,457  
Casablanca, Morocco, 700  
Charleston, South Carolina, U.S.A., 3,388  
Cristobal, Panama, 4,275  
Dakar, Senegal, 1,879  
Freetown, Sierra Leone, 2,354  
Lisboa, Portugal, 377  
New York, New York, U.S.A., 5,125  
Recife, Brazil, 3,486  
Vigo, Spain, 178

#### RICHARDS BAY, SOUTH AFRICA

(28°51'07"S., 32°07'45"E.) to:

#### Junction Points\*

Cape of Good Hope, South Africa, 959  
Cape Leeuwin, Australia, 4,129  
Selat Lombok, Indonesia, 4,811  
Port Said, Egypt, 5,917  
Singapore, 4,837  
Sundra Strait, Indonesia, 4,370  
Torres Strait, Australia, 6,259

#### Ports

Albany, Australia, 5,031  
Bombay, India, 3,725  
East London, South Africa, 336  
Fremantle, Australia, 4,210  
Karachi, Pakistan, 3,824  
Mombasa, Kenya, 1,644  
Port Adelaide, Australia, 5,259  
Port Darwin, Australia, 5,505  
Sabang, Indonesia, 4,208  
Zanzibar, Tanzania, 1,535

#### RICHMOND, CALIFORNIA, U.S.A.

(37°54'12"N., 122°21'48"W.)  
Add 9 miles to San Francisco distances.

#### RIGA, LATVIA

(56°57'30"N., 24°05'30"E.) to:

#### Junction Points\*

Nord-Ostsee-Kanal (East Entrance), 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  
Ornskoldsvik, Sweden, 461  
Oslo, Norway (via Store Baelt), 871  
Oslo, Norway (via The Sound), 739  
Porkkala, Finland, 284  
Ruche's, Russia, 403

#### RIJEKA, CROATIA

(45°19'37"N., 14°25'51"E.) to:

#### Junction Points\*

Port Said, Egypt, 1,276  
Strait of Gibraltar, 1,648

#### Ports

Alexandria, Egypt, 1,166  
Algiers, Algeria, 1,220  
Alicante, Spain, 1,375  
Ancona, Italy, 112  
Annaba, Algeria, 1,000  
Banghazi, Libya, 868  
Banzart, Tunisia, 910  
Barcelona, Spain, 1,279  
Bari, Italy, 288  
Beirut, Lebanon, 1,345  
Brindisi, Italy, 342  
Cartagena, Spain, 1,405  
Ceuta, Morocco, 1,628  
Chioggia, Italy, 126  
Dubrovnik, Croatia, 276  
Genova, Italy, 1,085  
Gibraltar, 1,630  
Haifa, Israel (south of Greece), 1,342  
Haifa, Israel (via Corinth Canal), 1,315  
Iraklion, Kriti, 831  
Istanbul, Turkey (south of Greece), 1,128  
Istanbul, Turkey (via Corinth Canal), 1,029  
Izmir, Turkey (south of Greece), 974  
Izmir, Turkey (via Corinth Canal), 875  
La Spezia, Italy, 1,049  
Livorno, Italy, 1,013  
Malaga, Spain, 1,578  
Marseille, France, 1,176  
Messina, Sicily, 603  
Napoli, Italy, 774  
Odessa, Ukraine (south of Greece), 1,476  
Odessa, Ukraine (via Corinth Canal), 1,377  
Oran, Algeria, 1,417  
Palermo, Sicily, 719  
Palma, Balearic Islands, 1,235  
Piraeus, Greece (south of Greece), 814  
Piraeus, Greece (via Corinth Canal), 675  
Ploce, Croatia, 230  
Savona, Italy, 1,095  
Sibenik, Croatia, 158  
Siracusa, Sicily, 624  
Split, Croatia, 176  
Tarabulus, Libya, 887  
Taranto, Italy, 482  
Thessaloniki, Greece (south of Greece), 1,023  
Thessaloniki, Greece (via Corinth Canal), 924  
Toulon, France, 1,145  
Trieste, Italy, 120  
Tunis, Tunisia, 897  
Valencia, Spain, 1,363  
Valletta, Malta, 701  
Venezia, Italy, 132  
Volos, Greece (via south of Greece), 964  
Volos, Greece (via Corinth Canal), 865

#### RIO DE JANEIRO, BRAZIL

(22°53'30"S., 43°11'00"W.) to:

#### Junction Points\*

Bishop Rock, England, 4,846  
Cape of Good Hope, South Africa, 3,267  
Fastnet Rock, Ireland, 4,873  
Ile d'Ouessant, France, 4,815  
Inishtrahull, Ireland, 5,143  
Montreal, Canada (via Cabot Strait), 5,215  
Pentland Firth, Scotland, 5,391  
Punta Arenas, Chile, 2,238  
Strait of Gibraltar, 4,180  
Straits of Florida (via Mona Passage), 4,612  
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, Barbados, 3,157  
Brunswick, Georgia, U.S.A., 4,744  
Buenos Aires, Argentina, 1,151  
Cadiz, Spain, 4,192  
Cape Town, South Africa, 3,273  
Charleston, South Carolina, U.S.A., 4,696  
Charlotte Amalie, Virgin Islands, 3,542  
Charlottetown, Canada, 4,730  
Cienfuegos, Cuba, 4,426  
Colon, Panama, 4,284  
Dakar, Senegal, 2,763  
Freetown, Sierra Leone, 2,613  
Funchal, Madeira Island, 3,722  
Georgetown, Ascension Island, 1,900  
Georgetown, Guyana, 2,853  
Guantanamo, Cuba, 4,106  
Guirira, Venezuela, 3,284  
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  
La Habana, Cuba, 4,570  
Lisboa, Portugal, 4,219  
Maccio, 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, Suriname, 2,713  
Philadelphia, Pennsylvania, U.S.A., 4,817  
Puerto Rico, 3,659  
Ponta Delgada, Azores, 3,875  
Port au Prince, Haiti, 4,157  
Port Castries, St. Lucia, 3,274  
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  
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  
St. Helena Island, 2,161

St. John, Canada, 4,752  
St. John's, Canada, 4,563  
Sydney, Canada, 4,648  
Vigo, Spain, 4,418  
Wilmington, North Carolina, U.S.A., 4,704

#### RIO 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

#### RIO GRANDE, BRAZIL

(32°03'00"S., 52°04'30"W.) to:

#### Ports

Buenos Aires, Argentina, 440  
Guirira, Venezuela, 3,984  
Montevideo, Uruguay, 313  
Pointe Noire, Congo, 3,938  
Rio de Janeiro, Brazil, 750  
Santos, Brazil, 602

#### RIO 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

#### 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

#### ROAD HARBOR, TORTOLA, BRITISH VIRGIN ISLANDS

(18°25'00"N., 64°37'00"W.) See Port Purcell.

#### ROCHFORT, 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

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

## 94 ROMANA, DOMINICAN REPUBLIC

Wilson Promontory, Australia, 1,213

**Ports**

Brisbane, Australia, 391  
Noumea, New Caledonia, 902  
Wellington, New Zealand, 1,685

**ROMANA, DOMINICAN REPUBLIC**  
(18°25'00"N., 68°57'10"W.) to:

**Ports**

San Pedro de Macoris, Dominican Republic, 21  
Santo Domingo, Dominican Republic, 61

**RONNE, BORNHOLM, DENMARK**  
(55°06'00"N., 14°41'40"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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

**ROSTOCK, GERMANY**  
(54°05'52"N., 12°09'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 92  
Skagens Odde, Denmark, 254

**Ports**

Klaipeda, Lithuania, 347  
Kobenhavn, Denmark, 231  
Stockholm, Sweden, 456

**ROSTOV-NA-DONU, RUSSIA**  
(47°11'30"N., 39°40'10"E.) to:

**Junction Points\***

Port Said, Egypt, 1,440  
Strait of Gibraltar, 2,458

**Ports**

Constanta, Romania, 572  
Derince, Turkey, 685  
Iskenderun, Turkey, 1,483  
Istanbul, Turkey, 640  
Kerch, Georgia, 208  
Larnaca, Cyprus, 1,402  
Mersin, Turkey, 1,426  
Pula, Croatia (south of Greece), 1,745  
Pula, Croatia (via Corinth Canal), 1,646  
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\***

Ile d'Ouessant, France, 885  
Strait of Gibraltar, 70

**Ports**

Casablanca, Morocco, 202  
Horta, Azores, 1,096

**ROTOAVA, ILES TUAMOTU**  
(16°02'30"S., 145°37'00"W.) to:

**Junction Points\***

Panama, Panama, 4,256

**Ports**

Apia, Samoa, 1,520  
Apra, Guam, 9,513  
Honolulu, Hawaii, U.S.A., 2,358  
Levuka, Fiji Islands, 2,060  
Noumea, New Caledonia, 2,737  
Papeete, French Polynesia, 244  
Rabaul, Papua New Guinea, 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

Ile d'Ouessant, France, 444  
Nord-Ostsee-Kanal (East Entrance), Germany, 323  
Pentland Firth, Scotland, 495  
Skagens Odde, Denmark, 447

**Ports**

Aberdeen, Scotland, 391  
Amsterdam, Netherlands, 67  
Antwerp, 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

**ROUEN, FRANCE**  
(49°26'30"N., 1°04'00"E.) Add 69 miles to Le Havre distances.

**RUCH'I, RUSSIA**  
(59°45'30"N., 28°25'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 766  
Skagens Odde, Denmark, 816

**Ports**

Gdynia, Poland, 530  
Riga, Latvia, 403  
Stockholm, Sweden, 344

**RUMOI, JAPAN**  
(43°57'30"N., 141°38'00"E.) to:

**Ports**

Busan, South Korea, 793  
Hakodate, Japan, 248  
Otaru, Japan, 57  
Shimonoseki, Japan, 812  
Vladivostok, Russia, 452

**SABANG, INDONESIA**  
(5°53'30"N., 95°19'15"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,980  
Cape Leeuwin, Australia, 2,711  
Selat Lombok, Indonesia, 1,575  
Port Said, Egypt, 4,422  
Singapore, 601  
Selat Sunda, Indonesia, 1,103  
Torres Strait, Australia, 3,072

**Ports**

Aden, Yemen, 3,033  
Al Basrah, Iraq, 3,287  
Al Manamah, Bahrain, 3,050  
Beira, Mozambique, 3,921  
Belawan, Indonesia, 268  
Berbera, Somalia, 3,047  
Bombay, India, 1,843  
Bushehr, Iran, 3,106  
Calcutta, India (via Duncan Passage), 1,131  
Calicut, India, 1,343  
Dar es Salaam, Tanzania, 3,443  
Diego Garcia, Chagos Archipelago, 1,594  
Durban, South Africa, 4,273  
Fort Dauphin, Madagascar, 3,376  
Fremantle, Australia, 2,601  
Kakinada, India, 1,019  
Karachi, Pakistan, 2,284  
Madras, India, 994  
Majunga, Madagascar, 3,246  
Malacca, Malaysia, 486  
Maputo, Mozambique, 3,481  
Mocambique, Mozambique, 3,481  
Mombasa, Kenya, 3,388  
Mosselbaai, South Africa, 4,785  
Penang, Malaysia, 313  
Port Elizabeth, South Africa, 4,610  
Port Louis, Mauritius, 2,731  
Rangoon, Burma, 664  
Tamatave, Madagascar, 3,076  
Victoria, Seychelles, 2,468  
Zanzibar, Tanzania, 3,461

**SAFI, MOROCCO**  
(32°18'35"N., 9°15'15"W.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,870  
Ile d'Ouessant, France, 1,023

**Ports**

Casablanca, Morocco, 134  
Dakar, Senegal, 1,228

**SAIDA, LEBANON**  
(33°32'02"N., 35°19'49"E.) See Sayda.

**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, 730  
Sydney, Australia, 3,077  
Truk, Caroline Islands, 610

**SAKAIDE, JAPAN**  
(34°19'45"N., 133°51'30"E.) to:

**Ports**

Hirohata, Japan, 89

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

Kobe, Japan, 107  
Kure, Japan, 107  
Shimonoseki, Japan, 169  
Yokohama, Japan (via Kii Suido),  
449

**SAKATA, JAPAN**  
(38°55'30"N., 139°48'00"E.) to:

**Ports**

Busan, South Korea, 577  
Hakodate, Japan, 189  
Maizuru, Japan, 314  
Shimonoseki, Japan, 554  
Vladivostok, Russia, 442

**SALAMIS, GREECE**  
(37°57'30"N., 23°29'12"E.) to:

**Junction Points\***

Port Said, Egypt, 614  
Strait of Gibraltar, 1,520

**Ports**

Durres, Albania, 343  
Iraklion, Kriti, 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

**SALAWATI, INDONESIA**  
(1°21'00"S., 130°59'00"E.) to:

**Junction Points\***

Honshu, Japan, 2,308  
Selat Lombok, Indonesia, 1,099  
Panama, Panama, 9,134  
Singapore (via Karimata Strait),  
2,047  
Torres Strait, Australia, 925  
Selat Wetar, Indonesia, 495

**Ports**

Davao, Philippines, 623  
Ho Chi Minh, Vietnam, 1,770  
Manila, Philippines, 1,298  
San Francisco, California, U.S.A.,  
6,582  
Yokohama, Japan, 2,332

**SALDANHA BAY, SOUTH AFRICA**  
(33°05'25"S., 17°52'20"E.) to:

**Junction Points\***

Bishop Rock, England, 5,752  
Fastnet Rock, Ireland, 5,792  
Grand Banks South, 5,880  
Ile d'Ouessant, France, 5,709  
Inishtrahull, Ireland, 6,065  
Panama, Panama, 6,449  
Punta Arenas, Chile, 4,255  
Strait of Gibraltar, 5,031

Straits of Florida, 6,738  
Yucatan Channel, 6,783

**Ports**

Accra, Ghana, 4,090  
Baltimore, Maryland, U.S.A.,  
6,846  
Cape Town, South Africa, 57  
Cristobal, Panama, 6,392  
Galway, Ireland, 5,894  
Natal, Brazil, 3,374  
New York, New York, U.S.A.,  
6,729  
Port of Spain, Trinidad, 5,265  
Victoria, Cameroon, 2,302

**SALEEF, YEMEN**  
(15°18'00"N., 42°40'00"E.) See  
As Salif.

**SALERNO, ITALY**  
(40°40'15"N., 14°45'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,095  
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  
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  
Monterey, California, U.S.A.,  
2,055  
Pago Pago, American Samoa,  
4,839  
Pisco, Peru, 2,117  
San Diego, California, U.S.A.,  
1,733  
San Francisco, California, U.S.A.,  
2,132  
San Juan del Sur, Nicaragua, 619  
Santa Barbara, California, U.S.A.,  
1,820  
Talcahuano, Chile, 3,414  
Valparaiso, Chile, 3,247

**SALINAS, ECUADOR**  
(2°12'00"S., 80°59'00"W.) Use  
La Libertad distances.

**SALVADOR, BRAZIL**  
(12°58'00"S., 38°31'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 4,134  
Montreal, Canada (via Cabot  
Strait), 4,673  
Panama, Panama, 3,741  
Punta Arenas, Chile, 2,920  
Strait of Gibraltar, 3,516  
Straits of Florida, 3,931

**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  
Charleston, South Carolina,  
U.S.A., 4,040  
Charlotte Amalie, Virgin Islands,  
2,907  
Charlottetown, Canada, 4,049  
Colon, Panama, 3,608  
Georgetown, Guyana, 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  
Port Castries, St. Lucia, 2,593  
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

**SAMBU, INDONESIA**  
(1°10'00"N., 103°54'00"E.) Use  
Singapore distances.

**SAMSON POINT, AUSTRALIA**  
(20°31'58"S., 117°14'00"E.) See  
Port Walcott.

**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 CIPRIAN, SPAIN**  
(43°42'20"N., 07°25'32"W.) to:

**Junction Points\***

Bishop Rock, England, 365  
Cape of Good Hope, South Africa,  
6,011  
Fastnet Rock, Ireland, 466

Grand Banks South, 1,846  
Ile d'Ouessant, France, 308  
Inishtrahull, Ireland, 749  
Panama, Panama, 4,288  
Pentland Firth, Scotland, 1,082  
Punta Arenas, Chile, 6,769  
Strait of Gibraltar, 706  
Straits of Florida, 3,855

**Ports**

Bilbao, Spain, 197  
Bordeaux, France, 303  
Boston, Massachusetts, U.S.A.,  
4,746  
Cape Town, South Africa, 5,438  
Casablanca, Morocco, 683  
Dakar, Senegal, 1,863  
Huelva, Spain, 573  
La Pallice, France, 303  
Lorient, France, 297  
Marin, Spain, 154  
Norfolk, Virginia, U.S.A., 5,230  
Setubal, Portugal, 397  
Villagarcia, Spain, 143

**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-Sakhalinskiy,  
Russia, 4,779  
Amapala, Honduras, 2,181  
Antofagasta, Chile, 4,360  
Apia, Samoa, 4,195  
Apra, Guam, 5,379  
Arica, Chile, 4,149  
Auckland, New Zealand, 6,855  
Baie du Controleur, Marquesas  
Islands, 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  
Coquimbo, Chile, 4,605  
Corinto, Nicaragua, 2,211  
Dutch Harbor, Alaska, U.S.A.,  
2,465  
Esmeraldas, Ecuador, 2,940  
Guayaquil, Ecuador, 3,112  
Guaymas, Mexico, 1,088  
Hilo, Hawaii, U.S.A., 2,175  
Ho Chi Minh, Vietnam, 7,267  
Hong Kong, China (via Tsugaru-  
Kaikyō), 6,439  
Honolulu, Hawaii, U.S.A., 2,278  
Iquique, Chile, 4,218  
Jakarta, Indonesia, 7,985  
Kobe, Japan, 5,204  
Kodiak, Alaska, 2,121  
Lota, Chile, 4,881  
Manila, Philippines (via Balintang  
Channel), 6,604  
Manzanillo, Mexico, 1,136  
Mazatlan, Mexico, 939  
Midway Island, 3,097  
Naknek, Alaska, U.S.A., 2,788  
Noumea, New Caledonia, 5,491  
Pago Pago, American Samoa,  
4,176

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



**96 SAN FELIX, VENEZUELA**

Papeete, French Polynesia, 3,554  
 Pearl Harbor, Hawaii, U.S.A., 2,285  
 Petropavlovsk-Kamchatskiy, Russia, 3,707  
 Pisco, Peru, 3,695  
 Port Darwin, Australia (north of New Guinea), 7,297  
 Puntarenas, Costa Rica, 2,429  
 Qingdao, China, 5,805  
 Salina Cruz, Mexico, 1,733  
 San Jose, Guatemala, 1,993  
 Shanghai, China (via Tsugaru-Kaikyo), 5,793  
 Sitka, Alaska, 1,725  
 Surabaya, 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  
 Valdivostok, Russia, 5,062  
 Valparaiso, Chile, 4,738  
 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**

Belem, 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**

Ho Chi Minh, Vietnam, 927  
 Hong Kong, China, 489  
 Kao-hsiung Kang, Taiwan, 356  
 Manila, Philippines, 207

**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-Sakhalinskiy, Russia, 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

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  
 Baie du Controleur, Marquesa Islands, 2,986  
 Bai Taio-Hae, Marquesa Islands, 2,987  
 Barbers Point, Hawaii, U.S.A., 2,100  
 Brisbane, Australia (west of D'Entrecasteaux Reefs and south of Bellona Reefs), 6,193  
 Buenaventura, Colombia, 3,383  
 Busan, South Korea, 4,914  
 Caldera, Chile, 4,894  
 Callao, Peru, 3,989  
 Canton, Phoenix Islands, 3,663  
 Chimbote, Peru, 3,804  
 Christmas Island, Line Islands, 2,895  
 Coquimbo, Chile, 5,007  
 Corinto, Nicaragua, 2,613  
 Dagu, China (via Osumi Kaikyo), 5,856  
 Dagu, China (via Tsugaru-Kaikyo), 5,615  
 Dalian, China (via Tsugaru Strait), 5,456  
 Dutch Harbor, Alaska, U.S.A., 2,051  
 Eniwetak, Marshall Islands, 4,282  
 Esmeraldas, Ecuador, 3,342  
 Funafuti, Tuvalu, 4,295  
 Guaymas, Mexico, 1,490  
 Hakodate, Japan, 4,246  
 Ho Chi Minh, Vietnam, 6,878  
 Hong Kong, China, 6,044  
 Honolulu, Hawaii, U.S.A., 2,091  
 Iloilo, Philippines, 6,168  
 Iquique, Chile, 4,620  
 Jakarta, Indonesia (via Balintang Channel), 7,642  
 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  
 La Union, El Salvador, 2,586  
 Levuka, Fiji Islands, 4,705  
 Lota, Chile, 5,282  
 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  
 Mogpo, South Korea, 5,125  
 Nagasaki, Japan, 5,029  
 Newcastle, Australia, 6,467  
 Nikolayevsk-Na-Amure, Russia (via Unimak Pass), 4,099  
 Nome, Alaska, U.S.A., 2,636  
 Noumea, New Caledonia, 5,410  
 Ocean Island, 4,406  
 Pago Pago, American Samoa, 4,150  
 Papeete, French Polynesia, 3,663  
 Petropavlovsk-Kamchatskiy, Russia (via Unimak Pass), 3,292  
 Pisco, Peru, 4,097  
 Ponape, Caroline Islands, 4,641  
 Port Darwin, Australia, 6,984  
 Prince Rupert, Canada, 1,090  
 Puerto Armuelles, Panama, 2,973  
 Puntarenas, Costa Rica, 2,831  
 Qingdao, China, 5,403

Raubul, Papua New Guinea, 5,396  
 Rotoava, Iles Tuamotu, 3,503  
 Salaverry, Peru, 3,750  
 Salina Cruz, Mexico, 2,135  
 San Jose, Guatemala, 2,395  
 Sasebo, Japan (via Osumi Kaikyo), 5,185  
 Seward, Alaska, U.S.A., 1,701  
 Shanghai, China (via Tsugaru Strait), 5,398  
 Shantou, China (via Osumi Kaikyo), 5,900  
 Shimonoseki, Japan (via Tsugaru-Kaikyo), 4,910  
 Sitka, Alaska, U.S.A., 1,302  
 Surabaya, Indonesia, 7,343  
 Suva, Fiji Islands, 4,749  
 Sydney, Australia, 6,448  
 Talara, Peru, 3,494  
 Talcahuano, Chile, 5,270  
 Taltal, Chile, 4,838  
 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, Russia (via La Perouse Strait and Proliv Kruzenshterna), 4,563  
 Vladivostok, Russia (via La Perouse Strait, Chetvertiy Kuril'skiy Proliv, and Unimak Pass), 4,570  
 Wake Island, 3,821  
 Weihai, China (via Tsugaru-Kaikyo), 5,402  
 Wellington, New Zealand, 5,900  
 Weonsan, North Korea, 4,866  
 Xiamen, China (via Osumi Kaikyo), 5,797  
 Xiamen, China (via Tsugaru-Kaikyo), 5,788  
 Yokohama, Japan, 4,536

**SAN JOSE, GUATEMALA**  
 (13°55'00"N., 90°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  
 Los Angeles, California, U.S.A., 2,054  
 Lota, Chile, 3,220  
 Manzanillo, Mexico, 840  
 Mazatlan, Mexico, 1,149  
 Monterey, California, U.S.A., 2,315  
 Pisco, Peru, 1,875  
 Puntarenas, Costa Rica, 465  
 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

**SAN JUAN, PUERTO RICO**  
 (18°27'50"N., 66°06'40"W.) to:

**Junction Points\***

Bishop Rock, England, 3,390  
 Fastnet Rock, Ireland (via Mona Passage), 3,299  
 Inishtrahull, Ireland, 3,436  
 Panama, Panama, 1,036  
 Pentland Firth, Scotland, 3,638  
 Strait of Gibraltar, 3,336  
 Straits of Florida, 1,017  
 Yucatan Channel, 1,111

**Ports**

Abraham Bay, Bahamas, 476  
 Argentina, Canada, 1,840  
 Arkhangel'sk, Russia, 5,001  
 Moa, Cuba, 533  
 Bahia de las Calderas, Dominican Republic, 273  
 Bahia de Samana, Dominican Republic, 185  
 Baltimore, Maryland, U.S.A., 1,374  
 Barahona, Dominican Republic, 294  
 Barranquilla, Colombia, 705  
 Basse-Terre, Guadeloupe, 314  
 Basseterre, Saint Kitts and Nevis, 214  
 Belem, Brazil, 1,692  
 Boca de Tanamo, Cuba, 549  
 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  
 Cap-Haitien, Haiti, 372  
 Cape Town, South Africa, 5,772  
 Cardenas, Cuba, 917  
 Cartagena, Colombia, 782  
 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  
 Colon, Panama, 993  
 Corunna, Spain, 3,255  
 Dakar, Senegal, 2,812  
 Elizabeth Harbor, Bahamas, 642  
 Fernandina, Florida, U.S.A., 1,115  
 Fort de France, Martinique, 385  
 Fort Liberté, Haiti, 373  
 Freetown, Sierra Leone, 3,141  
 Funchal, Madeira Island, 2,773

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

Georgetown, Guyana, 876  
 Guantanamo, Cuba (via north of Hispaniola), 537  
 Halifax, Canada, 1,580  
 Hamilton, Bermuda, 856  
 Hopetown, Bahamas, 802  
 Horta, Azores, 2,294  
 Ivittuut, 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 Guaira, Venezuela, 506  
 La Habana, Cuba, 978  
 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, 157  
 Ponta Delgada, Azores, 2,412  
 Port au Prince, Haiti, 552  
 Port Castries, St. Lucia (via Virgin Passage and west of St. Croix), 418  
 Port of Spain, Trinidad, 574  
 Portland, Maine, U.S.A., 1,531  
 Portsmouth, New Hampshire, U.S.A., 1,507  
 Puerto Cortes, Honduras, 1,284  
 Puerto Manati, Cuba, 639  
 Puerto Padre, Cuba, 625  
 Puerto Vita, Cuba, 592  
 Recife, Brazil (via outside all islands), 2,609  
 Rio de Janeiro, Brazil, 3,652  
 Rio Haina, Dominican Republic, 249  
 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  
 St. John, Canada, 1,614  
 St. John's, Antigua, 265  
 St. Pierre, Martinique, 374  
 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, 1,525

**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  
 Puntarenas, Costa Rica, 171  
 Salina Cruz, Mexico, 619

**SAN LORENZO, ARGENTINA**  
 (32°44'00"S., 60°43'32"W.) Add  
 238 miles to Buenos Aires  
 distances or add 202 miles via the  
 Miter Channel.

**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 LORENZO, VENEZUELA**  
 (9°47'00"N., 71°05'30"W.) Add  
 95 miles to Maracaibo distances.

**SAN NICOLAS, ARGENTINA**  
 (33°19'30"S., 60°13'00"W.) Add  
 188 miles to Buenos Aires  
 distances.

**SAN NICOLAS, PERU**  
 (15°14'42"S., 75°14'26"W.) to:

**Junction Points\***

Panama, Panama, 1,573  
 Punta Arenas, Chile, 2,469  
 Torres Strait, Australia, 8,209  
 Wilson Promontory, Australia (via  
 30°S.), 8,119  
 Wilson Promontory, Australia (via  
 40°S.), 7,099

**Ports**

Antofagasta, Chile, 571  
 Arica, Chile, 350  
 Callao, Peru, 230  
 Corinto, Nicaragua, 1,837  
 Pisco, Peru, 135  
 Salina Cruz, Mexico, 902  
 Supe Bay, Peru, 314  
 Talcahuano, Chile, 1,300  
 Valparaiso, Chile, 1,089

**SAN PEDRO, ARGENTINA**  
 (33°42'00"S., 59°39'00"W.) Add  
 151 miles to Buenos Aires  
 distances.

**SAN PEDRO, IVORY COAST**  
 (4°44'00"N., 6°36'24"W.) to:

**Junction Points\***

Bishop Rock, England, 3,397

Cape of Good Hope, South Africa,  
 2,735

Fastnet Rock, Ireland, 3,413  
 Grand Banks South, 3,552  
 Ile d'Ouessant, France, 3,344  
 Inishtrahull, Ireland, 3,677  
 Panama, Panama, 4,555  
 Pentland Firth, Scotland, 4,236  
 Punta Arenas, Chile, 4,811  
 Strait of Gibraltar, 3,091  
 Straits of Florida, 4,727  
 Yucatan Channel, 4,876

**Ports**

Abidjan, Ivory Coast, 157  
 Accra, Ghana, 398  
 Bordeaux, France, 3,160  
 Cape Town, South Africa, 2,718  
 Dakar, Senegal, 994  
 Freetown, Sierra Leone, 532  
 Galway, Ireland, 3,356  
 Lagos, Nigeria, 616  
 Monrovia, Liberia, 312  
 Natal, Brazil, 1,826  
 New York, New York, U.S.A.,  
 4,284  
 Nouadhibou, Mauritania, 1,368  
 Port of Spain, Trinidad, 3,302  
 Tangier, Morocco, 2,304

**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

**SAN SEBASTIAN, SPAIN**  
 (43°19'00"N., 1°59'30"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 353  
 Strait of Gibraltar, 892

**Ports**

Bordeaux, France, 210  
 El Ferrol del Caudillo, Spain, 302  
 Horta, Azores, 957

**SAN VICENTE, CHILE**  
 (36°43'55"S., 73°10'00"W.) to:

**Junction Points\***

Panama, Panama, 2,800  
 Punta Arenas, Chile, 1,210  
 Wilson Promontory, Australia (via  
 Cook Strait), 6,485

**Ports**

Antofagasta, Chile, 791  
 Arica, Chile, 1,104  
 Corinto, Nicaragua, 3,063  
 Kodiak, Alaska, 6,943  
 Pisco, Peru, 1,428  
 Wellington, New Zealand, 4,878  
 Yokohama, Japan, 9,248

**SAN-MEN WEN, CHINA**  
 (29°03'00"N., 121°45'00"E.) See  
 Sanmen Wen, China.

**SAN-YA CHIANG, CHINA**  
 (18°14'00"N., 109°26'00"E.) See

Sanya Gang, China.

**SANDAKAN, SABAH**  
 (5°50'00"N., 118°07'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via  
 Makassar Strait), 1,010  
 Panama, Panama (via Surigao  
 Strait), 9,618  
 Singapore (via Balabac Strait),  
 1,130  
 Selat Sunda, Indonesia (via  
 Balabac Strait), 1,368  
 Torres Strait, Australia, 1,853

**Ports**

Honolulu, Hawaii, U.S.A., 5,044  
 Jolo, Philippines, 180  
 Victoria, Sabah, 412  
 Zamboanga Philippines, 251

**SANDEFJORDEN, 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

**SANKT-PETERBURG, RUSSIA**  
 (59°55'00"N., 30°15'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
 Entrance), Germany, 779  
 Skagens Odde, Denmark (via Store  
 Baelt), 971  
 Skagens Odde, Denmark (via The  
 Sound), 841

**Ports**

Hango, Finland, 233  
 Helsinki, Finland, 172  
 Karlskrona, Sweden, 563  
 Kobenhavn, Denmark, 917  
 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

**SANMEN WEN, CHINA**  
 (29°03'00"N., 121°45'00"E.) to:

**Ports**

Chi-lung, Taiwan, 248  
 Hong Kong, China, 650  
 Incheon, South Korea, 628  
 Nagoya, Japan, 143  
 Qingdao, China, 528  
 Shanghai, China, 270

**SAINT ANTIOCO PONTI, SARDINIA**  
 (39°03'12"N., 8°28'12"E.) to:

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

## 98 SANTA BARBARA, CALIFORNIA, U.S.A.

**Junction Points\***

Port Said, Egypt, 1,282  
Strait of Gibraltar, 715

**Ports**

Banzart, Tunisia, 132  
Nice, France, 310  
Palma, Balearic Islands, 298

**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  
Esmeraldas, Ecuador, 3,077  
Guayaquil, Ecuador, 3,249  
Guaymas, Mexico, 1,225  
Iquique, Chile, 4,355  
Lota, Chile, 5,018  
Pisco, Peru, 3,832  
Puntarenas, Costa Rica, 2,566  
Salina Cruz, Mexico, 1,870  
San Jose, Guatemala, 2,130  
Talcahuano, Chile, 5,006  
Valparaiso, Chile, 4,875

**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, South Africa, 4,453  
Ile d'Ouessant, France, 1,320  
Inishtrahull, Ireland, 1,704  
Montreal, Canada, 3,009  
Pentland Firth, Scotland, 1,952  
Punta Arenas, Chile, 5,690  
Strait of Gibraltar, 697  
Straits of Florida, 3,614

**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, 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, Madeira Island, 258  
Guantanamo, Cuba, 3,265  
Halifax, Canada, 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  
Oporto, Portugal, 849  
Philadelphia, Pennsylvania, U.S.A., 3,062  
Port of Spain, Trinidad, 2,804  
Porto Grande, Sao Vicente, Cape Verde Islands, 849  
Rio de Janeiro, Brazil, 3,518  
San Juan, Puerto Rico, 2,820  
St. John's, Canada, 2,053  
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  
La 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 LUCIA, CUBA**

(22°42'00"N., 83°58'30"W.) to:

**Junction Points\***

Straits of Florida, 120  
Yucatan Channel, 99

**Ports**

Kingston, Jamaica, 651  
Nuevit, 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

**Ports**

Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,755  
Santo Domingo, Dominican Republic, 504  
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,372  
Veracruz, Mexico, 1,537

**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  
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,588

**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

**SANTAN TERMINAL, INDONESIA**

(0°06'00"S., 117°32'00"E.) to:

**Junction Points\***

Honshu, Japan, 2,543  
Selat Lombok, Indonesia, 586  
Singapore (via Makassar and Karimata Straits), 1,387  
Selat Sunda, Indonesia, 1,008  
Selat Wetar, Indonesia, 914

**Ports**

Davao, Philippines, 741  
Hong Kong, China, 1,502  
Honolulu, Hawaii, U.S.A., 5,112  
Makassar, Celebes, 422  
Manila, Philippines, 952  
Sorong, New Guinea, 953

**SANTANA, BRAZIL**

(0°04'09"S., 51°06'44"W.) to:

**Junction Points\***

Bishop Rock, England, 3,782  
Cape of Good Hope, South Africa, 4,546  
Fastnet Rock, Ireland, 3,754  
Grand Banks South, 2,595  
Ile d'Ouessant, France, 3,776  
Inishtrahull, Ireland, 3,980  
Montreal, Canada, 3,648  
Panama, Panama, 2,253  
Pentland Firth, Scotland, 4,228  
Punta Arenas, Chile, 4,545  
Strait of Gibraltar, 3,226  
Straits of Florida, 2,710  
Yucatan Channel, 2,722

**Ports**

Bordeaux, France, 3,874  
Buenos Aires, Argentina, 3,534  
Dakar, Senegal, 2,039  
Halifax, Canada, 2,831  
Kingston, Jamaica, 2,091  
Lisboa, Portugal, 2,527  
Natal, Brazil, 1,220  
New York, New York, U.S.A., 2,924

**SANTANDER, SPAIN**

(43°27'30"N., 3°48'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 323

**Ports**

Barranquilla, Colombia, 753  
Cienfuegos, Cuba, 149  
Santiago de Cuba, Cuba, 300

**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 Buoy), 1,545  
Brunswick, Georgia, U.S.A., 926  
Casilda, Cuba, 288  
Charleston, South Carolina, U.S.A. (via Crooked Island Passage), 952  
Cienfuegos, 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  
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  
La Habana, Cuba, 650  
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), 1,334  
Ponce, Puerto Rico, 587  
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), 951  
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 Rock, Ireland, 3,491  
Inishtrahull, Ireland (via Mona Passage), 3,641  
Montreal, Canada (via Mona

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

Passage), 2,579  
 Panama, Panama, 846  
 Pentland Firth, Scotland, 3,820  
 Strait of Gibraltar, 3,549  
 Straits of Florida (via Mona Passage), 1,036  
 Straits of Florida (via Windward Passage), 986  
 Yucatan Channel, 929

**Ports**

Baltimore, Maryland, U.S.A., 1,451  
 Barranquilla, Colombia, 538  
 Belem, Brazil, 1,866  
 Belize, Belize, 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, South Africa, 5,948  
 Cardenas, Cuba, 887  
 Carmen, Mexico, 1,437  
 Cartagena, Colombia, 610  
 Charleston, South Carolina, U.S.A., 1,190  
 Charlotte Amalie, Virgin Islands, 300  
 Cienfuegos, Cuba, 716  
 Colon, Panama, 802  
 Dakar, Senegal, 3,036  
 Guantanamo, Cuba, 397  
 Halifax, Canada, 1,709  
 Hamilton, Bermuda, 992  
 Jacksonville, Florida, U.S.A., 1,166  
 Key West, Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 936  
 Kingston, Jamaica, 430  
 La Guaira, Venezuela, 502  
 La Habana, Cuba (via Windward Passage), 946  
 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, Guadeloupe, 520  
 Ponce, Puerto Rico, 196  
 Ponta Delgada, Azores, 2,620  
 Port au Prince, Haiti, 453  
 Port Castries, St. Lucia, 578  
 Port of Spain, Trinidad, 681  
 Puerto Cabello, Venezuela, 492  
 Rio de Janeiro, Brazil, 3,829  
 Romana, Dominican Republic, 61  
 San Juan del Norte, Nicaragua, 924  
 San Juan, Puerto Rico, 232  
 Santa Marta, Colombia, 504  
 Santiago de Cuba, Cuba, 429  
 Savannah, Georgia, U.S.A., 1,204  
 St. John, Canada, 1,733  
 Sydney, Canada, 1,867  
 Tuxpan, Mexico, 1,624  
 Veracruz, Mexico, 1,596  
 Willemstad, Curacao, 397  
 Wilmington, North Carolina, U.S.A., 1,210

**SANTO TOMAS DE CASTILLA, GUATEMALA**  
 (15°42'30"N., 88°37'00"W.) Add  
 2 miles to Puerto Barrios.

**SANTOS, BRAZIL**  
 (23°56'00"S., 46°19'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 5,002  
 Montreal, Canada, 5,544  
 Panama, Panama, 4,609  
 Strait of Gibraltar, 4,378  
 Straits of Florida, 4,799

**Ports**

Bahia Blanca, Argentina, 1,292  
 Baltimore, Maryland, U.S.A., 5,031  
 Boston, Massachusetts, U.S.A., 4,928  
 Buenos Aires, Argentina, 1,006  
 Cape Town, South Africa, 3,409  
 Charleston, South Carolina, U.S.A., 4,908  
 Colon, Panama, 4,476  
 Fernando de Noronha, 1,560  
 Guiria, Venezuela, 3,467  
 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

**SANYA GANG, CHINA**  
 (18°14'00"N., 109°26'00"E.) to:

**Ports**

Haiphong, Vietnam, 253  
 Ho Chi Minh, Vietnam, 624  
 Hong Kong, China, 391  
 Kao-hsiung Kang, Taiwan, 682  
 Manila, Philippines, 714

**SAO FRANCISCO DO SUL, BRAZIL**  
 (26°13'32"S., 48°38'22"W.) to:

**Junction Points\***

Bishop Rock, England, 5,210  
 Cape of Good Hope, South Africa, 3,445  
 Fastnet Rock, Ireland, 5,236  
 Grand Banks South, 4,613  
 Ile d'Ouessant, France, 5,177  
 Inishtrahull, Ireland, 5,514  
 Panama, Panama, 4,681  
 Pentland Firth, Scotland, 5,799  
 Punta Arenas, Chile, 1,984  
 Strait of Gibraltar, 4,559  
 Straits of Florida, 5,066  
 Yucatan Channel, 5,073

**Ports**

Buenos Aires, Argentina, 950  
 Cape Town, South Africa, 6,671  
 Charleston, South Carolina, U.S.A., 5,103  
 Colon, Panama, 4,671  
 Maldonado, Uruguay, 709

Monrovia, Liberia, 3,096  
 New York, New York, U.S.A., 5,205  
 Rio Grande, Brazil, 483

**SAO SEBASTIAO, BRAZIL**  
 (23°48'18"S., 45°22'11"W.) to:

**Junction Points\***

Bishop Rock, England, 5,027  
 Cape of Good Hope, South Africa, 3,349  
 Fastnet Rock, Ireland, 5,051  
 Grand Banks South, 4,441  
 Ile d'Ouessant, France, 4,994  
 Inishtrahull, Ireland, 5,326  
 Panama, Panama, 4,582  
 Pentland Firth, Scotland, 5,597  
 Punta Arenas, Chile, 2,112  
 Strait of Gibraltar, 4,371  
 Straits of Florida, 4,836  
 Yucatan Channel, 4,869

**Ports**

Abidjan, Ivory Coast, 3,015  
 Bahia Blanca, Argentina, 1,371  
 Cape Town, South Africa, 3,355  
 Colon, Panama, 4,590  
 Dakar, Senegal, 7,380  
 Maldonado, Uruguay, 5,269  
 New York, New York, U.S.A., 5,044  
 Recife, Brazil, 1,250  
 San Julian, Argentina, 1,861

**SAO TOME, SAO TOME, GULF OF GUINEA**  
 (0°21'00"N., 6°45'00"E.) to:

**Ports**

Boma, Congo, 563  
 Douala, Cameroon, 285  
 Lagos, Nigeria, 422  
 Pointe Noire, Congo, 436  
 Porto Grande, Cape Verde Islands, 2,208

**SARANDE, ALBANIA**  
 (39°52'00"N., 20°00'30"E.) to:

**Junction Points\***

Port Said, Egypt, 863  
 Strait of Gibraltar, 1,311

**Ports**

Piraeus, Greece (via Corinth Canal), 253  
 Split, Croatia, 293  
 Taranto, Italy, 154

**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  
 Gunsan, South Korea, 343  
 Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,009  
 Itozakicho, Japan, 271  
 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

**SAVANNAH, GEORGIA, U.S.A.**  
 (32°05'00"N., 81°06'00"W.) to:

**Junction Points\***

Montreal, Canada, 2,078  
 Panama, Panama, 1,606  
 Pentland Firth, Scotland, 3,613  
 Punta Arenas, Chile, 6,930  
 Straits of Florida, 603

**Ports**

Banes, Cuba (via Crooked Island Passage), 801  
 Bocas del Toro, Panama (via Crooked Island Passage), 1,637  
 Bridgetown, Barbados, 1,646  
 Buenos Aires, Argentina (via north of English Bank), 5,854  
 Cape Town, South Africa, 6,864  
 Cartagena, Colombia (via Crooked Island Passage), 1,442  
 Charlotte Amalie, Virgin Islands, 1,210  
 Charlottetown, Canada, 1,386  
 Colon, Panama, 1,563  
 Halifax, Canada, 1,164  
 Kingston, Jamaica (via Crooked Island Passage), 1,063  
 La Guaira, Venezuela (via Mona Passage), 1,575  
 La Habana, Cuba, 606  
 Las Palmas, Canary Islands, 3,409  
 Limon, Costa Rica (via Crooked Island 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), 1,012  
 Port Castries, St. Lucia, 1,548  
 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  
 Salvador, Brazil, 4,072  
 San Juan, Puerto Rico, 1,153  
 Santa Marta, Colombia (via Crooked Island Passage), 1,372  
 Santiago de Cuba (via Crooked Island Passage), 951  
 Santo Domingo, Dominican Republic, 1,204  
 Santos, Brazil, 4,940  
 St. John, Canada (via Nantuckett Light Buoy), 1,113  
 Tampico, Mexico, 1,432  
 Willemstad, Curacao, 1,444

**SAVONA, ITALY**  
 (44°18'44"N., 8°29'29"E.) to:

**Junction Points\***

Port Said, Egypt, 1,437  
 Strait of Gibraltar, 852

**Ports**

Alexandria, Egypt, 1,326

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



**100 SAYDA, LEBANON**

Algiers, Algeria, 518  
 Alicante, Spain, 549  
 Ancona, Italy, 1,028  
 Annaba, Algeria, 451  
 Banghazi, Libya, 922  
 Banzart, Tunisia, 440  
 Barcelona, Spain, 341  
 Bari, Italy, 820  
 Beirut, Lebanon, 1,519  
 Brindisi, Italy, 762  
 Cagliari, Sardinia, 362  
 Cartagena, Spain, 601  
 Ceuta, Morocco, 834  
 Gibraltar, 835  
 Haifa, Israel, 1,515  
 Iraklion, Kriti, 1,002  
 Istanbul, Turkey (south of Greece), 1,301  
 Istanbul, Turkey (via Corinth Canal), 1,260  
 Izmir, Turkey (south of Greece), 1,147  
 Izmir, Turkey (via Corinth Canal), 1,106  
 Malaga, Spain, 783  
 Marseille, France, 189  
 Messina, Sicily, 496  
 Napoli, Italy, 350  
 Odessa, Ukraine (south of Greece), 1,650  
 Odessa, Ukraine (via Corinth Canal), 1,608  
 Oran, Algeria, 672  
 Palermo, Sicily, 434  
 Palma, Balearic Islands, 433  
 Piraeus, Greece (south of Greece), 988  
 Piraeus, Greece (via Corinth Canal), 906  
 Rijeka, Croatia, 1,095  
 Sibenik, Croatia, 969  
 Siracusa, Sicily, 567  
 Split, Croatia, 954  
 Tarabulus, Libya, 722  
 Taranto, Italy, 715  
 Thessaloniki, Greece (south of Greece), 1,196  
 Thessaloniki, Greece (via Corinth Canal), 1,154  
 Toulon, France, 156  
 Trieste, Italy, 1,128  
 Tunis, Tunisia, 475  
 Valencia, Spain, 497  
 Valletta, Malta, 588  
 Venezia, Italy, 1,138  
 Volos, Greece (south of Greece), 1,137  
 Volos, Greece (via Corinth Canal), 1,096

**SAYDA, LEBANON**  
 (33°32'02"N., 35°19'49"E.) to:

**Junction Points\***

Port Said, Egypt, 205  
 Strait of Gibraltar, 2,035

**Ports**

Haifa, Israel, 49  
 Marseille, France, 1,596  
 Sete, France, 1,655  
 Venezia, Italy (south of Greece), 1,382  
 Venezia, Italy (via Corinth Canal), 1,354

**SCAPA FLOW, ORKNEY ISLANDS, UNITED KINGDOM**  
 (58°53'00"N., 3°05'00"W.) to:

**Junction Points\***

Bishop Rock, England, 640  
 Ile d'Ouessant, France, 632  
 Nord-Ostsee-Kanal (East Entrance), Germany, 569  
 Pentland Firth, Scotland, 16  
 Skagens Odde, Denmark, 454

**Ports**

Amsterdam, Netherlands, 485  
 Antwerp, Belgium, 573  
 Bergen, Norway, 286  
 Calais, France, 526  
 Emden, Germany, 490  
 Oslo, Norway, 532

**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

**SEARSPORT, MAINE, U.S.A.**  
 (44°25'39"N., 68°53'58"W.) to:

**Junction Points\***

Grand Banks South, 865  
 Montreal, Canada, 1,360  
 Panama, Panama, 2,260  
 Punta Arenas, Chile, 7,111  
 Straits of Florida, 1,475

**Ports**

Cape Town, South Africa, 6,708  
 Colon, Panama, 2,245  
 Halifax, Canada, 306  
 Maracaibo, Venezuela, 2,073  
 Rio de Janeiro, Brazil, 4,973  
 San Juan, Puerto Rico, 1,564  
 Yarmouth, Canada, 2,704

**SEATTLE, WASHINGTON, U.S.A.**  
 (47°3'00"N., 122°22'00"W.) to:

**Junction Points\***

Panama, Panama, 4,020  
 Punta Arenas, Chile, 6,964  
 Singapore, 7,062  
 Wilson Promontory, Australia, 7,181

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia (via La Perouse Strait and Proliv Kruzenshtrerna), 4,108  
 Amapala, Honduras, 3,361  
 Anchorage, Alaska, U.S.A., 1,427  
 Apia, Samoa, 4,626  
 Apra, Guam, 4,948  
 Attu Island, Alaska, U.S.A. (via Unimak Pass), 2,422  
 Auckland, New Zealand, 6,170  
 Avarua, Cook Islands, 4,700  
 Brisbane, Australia, 6,471  
 Callao, Peru, 4,764

Canton, Phoenix Islands, 4,049  
 Cordova, Alaska, U.S.A., 1,216  
 Dagu, China (via La Perouse Strait and north of Aleutian Islands), 5,285  
 Dalian, China (via La Perouse Strait and north of Aleutian Islands), 5,127  
 Dutch Harbor, Alaska, U.S.A., 1,707  
 Enderbury Island, Phoenix Islands, 4,047  
 Funafuti, Tuvalu, 4,640  
 Guayaquil, Ecuador, 4,326  
 Hakodate, Japan, 3,941  
 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), 4,534  
 Kodiak, Alaska, U.S.A., 1,257  
 Levuka, Fiji Islands, 5,120  
 Manila, Philippines (via Balintang Channel), 5,630  
 Melbourne, Australia, 7,332  
 Midway Island, 2,817  
 Nagasaki, Japan (via Tsugaru-Kaikyo and north of Aleutian Islands), 4,705  
 Nagasaki, Japan (via Tsugaru-Kaikyo and south of Aleutian Islands), 4,735  
 Naknek, Alaska, U.S.A., 2,020  
 Nanaimo, Canada, 132  
 New Westminster, Canada, 126  
 Nikolayevsk-Na-Amure, Russia (south of Aleutian Islands), 3,823  
 Nikolayevsk-Na-Amure, Russia (via Unimak Pass), 3,748  
 Nome, Alaska, U.S.A., 2,288  
 Noumea, New Caledonia, 5,760  
 Ocean Island, 4,611  
 Pago Pago, American Samoa, 4,611  
 Papeete, French Polynesia, 4,296  
 Petersburg, Alaska, U.S.A., 771  
 Petropavlovsk-Kamchatskiy, Russia (via Unimak Pass), 2,939  
 Ponape, Caroline Islands, 4,696  
 Port Darwin, Australia, 6,892  
 Prince Rupert, Canada, 577  
 Rabaul, Papua New Guinea, 5,509  
 Seward, Alaska, U.S.A. (via Strait of Juan de Fuca), 1,232  
 Shanghai, China (via Tsugaru Strait), 5,094  
 Shimoneki, Japan (via Tsugaru Strait), 4,604  
 Sitka, Alaska, U.S.A., 806  
 Skagway, Alaska, U.S.A., 934  
 Surabaya, Indonesia, 7,162  
 Suva, Fiji Islands, 5,162  
 Sydney, Australia, 6,810  
 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, Russia (north of Aleutian Islands), 4,210  
 Vladivostok, Russia (via Tsugaru

Kaikyo and composite sailing), 4,366  
 Wake Island, 3,820  
 Weihai, China (via La Perouse Strait, north of Aleutian Islands and via Unimak Pass), 5,054  
 Weihai, China (via Tsugaru-Kaikyo and north of Aleutian Islands), 5,059  
 Weihai, 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  
 Xiamen, China (via La Perouse Strait and north of Aleutian Islands), 5,463  
 Xiamen, China (via Osumi Kaikyo and south of Aleutian Islands), 5,515  
 Xiamen, China (via Tsugaru-Kaikyo and north of Aleutian Islands), 5,464  
 Xiamen, China (via Tsugaru-Kaikyo and south of Aleutian Islands), 5,494  
 Yakutat, Alaska, U.S.A., 1,003  
 Yokohama, Japan (north of Aleutian Islands), 4,245

**SELAT LOMBOK, INDONESIA\***  
 (8°50'00"S., 115°43'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,461  
 Cape Leeuwin, Australia, 1,571  
 Honshu, Japan, 3,059  
 Port Said, Egypt, 5,892  
 Singapore, 963  
 Selat Sunda, Indonesia (north of Java), 677  
 Selat Wetar, Indonesia, 727

**Ports**

Ambon, Indonesia, 819  
 Balikpapan, Kalimantan, Indonesia, 472  
 Bandjermasin, Kalimantan, Indonesia, 357  
 Belawan, Indonesia, 1,342  
 Bunbury, Australia, 1,510  
 Calcutta, India, 2,614  
 Calicut, India, 2,916  
 Cebu, Philippines, 1,278  
 Flying Fish Cove, Christmas Island, 603  
 Fremantle, Australia, 1,440  
 Geraldton, Australia, 1,242  
 Ho Chi Minh, Vietnam, 1,408  
 Hong Kong, China (via Linapacan Strait), 2,029  
 Iloilo, Philippines, 1,247  
 Incheon, South Korea, 2,885  
 Jakarta, Indonesia, 615  
 Kakinada, India, 2,567  
 Kuching, Sarawak, 974  
 Madras, India, 2,559  
 Makassar, Sulawesi, 339  
 Malacca, Malaysia, 1,091  
 Manila, Philippines (via Mindoro Strait, Cuyo West Pass, Sibutu Passage, and Makassar Strait), 1,514  
 Mogpo, South Korea, 2,725  
 Nampo, North Korea, 2,946  
 Port Darwin, Australia (south of Pulau Roti), 926

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



Port Kembla, Australia, 3,388  
 Port Refuge, Cocos Islands, 1,132  
 Sabang, Indonesia, 1,575  
 Semarang, Indonesia, 416  
 Shanghai, China (via Pai-chieh Hsia, Steep Island Passage, east of Taiwan, Mindoro Strait, and Sibutu Passage), 2,577  
 Surabaya, Indonesia (north of Madura), 275  
 Tarakan, Kalimantan, Indonesia, 830  
 Tjilatjap, Indonesia, 413  
 Tjirebon, Indonesia, 503  
 Whyalla, Australia, 2,782  
 Zamboanga, Philippines, 1,047

**SELAT SUNDA, INDONESIA\***  
 (6°04'00"S., 105°50'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,164  
 Cape Leeuwin, Australia, 1,815  
 Honshu, Japan, 3,171  
 Selat Lombok, Indonesia (north of Java), 677  
 Port Said, Egypt (via Eight Degree Channel), 5,224  
 Port Said, Egypt (via One and Half Degree Channel), 5,335  
 Singapore (via Selat Bangka and Selat Berhala), 532  
 Selat Wetar, Indonesia, 1,330

**Ports**

Aden, Yemen (via One and Half Degree Channel), 3,935  
 Aleksandrovsk-Sakhalinskiy, Russia, 3,961  
 Balikpapan, Kalimantan, Indonesia, 837  
 Bandjermasin, Kalimantan, Indonesia, 775  
 Bangkok, Thailand, 1,292  
 Belawan, Indonesia, 870  
 Bombay, India, 2,664  
 Busan, South Korea, 2,855  
 Calcutta, India, 2,140  
 Chang-kan, China, 1,588  
 Colombo, Sri Lanka, 1,781  
 Flying Fish Cove, Christmas Island, Line Islands, 281  
 Fremantle, Australia, 1,691  
 Geraldton, Australia, 1,494  
 Hong Kong, China, 1,807  
 Incheon, South Korea, 2,913  
 Jakarta, Indonesia, 77  
 Kompong Som, Camb (via Los Angeles, California, U.S.A.), 1,096, (via Makassar Strait), 7,976  
 Makassar, Sulawesi, 861  
 Malacca, Malaysia, 619  
 Manila, Philippines, 1,578  
 Mogpo, South Korea, 2,760  
 Nampo, North Korea, 2,974  
 Palembang, Indonesia, 362  
 Petropavlovsk-Kamchatskiy, Russia, 4,574  
 Port Adelaide, Australia, 2,980  
 Port Darwin, Australia (south of Java), 1,623  
 Port Refuge, Cocos Islands, 647  
 Qui Nhon, Vietnam, 1,241  
 Rapid Bay, Australia, 2,946  
 Sabang, Indonesia, 1,103  
 Seletar, Malaysia, 533  
 Semarang, Indonesia, 297  
 Shanghai, China (via Pai-chieh

Hsia, Steep Island Pass, west of Macclesfield Bank, east of South Natuna Island and through Selat Gaspar), 2,535  
 Simons Bay, South Africa, 5,058  
 Surabaya, Indonesia, 450  
 Tandjung Uban, Indonesia, 502  
 Tarakan, Indonesia, 1,191  
 Telukbayur, Indonesia, 488  
 Tjilatjap, Indonesia, 345  
 Tjirebon, Indonesia, 211  
 Victoria, Sabah, 948  
 Vladivostok, Russia, 3,357  
 Weonsan, North Korea, 3,161  
 Zhenjiang, China, 1,710

**SELAT WETAR, INDONESIA\***  
 (8°19'00"S., 127°27'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 6,768  
 Cape Leeuwin, Australia, 1,954  
 Honshu, Japan, 2,838  
 Selat Lombok, Indonesia, 727  
 Singapore (via Selat Riouw and Selat Karimata), 1,587  
 Sunda Strait, Indonesia, 1,330  
 Torres Strait, Australia, 881

**Ports**

Balikpapan, Kalimantan, Indonesia, 870  
 Busan, South Korea (via Selat Manipa and Molucca Passage), 2,632  
 Incheon, South Korea (via Selat Manipa and Molucca Passage), 2,767  
 Jakarta, Indonesia, 1,266  
 Lingkas, Indonesia, 1,161  
 Makassar, Sulawesi, 614  
 Mogpo, South Korea (via Molucca Passage), 2,632  
 Nampo, North Korea (via Selat Manipa and Molucca Passage), 2,861  
 Petropavlovsk-Kamchatskiy, Russia (via Selat Manipa and Dampier Strait), 4,106  
 Port Darwin, Australia (west of Bathurst Island), 326  
 Semarang, Indonesia, 1,067  
 Shanghai, China (via Basilan Strait, Mindoro Strait, east of Taiwan, and Pai-chieh Hsia), 2,553  
 Surabaya, Indonesia (north of Madura), 928  
 Surabaya, Indonesia (south of Madura), 880  
 Vinh Cam Ranh, Vietnam, 2,106  
 Vladivostok, Russia (via Selat Manipa), 3,133  
 Weonsan, North Korea (via Selat Manipa and Molucca Passage), 3,100  
 Wyndham, Australia, 431  
 Zamboanga, Philippines (via Selat Manipa and Selat Bangka), 995

**SEKONDI, GHANA**  
 (4°56'20"N., 1°42'00"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 3,424

**Ports**

Horta, Azores, 2,838  
 Lagos, Nigeria, 317  
 Monrovia, Liberia, 599  
 Pointe Noire, Congo, 997

**SEMARANG, INDONESIA**  
 (6°56'00"S., 110°25'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 416  
 Selat Sunda, Indonesia, 267  
 Selat Wetar, Indonesia, 1,067

**Ports**

Apra, Guam, 2,464  
 Jakarta, Indonesia, 236  
 Makassar, Sulawesi, 596  
 Surabaya, Indonesia, 196

**SENIPAH OIL TERMINAL, INDONESIA**  
 (1°03'25"S., 117°13'00"E.) to:

**Junction Points\***

Honshu, Japan, 2,615  
 Selat Lombok, Indonesia, 476  
 Panama, Panama (via north of Sulawesi), 10,464  
 Singapore (via Makassar and Karimata Straits), 815  
 Sunda Strait, Indonesia, 834  
 Tsugaru-Kaikyo, Japan, 2,963  
 Selat Wetar, Indonesia, 858

**Ports**

Ambon, Indonesia, 917  
 Dairen, China, 2,639  
 Hong Kong, China, 1,524  
 Manila, Philippines, 1,007  
 Midway Island (via San Bernardino Strait), 4,273  
 Weonsan, Korea, 2,759  
 Zamboanga, Philippines, 562

**SEPT ILES, CANADA**  
 (50°11'07"N., 66°22'18"W.) to:

**Junction Points\***

Bishop Rock, England (via Strait of Belle Isle), 2,273  
 Cape of Good Hope, South Africa, 6,785  
 Grand Banks South, 818  
 Ile d'Ouessant, France (via Strait of Belle Isle), 2,338  
 Inishtrahull, Ireland (via Strait of Belle Isle), 2,135  
 Montreal, Canada, 409  
 Panama, Panama, 3,045  
 Pentland Firth, Scotland (via Strait of Belle Isle), 2,230  
 Punta Arenas, Chile, 7,188  
 Straits of Florida, 2,250

**Ports**

Boston, Massachusetts, U.S.A., 1,035  
 La Guaira, Venezuela, 2,630  
 New York, New York, U.S.A., 1,191  
 Portland, Maine, U.S.A., 1,002  
 San Juan, Puerto Rico, 2,132  
 St. John's, Canada, 699  
 Yarmouth, Canada, 842

**SETE, FRANCE**  
 (43°24'05"N., 3°42'07"E.) to:

**Junction Points\***

Port Said, Egypt, 1,577  
 Strait of Gibraltar, 684

**Ports**

Augusta, Sicily, 703  
 Cagliari, Sardinia, 402  
 Cannes, France, 171  
 Genova, Italy, 266  
 Istanbul, Turkey (south of Greece), 1,442  
 Iskenderun, Turkey, 1,675  
 Istanbul, Turkey (via Corinth Canal), 1,401  
 Kerch, Ukraine (south of Greece), 1,877  
 Kerch, Ukraine (via Corinth Canal), 1,836  
 Larnaca, Cyprus, 1,579  
 Livorno, Italy, 298  
 Messina, Sicily, 636  
 Napoli, Italy, 515  
 Pula, Croatia, 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\***

Ile d'Ouessant, France, 672  
 Strait of Gibraltar, 287

**Ports**

Bilbao, Spain, 612  
 Casablanca, Morocco, 313  
 Horta, Azores, 939

**SEVERODVINSK, RUSSIA**  
 (64°35'00"N., 39°50'00"E.) Add 2 1/4 miles to Arkhangel'sk distances.

**SEVILLA, SPAIN**  
 (37°23'30"N., 6°00'00"W.) to:

**Junction Points\***

Bishop Rock, England, 973  
 Cape of Good Hope, South Africa, 6,917  
 Fastnet Rock, Ireland, 1,049  
 Grand Banks South, 2,070  
 Ile d'Ouessant, France, 931  
 Inishtrahull, Ireland, 1,299  
 Panama, Panama, 5,244  
 Pentland Firth, Scotland, 1,467  
 Punta Arenas, Chile, 6,950  
 Strait of Gibraltar, 154  
 Straits of Florida, 4,018  
 Yucatan Channel, 4,088

**Ports**

Banjul, Gambia, 1,624  
 Belem, Brazil, 4,838  
 Buenos Aires, Argentina, 5,315  
 Cape Town, South Africa, 4,647  
 Casablanca, Morocco, 240  
 Cristobal, Panama, 4,298  
 Dakar, Senegal, 1,527  
 Funchal, Madeira Island, 611  
 Horta, Azores, 1,073  
 Lisboa, Portugal, 253

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

## 102 SEWARD, ALASKA, U.S.A.

Norfolk, Virginia, U.S.A., 3,303  
Porto Grande, Cape Verde Islands,  
1,589  
Vigo, Spain, 474

**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, China (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, French Polynesia, 4,661  
Petropavlovsk-Kamchatskiy, Russia (via Unimak Pass), 2,065  
Prince Rupert, Canada, 734  
San Francisco, California, U.S.A., 1,701  
Seattle, Washington, U.S.A. (via inside route), 1,428  
Seattle, Washington, U.S.A. (via Strait of Juan de Fuca), 1,232  
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, Russia, 1,173  
St. John's, Canada, 1,690

**SFAX, TUNISIA**  
(34°43'39"N., 10°46'30"E.) to:

### Junction Points\*

Port Said, Egypt, 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, Russia, 1,684

**SHANGHAI, CHINA**  
(31°14'00"N., 121°29'30"E.) to:

### Junction Points\*

Selat Lombok, Indonesia (via Pai-chieh Hsia, Steep Island Pass, east of Taiwan, Mindoro Strait and Sibutu Passage), 2,577  
Panama, Panama (via Osumi Kaikyo), 8,648  
Panama, Panama (via Tsugaru-Kaikyo), 8,566  
Punta Arenas, Chile, 9,827  
Singapore, 2,207  
Selat Sunda, Indonesia (via Pai-chieh Hsia, Steep Island Pass, west of Macclesfield Bank, east of South Natuna Island, and through Selat Gaspar), 2,535  
Selat Wetar, Indonesia, 2,553

### Ports

Aleksandrovsk-Sakhalinskiy, Russia, 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  
Busan, South Korea (north of Cheju Do and via South Channel), 491  
Cebu, Philippines (via South Channel, Pai-chieh Hsia, Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,322  
Chi-lung, Taiwan, 447  
Chimu Wan, Ryukyu Islands, 527  
Dagu, China (via outside islands), 720  
Dalian, China, 560  
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,375  
Dutch Harbor, Alaska, U.S.A. (via Tsugaru-Kaikyo), 3,377  
Guayaquil, Ecuador, 8,872  
Gunsan, South Korea, 457  
Haiphong, Vietnam (via Pai-chieh Hsia, Steep Island Pass and Hainan Strait), 1,285  
Hakodate, Japan, 1,166  
Hankou, China, 592  
Higashi-Iwase, Japan, 966  
Ho Chi Minh, Vietnam (via Bonham Strait), 1,679  
Hong Kong, China (via Pai-chieh Hsia, Steep Island Pass, and Formosa Strait), 831  
Honolulu, Hawaii, U.S.A., 4,336  
Hua-lien Kang, Taiwan, 533  
Iloilo, Philippines (via South Channel, Pai-chieh Hsia, and Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,343  
Incheon, South Korea (via South Channel), 503  
Jakarta, Indonesia, 2,522  
Jaluit, Marshall Islands, 3,138  
Kobe, Japan (via Inland Sea), 789  
Kobe, Japan (via Osumi Kaikyo), 826  
Kodiak, Alaska, U.S.A., 3,967  
Levuka, Fiji Islands, 4,528  
Lianyungang, China, 414  
Lo hsing-ta Mao-ti, China (via South Channel, Pai-chieh Hsia, and Steep Island Pass), 440  
Los Angeles, California, U.S.A. (via Osumi Kaikyo), 5,810

Los Angeles, California, U.S.A. (via Tsugaru-Kaikyo), 5,699  
Maizuru, Japan, 800  
Manila, Philippines (east of Taiwan), 1,156  
Manila, Philippines (via Formosa Strait), 1,166  
Midway Island, 3,184  
Misumi, Japan, 490  
Mogpo, South Korea, 369  
Nagasaki, Japan, 463  
Naha, Ryukyu Islands, 479  
Nakagusuku, Ryukyu Islands, 515  
Nakhodka, Russia, 991  
Nampo, North Korea, 561  
Nikolayevsk-Na-Amure, Russia, 1,742  
Noumea, New Caledonia (via Passé de Dunbea), 4,185  
Otaru, Japan, 1,233  
Pago Pago, American Samoa, 4,794  
Papeete, French Polynesia, 5,907  
Peng-hu Kang, Taiwan, 605  
Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 2,200  
Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,224  
Ponape, Caroline Islands, 2,545  
Port Darwin, Australia, 2,804  
Qingdao, China (via outside islands), 401  
Qinhuangdao, China (via outside islands), 668  
Rabaul, Papua New Guinea, 2,812  
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  
Sanmen Wen, China, 270  
Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,067  
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,242  
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and north of Aleutian Islands), 5,071  
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and south of Aleutian Islands), 5,131  
Shantou, China, 708  
Shimonoseki, Japan, 548  
Sitka, Alaska, U.S.A., 4,446  
Su-ao Kang, Taiwan, 498  
Surabaya, Indonesia, 2,626  
Suva, Fiji Islands, 4,467  
Sydney, Australia (via west of New Ireland), 4,642  
Sydney, Australia (via Vitiaz Strait), 4,636  
Tai-tung Kang, Taiwan, 612  
Tianjin, China (via Chang-shan Shuitao), 740  
Truk, Caroline Islands, 2,261  
Tsuruga, Japan, 823  
Valparaiso, Chile (via Tokara Kaikyo), 10,148  
Vinh Cam Ranh, Vietnam, 1,520  
Vladivostok, Russia (via north of Cheju Do), 998  
Vladivostok, Russia (via south of Cheju Do), 997  
Wakamatsu, Japan, 541  
Wake Island, 2,550  
Weihai, China (via South Channel), 483

Wenzhou, China, 365  
Weonsan, North Korea (via north of Cheju Do and South Channel), 797  
Xiamen, China (via outside islands), 603  
Yantai, China (via outside islands), 523  
Yokohama, Japan (via Naikai), 1,117

**SHARJAH, UNITED ARAB EMIRATES**  
(25°23'00"N., 55°20'48"E.) to:

### Junction Points\*

Cape of Good Hope, South Africa, 4,701  
Cape Leeuwin, Australia, 5,037  
Selat Lombok, Indonesia, 4,288  
Port Said, Egypt, 2,883  
Singapore, 3,422  
Selat Sunda, Indonesia, 3,629  
Torres Strait, Australia (via south of Java), 5,831

### Ports

Aden, Yemen, 1,494  
Al Basrah, Iraq, 518  
Belawan, Indonesia, 3,091  
Calcutta, India, 3,099  
Fremantle, Australia, 4,968  
Penang, Malaysia, 3,131

**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

**SHENGJIN, ALBANIA**  
(41°47'30"N., 19°35'00"E.) to:

### Junction Points\*

Port Said, Egypt, 988  
Strait of Gibraltar, 1,382

### Ports

Ancona, Italy, 297  
Brindisi, Italy, 103  
Split, Croatia, 207

**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

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

**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  
 Bohang, South Korea, 164  
 Cebu, Philippines, 1,547  
 Changjon, North Korea, 337  
 Chongjin, North Korea, 480  
 Dagu, China, 790  
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru-Kaikyo), 2,892  
 Hakodate, Japan, 683  
 Higashi-Iwase, Japan, 466  
 Hong Kong, China, 1,179  
 Honolulu, Hawaii, U.S.A., 3,804  
 Hulu Dao, China, 781  
 Iloilo, Philippines, 1,569  
 Imabari, Japan, 123  
 Incheon, South Korea, 489  
 Itozakicho, Japan, 133  
 Iwakuni, Japan, 93  
 Jakarta, Indonesia, 2,838  
 Kagoshima, Japan (via Bungo Suido), 295  
 Kagoshima, Japan (west of Kyushu), 306  
 Kimchack, North Korea, 421  
 Kobe, Japan, 241  
 Kure, Japan, 116  
 Lo hsing-ta Mao-ti, China, 799  
 Maizuru, Japan, 302  
 Manila, Philippines, 1,424  
 Masan, South Korea, 146  
 Miike, Japan, 222  
 Nagasaki, Japan, 159  
 Nagoya, Japan, 434  
 Naha, Ryukyu Islands, 530  
 Nakhodka, Russia, 552  
 Nanao, Japan, 453  
 Niigata, Japan, 492  
 Pago Pago, American Samoa, 4,440  
 Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 1,732  
 Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 1,739  
 Port Darwin, Australia (via Selat Sele), 2,883  
 Rumoi, Japan, 812  
 Sakaide, Japan, 169  
 Sakata, Japan, 554  
 San Francisco, California, U.S.A. (South of Honshu), 5,007  
 San Francisco, California, U.S.A. (via Tsugaru Strait), 4,915  
 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  
 Shanghai, China, 548  
 Shantou, China, 1,029  
 Shimizu, Honshu, Japan, 469  
 Shimotsui, Japan, 152  
 Shiogama, Japan, 756  
 Sydney, Australia, 4,453

Tokuyama, Japan, 50  
 Tsuruga, Japan, 325  
 Unggi, North Korea, 511  
 Uno, Japan, 177  
 Valparaiso, Chile, 9,709  
 Vladivostok, Russia, 565  
 Weihai, China, 562  
 Xiamen, China, 920  
 Yantai, China, 596  
 Yeosu, South Korea, 182  
 Yokohama, Japan (via Bungo Suido), 545

**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  
 Itozakicho, 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  
 Ile d'Ouessant, France, 245  
 Pentland Firth, Scotland, 633

**Ports**

Le Havre, France, 90  
 London, England, 161  
 Plymouth, England, 162

**SIBENIK, CROATIA**  
(43°44'03"N., 15°53'17"E.) to:**Junction Points\***

Port Said, Egypt, 1,148  
 Strait of Gibraltar, 1,522

**Ports**

Alexandria, Egypt, 1,039  
 Algiers, Algeria, 1,094  
 Alicante, Spain, 1,249  
 Ancona, Italy, 115  
 Annaba, Algeria, 874  
 Banghazi, Libya, 741  
 Banzart, Tunisia, 783  
 Barcelona, Spain, 1,153  
 Bari, Italy, 167  
 Beirut, Lebanon (south of Greece), 1,218  
 Beirut, Lebanon (via Corinth Canal), 1,184  
 Brindisi, Italy, 217  
 Cartagena, Spain, 1,279  
 Ceuta, Morocco, 1,502  
 Dubrovnik, Croatia, 144  
 Genova, Italy, 958  
 Gibraltar, 1,504  
 Haifa, Israel (south of Greece), 1,214

Haifa, Israel (via Corinth Canal), 1,187  
 Iraklion, Kriti, 704  
 Istanbul, Turkey (south of Greece), 1,001  
 Istanbul, Turkey (via Corinth Canal), 902  
 Izmir, Turkey (south of Greece), 846  
 Izmir, Turkey (via Corinth Canal), 747  
 La Spezia, Italy, 923  
 Livorno, Italy, 887  
 Malaga, Spain, 1,452  
 Marseille, France, 1,050  
 Messina, Sicily, 477  
 Napoli, Italy, 648  
 Odessa, Ukraine (south of Greece), 1,349  
 Odessa, Ukraine (via Corinth Canal), 1,250  
 Oran, Algeria, 1,290  
 Palermo, Sicily, 593  
 Malaga, Balearic Islands, 1,112  
 Piraevs, Greece (south of Greece), 687  
 Piraevs, Greece (via Corinth Canal), 548  
 Rijeka, Croatia, 158  
 Savona, Italy, 969  
 Siracusa, Sicily, 498  
 Tarabulus, Libya, 761  
 Taranto, Italy, 326  
 Thessaloniki, Greece (south of Greece), 895  
 Thessaloniki, Greece (via Corinth Canal), 796  
 Toulon, France, 1,018  
 Trieste, Italy, 192  
 Tunis, Tunisia, 771  
 Valencia, Spain, 1,237  
 Valletta, Malta, 575  
 Venezia, Italy, 204  
 Volos, Greece (south of Greece), 836  
 Volos, Greece (via Corinth Canal), 737

**SIBU, MALAYSIA**  
(2°24'00"N., 111°56'00"E.) to:**Junction Points\***

Selat Lombok, Indonesia, 1,063  
 Singapore, 532

**Ports**

Cebu, Philippines (via Balabac Strait), 1,049  
 Ho Chi Minh, Vietnam, 659  
 Kota Kinabalu, Malaysia, 479  
 Masbate, Philippines (via Balabac Strait), 1,151  
 Sandakan, Sabah (via Balabac Strait), 728

**SIDI IFNI, MOROCCO**  
(29°26'00"N., 10°09'00"W.) to:**Junction Points\***

Ile d'Ouessant, France, 1,197  
 Strait of Gibraltar, 472

**Ports**

Porto Grande, Cape Verde Islands, 1,117  
 Rabat, Morocco, 357

**SIMONS BAY, SOUTH AFRICA**  
(34°11'22"S., 18°26'29"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 23  
 Cape Leeuwin, Australia, 4,572  
 Port Said, Egypt, 5,315  
 Selat Sunda, Indonesia, 5,085

**Ports**

Port Elizabeth, South Africa, 391

**SINES, PORTUGAL**  
(38°56'07"N., 8°52'15"W.) to:**Junction Points\***

Bishop Rock, England, 689  
 Cape of Good Hope, South Africa, 8,342  
 Fastnet Rock, Ireland, 766  
 Grand Banks South, 1,864  
 Ile d'Ouessant, France, 625  
 Inishtrahull, Ireland, 1,400  
 Panama, Panama, 4,168  
 Pentland Firth, Scotland, 1,371  
 Punta Arenas, Chile, 6,453  
 Strait of Gibraltar, 2,708  
 Straits of Florida, 3,825

**Ports**

Cadiz, Spain, 266  
 Dakar, Senegal, 1,540  
 Freetown, Sierra Leone, 2,017  
 Funchal, Madeira Island, 544  
 Lisboa, Portugal, 20  
 Ponta Delgada, Azores, 794  
 Santa Cruz de Tenerife, Canary Islands, 727  
 Vigo, Spain, 251

**SINGAPORE \***  
(1°16'00"N., 103°50'00"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 5,579  
 Honshu, Japan, 2,879  
 Selat Lombok, Indonesia, 963  
 Panama, Panama (via San Bernardino Strait), 10,505  
 Port Said, Egypt, 5,035  
 Selat Sunda, Indonesia (via Selat Bangka and Selat Berhala), 532  
 Tsugaru-Kaikyo, Japan, 3,343  
 Selat Wetar, Indonesia (via Selat Riouw and Selat Karimata), 1,587

**Ports**

Ad Damman, Saudi Arabia, 3,681  
 Aden, Yemen, 3,627  
 Akyab, Burma, 1,365  
 Al Basrah, Iraq, 3,916  
 Al Gurdagah, Egypt, 4,754  
 Al Manamah, Bahrain, 3,652  
 Albany, Australia, 2,525  
 Aleksandrovsk-Sakhalinskiy, Russia, 3,608  
 Apra, Guam (via Sulu Sea), 2,585  
 Assab, Ethiopia, 3,769  
 Balikpapan, Kalimantan, Indonesia, (via Selat Riouw), 1,053  
 Bandar Abbas, Iran, 3,381  
 Bandar Khomeini, Iran, 3,872

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

## 104 SINT NICOLAASHAVEN, ARUBA

Bandjermasin, Kalimantan, Indonesia, 830  
 Bangkok, Thailand, 842  
 Barbers Point, Hawaii, U.S.A. (via Sulu Sea), 5,866  
 Bassein, Burma, 1,137  
 Beihai, China, 1,332  
 Beira, Mozambique, 4,520  
 Belawan, Indonesia, 368  
 Berbera, Somalia, 3,646  
 Bikini, Marshall Islands, 3,591  
 Bombay, India, 2,441  
 Bur Safaga, Egypt, 4,729  
 Busan, South Korea, 2,502  
 Bushehr, Iran, 3,737  
 Calcutta, India, 1,649  
 Calicut, India, 1,942  
 Cebu, Philippines, 1,355  
 Chalna, Bangladesh, 1,578  
 Chimu Wan, Ryukyu Islands, 2,046  
 Chittagong, Bangladesh, 1,517  
 Cochin, India, 1,853  
 Colombo, Sri Lanka, 1,581  
 Dagu, China, 2,770  
 Dalian, China, 2,612  
 Dar es Salaam, Tanzania, 4,042  
 Davao, Philippines, 1,532  
 Diego Garcia, Chagos Archipelago (via Strait of Malacca), 2,227  
 Djibouti, Djibouti, 3,769  
 Dumai, Indonesia, 200  
 Durban, South Africa, 4,872  
 Dutch Harbor, Alaska, U.S.A., 5,364  
 East London, South Africa, 5,082  
 Eilat, Israel, 4,868  
 Fort Dauphin, Madagascar, 3,975  
 Galle, Sri Lanka, 1,502  
 Guayaquil, Ecuador (via Surigao Strait), 10,726  
 Hakodate, Japan (via Sea of Japan), 3,160  
 Ho Chi Minh, Vietnam, 649  
 Hong Kong, China, 1,454  
 Honolulu, Hawaii, U.S.A. (via Sulu Sea), 5,881  
 Iloilo, Philippines (via Lumbacan Channel), 1,268  
 Incheon, South Korea, 2,560  
 Jakarta, Indonesia (via Selat Durian and Selat Bangka), 525  
 Jakarta, Indonesia (via Selat Riouw and Selat Bangka), 526  
 Kakinada, India, 1,593  
 Karachi, Pakistan, 2,882  
 Kobe, Japan, 2,689  
 Kodiak, Alaska, U.S.A., 6,020  
 Kompong Som, Cambodia, 638  
 Kota Kinabalu, Sabah, 832  
 Kuching, Sarawak, 443  
 Lo hsing-ta Mao-ti, China, 1,817  
 Los Angeles, California, U.S.A. (via San Bernardino Strait), 7,867  
 Madras, India, 1,583  
 Majunga, Madagascar, 3,845  
 Makassar, Sulawesi, 1,070  
 Malacca, Malaysia, 117  
 Malakal, Palau Islands (via Basilan Strait), 2,006  
 Manila, Philippines (north of North Danger Reef), 1,330  
 Maputo, Mozambique, 4,769  
 Massawa, Ethiopia, 4,019  
 Midway Island, 4,828  
 Mina al Ahmadi, Kuwait, 3,825  
 Mina Abd Allah, Kuwait, 3,822  
 Mina Az Zawr, Kuwait, 3,803  
 Mocambique, Mozambique, 4,080  
 Mogadishu, Somalia, 3,611  
 Mombasa, Kenya, 3,987

Marmagao, India, 2,217  
 Mosselbaai, South Africa, 5,384  
 Mtwara, Tanzania, 4,042  
 Nagasaki, Japan (east of Taiwan), 2,413  
 Nagasaki, Japan (via Formosa Strait), 2,427  
 Nampo, North Korea, 2,621  
 Negappattinam, India, 1,568  
 Nha Trang Bay, Vietnam, 769  
 Olongapo, Philippines, 1,335  
 Palembang, Indonesia, 304  
 Penang, Malaysia, 367  
 Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait and Pervyy Kuril'skiy Proliv), 4,194  
 Phuket, Thailand, 538  
 Port des Galets, Reunion Island, 3,450  
 Port Augusta, Australia, 3,580  
 Port Blair, Andaman Islands, 929  
 Port Elizabeth, South Africa, 5,209  
 Port Louis, Mauritius, 3,333  
 Port Pirie, Australia, 3,564  
 Port Swettenham, Malaysia, 210  
 Portland, Oregon, U.S.A., 7,142  
 Prince Rupert, Canada, 6,683  
 Pulpandan, Philippines, 1,504  
 Qingdao, China, 2,466  
 Qui Nhon, Vietnam, 856  
 Rangoon, Burma, 1,109  
 Ras al Khafji, Saudi Arabia, 3,799  
 Ras as Sidr, Egypt, 4,902  
 Ras Gharib, Egypt, 4,827  
 Ras Tannurah, Saudi Arabia, 3,701  
 Rongelap, Marshall Islands, 3,669  
 Sabang, Indonesia, 601  
 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, Sabah (via Banggi South Channel), 1,071  
 Seattle, Washington, U.S.A., 7,062  
 Shanghai, China, 2,207  
 Shimonoseki, Japan, 2,527  
 Sitka, Alaska, U.S.A., 6,433  
 Sorido, Indonesia, 2,202  
 Sorong, New Guinea, 1,894  
 Suakin, Sudan, 4,251  
 Surabaya, Indonesia, 763  
 Tamatave, Madagascar, 3,675  
 Tandjung Uban, Indonesia, 27  
 Tanga, Tanzania, 4,037  
 Tarakan, Indonesia, 1,286  
 Telukbayur, Indonesia, 1,011  
 Tjirebon, Indonesia, 624  
 Truk, Caroline Islands, 3,052  
 Umm Said, Qatar, 3,630  
 Vancouver, Canada, 7,078  
 Victoria, Sabah, 762  
 Victoria, Seychelles, 3,067  
 Vinh Cam Ranh, Vietnam, 786  
 Vladivostok, Russia, 3,004  
 Weihai, China, 2,548  
 Wake Island (via Surigao Strait), 3,885  
 Wallaroo, Australia, 3,500  
 Whyalla, Australia, 3,546  
 Weonsan, South Korea, 2,808  
 Wotho, Marshall Islands, 3,614  
 Xiamen, China, 1,649  
 Yantai, China, 2,582  
 Yokohama, Japan, 2,889  
 Zamboanga, Philippines (via Balabac Strait), 1,197  
 Zanzibar, Tanzania, 4,060  
 Zhenjiang, China, 1,333

### SINT NICOLAASHAVEN, ARUBA (12°25'45"N., 69°54'30"W.) to:

#### Junction Points\*

Yucatan Channel, 1,036

#### Ports

Boston, Massachusetts, U.S.A., 1,853  
 Colon, Panama, 633  
 Georgetown, Guyana, 856  
 Guantanamo, Cuba, 544  
 Hamilton, Bermuda, 1,263  
 Kingston, Jamaica, 528  
 La Guaira, Venezuela, 207  
 New York, New York, U.S.A. (via Mona Passage), 1,761  
 New York, New York, U.S.A. (via Windward Passage), 1,805  
 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 Castries, St. Lucia, 532  
 Port of Spain, Trinidad, 515  
 St. John's, Antigua, 549

### SIRACUSA, SICILY, ITALY (37°03'29"N., 15°17'21"E.) to:

#### Junction Points\*

Port Said, Egypt, 924  
 Strait of Gibraltar, 1,054

#### Ports

Alexandria, Egypt, 809  
 Algiers, Algeria, 626  
 Alicante, Spain, 792  
 Ancona, Italy, 557  
 Annaba, Algeria, 401  
 Banghazi, Libya, 381  
 Banzart, Tunisia, 296  
 Barcelona, Spain, 752  
 Bari, Italy, 350  
 Beirut, Lebanon, 1,013  
 Brindisi, Italy, 292  
 Cartagena, Spain, 817  
 Ceuta, Morocco, 1,035  
 Civitavecchia, Italy, 373  
 Genova, Italy, 557  
 Gibraltar, 1,037  
 Haifa, Israel, 1,013  
 Iraklion, Kriti, 495  
 Istanbul, Turkey (south of Greece), 798  
 Istanbul, Turkey (via Corinth Canal), 772  
 Izmir, Turkey (south of Greece), 644  
 Izmir, Turkey (via Corinth Canal), 618  
 Kavala, Greece (south of Greece), 682  
 Kavala, Greece (via Corinth Canal), 656  
 La Spezia, Italy, 521  
 Livorno, Italy, 486  
 Malaga, Spain, 985  
 Marseille, France, 649  
 Messina, Sicily, 75  
 Napoli, Italy, 247  
 Odessa, Ukraine (south of Greece), 1,146  
 Odessa, Ukraine (via Corinth Canal), 1,120

Oran, Algeria, 823  
 Palermo, Sicily, 192  
 Palma, Balearic Islands, 668  
 Piraeus, Greece (south of Greece), 484  
 Piraeus, Greece (via Corinth Canal), 418  
 Rijeka, Croatia, 624  
 Savona, Italy, 567  
 Sibenik, Croatia, 498  
 Split, Croatia, 483  
 Tarabulus, Libya, 276  
 Taranto, Italy, 245  
 Tarragona, Spain, 746  
 Thessaloniki, Greece (south of Greece), 692  
 Thessaloniki, Greece (via Corinth Canal), 667  
 Toulon, France, 617  
 Trieste, Italy, 658  
 Tunis, Tunisia, 283  
 Valencia, Spain, 790  
 Valletta, Malta, 88  
 Venezia, Italy, 668  
 Volos, Greece (south of Greece), 634  
 Volos, Greece (via Corinth Canal), 608

### SIRRI ISLAND, IRAN (25°54'25"N., 54°33'44"E.) See Jazireh-Ye Sirri.

### SISIMIUT, 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

### 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  
 Guayaquil, Ecuador, 4,817  
 Hakodate, Japan (south of Aleutian Islands), 3,338  
 Ho Chi Minh, Vietnam, 5,963  
 Hong Kong, China (alternate route north of Aleutian Islands), 5,095  
 Hong Kong, China (south of Aleutian Islands), 5,136  
 Honolulu, Hawaii, U.S.A., 2,386  
 Ketchikan, Alaska, U.S.A., 224  
 Los Angeles, California, U.S.A., 1,640  
 Manila, Philippines (alternate route north of Aleutian Islands), 5,302  
 Manila, Philippines (south of Aleutian Islands), 5,323  
 Midway Island, 2,473  
 Noumea, New Caledonia, 5,613  
 Pago Pago, American Samoa, 4,635  
 Papeete, French Polynesia, 4,537

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



Petropavlovsk-Kamchatskiy, Russia, 2,314  
 Port Darwin, Australia, 6,338  
 Prince Rupert, Canada, 285  
 Qingdao, China, 4,454  
 San Diego, California, U.S.A., 1,725  
 San Francisco, California, U.S.A., 1,302  
 Seattle, Washington, U.S.A., 806  
 Shanghai, China, 4,446  
 Skagway, Alaska, U.S.A., 181  
 Surabaya, 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, Russia, 3,585  
 Wake Island, 3,405  
 Wrangell, Alaska, U.S.A., 170  
 Yakutat, Alaska, U.S.A., 231  
 Yokohama, Japan (alternate route north of Aleutian Islands), 3,620  
 Yokohama, Japan (south of Aleutian Islands), 3,640

**SITRAH ANCHORAGE, BAHRAIN**

(26°10'00"N., 50°41'00"E.) Use Al Manamah distances.

**SITTWE HARBOR, BURMA**

(20°08'30"N., 92°54'30"E.) to:

**Junction Points\***

Port Said, Egypt, 4,672  
 Singapore, 1,365

**Ports**

Calcutta, India, 402  
 Colombo, Sri Lanka, 1,225  
 Penang, Malaysia, 1,215

**SKAGENS ODDE, DENMARK\***

(57°48'00"N., 10°44'00"E.) to:

**Junction Points\***

Bishop Rock, England, 851  
 Ile d'Ouessant, France, 833  
 Nord-Ostsee-Kanal (East Entrance), Germany, 224  
 Pentland Firth, Scotland, 450

**Ports**

Aalborg, Denmark, 87  
 Aarhus, Denmark, 127  
 Abenra, Denmark, 229  
 Aberdeen, Scotland, 416  
 Alesund, Norway, 450  
 Amsterdam, Netherlands, 422  
 Antwerp, Belgium, 528  
 Assens, Denmark, 187  
 Bergen, Norway, 305  
 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  
 Flekkefjorden, 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  
 Hamburg, Germany, 360  
 Hamina, Finland, 797  
 Hango, Finland, 625  
 Harstad, Norway, 911  
 Hartlepool, England, 438  
 Harwich, England, 487  
 Helsingborg, Sweden, 128  
 Helsingor, Denmark, 127  
 Helsinki, Finland (via Store Baelt), 841  
 Helsinki, Finland (via The Sound), 687  
 Hirtshals, Denmark, 30  
 Horsens, Denmark, 170  
 Hull, England, 462  
 Inverness, England, 481  
 Kalmar, Sweden (via Store Baelt), 496  
 Kalmar, Sweden (via The Sound), 342  
 Kalundborg, Denmark, 141  
 Karlskrona, Sweden, 295  
 Klaipeda, Lithuania (via Store Baelt), 612  
 Klaipeda, Lithuania (via The Sound and north of Bornholm), 462  
 Kobenhavn, Denmark, 150  
 Koge, Denmark, 161  
 Kolding, Denmark, 289  
 Korsor, Denmark, 162  
 Kotka, Finland, 755  
 Kristiansand, Norway, 92  
 Kyndbyvaerkets, Denmark, 136  
 Landskrona, Sweden, 137  
 Le Havre, France, 639  
 Leith, Scotland, 472  
 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  
 Naskov, Denmark, 213  
 Namsos, Norway, 696  
 Newcastle, England, 445  
 Norrkoping, Sweden, 520  
 Odense, Denmark, 126  
 Oostende, Belgium, 489  
 Ornskoldsvik, Sweden, 798  
 Oslo, Norway, 131  
 Oulu, Finland, 979  
 Oxelosund, Sweden, 481  
 Pechenga, Russia, 1,325  
 Peenemunde, Germany, 272  
 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 Store Baelt), 389  
 Ronne, Denmark (via The Sound), 244  
 Rostock, Germany, 254  
 Rosyth, Scotland, 478  
 Rotterdam, Netherlands, 448  
 Ruch'i, Russia, 816  
 Sankt-Peterburg, Russia (via Store Baelt), 992  
 Sankt-Peterburg, Russia (via The Sound), 841  
 Sassnitz, Germany, 239  
 Sonderborg, Denmark, 251  
 Southampton, England, 650  
 Stavanger, Norway, 221  
 Stockholm, Sweden (via Sandhamnsleden and Store Baelt), 719  
 Stockholm, Sweden (via The Sound), 567  
 Stralsund, Germany, 226  
 Sundsvall, Sweden, 745  
 Swinoujscie, Poland (via Store Baelt), 462  
 Swinoujscie, Poland (via The Sound), 275  
 Szczecin, Poland, 410  
 Tallinn, Estonia, 661  
 Tornio, Finland (via Store Baelt), 1,137  
 Tornio, Finland (via The Sound), 973  
 Torshavn, Faroe 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, Russia (via Store Baelt), 923  
 Vysotsk, Russia (via The Sound), 803  
 Wilhelmshaven, Germany, 314  
 Wismar, Germany, 281  
 Zeebrugge, Belgium, 479

**SKAGWAY, ALASKA, U.S.A.**

(59°27'00"N., 13°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 Piraeus distances.

**SKELLEFTEHAMN, SWEDEN**

(64°41'16"N., 21°12'10"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 847  
 Skagens Odde, Denmark (via The Sound), 908

**Ports**

Helsinki, Finland, 507  
 Horsens, Denmark (via The Sound), 180  
 Odense, Denmark, 883  
 Porvoo, Finland, 534  
 Sankt-Peterburg, Russia, 650  
 Slagen, Norway (via The Sound), 974  
 Umea, Sweden, 116  
 Vaasa, Finland, 128

**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

**SKIKID, ALGERIA**

(36°53'24"N., 6°54'25"E.) to:

**Junction Points\***

Port Said, Egypt, 1,332  
 Strait of Gibraltar, 629

**Ports**

Algiers, Algeria, 200  
 Barcelona, Spain, 354  
 Cartagena, Spain, 395  
 Marseille, France, 398  
 Oran, Algeria, 398  
 Sete, France, 422  
 Toulon, France, 381

**SKREDSVIK, SWEDEN**

(58°25'00"N., 11°30'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 275  
 Nord-Ostsee-Kanal (East Entrance), Germany (via The Sound), 347  
 Skagens Odde, Denmark, 45

**Ports**

Aarhus, Denmark, 194  
 Abenra, Denmark, 266  
 Kobenhavn, Denmark, 185  
 Porvoo, Finland (via The Sound), 762  
 Stenungsund, Sweden, 52  
 Varberg, Sweden, 94

**SLAGEN, NORWAY**

(59°20'00"N., 10°31'02"E.) to:

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



## 106 SLITE, SWEDEN

**Junction Points\***

Bishop Rock, England (via Dover Strait), 915  
 Ile d'Ouessant, France (via Dover Strait), 901  
 Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 330  
 Nord-Ostsee-Kanal (East Entrance), Germany (via The Sound), 402  
 Pentland Firth, Scotland, 485  
 Skagens Odde, Denmark, 93

**Ports**

Aarhus, Denmark, 222  
 Antwerp, Belgium, 619  
 Bergen, Norway, 340  
 Bremerhaven, Germany, 390  
 Calais, France, 596  
 Drammen Harbor, Norway, 28  
 Kobenhavn, Denmark, 234  
 Leith, Scotland, 505  
 London, England, 628  
 Reykjavik, Iceland, 1,141  
 Zeebrugge, Belgium, 565

**SLITE, SWEDEN**

(57°40'00"N., 18°53'44"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 400  
 Skagens Odde, Denmark (via The Sound), 462

**Ports**

Helsinki, Finland, 254  
 Karlskrona, Sweden, 187  
 Lubeck, Germany, 384  
 Rostock, Germany, 343  
 Sankt-Peterburg, Russia, 400  
 Skelleftehamn, Sweden, 471  
 Varberg, Sweden (via The Sound), 401

**SMALKALDEN, SURINAME**

(5°37'10"N., 55°05'27"W.) Add 20 miles to Paramaribo distances.

**SOCHI, RUSSIA**

(43°35'00"N., 39°42'45"E.) to:

**Junction Points\***

Port Said, Egypt, 1,313  
 Strait of Gibraltar (via Corinth Canal), 4,181  
 Strait of Gibraltar (south of Greece), 4,241

**Ports**

Alexandria, Egypt, 1,251  
 Beirut, Lebanon, 1,438  
 Constanta, Romania, 479  
 Haifa, Israel, 1,364  
 Iraklion, Kriti, 963  
 Istanbul, Turkey, 506  
 Napoli, Italy (via Corinth Canal), 1,444  
 Napoli, Italy (south of Greece), 1,507  
 Valencia, Spain (via Corinth Canal), 2,039  
 Valencia, Spain (south of Greece), 2,099

**SONDERBORG, DENMARK**

(54°54'36"N., 9°47'15"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 46  
 Skagens Odde, Denmark, 251

**Ports**

Gdynia, Poland, 360  
 Goteborg, Sweden, 239  
 Swinoujscie, Poland, 215

**SORIDO, INDONESIA**

(1°10'00"S., 136°02'00"E.) to:

**Junction Points\***

Singapore, 2,202  
 Torres Strait, Australia, 1,329

**Ports**

Jakarta, Indonesia, 1,879  
 Makassar, Sulawesi, 1,180

**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  
 Makassar, Sulawesi, 872  
 Rabaul, Papua New Guinea, 1,304

**SORVAGUR, FAROE ISLANDS**

(62°04'20"N., 7°18'17"W.) to:

**Junction Points\***

Bishop Rock, England, 826  
 Cape of Good Hope, South Africa, 6,520  
 Fastnet Rock, Ireland, 678  
 Grand Banks South, 1,931  
 Ile d'Ouessant, France, 904  
 Inishtrahull, Ireland, 401  
 Panama, Panama, 4,488  
 Pentland Firth, Scotland, 234  
 Punta Arenas, Chile, 7,767  
 Strait of Gibraltar, 1,543

**Ports**

Aberdeen, Scotland, 364  
 Alesund, Norway, 376  
 Amsterdam, Netherlands, 433  
 Bodo, Norway, 637  
 Bremerhaven, Germany, 719  
 Dover, England, 752  
 Fredrikstad, Norway, 653  
 Goteborg, Sweden, 656  
 Hirtshals, Denmark, 593  
 Leith, Scotland, 442  
 London, England, 787  
 Murmansk, Russia, 1,172  
 Oslo, Norway, 635  
 Portsmouth, England, 831  
 Reykjavik, Iceland, 486  
 Tromso, Norway, 765  
 Zeebrugge, Belgium, 724

**SOUHDA, KRITI**

(35°29'30"N., 24°04'45"E.) to:

**Junction Points\***

Port Said, Egypt, 507  
 Strait of Gibraltar, 1,479

**Ports**

Alexandria, Egypt, 425  
 Izmir, Turkey, 281  
 Messina, Sicily, 473  
 Piraevs, Greece, 159

**SOUSSE, TUNISIA**

(35°49'30"N., 10°39'30"E.) to:

**Junction Points\***

Port Said, Egypt, 1,133  
 Strait of Gibraltar, 909

**Ports**

Annaba, Algeria, 255  
 Tarabulus, Libya, 231  
 Valletta, Malta, 197

**SOUTH RIDING POINT, GRAND BAHAMA ISLANDS**

(26°36'45"N., 78°13'10"W.) to:

**Junction Points\***

Panama, Panama (via Windward Passage), 1,298  
 Straits of Florida, 305  
 Yucatan Channel, 483

**Ports**

Baltimore, Maryland, U.S.A., 875  
 Jacksonville, Florida, U.S.A., 338  
 La Habana, Cuba, 316  
 Philadelphia, Pennsylvania, U.S.A., 924  
 San Juan, Puerto Rico, 858  
 Wilmington, North Carolina, U.S.A., 521

**SOUTHAMPTON, ENGLAND**

(50°53'00"N., 1°23'30"W.) to:

**Junction Points\***

Bishop Rock, England (via Needles Channel), 232  
 Ile d'Ouessant, France, 223  
 Nord-Ostsee-Kanal (East Entrance), Germany, 533  
 Skagens Odde, Denmark, 650

**Ports**

Aberdeen, Scotland, 532  
 Amsterdam, Netherlands, 284  
 Antwerp, 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  
 Ostende, 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 GAVAN, RUSSIA**

(48°59'00"N., 140°16'00"E.) to:

**Ports**

Korsakov, Sakhalin, Russia, 264  
 Nikolayevsk-Na-Amure, Russia (via South Channel), 276  
 Vladivostok, Russia, 593

**SPLIT, CROATIA**

(43°30'16"N., 16°26'10"E.) to:

**Junction Points\***

Port Said, Egypt, 1,133  
 Strait of Gibraltar, 1,507

**Ports**

Alexandria, Egypt, 1,024  
 Algiers, Algeria, 1,079  
 Alicante, Spain, 1,234  
 Ancona, Italy, 132  
 Annaba, Algeria, 859  
 Banghazi, Libya, 726  
 Banzart, Tunisia, 768  
 Barcelona, Spain, 1,138  
 Bari, Italy, 155  
 Beirut, Lebanon (south of Greece), 1,203  
 Beirut, Lebanon (via Corinth Canal), 1,169  
 Brindisi, Italy, 202  
 Cartagena, Spain, 1,264  
 Ceuta, Morocco, 1,487  
 Durres, Albania, 216  
 Genova, Italy, 943  
 Gibraltar, 1,489  
 Haifa, Israel (south of Greece), 1,199  
 Haifa, Israel (via Corinth Canal), 1,172  
 Iraklion, Kriti, 689  
 Istanbul, Turkey (south of Greece), 986  
 Istanbul, Turkey (via Corinth Canal), 887  
 Izmir, Turkey (south of Greece), 831  
 Izmir, Turkey (via Corinth Canal), 732  
 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, Ukraine (south of Greece), 1,334  
 Odessa, Ukraine (via Corinth Canal), 1,235

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

Oran, Algeria, 1,275  
Palermo, Sicily, 578  
Palma, Balearic Islands, 1,096  
Piraeus, Greece (south of Greece), 672  
Piraeus, Greece (via Corinth Canal), 533  
Rijeka, Croatia, 176  
Sarande, Albania, 293  
Savona, Italy, 954  
Shengjin, Albania, 207  
Siracusa, Sicily, 483  
Tarabulus, Libya, 746  
Taranto, Italy, 341  
Thessaloniki, Greece (south of Greece), 880  
Thessaloniki, Greece (via Corinth Canal), 781  
Toulon, France, 1,003  
Trieste, Italy, 210  
Tunis, Tunisia, 756  
Valencia, Spain, 1,222  
Valletta, Malta, 560  
Venezia, Italy, 221  
Vlores, Albania, 252  
Volos, Greece (south of Greece), 821  
Volos, Greece (via Corinth Canal), 722

**SRIRACHA, THAILAND**  
(13°06'54"N., 100°51'33"E.) to:

**Junction Points\***

Honshu, Japan, 3,010  
Selat Lombok, Indonesia, 1,612  
Panama, Panama, 11,255  
Singapore, 759  
Selat Sunda, Indonesia, 1,269  
Tsugaru-Kaikyo, Japan, 3,293  
Selat Wetar, Indonesia, 2,247

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 3,749  
Busan, South Korea, 2,610  
Hong Kong, China, 1,546  
Incheon, South Korea, 2,671  
Manila, Philippines, 1,430  
Mogpo, South Korea, 2,519  
Vladivostok, Russia, 4,659  
Weonsan, Korea, 4,488

**ST. ANDREWS, CANADA**  
(45°03'30"N., 67°01'40"W.)  
Subtract 76 miles from Parrsboro distances.

**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, Suriname, 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, Congo, 1,232  
Buenos Aires, Argentina, 3,052  
Cape Town, South Africa, 1,697  
Freetown, Sierra Leone, 1,564  
Georgetown, Ascension Island, 707  
Malabo, Equatorial Guinea, 1,472  
Montevideo, Uruguay, 2,936  
Philadelphia, Pennsylvania, U.S.A., 5,169  
Rio de Janeiro, Brazil, 2,161

**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 Buoy), 860  
Bath, Maine, U.S.A., 206  
Belem, Brazil, 2,998  
Boston, Massachusetts, U.S.A., 286  
Buenos Aires, Argentina, 5,853  
Cape Town, South Africa, 6,667  
Colon, Panama, 2,294  
Halifax, Canada, 278  
Kingston, Jamaica, 1,794  
La Guaira, Venezuela, 2,086  
La Habana, Cuba, 1,574  
Liverpool, Canada, 212  
New York, New York, U.S.A. (via Nantucket Light Buoy), 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 Nantucket Light Buoy), 698  
Philadelphia, Pennsylvania, U.S.A. (via Vineyard Sound), 673  
Port of Spain, Trinidad, 2,113  
Portland, Maine, U.S.A., 215  
Portsmouth, New Hampshire, U.S.A., 1,248  
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 Buoy), 1,113  
Sydney, Canada, 492

**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

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**

Aasiaat (Egedesminde), Greenland, 1,294  
Akureyri, Iceland, 1,616  
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, South Africa, 6,205  
Colon, Panama, 2,695  
Dakar, Senegal, 2,646  
El Ferrol del Caudillo, Spain, 1,861  
Frederiksdal, Greenland, 800  
Galway, Ireland, 1,678  
Goose Bay, Canada, 588  
Halifax, Canada, 531  
Hvalfjordsdhar, Iceland, 1,437  
Ilulissat (Jakobshavn), Greenland, 1,341  
Itivtuut, Greenland, 849  
Kangerluarsorseq, Greenland, 969  
Keflavik, Iceland, 1,404  
Liverpool, Canada, 585  
Maniitsoq, Greenland, 1,075  
Nanortalik, Greenland, 821  
Narsarsuaq, Greenland, 916  
Natal, Brazil, 3,341  
New York, New York, U.S.A., 1,093  
Norfolk, Virginia, U.S.A., 1,277  
Nuuk (Godthab), Greenland, 1,005  
Paramaribo, Suriname, 2,518  
Philadelphia, Pennsylvania, U.S.A., 1,254  
Ponta Delgada, Azores, 1,326  
Port of Spain, Trinidad, 2,288  
Qaanaaq (Thule), Greenland, 1,800  
Qaqortoq (Julianehaab), Greenland, 827  
Qasiqianguit, Greenland, 1,333  
Qutdligssat, Greenland, 1,476  
Recife, Brazil, 3,491  
Reykjavik, Iceland, 1,416  
Rio de Janeiro, Brazil, 4,563  
Santa Cruz de Tenerife, Canary Islands, 2,053  
Seydhisfjordsdhar, Iceland, 1,690  
Shelburne, Canada, 621  
Sisimiut, Greenland, 1,172  
Upernavik, Greenland, 1,532

**ST. JOHN'S, ANTIGUA**  
(17°08'00"N., 61°52'00"W.) to:

**Ports**

Belem, Brazil, 1,433  
Colon, Panama, 1,158  
Elizabeth Harbor, Bahamas, 900  
Georgetown, Guyana, 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 (east of Guadeloupe), 107  
Pointe a Pitre, Guadeloupe (west of Guadeloupe), 110  
Port Castries, St. Lucia, 204

Port of Spain, Trinidad, 411  
Puerto Cortes, Honduras, 1,511  
San Juan, Puerto Rico, 265  
Sint Nicolaashaven, Aruba, 549

**ST. LOUIS DU RHONE, FRANCE**  
(43°23'00"N., 4°48'27"E.) to:

**Junction Points\***

Port Said, Egypt, 1,536  
Strait of Gibraltar, 701

**Ports**

Ajaccio, Corsica, 197  
Alexandria, Egypt, 413  
Alicante, Spain, 395  
Ayios Nikolaos, Greece, 1,131  
Bari, Italy, 906  
Ceuta, Morocco, 685  
Es Sider, Libya, 994  
Haifa, Israel, 1,601  
Kerch, Ukraine, 1,831  
Mersin, Turkey, 1,557  
Oran, Algeria, 537  
Sevastopol', Ukraine, 686  
Trieste, Italy, 1,216  
Zelinika, Montenegro, 943

**ST. MALO, FRANCE**  
(48°38'40"N., 2°01'38"W.) to:

**Junction Points\***

Bishop Rock, England, 90  
Ile d'Ouessant, 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\***

Ile d'Ouessant, France, 184

**Ports**

Aviles, Spain, 274  
Bordeaux, France, 184  
Gijon, Spain, 274  
La Pallice, France, 108

**ST. NICHOLAS, GREECE**  
(35°11'38"N., 25°43'20"E.) See Ayios Nikolaos.

**ST. PETERSBURG, FLORIDA, U.S.A.**  
(27°46'00"N., 82°37'00"W.)  
Subtract 15 miles from Tampa distances.

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

**108 ST. PIERRE, MARTINIQUE****ST. PIERRE, MARTINIQUE**  
(14°44'30"N., 61°11'15"W.) to:**Ports**

La Habana, Cuba, 1,339  
New York, New York, U.S.A. (via Anegada Channel), 1,705  
Port Castries, St. Lucia, 46  
San Juan, Puerto Rico, 374

**ST. RAPHAEL, FRANCE**  
(43°25'21"N., 6°45'45"E.) to:**Junction Points\***

Port Said, Egypt, 1,475  
Strait of Gibraltar, 763

**Ports**

Barcelona, Spain, 251  
Genova, Italy, 118  
Palma, Balearic Islands, 347

**STADERSAND, GERMANY**  
(53°37'47"N., 9°32'00"E.) to:**Junction Points\***

Bishop Rock, England, 739  
Ile d'Ouessant, France, 725  
Nord-Ostsee-Kanal (East Entrance), Germany, 77  
Pentland Firth, Scotland, 543  
Skagens Odde, Denmark, 358

**Ports**

Aberdeen, Scotland, 464  
Amsterdam, Netherlands, 253  
Antwerp, Belgium, 388  
Bergen, Norway, 470  
Emden, Germany, 166  
Inverness, Scotland, 547  
London, England, 411  
Rotterdam, Netherlands, 288  
Stavanger, Norway, 391  
Zeebrugge, Belgium, 330

**STENUNGSUND, SWEDEN**  
(58°04'43"N., 11°48'14"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 258  
Nord-Ostsee-Kanal (East Entrance), Germany (via The Sound), 330  
Skagens Odde, Denmark, 42

**Ports**

Aarhus, Denmark, 163  
Abenra, Denmark, 245  
Kobenhavn, Denmark, 162  
Kokkola, Finland (via The Sound), 898  
Limhamn, Sweden (via The Sound), 169  
Vassa, Finland (via The Sound), 810

**STEPHENVILLE, CANADA**  
(48°29'39"N., 58°32'59"W.) to:**Junction Points\***

Bishop Rock, England, 2,282  
Cape of Good Hope, South

Africa, 6,471  
Grand Banks South, 608  
Ile d'Ouessant, France, 2,339  
Inishtrahull, Ireland, 2,198  
Montreal, Canada, 790  
Panama, Panama, 2,681  
Pentland Firth, Scotland, 2,327  
Punta Arenas, Chile, 7,101  
Straits of Florida, 1,991

**Ports**

Boston, Massachusetts, U.S.A., 811  
Buenos Aires, Argentina, 6,112  
Cape Town, South Africa, 6,560  
Colon, Panama, 2,667  
Kingston, Jamaica, 2,168  
Liverpool, Canada, 493  
New York, New York, U.S.A., 958  
Philadelphia, Pennsylvania, U.S.A., 1,111  
Recife, Brazil, 3,712  
St. John, Canada, 995  
Yarmouth, Canada, 623

**STOCKHOLM, SWEDEN**  
(59°19'30"N., 18°05'00"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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  
Hamina, Finland, 325  
Hango, Finland, 178  
Helsingborg, Sweden, 436  
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  
Limhamn, Sweden, 427  
London, England, 1,251  
Lubeck, Germany, 491  
Malmo, Sweden (via Drogden), 435  
Malmo, Sweden (via Flintranann), 422  
Masnedssund, Denmark, 531  
Narvik, Norway, 1,612  
Norrkoping, Sweden, 143  
Odense, Denmark, 609  
Ornskoldsvik, 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  
Reposaari, Finland, 192  
Rostock, Germany, 456  
Ruch'i, Russia, 344  
Sankt-Peterburg, Russia, 386  
Sassnitz, Germany, 390  
Stralsund, Germany, 423  
Sundsvall, Sweden, 222  
Tallinn, Estonia (via Sandofjarden), 220  
Umea, Sweden, 289  
Uusikaupunki, Finland, 164  
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, Northern Ireland, 234  
Glasgow, Scotland, 283  
Reykjavik, Iceland, 647

**STRAIT OF GIBRALTAR\***  
(35°57'00"N., 5°45'00"W.) to:**Junction Points\***

Bishop Rock, England, 969  
Cape of Good Hope, South Africa, 5,082  
Fastnet Rock, Ireland, 1,068  
Grand Banks South, 2,070  
Ile d'Ouessant, France, 918  
Inishtrahull, Ireland, 1,350  
Panama, Panama (via Anegada Passage), 4,351  
Pentland Firth, Scotland, 1,598  
Port Said, Egypt, 1,943  
Punta Arenas, Chile, 6,352  
Straits of Florida, 4,009

**Ports**

Aasiaat (Egedesminde), Greenland, 2,772  
Abidjan, Ivory Coast, 2,656  
Ajaccio, Corsica, 778  
Akureyri, Iceland, 2,102  
Alexandria, Egypt, 1,822  
Alexandroupolis, Greece, 1,716  
Algeciras, Spain, 25  
Algiers, Algeria, 437  
Alicante, Spain, 317  
Almeria, Spain, 171  
Ancona, Italy, 1,580  
Annaba, Algeria, 675  
Antalya, Turkey, 1,822  
Argentina, Canada, 2,302  
Arkhangel'sk, Russia, 3,225  
Arzew, Algeria, 275  
As Sukhayrah, Tunisia, 1,072  
Ashdod, Israel, 2,031  
Augusta, Sicily, 1,065  
Aviles, Spain, 722  
Baltimore, Maryland, U.S.A., 3,458  
Banghazi, Libya, 1,356  
Baniyas, Syria, 2,045  
Banjul, Gambia, 1,575  
Banzart, Tunisia, 769  
Barcelona, Spain, 534  
Bari, Italy, 1,374  
Barletta, Italy, 1,398

Bastia, Corsica, 868  
Bat'umi, Georgia (south of Greece), 2,408  
Bat'umi, Georgia (via Corinth Canal), 2,392  
Bayonne, France, 912  
Beaulieu, France, 792  
Beirut, Lebanon, 2,034  
Bejaia, Algeria, 545  
Belem, Brazil, 3,285  
Bilbao, Spain, 854  
Bordeaux, France, 1,010  
Boston, Massachusetts, U.S.A., 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, South Africa, 5,024  
Cartagena, Spain, 259  
Cartagena, Colombia, 4,087  
Casablanca, Morocco, 166  
Catania, Sicily, 1,081  
Ceuta, Morocco, 23  
Charleston, South Carolina, U.S.A., 3,593  
Charlotte Amalie, Virgin Islands, 3,323

Chioggia, Italy, 1,682  
Cienfuegos, Cuba, 4,102  
Civitavecchia, Italy, 907  
Colon, Panama (via Mona Passage), 4,308  
Constanta, Romania, 2,018  
Crotona, Italy, 1,412  
Dakar, Senegal, 1,487  
Derince, Turkey, 1,855  
Dubrovnik, Croatia, 1,420  
Durrës, Albania, 1,349  
Elizabeth Harbor, Bahamas, 3,651  
Ermoupolis, Greece, 1,524  
Famagusta, Cyprus, 1,991  
Fethiye, Turkey, 1,712  
Frederiksdal, Greenland, 2,115  
Freetown, Sierra Leone, 1,966  
Funchal, Madeira Island, 589  
Gaeta, Italy, 986  
Galway, Ireland, 1,184  
Genova, Italy, 868  
Georgetown, Guyana, 3,358  
Ghazaouet, Algeria, 199  
Gibraltar, 24  
Golfe-Juan, France, 780  
Goose Bay, Canada, 2,538  
Guantanamo, Cuba, 3,737  
Guiria, Venezuela, 3,430  
Haifa, Israel, 2,031  
Halifax, Canada, 2,686  
Hamilton, Bermuda, 2,903  
Horta, Azores, 1,102  
Huelva, Spain, 102  
Hvalfjardhur, Iceland, 1,944  
Hyeres, France, 725  
Ilulissat (Jakobshavn), Greenland, 2,819

Iraklion, Kriti, 1,516  
Iskenderun, Turkey, 2,054  
Istanbul, Turkey, 1,821  
Ivittuut, Greenland (direct), 2,283  
Ivittuut, Greenland (via 75 miles off Kap Farvel), 2,304  
Izmir, Turkey, 1,667  
Jacksonville, Florida, U.S.A., 3,740  
Kalamai, Greece, 1,370  
Kangerluarsorseq, Greenland, 2,444  
Kavala, Greece, 1,706  
Keflavik, Iceland, 1,947

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

- Kerch, Ukraine, 2,256  
Kerkira, Greece, 1,324  
Key West, Florida, U.S.A., 3,949  
Khalkis, Greece (south of Greece), 1,562  
Khalkis, Greece (via Corinth Canal), 1,545  
Kingston, Jamaica, 3,891  
Kyrenia, Cyprus, 1,910  
La Guaira, Venezuela, 3,634  
La Habana, Cuba, 4,013  
La Pallice, France, 950  
La Spezia, Italy, 891  
Lagos, Nigeria, 3,100  
Larnaca, Cyprus, 1,953  
Las Palmas, Canary Islands, 681  
Latakia, Syria, 2,029  
Licata, Sicily, 958  
Limassol, Cyprus, 1,914  
Lisboa, Portugal, 286  
Livorno, Italy, 887  
Mahon, Balearic Islands, 552  
Malaga, Spain, 78  
Manfredonia, Italy, 1,419  
Maniitsoq, Greenland, 2,547  
Marin, Spain, 517  
Marsaxlokk, Malta, 1,017  
Marseille, France, 711  
Marshall, Liberia, 2,197  
Matruh, Egypt, 1,695  
Melilla, Morocco, 154  
Menton, France, 791  
Mers el Kebir, Algeria, 252  
Mersin, Turkey, 1,996  
Messina, Sicily, 1,049  
Milazzo, Sicily, 1,025  
Monaco, Monaco, 762  
Monopoli, Italy, 1,346  
Montevideo, Uruguay, 5,178  
Mostaganem, Algeria, 283  
Nanortalik, Greenland, 2,138  
Narsarsuaq, 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., 3,087  
New York, New York, U.S.A., 3,176  
Nice, France, 788  
Norfolk, Virginia, U.S.A., 3,335  
Novorossiysk, Russia, 2,277  
Nuuk (Godthab), Greenland, 2,477  
Odessa, Ukraine, 2,169  
Olbia, Sardinia, 828  
Oporto, Portugal, 432  
Oran, Algeria, 252  
Palermo, Sicily, 940  
Palma, Balearic Islands, 471  
Paphos, Cyprus, 1,872  
Paramaribo, Suriname, 3,275  
Patrai, Greece, 1,350  
Pescara, Italy, 1,515  
Philadelphia, Pennsylvania, U.S.A., 3,319  
Piraeus, Greece (south of Greece), 1,508  
Piraeus, Greece (via Corinth Canal), 1,451  
Ploce, Croatia, 1,487  
Ponta Delgada, Azores, 964  
Port au Prince, Haiti, 3,757  
Port Castries, St. Lucia, 3,236  
Port of Spain, Trinidad, 3,403  
Port St. Louis du Rhone, France, 703  
Port Vendres, France, 633  
Porto Empedocle, Sicily, 937  
Porto Grande, Cape Verde Islands, 1,539  
Porto Vecchio di Piombino, Italy, 897  
Pozzuoli, Italy, 997  
Praia Da Vitoria, Terceira, Azores, 1,034  
Preveza, Greece, 1,319  
Providence, Rhode Island, U.S.A., 3,081  
Puerto de Pasajes, Spain, 894  
Pula, Croatia, 1,628  
Qabis, Tunisia, 1,073  
Qaanaaq (Thule), Greenland, 3,299  
Qasigiannuit, Greenland, 2,679  
Qutdligssat, Greenland, 2,953  
Recife, Brazil, 3,116  
Reggio Di Calabria, Sicily, 1,052  
Rethimnon, Kriti, 1,485  
Reykjavik, Iceland, 1,905  
Rhodes, Greece, 1,668  
Rijeka, Croatia, 1,648  
Rio de Janeiro, Brazil, 4,180  
Rostov-na-Donu, Russia, 2,458  
Rota, Spain, 70  
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  
Sete, France, 684  
Setubal, Portugal, 287  
Sevastopol', Ukraine, 2,122  
Seydhisjordhur, Iceland, 1,899  
Sfax, Tunisia, 1,043  
Shengjin, Albania, 1,382  
Sibenik, Croatia, 1,522  
Sidi Ifni, Morocco, 472  
Siracusa, Sicily, 1,054  
Sisimiut, Greenland, 2,649  
Skikda, Algeria, 629  
Soudha, Ormos Soudhas, Kriti, 1,479  
Sousse, Tunisia, 909  
Split, Croatia, 1,507  
St. John's, Canada, 2,182  
St. Raphael, France, 763  
Tarabulus, Lebanon, 2,047  
Tarabulus, Libya, 1,093  
Taranto, Italy, 1,268  
Tarragona, Spain, 501  
Thessaloniki, Greece, 1,716  
Toulon, France, 722  
Trapani, Sicily, 896  
Trieste, Italy, 1,682  
Tubruq, Libya, 1,534  
Tunis, Tunisia, 820  
Upernavik, Greenland, 3,011  
Valencia, Spain, 403  
Valletta, Malta, 1,005  
Venezia, Italy, 1,691  
Viana do Castelo, Portugal, 472  
Viareggio, Italy, 898  
Vigo, Spain, 504  
Vila Real de Santo Antonio, Portugal, 113  
Villa do Porto, Azores, 963  
Villa Cisneros, Western Sahara, 923  
Villa San Giovanni, Italy, 1,045  
Villa Sanjurjo, Morocco, 106  
Villagarcia, Spain, 526  
Villefranche, France, 789  
Vlores, Albania, 1,311  
Volos, Greece, 1,657  
Washington, D.C., U.S.A., 3,471  
Willemstad, Curacao, 3,685  
Wilmington, North Carolina, U.S.A., 3,524  
Yumurtalik, Turkey, 1,672
- STRAITS OF FLORIDA\***  
(24°25'00"N., 83°00'00"W.) to:
- Junction Points\***
- Cape of Good Hope, South Africa, 6,784  
Grand Banks South, 1,990  
Montreal, Canada (via Cabot Strait), 2,563  
Montreal, Canada (via Strait of Canso), 2,467  
Punta Arenas, Chile (east of South America), 6,829  
Strait of Gibraltar, 4,009  
Yucatan Channel, 192
- Ports**
- Abraham Bay, Bahamas, 593  
Accra, Ghana (via Northwest Providence Channel), 5,016  
Antilla, Cuba, 491  
Argentia, Canada, 2,050  
Arkhangel'sk, Russia, 5,208  
Moa, Cuba, 510  
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  
Boca de Tanamo, Cuba, 489  
Bordeaux, France, 4,234  
Boston, Massachusetts, U.S.A., 1,440  
Brest, France, 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, South Africa, 6,778  
Cardenas, Cuba, 140  
Charleston, South Carolina, U.S.A., 644  
Charlotte Amalie, Virgin Islands, 1,087  
Coatzacoalcos, Mexico, 757  
Corpus Christi, Texas, U.S.A., 803  
Dakar, Senegal (via Northwest Providence Channel), 3,768  
Douala, Cameroon, 5,526  
Elizabeth Harbor, Bahamas, 544  
Fort de France, Martinique, 1,389  
Fort Liberté, Haiti, 692  
Freetown, Sierra Leone, 4,137  
Funchal, Madeira Island, 3,532  
Galveston, Texas, U.S.A., 698  
Georgetown, Guyana (via Mona Passage), 1,869  
Gibara, Cuba, 447  
Grand Turk, Grand Turk Island, 721  
Guantanamo, Cuba (via Windward Passage), 638  
Guiria, Venezuela, 2,099  
Gulfport, Mississippi, U.S.A., 494  
Halifax, Canada, 1,642  
Hamilton, Bermuda, 1,166  
Hopetown, Bahamas, 415  
Horta, Azores, 2,913  
Isabel de Sagua, Cuba, 195  
Isabel Segunda, Isla de Vieques, 1,064  
Ivittuut, Greenland, 2,969  
Jacksonville, Florida, U.S.A., 523  
Key West, Florida, U.S.A., 73  
Kingston, Jamaica (via Windward Passage), 802  
La Guaira, Venezuela (via Windward Passage), 1,331  
La Habana, Cuba, 87  
Lagos, Nigeria, 5,225  
Lake Charles, Louisiana, U.S.A., 677  
Las Palmas, 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  
Montecristi, Dominican Republic, 711  
Montego Bay, Jamaica, 642  
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, Suriname (via Mona Passage), 2,014  
Pensacola, Florida, U.S.A., 431  
Philadelphia, Pennsylvania, U.S.A., 1,168  
Pointe a Pitre, Guadeloupe (via Mona Passage), 1,348  
Pointe a Pitre, Guadeloupe (via Virgin Passage), 1,347  
Ponce, Puerto Rico, 1,020  
Ponta Delgada, Azores, 3,052  
Porlamar, Venezuela, 1,450  
Port au Prince, Haiti, 701  
Port Antonio, Jamaica, 751  
Port Arthur, Texas, U.S.A., 677  
Port Castries, St. Lucia, 1,409  
Port of Spain, Trinidad (via Mona Passage), 1,533  
Portland, Maine, U.S.A., 1,485  
Porto Grande, Cape Verde Islands, 3,314  
Portsmouth, New Hampshire, U.S.A., 1,421  
Praia Da Vitoria, Terceira, Azores, 3,017  
Puerto de Hierro, Venezuela, 2,086  
Puerto Cabello, Venezuela, 1,299  
Puerto Manati, Cuba, 397  
Puerto Padre, Cuba, 409  
Puerto Vita, Cuba, 444  
Recife, Brazil, 3,590  
Reykjavik, Iceland, 3,530  
Rio de Janeiro, Brazil, 4,662  
Roosevelt Roads, Puerto Rico, 1,063  
Salvador, Brazil, 3,981  
San Juan, Puerto Rico, 1,017  
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

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



## 110 STRALSUND, GERMANY

Republic (via Mona Passage), 1,036

Santo Domingo, Dominican Republic (via Windward Passage), 986  
Santos, Brazil, 4,849  
Savannah, Georgia, U.S.A., 603  
St. Georges, Grenada, 1,453  
St. John, Canada, 1,611  
St. John's, Canada, 2,128  
St. Marc, Haiti, 673  
Tampa, Florida, U.S.A., 232  
Tampico, Mexico, 832  
Tuxpan, Mexico, 792  
Vigo, Spain, 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\***

Nord-Ostsee-Kanal (East Entrance), Germany, 104  
Skagens Odde, Denmark, 226

**Ports**

Gdynia, Poland, 245  
Kobenhavn, Denmark, 81  
Stockholm, Sweden, 423

**SU-AO KANG, TAIWAN**  
(24°36'00"N., 121°52'00"E.) to:

**Ports**

Hong Kong, China, 554  
Incheon, South Korea, 823  
Manila, Philippines, 684  
Qingdao, China, 756  
Shanghai, China, 498

**SUAKIN, SUDAN**  
(19°06'47"N., 37°20'21"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,538  
Port Said, Egypt, 813  
Singapore, 4,251

**Ports**

Aden, Yemen, 631

**SUBIC BAY, PHILIPPINES**  
(14°43'11"N., 120°11'46"E.)  
Subtract 8 1/2 miles from Olongapo distances.

**SUKKERTOPPEN, GREENLAND**  
(65°24'36"N., 52°54'12"W.) See Maniitsoq, Greenland.

**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\***

Nord-Ostsee-Kanal (East Entrance), Germany, 684  
Skagens Odde, Denmark, 745

**Ports**

Gdynia, Poland, 507  
Sankt-Peterburg, Russia, 507  
Stockholm, Sweden, 222

**SUNNDALSORA, NORWAY**  
(62°41'14"N., 8°33'00"E.) to:

**Junction Points\***

Bishop Rock, England, 1,154  
Grand Banks South, 2,342  
Ile d'Ouessant, France, 1,140  
Nord-Ostsee-Kanal (East Entrance), Germany, 744  
Pentland Firth, Scotland, 367  
Skagens Odde, Denmark, 549

**Ports**

Aberdeen, Scotland, 484  
Bergen, Norway, 238  
Bremerhaven, Germany, 651  
Oslo, Norway, 611  
Stavanger, Norway, 334  
Tromsø, Norway, 539  
Troxidheim, Norway, 116

**SUPE BAY, PERU**  
(10°49'20"S., 77°44'15"W.) to:

**Junction Points\***

Panama, Panama, 1,265  
Punta Arenas, Chile, 2,736  
Torres Strait, Australia, 8,217  
Wilson Promontory, Australia (via 30°S.), 7,291  
Wilson Promontory, Australia (via 40°S.), 7,203

**Ports**

Antofagasta, Chile, 883  
Callao, Peru, 85  
Corinto, Nicaragua, 1,529  
Pisco, Peru, 201  
Salina Cruz, Mexico, 1,921  
San Nicolas, Peru, 314  
Talcahuano, Chile, 1,588  
Valparaiso, Chile, 1,373

**SURABAYA, INDONESIA**  
(7°12'00"S., 112°44'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (north of Madura), 275  
Selat Lombok, Indonesia (south of Madura), 232  
Singapore, 763  
Selat Sunda, Indonesia, 450  
Torres Strait, Australia (north of Madura and via Selat Wetar ), 1,814  
Selat Wetar, Indonesia (south of Madura), 880  
Selat Wetar, Indonesia (north of Madura), 928

**Ports**

Ambon, Indonesia, 980  
Apra, Guam, 2,334  
Belawan, Indonesia, 1,132  
Dagu, China, 3,174  
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  
Ho Chi Minh, Vietnam, 1,206  
Hong Kong, China, 1,925  
Honolulu, Hawaii, U.S.A., 5,598  
Kodiak, Alaska, U.S.A., 6,086  
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  
Qingdao, China, 2,864  
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  
Shanghai, China, 2,626  
Sitka, Alaska, U.S.A., 6,564  
Truk, Caroline Islands, 2,623  
Vinh Cam Ranh, Vietnam, 1,251  
Vladivostok, Russia, 3,357  
Wake Island, 3,641  
Xiamen, China, 2,121  
Yokohama, Japan, 3,092

**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

**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, 2,262  
Wilson Promontory, Australia, 2,088

**Ports**

Apia, Samoa, 647  
Apra, Guam, 2,784  
Auckland, New Zealand, 1,149  
Avarua, Cook Islands, 1,256  
Baker Island, 1,202  
Brisbane, Australia, 1,548  
Callao, Peru, 5,995  
Dagu, China, 4,898  
Dutch Harbor, Alaska, U.S.A., 4,493  
Guayaquil, Ecuador, 6,067  
Ho Chi Minh, Vietnam, 4,679  
Hobart, Tasmania, 2,198

Hong Kong, China, 4,541  
Honolulu, Hawaii, U.S.A., 2,776  
Kodiak, Alaska, U.S.A., 4,853  
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  
Nukulofa, Tonga Islands, 416  
Ocean Island, 1,207  
Pago Pago, American Samoa, 688  
Papeete, French Polynesia, 1,838  
Petropavlovsk-Kamchatskiy, Russia, 4,460  
Qingdao, China, 4,662  
Raoul Island, Kermadec Islands, 701  
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  
Shanghai, China, 4,467  
Sitka, Alaska, U.S.A., 5,112  
Sidney, Australia, 1,738  
Truk, Caroline Islands, 2,231  
Valparaiso, Chile, 5,759  
Vladivostok, Russia, 4,626  
Wake Island, 2,501  
Wellington, New Zealand, 1,476  
Wotje Island, Marshall Islands, 1,880  
Xiamen, China, 4,389  
Yap, Caroline Islands, 2,933  
Yokohama, Japan, 3,967

**SVENDBORG, DENMARK**  
(55°03'45"N., 10°37'30"E.) Add 12 miles to Faborg distances.

**SWAN ISLAND, HONDURAS**  
(17°24'30"N., 83°57'00"W.) to:

**Junction Points\***

Panama, Panama, 605  
Yucatan Channel, 273

**Ports**

Maríel, Cuba, 437  
Puerto Cortes, Honduras, 254

**SWANSEA, WALES**  
(51°37'00"N., 30°55'00"W.) to:

**Junction Points\***

Bishop Rock, England, 155  
Fastnet Rock, Ireland, 217  
Pentland Firth, Scotland, 578

**Ports**

Barrow in Furness, England, 242  
Cardiff, Wales, 46  
Fishguard, Wales, 100  
Holyhead, Wales, 171  
Liverpool, England, 236

**SWEPPER COVE, ALASKA, U.S.A.**  
(51°51'30"N., 176°38'00"W.) to:

**Junction Points\***

Panama, Panama, 5,586

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



**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

**SWINOUJSCIE, POLAND**  
(53°55'00"N., 14°17'00"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), 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 49°S.),  
5,848  
Punta Arenas, Chile (via 60°S.),  
5,398  
Torres Strait, Australia, 1,670  
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  
Dagu, China, 5,135  
Dalian, China (via Vitiaz Strait),  
4,976  
Dalian, China (west of New  
Ireland), 5,015  
Dutch Harbor, Alaska, U.S.A.,  
5,761  
Guayaquil, Ecuador, 7,268  
Hakodate, Japan, 4,688  
Ho Chi Minh, Vietnam, 4,679  
Hobart, Tasmania, 638  
Honolulu, Hawaii, U.S.A., 4,420  
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  
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  
Pago Pago, American Samoa,  
2,377  
Papeete, French Polynesia, 3,308  
Ponape, Caroline Islands, 2,514  
Port Augusta, Australia, 1,164  
Portland, Oregon, U.S.A., 6,737  
Prince Rupert, Canada, 6,671  
Qingdao, China, 4,871  
Rabaul, Papua New Guinea, 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  
Seward, Alaska, U.S.A., 6,373  
Shanghai, China (via Vitiaz  
Strait), 4,636  
Shanghai, China (west of New  
Ireland), 4,642  
Shimonoseki, Japan, 4,453  
Sitka, Alaska, U.S.A., 6,595  
Suva, Fiji Islands, 1,738  
Talomako, Vanuatu, 1,471  
Tinian, Mariana Islands, 3,064  
Truk, Caroline Islands, 2,543  
Valparaiso, Chile (via 49°S.),  
6,294  
Vladivostok, Russia, 5,105  
Wake Island, 3,346  
Walleroo, Australia, 1,084  
Wellington, New Zealand, 1,234  
Xiamen, China (via Vitiaz Strait),  
4,437  
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, South Africa, 6,425  
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 Castries, St. Lucia, 1,967  
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  
Recife, Brazil, 3,553  
Rio de Janeiro, Brazil, 4,648  
Salvador, Brazil, 3,967  
San Juan, Puerto Rico, 1,728  
Santo Domingo, Dominican  
Republic, 1,867  
St. John, Canada, 492  
Yarmouth, Canada, 416

**SZCZECIN, POLAND**  
(53°26'00"N., 14°34'30"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), 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

**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.**TA-KU, CHINA**  
(38°59'15"N., 117°40'45"E.) See  
Dagu, China.**TAKORADI, GHANA**  
(4°53'00"N., 1°44'30"W.) to:**Ports**

Buchanan, Liberia, 197  
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, Congo, 1,001  
Port of Spain, Trinidad, 3,632  
Porto Grande, Cape Verde Islands,  
1,673  
Santa Cruz de Tenerife, Canary  
Islands, 2,119  
Tema, Ghana, 117  
Willemstad, Curacao, 4,040

**TAKU BAR, CHINA**  
(38°56'15"N., 117°68'45"E.) See  
Dagu Bar, China.**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  
Esmeraldas, Ecuador, 2,368  
Guayaquil, Ecuador, 2,135  
Guaymas, Mexico, 4,428  
Iquique, Chile, 1,008  
Lota, Chile, 50  
Monterey, California, U.S.A.,  
5,190  
Pisco, Peru, 1,411  
Puntarenas, Costa Rica, 2,879  
Salina Cruz, Mexico, 3,414  
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

**TALLINN, ESTONIA**  
(59°27'00"N., 24°46'30"E.) to:**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 603  
Skagens Odde, Denmark, 661

**Ports**

Gdynia, Poland, 392  
Sankt-Peterburg, Russia, 189  
Stockholm, Sweden, 220

**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, MADAGASCAR**  
(18°09'00"S., 49°25'30"E.) to:**Junction Points\***

Cape of Good Hope, South Africa,  
2,055  
Port Said, Egypt, 3,598  
Singapore, 3,675

**Ports**

Beira, Mozambique, 1,239  
Belawan, Indonesia, 3,342  
Bombay, India, 2,621  
Colombo, Sri Lanka, 2,351  
Fremantle, Australia, 3,650  
Karachi, Pakistan, 2,788  
Malacca, Malaysia, 3,560  
Maputo, Mozambique, 1,242  
Penang, Malaysia, 3,387  
Port Darwin, Australia, 4,702

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

## 112 TAMPA, FLORIDA, U.S.A.

Port Louis, Mauritius, 474  
Sabang, Indonesia, 3,076  
Zanzibar, Tanzania, 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  
La Habana, Cuba, 307  
Matanzas, Cuba (via Northwest Channel), 325  
Tampico, Mexico, 921  
Veracruz, Mexico, 925

**TAMPICO, MEXICO**  
(22°12'30"N., 97°3'30"W.) to:

**Junction Points\***

Panama, Panama, 1,528  
Straits of Florida, 832  
Yucatan Channel, 716

**Ports**

Belize, Belize, 927  
Brunswick, Georgia, U.S.A., 1,387  
Campeche, Mexico, 430  
Carmen, Mexico, 401  
Cartagena, Colombia, 1,575  
Cienfuegos, Cuba, 1,009  
Coatzacoalcos, Mexico, 320  
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  
Jacksonville, Florida, U.S.A., 1,361  
Key West, Florida, U.S.A., 907  
Kingston, Jamaica, 1,252  
La Habana, Cuba, 864  
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  
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

**TANDJUNG UBAN, INDONESIA**  
(1°04'00"N., 104°13'00"E.) to:

**Junction Points\***

Singapore, 27  
Selat Sunda, Indonesia, 502

**Ports**

Ho Chi Minh, Vietnam, 633  
Makassar, Sulawesi, 1,075  
Manila, Philippines, 1,328

**TANDJUNG PRIOK, INDONESIA**  
(6°06'00"S., 106°53'00"E.) See Jakarta.

**TANGA, TANZANIA**  
(5°04'00"S., 39°07'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,425  
Port Said, Egypt, 3,068  
Singapore, 4,037

**Ports**

Aden, Yemen, 1,681  
Belawan, Indonesia, 3,704  
Fremantle, Australia, 4,283  
Mombasa, Kenya, 69  
Penang, Malaysia, 3,749  
Port Darwin, Australia, 5,466  
Zanzibar, Tanzania, 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 Grande, Cape Verde Islands, 1,536  
Vigo, Spain, 516

**TANJONG PERAK, INDONESIA**  
(7°11'28"S., 112°44'32"E.) See Surabaya.

**TARABULUS, LEBANON**  
(34°29'37"N., 35°51'55"E.) to:

**Junction Points\***

Port Said, Egypt, 268  
Strait of Gibraltar, 2,047

**Ports**

Haifa, Israel, 118  
Marseille, France, 1,613  
Sete, France, 1,672  
Venezia, Italy (south of Greece), 1,399  
Venezia, Italy (via Corinth Canal), 1,369

**TARABULUS, LIBYA**  
(32°54'10"N., 13°11'36"E.) to:

**Junction Points\***

Port Said, Egypt, 998  
Strait of Gibraltar, 1,093

**Ports**

Alexandria, Egypt, 876  
Algiers, Algeria, 665  
Alicante, Spain, 832  
Ancona, Italy, 820  
Annaba, Algeria, 440  
Banghazi, Libya, 354  
Banzart, Libya, 335

Barcelona, Spain, 762  
Bari, Italy, 613  
Bat'umi, Georgia, 1,540  
Beirut, Lebanon, 1,129  
Brindisi, Italy, 555  
Cartagena, Spain, 856  
Ceuta, Morocco, 1,074  
Genova, Italy, 719  
Gibraltar, 1,076  
Haifa, Israel, 1,109  
Iraklion, Kriti, 630  
Iskenderun, Turkey, 1,167  
Istanbul, Turkey, 953  
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, Ukraine, 1,301  
Oran, Algeria, 862  
Palermo, Sicily, 460  
Palma, Balearic Islands, 708  
Piraeus, Greece, 640  
Porto Empedocle, Sicily, 263  
Qabis, Tunisia, 174  
Rhodes, Greece, 780  
Rijeka, Croatia, 887  
Savona, Italy, 722  
Sibenik, Croatia, 761  
Siracusa, Sicily, 276  
Sousse, Tunisia, 231  
Split, Croatia, 746  
Taranto, Italy, 509  
Thessaloniki, Greece, 848  
Toulon, France, 722  
Trieste, Italy, 921  
Tubruq, Libya, 574  
Tunis, Tunisia, 322  
Valencia, Spain, 831  
Valletta, Malta, 201  
Venezia, Italy, 931  
Volos, Greece, 789

**TARANTO, ITALY**  
(40°28'46"N., 17°14'53"E.) to:

**Junction Points\***

Port Said, Egypt, 954  
Strait of Gibraltar, 1,268

**Ports**

Alexandria, Egypt, 844  
Algiers, Algeria, 841  
Alicante, Spain, 995  
Ancona, Italy, 415  
Annaba, Algeria, 620  
Augusta, Sicily, 243  
Banghazi, Libya, 523  
Banzart, Tunisia, 530  
Bari, Italy, 208  
Barletta, Italy, 232  
Beirut, Lebanon, 1,023  
Brindisi, Italy, 150  
Cartagena, Spain, 1,025  
Ceuta, Morocco, 1,249  
Crotone, Italy, 87  
Durrës, Albania, 183  
Genova, Italy, 705  
Gibraltar, 1,250  
Haifa, Israel, 1,020  
Iraklion, Kriti, 509  
Istanbul, Turkey (south of Greece), 806  
Istanbul, Turkey (via Corinth Canal), 717

Izmir, Turkey (south of Greece), 652  
Izmir, Turkey (via Corinth Canal), 563  
Kalamai, Greece, 351  
Kerkira, Greece, 167  
La Spezia, Italy, 669  
Livorno, Italy, 634  
Malaga, Spain, 1,198  
Marseille, France, 797  
Messina, Sicily, 223  
Milazzo, Sicily, 316  
Napoli, Italy, 395  
Odessa, Ukraine (south of Greece), 1,154  
Odessa, Ukraine (via Corinth Canal), 1,065  
Oran, Algeria, 1,037  
Palermo, Sicily, 339  
Palma, Balearic Islands, 858  
Piraeus, Greece (south of Greece), 493  
Piraeus, Greece (via Corinth Canal), 363  
Rijeka, Croatia, 482  
Sarandë, Albania, 154  
Savona, Italy, 715  
Sibenik, Croatia, 356  
Siracusa, Sicily, 245  
Split, Croatia, 341  
Taormina, Sicily, 211  
Tarabulus, Libya, 509  
Thessaloniki, Greece (south of Greece), 701  
Thessaloniki, Greece (via Corinth Canal), 612  
Toulon, France, 765  
Trieste, Italy, 516  
Tunis, Tunisia, 518  
Valencia, Spain, 983  
Valletta, Malta, 322  
Venezia, Italy, 526  
Villa San Giovanni, Italy, 287  
Vlores, Albania, 146  
Volos, Greece (south of Greece), 642  
Volos, Greece (via Corinth Canal), 553

**TARAWA ATOLL, KIRIBATI**  
(1°24'00"N., 172°54'00"E.) to:

**Junction Points\***

Honshu, Japan, 2,712  
Panama, Panama (via Central Route), 6,537  
Punta Arenas, Chile, 6,479  
Singapore, 4,520  
Torres Strait, Australia, 2,191  
Tsugaru-Kaikyo, Japan, 2,984  
Wilson Promontory, Australia, 2,919

**Ports**

Auckland, New Zealand, 2,365  
Brisbane, Australia, 2,078  
Honolulu, Hawaii, U.S.A., 2,085  
Manila, Philippines, 3,695  
San Francisco, California, U.S.A., 4,161  
Sydney, Australia, 2,475

**TARBERT ISLAND, IRELAND**  
(52°35'15"N., 9°21'46"W.) to:

**Junction Points\***

Fastnet Rock, Ireland, 125  
Inishtrahull, Ireland, 250  
Pentland Firth, Scotland, 509

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

<p><b>Ports</b></p> <p>Belfast, Northern Ireland (via north of Ireland), 338 Cobh, Ireland, 193 Larne, Northern Ireland (via west of Ireland), 336 Limerick, Ireland, 30</p> <p><b>TARRAGONA, SPAIN</b> (41°06'25"N., 1°14'30"E.) to:</p> <p><b>Junction Points*</b></p> <p>Port Said, Egypt, 1,634 Strait of Gibraltar, 501</p> <p><b>Ports</b></p> <p>Beirut, Lebanon, 1,738 Malaga, Spain, 431 Oran, Algeria, 336 Palma, Balearic Islands, 134 Siracusa, Sicily, 746 Toulon, France, 251 Valencia, Spain, 124</p> <p><b>TATIBANA KO, JAPAN</b> (33°52'10"N., 134°40'00"E.) to:</p> <p><b>Junction Points*</b></p> <p>Honshu, Japan, 343 Selat Lombok, Indonesia (via south of Mindanao), 2,884 Panama, Panama, 7,915 Punta Arenas, Chile, 9,380 Singapore, 2,640 Selat Sunda, Indonesia, 2,999 Torres Strait, Australia, 3,118</p> <p><b>Ports</b></p> <p>Aleksandrovsk-Sakhalinskiy, Russia, 1,363 Auckland, New Zealand, 4,896 Hakodate, Japan, 897 Honolulu, Hawaii, U.S.A., 3,224 Los Angeles, California, U.S.A., 5,129 Yokohama, Japan, 285</p> <p><b>TAURANGA, NEW ZEALAND</b> (37°36'14"S., 176°12'10"E.) to:</p> <p><b>Junction Points*</b></p> <p>Panama, Panama, 6,534 Punta Arenas, Chile, 4,613 Torres Strait, Australia, 2,647 Wilson Promontory, Australia (via north of New Zealand), 1,609 Wilson Promontory, Australia (via Cook Strait), 1,795</p> <p><b>Ports</b></p> <p>Auckland, New Zealand, 131 Brisbane, Australia, 1,436 Dunedin, New Zealand, 760 New Plymouth, New Zealand, 587 Picton, New Zealand, 509 Suva, Fiji Islands, 1,811 Sydney, Australia, 1,353 Wellington, New Zealand, 430</p> <p><b>TAWAU, MALAYSIA</b> (4°13'32"N., 117°53'33"E.) to:</p> <p><b>Junction Points*</b></p> <p>Selat Lombok, Indonesia, 856</p>	<p>Panama, Panama (via north of Sulawesi), 9,779 Singapore (via Balabac Strait), 1,342 Selat Sunda, Indonesia (via Makassar Strait), 1,336 Torres Strait, Australia, 1,798</p> <p><b>Ports</b></p> <p>Batangas, Philippines, 720 Cebu, Philippines, 557 Honolulu, Hawaii (via south of Mindanao), 4,975 Makassar, Sulawesi, 591 Manila, Philippines, 742 Sandakan, Sabah, 241 Zamboanga, Philippines, 340</p> <p><b>TEES RIVER, ENGLAND</b> (54°40'57"N., 1°06'20"W.) to:</p> <p><b>Junction Points*</b></p> <p>Bishop Rock, England, 584 Ile d'Ouessant, France, 578 Nord-Ostsee-Kanal (East Entrance), Germany, 421 Pentland Firth, Scotland, 266 Skagens Odde, Denmark, 435</p> <p><b>Ports</b></p> <p>Amsterdam, Netherlands, 256 Antwerp, Belgium, 327 Bergen, Norway, 406 Dover, England, 270 Emden, Germany, 303 Hamburg, Germany, 404 London, England, 286 Oslo, Norway, 525</p> <p><b>TELA, HONDURAS</b> (15°46'30"N., 87°27'00"W.) to:</p> <p><b>Junction Points*</b></p> <p>Panama, Panama, 749</p> <p><b>Ports</b></p> <p>Colon, Panama, 706 New Orleans, Louisiana, U.S.A., 915 San Juan, Puerto Rico, 1,258 Tampico, Mexico, 974</p> <p><b>TELUKBAYUR, INDONESIA</b> (1°00'00"S., 100°22'00"E.) to:</p> <p><b>Junction Points*</b></p> <p>Cape of Good Hope, South Africa, 4,979 Singapore, 1,011 Selat Sunda, Indonesia, 488</p> <p><b>Ports</b></p> <p>Durban, South Africa, 4,307 Penang, Malaysia, 931 Tjilatjap, Indonesia, 738</p> <p><b>TEMA, GHANA</b> (5°37'33"N., 0°00'45"E.) to:</p> <p><b>Junction Points*</b></p> <p>Cape of Good Hope, South Africa, 2,619 Ile d'Ouessant, France, 3,597</p>	<p><b>Ports</b></p> <p>Lagos, Nigeria, 216 Takoradi, Ghana, 117</p> <p><b>TERNEUZEN, NETHERLANDS</b> (51°20'00"N., 3°49'00"E.) Subtract 36 miles from Antwerp distances.</p> <p><b>TETNEY TERMINAL, ENGLAND</b> (53°32'22"N., 0°06'53"E.) to:</p> <p><b>Junction Points*</b></p> <p>Bishop Rock, England, 511 Ile d'Ouessant, France, 503 Nord-Ostsee-Kanal (East Entrance), Germany, 381 Pentland Firth, Scotland, 311 Skagens Odde, Denmark, 442</p> <p><b>Ports</b></p> <p>Amsterdam, Netherlands, 216 Bremerhaven, Germany, 321 Le Havre, France, 337 Oslo, Norway, 533 Trondheim, Norway, 724 Wilhelmshaven, Germany, 326</p> <p><b>TEXAS CITY, TEXAS, U.S.A.</b> (29°22'30"N., 94°53'15"W.) Add 5 miles to Galveston distances.</p> <p><b>THAMES HAVEN, ENGLAND</b> (51°30'00"N., 0°30'30"E.) Subtract 23 miles from London distances.</p> <p><b>THESSALONIKI, GREECE</b> (40°37'56"N., 22°55'48"E.) to:</p> <p><b>Junction Points*</b></p> <p>Port Said, Egypt, Strait of Gibraltar, 1,716</p> <p><b>Ports</b></p> <p>Alexandria, Egypt, 678 Alexandroupolis, Greece, 191 Algiers, Algeria, 1,287 Alicante, Spain, 1,454 Ancona, Italy (south of Greece), 953 Ancona, Italy (via Corinth Canal), 857 Annaba, Algeria, 1,063 Banghazi, Libya, 611 Baniyas, Syria, 792 Banzart, Tunisia, 958 Barcelona, Spain (south of Greece), 1,380 Barcelona, Spain (via Corinth Canal), 1,339 Bari, Italy (south of Greece), 746 Bari, Italy (via Corinth Canal), 650 Bat'umi, Georgia, 926 Beirut, Lebanon, 783 Brindisi, Italy (south of Greece), 688 Brindisi, Italy (via Corinth Canal), 592 Cartagena, Spain, 1,479 Ceuta, Morocco, 1,696 Derince, Turkey, 372 Ermoupolis, Greece, 227 Genova, Italy (south of Greece), 1,186</p>	<p>Genova, Italy (via Corinth Canal), 1,144 Gibraltar, 1,698 Haifa, Israel, 786 Iraklion, Kriti, 351 Iskenderun, Turkey, 784 Istanbul, Turkey, 338 Izmir, Turkey, 259 Kavala, Greece, 160 La Spezia, Italy (south of Greece), 1,150 La Spezia, Italy (via Corinth Canal), 1,109 Larnaca, Cyprus, 703 Livorno, Italy (south of Greece), 1,114 Livorno, Italy (via Corinth Canal), 1,073 Malaga, Spain, 1,646 Marseille, France (south of Greece), 1,278 Marseille, France (via Corinth Canal), 1,236 Mersin, Turkey, 726 Messina, Sicily (south of Greece), 704 Messina, Sicily (via Corinth Canal), 663 Mitilini, Greece, 232 Napoli, Italy (south of Greece), 876 Napoli, Italy (via Corinth Canal), 834 Novorossiysk, Russia, 794 Odessa, Ukraine, 686 Oran, Algeria, 1,484 Palermo, Sicily (south of Greece), 820 Palermo, Sicily (via Corinth Canal), 779 Palma, Balearic Islands (south of Greece), 1,339 Palma, Balearic Islands (via Corinth Canal), 1,297 Piraeus, Greece, 259 Rhodes, Greece, 388 Rijeka, Croatia (south of Greece), 1,023 Rijeka, Croatia (via Corinth Canal), 924 Savona, Italy (south of Greece), 1,196 Savona, Italy (via Corinth Canal), 1,154 Sibenik, Croatia (south of Greece), 895 Sibenik, Croatia (via Corinth Canal), 796 Siracusa, Sicily (south of Greece), 692 Siracusa, Sicily (via Corinth Canal), 667 Split, Croatia (south of Greece), 880 Split, Croatia (via Corinth Canal), 781 Tarabulus, Libya, 848 Taranto, Italy (south of Greece), 701 Taranto, Italy (via Corinth Canal), 612 Toulon, France (south of Greece), 1,246 Toulon, France (via Corinth Canal), 1,204 Trieste, Italy (south of Greece), 1,056 Trieste, Italy (via Corinth Canal), 957 Tunis, Tunisia, 945 Valencia, Spain, 1,452 Valletta, Malta, 732</p>
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\* JUNCTION POINT.—See Preface for use of junction points

## 114 THORSHAVN, FAROE ISLANDS

Venezia, Italy (south of Greece), 1,064  
 Venezia, Italy (via Corinth Canal), 968  
 Volos, Greece, 132

**THORSHAVN, FAROE ISLANDS**  
 (62°00'20"N., 6°4'30"W.) See Thorshavn.

**THULE, GREENLAND**  
 (76°32'52"N., 68°52'30"W.) See Qaanaaq, Greenland.

**TIANJIN, CHINA**  
 (39°07'30"N., 117°11'45"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via Makassar Strait), 3,189  
 Panama, Panama (via Osumi Strait), 9,024  
 Panama, Panama (via Tsugaru Strait), 8,891  
 Punta Arenas, Chile, 10,294  
 Singapore, 2,823

**Ports**

Dagu, China, 48  
 Moji, Japan, 840  
 Shanghai, China (via Chang-shan Shui-Tao), 740  
 Yokohama Japan (via Naikai), 1,465

**TIENTSIN, CHINA**  
 (39°07'30"N., 117°11'45"E.) See Tianjin, China.

**TIKSI, RUSSIA**  
 (71°39'30"N., 128°59'00"E.) to:

**Ports**

Mys Chelyuskin, Russia, 579  
 Pevek, Russia, 854  
 Provideniya, Russia, 1,500

**TJILATJAP, INDONESIA**  
 (7°44'00"S., 108°59'24"E.) to:

**Junction Points\***

Cape Leeuwin, Australia, 1,616  
 Selat Lombok, Indonesia, 413  
 Selat Sunda, Indonesia, 345

**Ports**

Fremantle, Australia, 1,519  
 Port Darwin, Australia, 1,321  
 Tarakan, Indonesia, 1,217

**TJIREBON, INDONESIA**  
 (6°42'00"S., 108°36'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 503  
 Singapore, 624  
 Selat Sunda, Indonesia, 211

**Ports**

Jakarta, Indonesia, 156  
 Makassar, Sulawesi, 681

**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

**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.

**TOMAKOMAI, JAPAN**  
 (42°36'50"N., 141°37'22"E.) to:

**Junction Points\***

Honshu, Japan, 486  
 Panama, Panama, 7,383  
 Punta Arenas, Chile, 9,455  
 Tsugaru-Kaikyo, Japan, 90

**Ports**

Apra, Guam, 1,759  
 Auckland, New Zealand, 5,198  
 Honolulu, Hawaii, U.S.A., 3,353  
 Sydney, Australia, 4,801  
 Valparaiso, Chile, 9,910  
 Yokohama, Japan, 541

**TOMARI, JAPAN**  
 (43°42'00"N., 145°30'00"E.) to:

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 542  
 Aomori, Japan, 335  
 Attu Island, Alaska, U.S.A., 1,238  
 Dutch Harbor, Alaska, U.S.A., 1,978  
 Hakodate, Japan, 301  
 Kholmsk, Russia, 314  
 Kiska, Alaska, U.S.A., 1,406  
 Korsakov, Sakhalin, Russia, 239  
 Muroran, Japan, 295  
 Nikolayevsk-Na-Amure, Russia, 694  
 Otaru, Japan, 387  
 Petropavlovsk-Kamchatskiy, Russia, 822  
 Vladivostok, Russia, 724  
 Wakkanai, Japan, 246

**TOMPKINSVILLE, NEW YORK, U.S.A.**  
 (40°38'00"N., 74°04'00"W.) For ocean distances, subtract 4 1/2 miles from New York distances.

**TONGYEONG, SOUTH KOREA**  
 (34°50'00"N., 128°27'00"E.) to:

**Ports**

Busan, South Korea, 63  
 Mogpo, South Korea, 189  
 Nampo, North Korea, 446  
 Rajin, North Korea, 501  
 Weonsan, North 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, South Africa, 6,854  
 Cape Leeuwin, Australia, 2,717  
 Honshu, Japan, 3,265  
 Panama, Panama, 8,451  
 Port Said, Egypt (via Eight Degree Channel), 7,403  
 Port Said, Egypt (via One and One Half Degree Channel), 7,505  
 Punta Arenas, Chile (via Raine Island entrance and Lat. 49°S.), 7,217  
 Selat Wetar, Indonesia, 881  
 Wilson Promontory, Australia (via Cape Capricorn and inner route), 2,183

**Ports**

Aden, Yemen (via Eight Degree Channel), 6,016  
 Ambon, Indonesia, 964  
 Apia, Samoa (via Raine Island entrance), 2,763  
 Auckland, New Zealand (via Raine Island entrance), 2,485  
 Bandjermasin, Kalimantan, Indonesia, 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  
 Cairns Harbor, Australia, 505  
 Callao, Peru (via Raine Island entrance), 8,152  
 Colombo, Sri Lanka (south of Java and Timor), 3,978  
 Davao, Philippines, 1,628  
 Dunedin, New Zealand, 2,872  
 Fremantle, Australia, 2,531  
 Gladstone Harbor, Australia, 1,085

Guayaquil, Ecuador (via Raine Island entrance), 8,270  
 Ho Chi Minh, Vietnam, 2,629  
 Hobart, Tasmania, 2,271  
 Hong Kong, China, 2,725  
 Honolulu, Hawaii, U.S.A. (via Raine Island entrance, China Strait and Bougainville Strait), 4,191  
 Jakarta, Indonesia (via Selat Wetar and north of Madura), 2,175  
 Karachi, Pakistan (south of Java and Timor), 5,298  
 Kota Kinabalu, Sabah, 2,041  
 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

Massawa, Ethiopia (via Eight Degree Channel), 6,403  
 Nelson, New Zealand, 2,646  
 Noumea, New Caledonia (via Raine Island entrance), 1,622  
 Pago Pago, American Samoa (via Raine Island entrance), 2,848  
 Papeete, French Polynesia (via Raine Island entrance), 4,043  
 Port Darwin, Australia (via Clarence Strait and Dundas Strait), 735  
 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  
 San Francisco, California, U.S.A. (via Raine Island entrance), 6,249  
 Sorido, Indonesia, 1,329  
 Sorong, New Guinea, 1,021  
 Surabaya, Indonesia (via Wetar Passage and north of Madura), 1,814  
 Surabaya, Indonesia (via Wetar Passage and south of Madura), 1,784  
 Suva, Fiji Islands (via Raine Island entrance, north of Cape Cumberland and Maewo to Kandavu Passage), 2,212  
 Sydney, Australia, 1,754  
 Townsville, Australia, 662  
 Urangan, Australia, 1,198  
 Valparaiso, Chile (via 49°S.), 7,670  
 Victoria, Sabah, 2,192  
 Wellington, New Zealand (via Raine Island entrance), 2,652  
 Xiamen, China, 2,655

**TORSHAVN, FAROE ISLANDS**  
 (62°00'20"N., 6°45'30"W.) to:

**Junction Points\***

Pentland Firth, Scotland, 22  
 Skagens Odde, Denmark, 624

**Ports**

Aberdeen, Scotland, 365  
 Bergen, Norway, 372

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

Reykjavik, Iceland, 516

**TOULON, FRANCE**  
(43°06'45"N., 5°35'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,486  
Strait of Gibraltar, 722

**Ports**

Ajaccio, Corsica, 155  
Alexandria, Egypt, 1,376  
Algiers, Algeria, 406  
Alicante, Spain, 418  
Ancona, Italy, 1,077  
Annaba, Algeria, 390  
Banghazi, Libya, 972  
Banzart, Tunisia, 405  
Barcelona, Spain, 205  
Bari, Italy, 870  
Beirut, Lebanon, 1,568  
Brindisi, Italy, 812  
Cagliari, Sardinia, 33,  
Cartagena, Spain, 471  
Castellammare di Stabia, Italy, 430  
Ceuta, Morocco, 704  
Genova, Italy, 1,171  
Gibraltar, 705  
Haifa, Israel, 1,565  
Iraklion, Kriti, 1,051  
Istanbul, Turkey, 1,351  
Izmir, Turkey, 1,197  
La Spezia, Italy, 199  
Livorno, Italy, 204  
Malaga, Spain, 652  
Messina, Sicily, 546  
Napoli, Italy, 424  
Odessa, Ukraine, 1,699  
Oran, Algeria, 545  
Palermo, Sicily, 464  
Palma, Balearic Islands, 308  
Piraeus, Greece (south of  
Greece), 1,038  
Piraeus, Greece (via Corinth  
Canal), 956  
Rijeka, Croatia, 1,145  
Savona, Italy, 156  
Sibenik, Croatia, 1,018  
Siracusa, Sicily, 617  
Skikda, Algeria, 381  
Split, Croatia, 1,003  
Tarabulus, Libya, 722  
Taranto, Italy, 765  
Tarragona, Spain, 251  
Thessaloniki, Greece, 1,246  
Trieste, Italy, 1,178  
Tunis, Tunisia, 453  
Valencia, Spain, 363  
Valletta, Malta, 605  
Venezia, Italy, 1,188  
Volos, Greece, 1,187

**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 New Guinea,  
595

**TRABZON, TURKEY**  
(41°01'00"N., 39°46'30"E.) Add  
511 miles to Istanbul distances or  
ports outside the Black Sea.

**TRAMANDAI, BRAZIL**  
(30°00'40"S., 50°05'12"W.) to:

**Junction Points\***

Bishop Rock, England, 5,418  
Cape of Good Hope, South Africa,  
3,420  
Fastnet Rock, Ireland, 5,445  
Grand Banks South, 5,074  
Ile d'Ouessant, France, 5,391  
Inishtrahull, Ireland, 5,718  
Montreal, Canada, 5,963  
Panama, Panama, 4,889  
Pentland Firth, Scotland, 5,998  
Punta Arenas, Chile, 1,676  
Strait of Gibraltar, 4,733  
Straits of Florida, 5,242  
Yucatan Channel, 5,267

**Ports**

Buenos Aires, Argentina, 609  
Guiria, Venezuela, 3,831  
Montevideo, Uruguay, 450  
Pointe Noire, Congo, 3,804  
Rio de Janeiro, Brazil, 565  
Santos, Brazil, 421  
Takoradi, Ghana, 3,483

**TRANGISVAAG, FAROE  
ISLANDS**  
(61°31'58"N., 6°44'30"W.) to:

**Junction Points\***

Bishop Rock, England, 798  
Cape of Good Hope, South Africa,  
6,492  
Fastnet Rock, Ireland, 650  
Grand Banks South, 1,938  
Inishtrahull, Ireland, 370  
Panama, Panama, 4,494  
Pentland Firth, Scotland, 197  
Punta Arenas, Chile, 7,644  
Strait of Gibraltar, 1,747

**Ports**

Aberdeen, Scotland, 331  
Alesund, Norway, 367  
Amsterdam, Netherlands, 671  
Bodo, Norway, 645  
Bremerhaven, Germany, 686  
Dover, England, 718  
Fredrikstad, Norway, 629  
Goteborg, Sweden, 632  
Hirtshals, Denmark, 569  
Leith, Scotland, 417  
London, England, 753  
Murmansk, Russia, 1,200  
Portsmouth, England, 812  
Reykjavik, Iceland, 492  
Tromso, Norway, 792  
Zeebrugge, Belgium, 705

**TRAPANI, SICILY**  
(38°00'15"N., 12°30'00"E.) to:

**Junction Points\***

Port Said, Egypt, 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\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 88  
Skagens 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\***

Nord-Ostsee-Kanal (East  
Entrance), 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, ITALY**  
(45°39'13"N., 13°44'49"E.) to:

**Junction Points\***

Port Said, Egypt, 1,310  
Strait of Gibraltar, 1,682

**Ports**

Al Latakia, Syria, 1,370  
Alexandria, Egypt, 1,200  
Algiers, Algeria, 1,254  
Alicante, Spain, 1,409  
Ancona, Italy, 130  
Annaba, Algeria, 1,034  
Banghazi, Libya, 901  
Banzart, Tunisia, 943  
Barcelona, Spain, 1,313  
Bari, Italy, 321  
Bat'umi, Georgia (south of  
Greece), 1,749  
Bat'umi, Georgia (via Corinth  
Canal), 1,650  
Beirut, Lebanon, 1,379  
Brindisi, Italy, 376  
Cartagena, Spain, 1,439  
Ceuta, Morocco, 1,662  
Genova, Italy, 1,118  
Gibraltar, 1,664  
Haifa, Israel, 1,375  
Iraklion, Kriti, 865  
Istanbul, Turkey (south of

Greece), 1,162  
Istanbul, Turkey (via Corinth  
Canal), 1,063  
Izmir, Turkey (south of Greece),  
1,007  
Izmir, Turkey (via Corinth Canal),  
908  
La Spezia, Italy, 1,083  
Livorno, Italy, 1,047  
Malaga, Spain, 1,611  
Marseille, France, 1,210  
Messina, Sicily, 637  
Napoli, Italy, 808  
Odessa, Ukraine (south of  
Greece), 1,510  
Odessa, Ukraine (via Corinth  
Canal), 1,411  
Oran, Algeria, 1,450  
Palermo, Sicily, 753  
Palma, Balearic Islands, 1,271  
Piraeus, Greece (south of  
Greece), 848  
Piraeus, Greece (via Corinth  
Canal), 709  
Rijeka, Croatia, 120  
Savona, Italy, 1,128  
Sibenik, Croatia, 192  
Siracusa, Sicily, 658  
Split, Croatia, 210  
Tarabulus, Libya, 921  
Taranto, Italy, 516  
Thessaloniki, Greece (south of  
Greece), 1,056  
Thessaloniki, Greece (via Corinth  
Canal), 957  
Toulon, France, 1,178  
Tunis, Tunisia, 930  
Valencia, Spain, 1,396  
Valletta, Malta, 735  
Volos, Greece (south of Greece),  
997  
Volos, Greece (via Corinth Canal),  
898  
Zadar, Croatia, 142

**TRINCOMALEE, SRI LANKA**  
(8°33'30"N., 81°12'45"E.) to:

**Ports**

Bombay, India, 1,218  
Colombo, Sri Lanka, 347  
Galle, Sri Lanka, 255  
Karachi, Pakistan, 1,667  
Pandang, Indonesia, 1,301

**TROMSO, NORWAY**  
(69°39'00"N., 18°58'30"E.) to:

**Junction Points\***

Bishop Rock, England (via English  
Channel), 1,597

**Ports**

Bergen, Norway, 705  
Bjornoya, Svalbard, 306  
Galway, Ireland, 1,352  
Hammerfest, Norway, 124  
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  
Ile d'Ouessant, France (via Dover

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



## 116 TRUK, CAROLINE ISLANDS

Strait), 1,188  
 Nord-Ostsee-Kanal (East Entrance), Germany, 791  
 Pentland Firth, Scotland, 415  
 Skagens Odde, Denmark, 597

**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  
 Dutch Harbor, Alaska, U.S.A., 3,493  
 Guayaquil, Ecuador, 7,752  
 Ho Chi Minh, Vietnam, 2,799  
 Hong Kong, China, 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  
 Papeete, French Polynesia, 3,788  
 Ponape, Caroline Islands, 383  
 Port Darwin, Australia (via Selat Sele), 2,142  
 Qingdao, China, 2,459  
 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  
 Shanghai, China, 2,261  
 Sitka, Alaska, U.S.A., 4,473  
 Surabaya, Indonesia, 2,623  
 Suva, Fiji Islands, 2,231  
 Sydney, Australia, 2,543  
 Tinian, Mariana Islands, 597  
 Valparaiso, Chile, 7,952  
 Vladivostok, Russia, 2,593  
 Wake Island, 1,117  
 Yap, Caroline Islands, 851  
 Yokohama, Japan, 1,832

**TSINGTAO, CHINA**  
(36°05'30"N., 120°19'00"E.) See Qingdao, China.**TSO-YING, TAIWAN**  
(22°42'00"N., 120°15'00"E.) to:**Ports**

Ho Chi Minh, Vietnam, 1,131  
 Hong Kong, China, 343  
 Incheon, South Korea, 975  
 Makassar, Sulawesi, 1,757  
 Manila, Philippines, 552

**TSUGARU-KAIKYO, JAPAN\***  
(41°30'00"N., 140°40'00"E.) to:**Junction Points\***

Honshu, Japan, 484  
 Panama, Panama, 8,004  
 Punta Arenas, Chile, 9,449  
 Singapore, 3,343

**Ports**

Honolulu, Hawaii, U.S.A., 3,299  
 San Francisco, California, U.S.A., 4,242  
 Seattle, Washington, U.S.A., 3,910  
 Weonsan, North Korea, 620

**TSURUGA, JAPAN**  
(35°39'30"N., 136°04'00"E.) to:**Ports**

Hakodate, Japan, 447  
 Masan, South Korea, 385  
 Shanghai, China, 823  
 Shimomoseki, Japan, 325  
 Vladivostok, Russia, 490

**TUAPSE, RUSSIA**  
(44°05'10"N., 39°04'08"E.) to:**Junction Points\***

Port Said, Egypt, 1,294  
 Strait of Gibraltar (via Corinth Canal), 4,161  
 Strait of Gibraltar (south of Greece), 4,222

**Ports**

Alexandria, Egypt, 1,232  
 Beirut, Lebanon, 1,343  
 Constanta, Romania, 448  
 Haifa, Israel, 1,346  
 Iraklion, Kriti, 944  
 Istanbul, Turkey, 487  
 Napoli, Italy (via Corinth Canal), 1,426  
 Napoli, Italy (south of Greece), 1,488  
 Valencia, Spain (via Corinth Canal), 2,020  
 Valencia, Spain (south of Greece), 2,080

**TUBRUQ, LIBYA**  
(32°04'39"N., 23°59'00"E.) to:**Junction Points\***

Port Said, Egypt, 445  
 Strait of Gibraltar, 1,534

**Ports**

Alexandria, Egypt, 308  
 Banglazi, Libya, 248  
 Beirut, Lebanon, 595  
 Genova, Italy, 1,048  
 Iskenderun, Turkey, 667  
 Piraievs, Greece, 359  
 Tarabulus, Libya, 574  
 Venezia, Italy, 980

**TULEAR, MADAGASCAR**  
(23°21'42"S., 43°39'42"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 1,509  
 Port Said, Egypt, 3,966

**Ports**

Beira, Mozambique, 539  
 Majunga, Madagascar, 625  
 Mocambique, Mozambique, 532

**TUMACO, COLOMBIA**  
(1°50'20"N., 78°50'55"W.) to:**Junction Points\***

Panama, Panama, 437  
 Punta Arenas, Chile, 3,575  
 Singapore (via San Bernardino Strait), 10,685  
 Singapore (via Surigao Strait), 10,633  
 Torres Strait, Australia, 8,375  
 Wilson Promontory, Australia, 7,638

**Ports**

Callao, Peru, 981  
 Esmeraldas, Ecuador, 78  
 Golfito, Costa Rica, 495  
 Guayaquil, Ecuador, 470  
 La Libertad, Ecuador, 309  
 Salina Cruz, Mexico, 1,302  
 Talara, Peru, 449  
 Valparaiso, Chile, 2,240  
 Yokohama, Japan, 7,802

**TUNIS, TUNISIA**  
(36°47'54"N., 10°11'51"E.) to:**Junction Points\***

Port Said, Egypt, 1,172  
 Strait of Gibraltar, 820

**Ports**

Al Khums, Libya, 357  
 Al Latakia, Syria, 1,258  
 Alexandria, Egypt, 1,051  
 Algiers, 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  
 Beirut, 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, Kriti, 745  
 Istanbul, Turkey, 1,050  
 Izmir, Turkey, 896  
 Kalamai, Greece, 599  
 La Spezia, Italy, 448  
 Licata, Sicily, 187  
 Livorno, Italy, 417  
 Marsala, Sicily, 124  
 Marsaxlokk, Malta, 246  
 Marseille, France, 476  
 Messina, Sicily, 302  
 Napoli, Italy, 313  
 Odessa, Ukraine, 1,399  
 Oran, Algeria, 589  
 Palermo, Sicily, 193  
 Palma, Balearic Islands, 435  
 Piraievs, Greece (south of Greece), 737

Piraievs, Greece (via Corinth Canal), 680

Porto Empedocle, Sicily, 167  
 Pozzuoli, Italy, 308  
 Qabis, Tunisia, 302  
 Rijeka, Croatia, 897  
 Savona, Italy, 475  
 Sibenik, Croatia, 771  
 Siracusa, Sicily, 283  
 Split, Croatia, 756  
 Tarabulus, Libya, 322  
 Taranto, Italy, 518  
 Thessaloniki, Greece, 945  
 Toulon, France, 453  
 Trapani, Sicily, 138  
 Trieste, Italy, 930  
 Valencia, Spain, 560  
 Valletta, Malta, 234  
 Venezia, Italy, 940  
 Viareggio, Italy, 778  
 Volos, Greece (south of Greece), 886  
 Volos, Greece (via Corinth Canal), 869

**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\***

Nord-Ostsee-Kanal (East Entrance), 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

**TUTICORIN, INDIA**  
(8°43'20"N., 78°13'55"E.) to:**Junction Points\***

Cape of Good Hope, South Africa, 6,593  
 Cape Leeuwin, Australia, 3,347  
 Port Said, Egypt, 3,400  
 Singapore, 1,715  
 Sunda Strait, Indonesia, 1,920  
 Torres Strait, Australia, 4,165

**Ports**

Al Basrah, Iraq, 2,274  
 Bombay, India, 831  
 Calcutta, India, 1,041  
 Colombo, Sri Lanka, 143  
 Honavar, India, 549  
 New Mangalore, India, 429  
 Rangoon, Burma, 1,179  
 Trincomalee, Sri Lanka, 245

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

Victoria, Seychelles, 1,583

**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**

Belize, Belize, 897  
Campeche, Mexico, 375  
Carmen, Mexico, 333  
Cartagena, Colombia, 1,545  
Charlotte Amalie, Virgin Islands  
(via Old Bahama Channel),  
1,890  
Charlotte Amalie, Virgin Islands  
(via Yucatan Channel and south  
of Hispaniola), 1,884  
Charlotte Amalie, Virgin Islands  
(via Yucatan Channel and  
Windward Passage), 1,867  
Cienfuegos, Cuba, 979  
Colon, Panama, 1,455  
Galveston, Texas, U.S.A., 530  
Gulfport, Mississippi, U.S.A., 751  
Key West, Florida, U.S.A., 891  
Kingston, Jamaica, 1,243  
La Guaira, Venezuela, 1,923  
La Habana, Cuba, 847  
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 au Prince, Haiti, 1,428  
Port Arthur, Texas, U.S.A., 572  
Port Castries, St. Lucia, 2,136  
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

**TYNE RIVER, ENGLAND**  
(55°00'46"N., 1°24'00"W.) to:

**Junction Points\***

Bishop Rock, England, 632  
Ile d'Ouessant, France, 618  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 432  
Pentland Firth, Scotland, 243  
Skagens Odde, Denmark, 430

**Ports**

Aberdeen, Scotland, 134  
Dundee, Scotland, 109  
Hull, England, 135

Le Havre, France, 400  
London, England, 311  
Tees River, England, 31

**UBE, JAPAN**  
(33°55'00"N., 131°13'30"E.) to:

**Ports**

Busan, South Korea, 143  
Hakata, Japan, 84  
Kagoshima, Japan, 280  
Nagoya, Japan, 419  
Yokohama, Japan, 536

**ULSAN, SOUTH KOREA**  
(35°28'00"N., 129°24'00"E.) to:

**Ports**

Hakodate, Japan, 661  
Incheon, South Korea, 435  
Maizuru, Japan, 315  
Rajin, North Korea, 418  
Vladivostok, Russia, 486

**UMEA, SWEDEN**  
(63°49'12"N., 20°16'20"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 751  
Skagens Odde, Denmark, 812

**Ports**

Gdynia, Poland, 574  
Sankt-Peterburg, Russia, 574  
Stockholm, Sweden, 289

**UMM SAID, QATAR**  
(24°53'30"N., 51°34'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa,  
4,909  
Cape Leeuwin, Australia, 5,245  
Port Said, Egypt, 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, NORTH KOREA**  
(42°19'00"N., 130°24'45"E.) to:

**Ports**

Busan, South Korea, 452  
Hakodate, Japan, 486  
Maizuru, Japan, 474  
Otaru, Japan, 488

Shimonoseki, Japan, 511

**UNO, JAPAN**  
(34°29'00"N., 133°57'30"E.) to:

**Ports**

Chi-lung, Taiwan, 903  
Kobe, Japan, 71  
Kure, Japan, 117  
Shimonoseki, Japan, 177  
Yokohama, Japan, 405

**UPERNAVIK, 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

**URDIALES, SPAIN**  
(43°22'40"N., 3°12'15"W.) See  
Castro-Urdiales.

**USHANT, FRANCE\***  
(48°40'00"N., 5°30'00"W.) See  
Ile d'Ouessant.

**USHUAIA, ARGENTINA**  
(54°59'00"S., 68°18'10"W.) to:

**Ports**

Buenos Aires, Argentina, 1,447

**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\***

Nord-Ostsee-Kanal (East  
Entrance), 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\***

Nord-Ostsee-Kanal (East  
Entrance), Germany, 744  
Skagens Odde, Denmark, 805

**Ports**

Jakobstad, Finland, 99  
Rauma, Finland, 160  
Stockholm, Sweden, 282

**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:

**Junction Points\***

Panama, Panama, 4,958  
Punta Arenas, Chile, 7,866  
Singapore (via 30°N., 180° and  
Balintang Channel), 7,119  
Singapore (via 30°N., 180° and San  
Bernardino Strait), 7,106  
Singapore (via 50°N., 160°W. and  
San Bernardino Strait), 7,106  
Torres Strait, Australia, 5,883  
Wilson Promontory, Australia,  
7,100

**Ports**

Auckland, New Zealand, 6,190  
Brisbane, Australia, 6,141  
Chimbote, Peru, 5,482  
Frederiksted, St. Croix (via Cape  
Horn), 13,670  
Frederiksted, St. Croix (via  
Magellan Strait), 13,503  
Honolulu, Hawaii, U.S.A., 2,462  
Kobe, Japan, 3,677  
Suva, Fiji Islands, 5,110  
Tokyo, Japan, 3,414  
Yokohama, Japan, 3,460

**VALENCIA, SPAIN**  
(39°27'14"N., 0°19'12"W.) to:

**Junction Points\***

Port Said, Egypt, 1,679  
Strait of Gibraltar, 403

**Ports**

Al Latakia, Syria, 1,765  
Alexandria, Egypt, 1,559  
Algiers, Algeria, 230  
Alicante, Spain, 98  
Ancona, Italy, 1,295  
Annaba, Algeria, 426  
Augusta, Sicily, 801  
Banghazi, Libya, 1,094  
Banzart, Tunisia, 506  
Barcelona, Spain, 165  
Bari, Italy, 1,088  
Beirut, Lebanon, 1,770  
Brindisi, Italy, 1,048  
Cagliari, Sardinia, 461  
Cartagena, Spain, 152  
Ceuta, Morocco, 385  
Genova, Italy, 512  
Gibraltar, 386  
Haifa, Israel, 1,767  
Iraklion, Kreti, 1,252  
Istanbul, Turkey (south of

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

**118 VALLETTA, MALTA**

Greece), 1,558  
 Istanbul, Turkey (via Corinth Canal), 1,528  
 Izmir, Turkey (south of Greece), 1,403  
 Izmir, Turkey (via Corinth Canal), 1,374  
 La Spezia, Italy, 538  
 Livorno, Italy, 539  
 Malaga, Spain, 334  
 Marseille, France, 347  
 Messina, Sicily, 764  
 Napoli, Italy, 690  
 Odessa, Ukraine (south of Greece), 1,906  
 Odessa, Ukraine (via Corinth Canal), 1,876  
 Oran, Algeria, 238  
 Palermo, Sicily, 656  
 Palma, Balearic Islands, 146  
 Piraeus, Greece (south of Greece), 1,244  
 Piraeus, Greece (via Corinth Canal), 1,174  
 Rijeka, Croatia, 1,363  
 Savona, Italy, 497  
 Sibenik, Croatia, 1,237  
 Siracusa, Sicily, 790  
 Split, Croatia, 1,222  
 Tarabulus, Libya, 831  
 Taranto, Italy, 983  
 Tarragona, Spain, 124  
 Thessaloniki, Greece (south of Greece), 1,452  
 Thessaloniki, Greece (via Corinth Canal), 1,422  
 Toulon, France, 363  
 Trieste, Italy, 1,396  
 Tunis, Tunisia, 560  
 Valletta, Malta, 743  
 Venezia, Italy, 1,406  
 Volos Greece (south of Greece), 1,393  
 Volos Greece (via Corinth Canal), 1,364

**VALLETTA, MALTA**  
 (35°53'30"N., 14°30'52"E.) to:

**Junction Points\***

Port Said, Egypt, 946  
 Strait of Gibraltar, 1,005

**Ports**

Alexandria, Egypt, 823  
 Algiers, Algeria, 576  
 Alicante, Spain, 743  
 Ancona, Italy, 634  
 Annaba, Algeria, 352  
 Augusta, Sicily, 98  
 Banghazi, Libya, 359  
 Banzart, Tunisia, 247  
 Barcelona, Spain, 671  
 Bari, Italy, 427  
 Beirut, Lebanon, 1,049  
 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, Kriti, 528  
 Istanbul, Turkey, 837  
 Izmir, Turkey, 683  
 La Spezia, Italy, 554  
 Licata, Sicily, 78  
 Livorno, Italy, 519

Malaga, Spain, 928  
 Marsala, Sicily, 157  
 Marseille, France, 637  
 Messina, Sicily, 156  
 Napoli, Italy, 327  
 Nice, France, 592  
 Odessa, Ukraine, 1,185  
 Oran, Algeria, 774  
 Palermo, Sicily, 242  
 Palma, Balearic Islands, 619  
 Piraeus, Greece, 524  
 Porto Empedocle, Sicily, 97  
 Qabis, Tunisia, 232  
 Rijeka, Croatia, 701  
 Savona, Italy, 588  
 Sete, France, 694  
 Sibenik, Croatia, 575  
 Siracusa, Sicily, 88  
 Sousse, France, 197  
 Split, Croatia, 560  
 Tarabulus, Libya, 201  
 Taranto, Italy, 322  
 Thessaloniki, Greece, 732  
 Toulon, France, 605  
 Trieste, Italy, 735  
 Tunis, Tunisia, 234  
 Valencia, Spain, 743  
 Venezia, Italy, 745  
 Volos, Greece, 672

**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, 8,123  
 Wilson Promontory, Australia (via 30°S.), 7,130  
 Wilson Promontory, Australia (via 40°S.), 6,636  
 Wilson Promontory, Australia (via 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 Contreleur, Marquesa Islands, 4,029  
 Caldera, Chile, 376  
 Callao, Peru, 1,306  
 Chanaral, Chile, 417  
 Chimbote, Peru, 1,490  
 Coquimbo, Chile, 203  
 Corinto, Nicaragua, 2,875  
 Dagu, China (via Shimonoseki Strait), 10,482  
 Dalian, China (via Shimonoseki Strait), 10,324  
 Dalian, China (via Tokara Kaikyō), 10,366  
 Dutch Harbor, Alaska, U.S.A., 7,140  
 Esmeraldas, Ecuador, 2,179  
 Guayaquil, Ecuador, 1,980  
 Guaymas, Mexico, 4,291  
 Hakodate, Japan, 9,197  
 Hong Kong, China (direct), 10,218  
 Honolulu, Hawaii, U.S.A., 5,919  
 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  
 Midway Island, Pacific, 7,042  
 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  
 Pago Pago, American Samoa, 5,378  
 Papeete, French Polynesia, 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  
 Qingdao, China, 10,274  
 Rabaul, Papua New Guinea, 7,461  
 Salina Cruz, Mexico, 3,247  
 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 Kaikyō), 9,836  
 Seattle, Washington, U.S.A., 5,916  
 Seward, Alaska, U.S.A., 6,812  
 Shanghai, China, 10,148  
 Shimonoseki, Japan, 9,709  
 Sitka, Alaska, U.S.A., 6,407  
 Suva, Fiji Islands, 5,759  
 Sydney, Australia (via 30°S.), 6,986  
 Sydney, Australia (via 49°S.), 6,294  
 Talcahuano, Chile, 241  
 Tocopilla, Chile, 663  
 Truk, Caroline Islands (direct), 7,952  
 Vladivostok, Russia, 9,606  
 Wake Island, Pacific, 7,601  
 Wellington, New Zealand, 5,036  
 Xiamen, China (via Cook Strait), 10,216  
 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 Active Pass), 126  
 Seattle, Washington, U.S.A. (via Haro Strait and Boundary Pass), 132  
 Seward, Alaska, U.S.A., 1,249  
 Sitka, Alaska, U.S.A., 823  
 Skagway, Alaska, U.S.A., 1,021  
 Yokohama, Japan, 4,262

**VANCOUVER, WASHINGTON, U.S.A.**  
 (45°37'35"N., 122°41'18"W.)  
 Add 5 miles to Portland, Oregon distances.

**VARBERG, SWEDEN**  
 (57°05'35"N., 12°13'25"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 193  
 Nord-Ostsee-Kanal (East Entrance), Germany (via The Sound), 254  
 Skagens Odde, Denmark, 66

**Ports**

Hango, Finland (via The Sound), 572  
 Karlshamn, Sweden, 230  
 Karlskrona, Sweden, 240  
 Kobenhavn, Denmark, 92  
 Odense, Denmark, 130  
 Oulu, Finland (via The Sound), 919  
 Porvoo, Finland (via The Sound), 666

**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

**VARNA, BULGARIA**  
 (43°11'09"N., 28°00'00"E.) to:

**Junction Points\***

Port Said, Egypt, 952  
 Strait of Gibraltar (south of Greece), 1,986

**Ports**

Ajaccio, Corsica, 1,360  
 Alexandria, Egypt, 871  
 Algiers, Algeria, 1,533  
 Arbatax, Italy, 1,254  
 Banzart, Tunisia, 1,202  
 Barcelona, Spain, 1,618  
 Kerch, Ukraine, 1,610  
 Livorno, Italy, 1,361  
 Nice, France, 1,462  
 Sibenik, Croatia, 1,140  
 Tangier, Morocco, 1,973  
 Venezia, Italy, 1,318

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

**VEJLE, DENMARK**  
(55°42'15"N., 9°34'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 106  
Skagens Odde, Denmark, 189

**Ports**

Goteborg, Sweden, 176  
Kobenhavn, Denmark, 149  
Lubeck, Germany, 173

**VENICE, ITALY**  
(45°25'54"N., 12°18'27"E.) See Venezia.

**VENEZIA, ITALY**  
(45°25'54"N., 12°18'27"E.) to:

**Junction Points\***

Port Said, Egypt, 1,317  
Strait of Gibraltar, 1,691

**Ports**

Ajaccio, Corsica, 1,507  
Alexandria, Egypt, 1,208  
Algiers, Algeria, 1,264  
Alicante, Spain, 1,418  
Ancona, Italy, 1,24  
Annaba, Algeria, 1,044  
Banghazi, Libya, 911  
Banzart, Tunisia, 953  
Barcelona, Spain, 1,323  
Bari, Italy, 329  
Beirut, Lebanon, 1,387  
Brindisi, Italy, 386  
Cagliari, Sardinia, 970  
Cartagena, Spain, 1,449  
Ceuta, Morocco, 1,672  
Dubrovnik, Croatia, 320  
Genova, Italy, 1,128  
Gibraltar, 1,674  
Haifa, Israel, 1,383  
Iraklion, Kriti, 872  
Istanbul, Turkey (south of Greece), 1,169  
Istanbul, Turkey (via Corinth Canal), 1,073  
Izmir, Turkey (south of Greece), 1,015  
Izmir, Turkey (via Corinth Canal), 919  
La Spezia, Italy, 1,093  
Livorno, Italy, 1,057  
Malaga, Spain, 1,621  
Marseille, France, 1,220  
Messina, Sicily, 647  
Napoli, Italy, 818  
Odessa, Ukraine (south of Greece), 1,518  
Odessa, Ukraine (via Corinth Canal), 1,421  
Oran, Algeria, 1,460  
Palermo, Sicily, 763  
Palma, Balearic Islands, 1,281  
Pescara, Italy, 201  
Piraeus Greece (south of Greece), 856  
Piraeus Greece (via Corinth Canal), 719  
Rijeka, Croatia, 132  
Savona, Italy, 1,138  
Sayda, Lebanon, 1,382  
Sibenik, Croatia, 204  
Siracusa, Sicily, 668  
Split, Croatia, 221  
Tarabulus, Lebanon, 1,399  
Tarabulus, Libya, 931

Taranto, Italy, 526  
Thessaloniki, Greece (south of Greece), 1,064  
Thessaloniki, Greece (via Corinth Canal), 968  
Toulon, France, 1,188  
Tubruq, Libya, 980  
Tunis, Tunisia, 940  
Valencia, Spain, 1,406  
Valletta, Malta, 745  
Volos, Greece (south of Greece), 1,005  
Volos, Greece (via Corinth Canal), 909

**VENTSPILS, LATVIA**  
(57°24'00"N., 21°34'00"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), Germany, 434  
Skagens Odde, Denmark, 502

**Ports**

Gdynia, Poland, 204  
Sankt-Peterburg, Russia, 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**

Barranquilla, Colombia, 1,525  
Belize, Belize, 862  
Brunswick, Georgia, U.S.A., 1,351  
Campeche, Mexico, 307  
Carmen, Mexico, 242  
Cartagena, Colombia, 1,510  
Cienfuegos, Cuba, 944  
Coatzacoalcos, Mexico, 127  
Colon, Panama, 1,420  
Galveston, Texas, U.S.A., 623  
Guantanamo, Cuba, 1,228  
Gulfport, Mississippi, U.S.A., 800  
Key West, Florida, U.S.A., 869  
Kingston, Jamaica, 1,210  
La Guaira, Venezuela, 1,888  
La Habana, Cuba, 814  
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, 1,818  
Puerto Cortes, Honduras, 948  
San Juan del Norte, Nicaragua (via inside route), 1,271  
San Juan, Puerto Rico, 1,780  
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

**VERAVAL, INDIA**  
(20°53'25"N., 70°21'52"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,654  
Cape Leeuwin, Australia, 4,233  
Selat Lombok, Indonesia, 3,489  
Port Said, Egypt, 2,901  
Singapore, 2,655  
Selat Sunda, Indonesia, 2,879  
Torres Strait, Australia, 5,102

**Ports**

Al Basrah, Iraq, 1,417  
Belawan, Indonesia, 2,345  
Calcutta, India, 2,002  
Colombo, Sri Lanka, 1,115  
Karachi, Pakistan, 337  
Okha, India, 215  
Trincomalee, Sri Lanka, 1,213  
Victoria, Seychelles, 1,764

**VIANA DO CASTELLO, PORTUGAL**  
(41°41'15"N., 8°49'30"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 467  
Strait of Gibraltar, 472

**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, Egypt, 1,716  
Strait of Gibraltar, 898

**Ports**

Civitavecchia, Italy, 480  
Marseille, France, 238  
Tunis, Tunisia, 778

**VICTORIA, CAMEROON**  
(4°00'12"N., 9°11'33"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 2,399  
Ile d'Ouessant, France, 4,126

**Ports**

Lagos, Nigeria, 410  
Matadi, Congo, 770

**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 Samoa, 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  
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, SABAH**  
(5°16'30"N., 115°14'30"E.) to:

**Junction Points\***

Singapore, 757  
Selat Sunda, Indonesia, 948  
Torres Strait, Australia, 2,192

**Ports**

Sandakan, Sabah, 412  
Zamboanga, Philippines, 563

**VICTORIA, SEYCHELLES**  
(4°36'40"S., 55°29'00"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa (east of Madagascar), 3,007  
Singapore, 3,067

**Ports**

Aden, Yemen, 1,416  
Belawan, Indonesia, 2,734  
Bombay, India, 1,749  
Colombo, Sri Lanka, 1,652  
Diego Garcia, Chagos Archipelago, 1,032  
Fremantle, Australia, 3,752  
Malacca, Malaysia, 2,952  
Mocambique, Mozambique, 1,085  
Penang, Malaysia, 2,779  
Port Darwin, Australia, 4,494  
Port Louis, Mauritius, 943  
Sabang, Indonesia, 2,468  
Zanzibar, Tanzania, 1,011

**VIGO, SPAIN**  
(42°14'30"N., 8°44'00"W.) to:

**Junction Points\***

Bishop Rock, England, 484  
Ile d'Ouessant, France, 439  
Montreal, Canada (via Cape Race), 2,873  
Strait of Gibraltar, 504  
Straits of Florida, 3,811

**Ports**

Banjul, Gambia, 1,832  
Belem, Brazil, 3,398  
Boston, Massachusetts, U.S.A., 2,746  
Buenos Aires, Argentina, 5,518  
Cadiz, Spain, 463  
Cape Town, 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 (via Cape Race), 2,439

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

**120 VILA REAL DE SANTO ANTONIO, PORTUGAL**

Horta, Azores, 938  
 Huelva, Spain, 453  
 Lisboa, Portugal, 247  
 New York, New York, U.S.A., 2,914  
 Norfolk, Virginia, U.S.A., 3,099  
 Oporto, Portugal, 74  
 Philadelphia, Pennsylvania, U.S.A., 3,092  
 Ponta Delgada, Azores, 828  
 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

**VILA REAL DE SANTO ANTONIO, PORTUGAL**  
 (37°12'00"N., 7°24'30"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 836  
 Strait of Gibraltar, 113

**Ports**

Casablanca, Morocco, 218  
 Horta, Azores, 1,046

**VILLA CISNEROS, WESTERN 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 CONSTITUCION, ARGENTINA**  
 (33°13'46"S., 60°19'26"W.) Add 197 miles to Buenos Aires distances.

**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, Egypt, 944  
 Strait of Gibraltar, 1,047

**Ports**

Napoli, Italy, 173  
 Palermo, Sicily, 118  
 Taranto, Italy, 287

**VILLAGARCIA, SPAIN**  
 (42°36'00"N., 8°47'45"W.) to:

**Junction Points\***

Ile d'Ouessant, France, 433  
 Strait of Gibraltar, 526

**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, Egypt, 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  
 Selat Wetar, Indonesia (via Selat Karimata and Selat Sapudi), 2,106

**Ports**

Apra, Guam, 2,112  
 Bangkok, Thailand, 817  
 Haiphong, Vietnam, 597  
 Hong Kong, China, 707  
 Jakarta, Indonesia, 1,103  
 Kao-hsiung Kang, Taiwan, 915  
 Kobe, Japan, 2,013  
 Manila, Philippines, 710  
 Port Darwin, Australia, 2,169  
 Shanghai, China, 1,520  
 Surabaya, Indonesia, 1,251

**VISHAKHAPATNAM, INDIA**  
 (17°41'00"N., 83°17'00"E.) to:

**Ports**

Calcutta, India, 458  
 Colombo, Sri Lanka, 880  
 Madras, India, 332

**VITA, CUBA**  
 (21°04'45"N., 75°57'08"W.) See Puerto Vita.

**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  
 Philadelphia, Pennsylvania, U.S.A., 4,554  
 Salvador, Brazil, 477

**VLAARDINGEN, NETHERLANDS**  
 (51°53'46"N., 4°20'29"E.) See Rotterdam.

**VLADIVOSTOK, RUSSIA**  
 (43°06'30"N., 131°53'00"E.) to:

**Junction Points\***

Panama, Panama (via La Perouse Strait and north of Aleutian Islands), 7,757  
 Panama, Panama (via La Perouse Strait and south of the Aleutian Islands), 7,741  
 Panama, Panama (via Tsugaru-Kaikyo), 7,833  
 Singapore, 3,004  
 Selat Sunda, Indonesia, 3,357  
 Selat Wetar, Indonesia (via Selat Manipa), 3,133

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 713  
 Apra, Guam (via Shimonoseki Kaikyo), 2,019  
 Apra, Guam (via Tsugaru-Kaikyo), 2,155  
 Auckland, New Zealand, 5,516  
 Bangkok, Thailand (outer bar), 3,035  
 Bukhta Shelikhova, Kuril Islands, Russia, 1,121  
 Busan, South Korea, 514  
 Cebu, Philippines, 2,026  
 Changjon, North Korea, 319  
 Chongjin, North Korea, 135  
 Dagu, China, 1,212  
 Dalian, China, 1,057  
 Dutch Harbor, Alaska, U.S.A., 2,518  
 Guayaquil, Ecuador, 8,044  
 Hakodate, Japan, 437  
 Higashi-Iwase, Japan, 471  
 Ho Chi Minh, Vietnam, 2,501  
 Hong Kong, China, 1,646  
 Honolulu, Hawaii, U.S.A. (via Tsugaru-Kaikyo), 3,725  
 Iloilo, Philippines, 2,048  
 Incheon, South Korea (via Maemut Sudo), 911  
 Jakarta, Indonesia, 3,338  
 Kimchaek, North Korea, 206  
 Kobe, Japan, 805  
 Kodiak, Alaska, U.S.A., 3,105  
 Kushiro, Japan, 624  
 Lo hsing-ta Mao-ti, China, 1,264  
 Los Angeles, California, U.S.A., 4,981  
 Maizuru, Japan, 485  
 Manila, Philippines, 1,912  
 Masan, South Korea, 542  
 Matsuga-hana, Japan (via Tsugaru Kaikyo), 730  
 Midway Island, Pacific, 2,612  
 Mogpo, South Korea, 726  
 Nagasaki, Japan, 657  
 Nampo, North Korea (via Changjuk Sudo), 997  
 Nanao, Japan, 460  
 Niigata, Japan, 453  
 Noumea, New Caledonia, 4,590  
 Osaka, Japan, 815  
 Pago Pago, American Samoa, 4,739  
 Papeete, French Polynesia, 5,663  
 Petropavlovsk-Kamchatskiy, Russia, 1,348  
 Port Darwin, Australia, 3,426  
 Portland, Oregon, U.S.A. (via La

Perouse Strait and north of Aleutian Islands), 4,278  
 Qingdao, China, 998  
 Qinhuangdao, China (via Maenggol Sudo), 1,151  
 Rumoi, Japan, 452  
 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 La Perouse Strait and Unimak Pass), 4,570  
 San Francisco, California, U.S.A. (via Tsugaru-Kaikyo), 4,664  
 Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,210  
 Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and south of Aleutian Islands), 4,396  
 Shanghai, China (north of Cheju Do), 998  
 Shanghai, China (south of Cheju Do), 997  
 Shimonoseki, Japan, 565  
 Sitka, Alaska, U.S.A., 3,585  
 Sovetskaya Gavan', Russia, 593  
 Surabaya, Indonesia, 3,357  
 Suva, Fiji Islands, 4,626  
 Sydney, Australia, 5,105  
 Tomari, Japan, 724  
 Truk, Caroline Islands, 2,593  
 Tsuruga, Japan, 490  
 Ulsan, South Korea, 486  
 Valparaiso, Chile, 9,606  
 Wake Island, Pacific, 2,305  
 Weihai, China (via Maenggol Sudo), 975  
 Weonsan, North Korea, 324  
 Wotje Island, Marshall Islands, 2,928  
 Xiamen, China, 1,393  
 Yantai, China (via Maenggol Sudo), 1,009  
 Yokohama, Japan, 952

**VLISSINGEN, NETHERLANDS**  
 (51°26'30"N., 3°36'00"E.) Subtract 47 miles from Antwerp, Belgium distances.

**VLORES, ALBANIA**  
 (40°26'30"N., 19°28'30"E.) to:

**Junction Points\***

Port Said, Egypt, 973  
 Strait of Gibraltar, 1,311

**Ports**

Piraeus, Greece (via Corinth Canal), 295  
 Split, Croatia, 252  
 Taranto, Italy, 146

**VOLOS, GREECE**  
 (39°21'25"N., 22°56'37"E.) to:

**Junction Points\***

Port Said, Egypt, 683  
 Strait of Gibraltar, 1,657

**Ports**

Ajaccio, Corsica (south of Greece), 1,056  
 Ajaccio, Corsica (via Corinth

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



## WARRENPOINT, NORTHERN IRELAND 121

Canal), 1,014  
 Alexandria, Egypt, 620  
 Alexandroupolis, Greece, 205  
 Algiers, Algeria, 1,228  
 Alicante, Spain, 1,395  
 Ancona, Italy (south of Greece), 894  
 Ancona, Italy (via Corinth Canal), 798  
 Annaba, Algeria, 1,004  
 Banghazi, Libya, 552  
 Banzart, Tunisia, 899  
 Barcelona, Spain (south of Greece), 1,322  
 Barcelona, Spain (via Corinth Canal), 1,280  
 Bari, Italy (south of Greece), 687  
 Bari, Italy (via Corinth Canal), 591  
 Beirut, Lebanon, 725  
 Brindisi, Italy (south of Greece), 629  
 Brindisi, Italy (via Corinth Canal), 533  
 Cagliari, Sardinia (south of Greece), 969  
 Cagliari, Sardinia (via Corinth Canal), 927  
 Cartagena, Spain, 1,420  
 Ceuta, Morocco, 1,637  
 Genova, Italy (south of Greece), 1,127  
 Genova, Italy (via Corinth Canal), 1,085  
 Gibraltar, 1,640  
 Haifa, Israel, 728  
 Iraklion, Kriti, 292  
 Istanbul, Turkey, 329  
 Izmir, Turkey, 226  
 Kavala, Greece, 162  
 Khalkis, Greece, 88  
 La Spezia, Italy (south of Greece), 1,091  
 La Spezia, Italy (via Corinth Canal), 1,050  
 Livorno, Italy (south of Greece), 1,056  
 Livorno, Italy (via Corinth Canal), 1,014  
 Malaga, Spain, 1,587  
 Marseille, France (south of Greece), 1,219  
 Marseille, France (via Corinth Canal), 1,177  
 Messina, Sicily (south of Greece), 645  
 Messina, Sicily (via Corinth Canal), 604  
 Napoli, Italy (south of Greece), 817  
 Napoli, Italy (via Corinth Canal), 775  
 Odessa, Ukraine, 677  
 Oran, Algeria, 1,426  
 Palermo, Sicily (south of Greece), 761  
 Palermo, Sicily (via Corinth Canal), 720  
 Palma, Balearic Islands (south of Greece), 1,280  
 Palma, Balearic Islands (via Corinth Canal), 1,238  
 Piraeus, Greece, 200  
 Rijeka, Croatia (south of Greece), 964  
 Rijeka, Croatia (via Corinth Canal), 865  
 Savona, Italy (south of Greece), 1,137  
 Savona, Italy (via Corinth Canal), 1,096  
 Sibenik, Croatia (south of Greece), 836  
 Sibenik, Croatia (via Corinth

Canal), 737  
 Siracusa, Sicily (south of Greece), 634  
 Siracusa, Sicily (via Corinth Canal), 608  
 Split, Croatia (south of Greece), 821  
 Split, Croatia (via Corinth Canal), 722  
 Tarabulus, Libya, 789  
 Taranto, Italy (south of Greece), 642  
 Taranto, Italy (via Corinth Canal), 553  
 Thessaloniki, Greece, 132  
 Toulon, France (south of Greece), 1,187  
 Toulon, France (via Corinth Canal), 1,145  
 Trieste, Italy, 997  
 Tunis, Tunisia, 886  
 Valencia, Spain (south of Greece), 1,393  
 Valencia, Spain (via Corinth Canal), 1,364  
 Valletta, Malta, 672  
 Venezia, Italy (south of Greece), 1,005  
 Venezia, Italy (via Corinth Canal), 909

**VUNG TAU, VIETNAM**  
 (10°20'30"N., 107°04'00"E.)  
 Subtract 45 1/2 miles from Ho Chi Minh distances.

**VYBORG, RUSSIA**  
 (60°42'30"N., 28°44'00"E.) Add 6 3/4 miles to Vysotsk distances.

**VYSOTSK, RUSSIA**  
 (60°38'00"N., 28°34'00"E.) to:

**Junction Points\***

Skagens Odde, Denmark (via Store Baelt), 923  
 Skagens Odde, Denmark (via The Sound), 803

**Ports**

Kotka, Finland, 69  
 Oslo, Norway (via Store Baelt), 1,047

**WADI FEIRAN, EGYPT**  
 (28°44'30"N., 33°12'36"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 5,138  
 Cape Leeuwin, Australia, 6,173  
 Port Said, Egypt, 172  
 Singapore, 4,851  
 Selat Sunda, Indonesia, 5,045  
 Torres Strait, Australia, 7,211

**Ports**

Aden, Yemen, 1,231  
 Assab, Ethiopia, 1,095  
 Bombay, India, 2,883  
 Calcutta, India, 4,528  
 Colombo, Sri Lanka, 3,318  
 Massawa, Ethiopia, 897

**WAKAMATSU, JAPAN**  
 (33°55'00"N., 130°49'00"E.) to:

**Ports**

Busan, South Korea, 120  
 Kure, Japan, 125  
 Maizuru, Japan, 299  
 Sasebo, Japan, 136  
 Shanghai, China, 541

**WAKAYAMA, JAPAN**  
 (34°08'33"N., 135°09'52"E.) to:

**Junction Points\***

Selat Lombok, Indonesia (via south of Mindanao), 2,889  
 Panama, Panama, 7,926  
 Punta Arenas, Chile, 9,391  
 Singapore, 2,660  
 Selat Sunda, Indonesia, 3,004

**Ports**

Aomori, Japan, 813  
 Hiroshima, Japan, 192  
 Iwakuni, Japan, 182  
 Kobe, Japan, 34  
 Ube, Japan, 239  
 Yokohama, Japan, 327

**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  
 Canton, Phoenix Islands, 1,843  
 Dutch Harbor, Alaska, U.S.A., 2,463  
 Guayaquil, Ecuador, 6,843  
 Ho Chi Minh, Vietnam (via San Bernardino Strait), 3,580  
 Hong Kong, China, 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  
 Pago Pago, American Samoa, 2,436  
 Papeete, French Polynesia, 3,401  
 Port Darwin, Australia, 3,187  
 Qingdao, China, 2,674  
 San Diego, California, U.S.A., 4,112  
 San Francisco, California, U.S.A., 3,821  
 Seattle, Washington, U.S.A., 3,820  
 Shanghai, China, 2,550  
 Sitka, Alaska, U.S.A., 3,405  
 Surabaya, Indonesia, 3,641  
 Suva, Fiji Islands, 2,501  
 Sydney, Australia, 3,346  
 Truk, Caroline Islands, 1,117  
 Valparaiso, Chile, 7,601  
 Vladivostok, Russia, 2,305  
 Yokohama, Japan, 1,740

**WAKKANAI, JAPAN**  
 (45°25'00"N., 141°41'20"E.) to:

**Ports**

Bukhta Shelikhova, Kuril Islands, Russia, 643  
 Kasatka, Japan, 310  
 Matsuga-hana, Japan, 294  
 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, Papua New Guinea, 2,911  
 Sydney, Australia, 1,084

**WALVISBAAI, NAMIBIA**  
 (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, Namibia, 240  
 Mocamedes, Angola, 518  
 New York, New York, U.S.A., 6,228  
 Philadelphia, Pennsylvania, U.S.A., 6,318

**WANGANUI, NEW ZEALAND**  
 (39°57'15"S., 174°58'35"E.) to:

**Junction Points\***

Panama, Panama (via Cook Strait), 6,628  
 Punta Arenas, Chile (via Cook Strait), 4,610  
 Torres Strait, Australia, 2,577  
 Wilson Promontory, Australia, 1,326

**Ports**

Auckland, New Zealand, 602  
 Bluff Harbor, New Zealand, 547  
 Honolulu, Hawaii, U.S.A., 3,798  
 Launceston, Tasmania (via Banks Strait), 1,304  
 Port Kembla, Australia, 1,183  
 Suva, Fiji Islands, 1,412  
 Sydney, Australia, 1,189  
 Yokohama, Japan, 4,965

**WARNEMUNDE, GERMANY**  
 (54°11'00"N., 12°05'30"E.)

Subtract 7 miles from Rostock distances.

**WARRENPOINT, NORTHERN IRELAND**

(54°05'50"N., 6°15'10"W.) to:

**Junction Points\***

Bishop Rock, England, 273  
 Fastnet Rock, Ireland, 262  
 Inishtrahull, Ireland, 161

**Ports**

Ardrossan, Scotland, 146  
 Avonmouth, England, 201

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

## 122 WASHINGTON, DISTRICT OF COLUMBIA, U.S.A.

Cardiff, Wales, 287  
Port Talbot, Wales, 265  
Stornoway, Scotland, 353

### WASHINGTON, DISTRICT OF COLUMBIA, U.S.A.

(38°52'30"N., 77°01'30"W.) to:

#### Junction Points\*

Bishop Rock, England, 3,243  
Fastnet Rock, Ireland, 3,137  
Inishtrahull, Ireland, 3,235  
Panama, Panama, 1,957  
Pentland Firth, Scotland, 3,415  
Strait of Gibraltar, 3,471

#### Ports

Bordeaux, France, 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 Rock, Ireland, 110  
Inishtrahull, Ireland, 276

#### Ports

Dublin, Ireland, 113  
Liverpool, England, 189

### WEI HAI WEI, CHINA

(37°30'00"N., 122°08'30"E.) See Weihai, China.

### WEIHAI, CHINA

(37°30'00"N., 122°08'30"E.) to:

#### Junction Points\*

Singapore, 2,548

#### Ports

Aleksandrovsk-Sakhalinskiy, Russia, 1,579  
Apra, Guam (via Tokara Kaikyo), 1,901  
Busan, South Korea, 474  
Cebu, Philippines, 1,679  
Dagu, China, 237  
Hakodate, Japan, 1,169  
Hong Kong, China, 1,190  
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,449  
Iloilo, Philippines, 1,701  
Incheon, South Korea, 238  
Jakarta, Indonesia, 2,860  
Kobe, Japan, 806  
Lo hsing-ta Mao-ti, China, 801  
Manila, Philippines (east of Taiwan), 1,498  
Manila, Philippines (via Formosa Strait), 1,508  
Mogpo, South Korea (via south of Kasa Do), 308  
Nagasaki, Japan, 526  
Nampo, North Korea, 172  
Petropavlovsk-Kamchatskiy, Russia, 2,192  
Qingdao, China, 205  
Qinhuangdao, China, 191  
San Francisco, California, U.S.A.

(via Osumi Kaikyo), 5,625  
San Francisco, California, U.S.A. (via Tsugaru-Kaikyo), 5,402  
Seattle, Washington, U.S.A. (via La Perouse Strait, Chetverty Kuril'skiy Proлив and Unimak Pass), 5,054  
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  
Shanghai, China (via South Channel), 483  
Shimonoseki, Japan, 562  
Vladivostok, Russia, 975  
Weonsan, North Korea (via Maenggol Sudo), 779  
Xiamen, China, 931  
Yokohama, Japan (via Bungo Suido and Shimonoseki Kaikyo), 1,106

### WEIPA, AUSTRALIA

(12°42'00"S., 141°41'00"E.) Add 19 miles to Albatross Bay distances.

### 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 49°S.), 4,639  
Punta Arenas, Chile (via 50°S.), 4,634  
Torres Strait, Australia, 2,683  
Wilson Promontory, Australia, 1,338

#### Ports

Aden, Yemen (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, Papua 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, French Polynesia, 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 49°S), 5,066  
Yokohama, Japan, 5,041

### WENZHO, CHINA

(28°01'45"N., 120°40'00"E.) to:

#### Ports

Chi-lung, Taiwan, 204  
Hong Kong, China, 595  
Incheon, South Korea, 723  
Qingdao, China, 623  
Shanghai, China, 365

### WEONSAN, NORTH KOREA

(39°10'00"N., 127°26'30"E.) to:

#### Junction Points\*

Panama, Panama, 8,038  
Singapore, 2,808  
Selat Sunda, Indonesia, 3,161  
Selat Wetar, Indonesia (via Molucca Passage and Selat Manipa), 3,100

#### Ports

Aleksandrovsk-Sakhalinskiy, Russia, 972  
Bangkok, Thailand (outer bar), 2,885  
Busan, South Korea, 308  
Dagu, China, 1,007  
Dalian, China (via Maenggol Sudo), 848  
Hakodate, Japan, 638  
Ho Chi Minh, Vietnam, 2,305  
Hong Kong, China, 1,450  
Honolulu, Hawaii, U.S.A. (via Tsugaru-Kaikyo), 3,933  
Incheon, South Korea (via Maenggol Sudo), 707  
Jakarta, Indonesia, 3,142  
Lo hsing-ta Mao-ti, China, 1,068  
Los Angeles, California, U.S.A., 5,181  
Manila, Philippines, 1,708  
Mogpo, South Korea (via Maenggol Sudo), 530  
Nagasaki, Japan, 452  
Nampo, North Korea (via Maenggol Sudo), 801  
Osaka, Japan, 627  
Pago Pago, American Samoa (via Bungo Suido), 4,816  
Petropavlovsk-Kamchatskiy, Russia, 1,609  
Port Darwin, Australia (via Molucca Passage), 3,242  
Qingdao, China, 802  
Qinhuangdao, China, 955  
San Francisco, California, U.S.A., 4,866  
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and 50°N.), 4,601  
Shanghai, China (north of Cheju Do and via South Channel), 797  
Tongyeong, South Korea, 358  
Vladivostok, Russia, 324  
Weihai, China (via Maenggol Sudo), 779  
Xiamen, China, 1,191  
Yantai, China, 813  
Yokohama, Japan (via Bungo Suido), 921

### WHANGAREI, NEW ZEALAND

(35°53'20"S., 174°33'00"E.) to:

#### Junction Points\*

Panama, Panama, 6,579  
Punta Arenas, Chile (via 50°S.), 4,713  
Torres Strait, Australia, 2,511  
Wilson Promontory, Australia, 1,457

#### Ports

Auckland, New Zealand, 83  
Brisbane, Australia, 1,311  
Hobart, Tasmania (via north of New Zealand), 1,473  
Sydney, Australia (via north of New Zealand), 1,228  
Yokohama, Japan, 4,903

### WHAMPOA, CHINA

(23°05'42"N., 113°26'30"E.) See Huangpu, China.

### WHIDDY ISLAND OIL TERMINAL, IRELAND

(51°41'14"N., 9°31'54"W.) See Bantry Bay.

### WHITEHAVEN, ENGLAND

(54°33'02"N., 3°35'59"W.) to:

#### Junction Points\*

Bishop Rock, England, 315  
Fastnet Rock, Ireland, 309  
Inishtrahull, Ireland, 158

#### Ports

Belfast, Northern Ireland, 85  
Cardiff, Wales, 293  
Cobh, Ireland, 254  
Dublin, Ireland, 124  
Fishguard, Wales, 165  
Glasgow, Scotland, 143  
Liverpool, England, 82  
Waterford, Ireland, 202

### WHITTIER, ALASKA, U.S.A.

(60°46'48"N., 148°39'36"W.) to:

#### Junction Points\*

Panama, Panama, 4,958

#### Ports

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\*

Selat Lombok, Indonesia, 2,782  
Singapore, 3,546

#### Ports

Melbourne, Australia, 665  
Port Adelaide, Australia, 245  
Rabaul, Papua New Guinea, 2,957

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

**WILHELMSHAVEN, GERMANY**  
(53°31'00"N., 8°08'30"E.) to:

**Junction Points\***

Bishop Rock, England, 651  
Ile d'Ouessant, France, 639  
Nord-Ostsee-Kanal (East Entrance), Germany, 126  
Pentland Firth, Scotland, 501  
Skagens Odde, Denmark, 314

**Ports**

Aberdeen, Scotland, 419  
Amsterdam, Netherlands, 210  
Antwerp, Belgium, 324  
Bergen, Norway, 441  
Cherbourg, France, 472  
Dover, England, 328  
Dundee, Scotland, 430  
Dunkerque, France, 308  
Egersund, Norway, 306  
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, 55  
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 Rock, Ireland, 3,708  
Ile d'Ouessant, France, 3,821  
Montreal, Canada (via Cabot Strait), 2,866  
Panama, Panama, 742  
Strait of Gibraltar, 3,685  
Straits of Florida (via Windward Passage), 1,184  
Yucatan Channel, 1,094

**Ports**

Bahia de las Calderas, Dominican Republic, 392  
Baltimore, Maryland, U.S.A., 1,733  
Barahona, Dominican Republic, 395  
Barranquilla, Colombia, 389  
Belize, Belize, 1,178  
Boston, Massachusetts, U.S.A. (via Mona Passage), 1,881  
Campeche, Mexico, 1,527  
Cap-Haitien, Haiti (via Mona Passage), 674  
Cap-Haitien, Haiti (via Windward Passage), 697  
Cape Town, South Africa, 5,811  
Carmen, Mexico, 1,599  
Cartagena, Colombia, 471  
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  
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 Habana, Cuba, 1,144  
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, Suriname, 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 Castries, St. Lucia, 489  
Port of Spain, Trinidad, 456  
Portland, Maine, U.S.A., 1,921  
Puerto Cabello, Venezuela, 116  
Rio Haina, Dominican Republic, 394  
Roosevelt Roads, Puerto Rico, 440  
San Juan del Norte, Nicaragua, 882  
San Juan, Puerto Rico (west end of Curacao, and via Mona Passage), 486  
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.)  
Subtract 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, 3,304  
Fastnet Rock, Ireland, 2,942  
Inishtrahull, Ireland, 3,046  
Panama, Panama (via Crooked Island Passage), 1,656  
Pentland Firth, Scotland, 3,473  
Punta Arenas, Chile (via east of South America), 6,881  
Strait of Gibraltar, 3,538  
Straits of Florida, 761

**Ports**

Bordeaux, France, 3,616  
Buenos Aires, Argentina, 5,805  
Cape Town, South Africa, 6,804  
Cartagena, Colombia, 1,494  
Colon, Panama (via Crooked Island Passage), 1,613  
Georgetown, Guyana, 2,011

Halifax, Canada, 1,016  
Hamilton, Bermuda, 746  
Kingston, Jamaica (via Crooked Island Passage), 1,115  
La Habana, Cuba, 767  
Limon, Costa Rica, 1,688  
Montevideo, Uruguay, 5,691  
Nassau, Bahamas, 561  
Paramaribo, Suriname, 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 of Good Hope, South Africa, 5,530  
Cape Leeuwin, Australia, 1,524  
Honshu, Japan, 4,881  
Panama, Panama (via Cook Strait), 7,818  
Panama, Panama (via Foveaux Strait), 7,770  
Punta Arenas, Chile (via Foveaux Strait and 49°S.), 5,820  
Punta Arenas, Chile (via 60°S. and south of Steward Island), 5,305  
Torres Strait, Australia (via Capricorn Channel and inner route), 2,193

**Ports**

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 49°S.), 6,939  
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, French Polynesia, 3,346  
Port Adelaide, Australia, 537  
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  
Suva, Fiji Islands, 2,088  
Sydney, Australia, 440  
Townsville, Australia, 1,499  
Urangan, Australia, 1,100  
Valparaiso, Chile (via 60°S.), 6,031  
Wellington, New Zealand, 1,338

**WISMAR, GERMANY**  
(53°54'30"N., 11°26'30"E.) to:

**Junction Points\***

Nord-Ostsee-Kanal (East Entrance), 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, NORTH KOREA**  
(39°10'00"N., 127°26'00"E.) See Weonsan, North Korea.

**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., 2,187

**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, Russia, 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

**WU-HU, CHINA**

(31°20'00"N., 118°21'00"E.) See Wuhu, China.

**WU-SUNG, CHINA**

(31°23'30"N., 121°30'30"E.) See Wusong, China.

**WUHU, CHINA**

(31°20'00"N., 118°21'00"E.) Add 227 miles to Shanghai distances or ports outside the Chang Chiang (Yangtze River).

**WUSONG, CHINA**

(31°23'30"N., 121°30'30"E.) Subtract 14 miles from Shanghai distances.

**WYNDHAM, AUSTRALIA**

(15°27'30"S., 128°06'00"E.) to:

**Junction Points\***

Selat Wetar, Indonesia, 431

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

## 124 XIAMEN, CHINA

**Ports**

Fremantle, Australia, 1,780  
Port Darwin, Australia, 274

**XIAMEN, CHINA**  
(24°27'00"N., 118°04'00"E.) to:

**Junction Points\***

Panama, Panama, 8,941  
Punta Arenas, Chile (via Vitiáz Strait), 9,665  
Singapore, 1,649  
Torres Strait, Australia, 2,655

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,991  
Apra, Guam, 1,669  
Auckland, New Zealand, 4,990  
Busan, South Korea, 885  
Cebu, Philippines (via Balintang Channel), 965  
Chi-lung, Taiwan, 227  
Dagu, China, 1,169  
Dalian, China, 1,008  
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,771  
Dutch Harbor, Alaska, U.S.A. (via Tsugaru Strait), 3,770  
Hakodate, Japan, 1,559  
Hong Kong, China, 290  
Honolulu, Hawaii, U.S.A., 4,592  
Iloilo, Philippines, 987  
Incheon, South Korea, 943  
Jakarta, Indonesia, 1,971  
Kobe, Japan, 1,117  
Lo hsing-ta, Mao-ti, China, 200  
Manila, Philippines, 662  
Mogpo, South Korea, 790  
Nagasaki, Japan, 810  
Nampo, North Korea, 1,004  
Nikolayevsk-Na-Amure, Russia (via South Channel), 2,138  
Noumea, New Caledonia, 4,031  
Pago Pago, American Samoa, 4,819  
Papeete, French Polynesia, 6,001  
Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 2,596  
Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,617  
Port Darwin, Australia, 2,411  
Qinhuangdao, China, 1,114  
Rabaul, Papua New Guinea, 2,659  
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,797  
San Francisco, California, U.S.A. (via Tsugaru-Kaikyo), 5,788  
Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,463  
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,537  
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and north of Aleutian Islands), 5,464  
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and south of Aleutian Islands), 5,524  
Shanghai, China, 603  
Shimonoseki, Japan, 920  
Surabaya, Indonesia, 2,121  
Suva, Fiji Islands, 4,389  
Sydney, Australia (via Vitiáz Strait), 4,437  
Valparaiso, Chile (via Cook

Strait), 10,216  
Vladivostok, Russia, 1,393  
Weihai, China, 931  
Weonsan, North Korea, 1,191  
Yantai, China, 978  
Yokohama, Japan (via Osumi Kaikyo), 1,335

**YABUCOA, PUERTO RICO**  
(18°02'36"N., 65°48'34"W.) to:

**Junction Points\***

Panama, Panama, 1,018  
Straits of Florida, 1,068

**Ports**

Baltimore, Maryland, U.S.A., 1,475  
Key West, Florida, U.S.A., 1,017  
La Habana, Cuba, 1,029  
Savannah, Georgia, U.S.A., 1,228  
Willemstad, Curacao, 418

**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

**YALTA, RUSSIA**  
(44°28'55"N., 34°10'20"E.) to:

**Junction Points\***

Port Said, Egypt, 1,340  
Strait of Gibraltar (via Corinth Canal), 3,992  
Strait of Gibraltar (south of Greece), 4,052

**Ports**

Alexandria, Egypt, 1,062  
Beirut, Lebanon, 1,173  
Constanta, Romania, 247  
Haifa, Israel, 1,176  
Iraklion, Kriti, 774  
Istanbul, Turkey, 317  
Napoli, Italy (via Corinth Canal), 1,255  
Napoli, Italy (south of Greece), 1,318  
Valencia, Spain (via Corinth Canal), 1,762  
Valencia, Spain (south of Greece), 1,910

**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**

Fremantle, Australia, 586  
Port Darwin, Australia, 1,457

**YANBU AL BAHR, SAUDI ARABIA**  
(24°03'44"N., 38°02'48"E.) to:

**Junction Points\***

Cape of Good Hope, South Africa, 4,758  
Cape Leeuwin, Australia, 5,793  
Port Said, Egypt, 547  
Singapore, 4,471  
Selat Sunda, Indonesia, 4,665  
Torres Strait, Australia, 6,870

**Ports**

Abadan, Iran, 2,783  
Aden, Yemen, 851  
Assab, Ethiopia, 718  
Bandar Abbas, Iran, 2,299  
Belawan, Indonesia, 4,140  
Bombay, India, 2,503  
Calcutta, India, 4,148

**YANDINA, SOLOMON ISLANDS**  
(9°04'17"S., 159°13'50"E.) to:

**Junction Points\***

Honshu, Japan, 2,853  
Panama, Panama (via Central Route), 7,483  
Punta Arenas, Chile, 6,449  
Torres Strait, Australia, 1,139  
Tsugaru-Kaikyo, Japan, 3,263  
Wilson Promontory, Australia, 2,032

**Ports**

Auckland, New Zealand, 1,917  
Brisbane, Australia, 1,192  
San Francisco, California, U.S.A., 8,614  
Sydney, Australia, 1,613

**YANTAI, CHINA**  
(37°33'15"N., 121°23'30"E.) to:

**Junction Points\***

Singapore, 2,582

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia (via Maenggol Sudo), 1,613  
Apra, Guam (via Tokara Kaikyo), 1,935  
Busan, South Korea (via Maenggol Sudo), 508  
Cebu, Philippines, 1,713  
Dagu, China, 205  
Hakodate, Japan, 1,203  
Hong Kong, China, 1,224  
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,483  
Iloilo, Philippines, 1,735  
Incheon, South Korea, 273  
Jakarta, Indonesia, 2,894  
Kobe, Japan, 840  
Lo hsing-ta Mao-ti, China (via Steep Island Pass), 835  
Manila, Philippines (via Formosa Strait), 1,542  
Manila, Philippines (east of Taiwan), 1,532  
Mojji, Japan, 600  
Mogpo, South Korea (via south of Kasa Do), 342  
Nagasaki, Japan, 560  
Nampo, North Korea, 205  
Petropavlovsk-Kamchatskiy, Russia, 2,226

Qingdao, China, 239  
Qinhuangdao, China, 168  
Shanghai, China, 523  
Shimonoseki, Japan, 596  
Vladivostok, Russia (via Maenggol Sudo), 1,009  
Weonsan, North Korea, 813  
Xiamen, China, 978  
Yokohama, Japan, 1,140

**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, French Polynesia, 4,585  
Rabaul, Papua New Guinea, 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 Buoy), 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

**YARMOUTH, ENGLAND**  
(50°42'30"N., 1°29'56"W.) to:

**Junction Points\***

Bishop Rock, England, 211  
Ile d'Ouessant, France, 197  
Nord-Ostsee-Kanal (East Entrance), Germany, 442  
Pentland Firth, Scotland, 678  
Skagens Odde, Denmark, 682

**Ports**

Aberdeen, Scotland, 311  
Amsterdam, Netherlands, 120  
Emden, Germany, 218  
Esbjerg, Denmark, 297  
Hull, England, 108  
Leith, Scotland, 293  
Wilhelmshaven, Germany, 263  
Zeebrugge, Belgium, 101

**YEN-TAI, CHINA**  
(37°33'15"N., 121°23'30"E.) See Yantai, China.

**YEOSU, SOUTH KOREA**  
(34°45'00"N., 127°45'30"E.) to:

**Ports**

Busan, South Korea, 97  
Gunsan, South Korea, 245  
Kimchaek, North Korea, 439  
Mogpo, South Korea, 151

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



Rajin, North Korea, 535  
Shimonoseki, Japan, 182

**YOKKAICHI, JAPAN**  
(34°57'00"N., 136°40'00"E.) to:

**Ports**

Apra, Guam, 1,364  
Kagoshima, Japan, 476  
Osaka, Japan, 236  
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

**Ports**

Aleksandrovsk-Sakhalinskiy, Russia, 1,143  
Apia, Samoa, 4,057  
Apra, Guam, 1,352  
Auckland, New Zealand, 4,789  
Avarua, Cook Islands, 4,849  
Barbers Point, Hawaii, U.S.A., 3,382  
Bellingham, Washington, U.S.A., 4,245  
Brisbane, Australia, 3,925  
Busan, South Korea, 665  
Cebu, Philippines (via San Bernardino Strait), 1,762  
Chim Wan, Ryukyu Islands, 830  
Dagu, China (via Osumi Kaikyo), 1,394  
Dalian, China (via Osumi Kaikyo), 1,235  
Dutch Harbor, Alaska, U.S.A., 2,551  
Guayaquil, Ecuador, 7,987  
Hachinohe, Japan, 436  
Hakata, Japan, 608  
Hakodate, Japan, 533  
Hirohata, Japan, 368  
Hiroshima, Japan, 519  
Ho Chi Minh, Vietnam, 2,419  
Hong Kong, China, 1,585  
Honolulu, Hawaii, U.S.A., 3,397  
Iloilo, Philippines (via San Bernardino Strait), 1,784  
Imabari, Japan, 454  
Incheon, South Korea (via Bungo Suido and Maemul Sudo), 1,016  
Incheon, South Korea (via Naikai), 1,070  
Iquique, Chile, 9,026  
Itozakicho, Japan, 446  
Iwakuni, Japan, 497  
Jakarta, Indonesia (east of Direction Island and via Selat Gaspar), 3,194  
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  
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  
Malakal, Palau Islands, 1,731  
Manila, Philippines (via Balintang Channel), 1,758  
Mazatlan, Mexico, 5,782  
Midway Island, Pacific, 2,250  
Miike, Japan (via Bungo Suido), 766  
Miike, Japan (via Osumi Kaikyo), 725  
Mogpo, South Korea, 838  
Moskal'vo, Russia, 1,453  
Nagasaki, Japan (via Osumi Kaikyo), 691  
Nagoya, Japan, 214  
Nakagusuku, Ryukyu Islands, 839  
Nampo, North Korea, 1,109  
Nase, Japan, 686  
Nome, Alaska, U.S.A., 2,696  
Noumea, New Caledonia (via Bougainville Strait), 3,837  
Ocean Island, 2,761  
Osaka, Japan (via Kii Suido), 3,59  
Pago Pago, American Samoa, 4,135  
Papeete, French Polynesia, 5,140  
Petropavlovsk-Kamchatskiy, Russia, 1,422  
Ponape, Caroline Islands, 1,998  
Port Darwin, Australia (via Selat Sele), 2,989  
Portland, Oregon, U.S.A., 4,328  
Prince Rupert, Canada (north of Aleutian Islands), 3,810  
Prince Rupert, Canada (south of Aleutian Islands), 3,863  
Qingdao, China, 1,160  
Rabaul, Papua New Guinea, 2,526  
Saipan, Mariana Islands, 1,262  
Sakaide, 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. (north of Aleutian Islands), 4,245  
Seattle, Washington, U.S.A. (South of Aleutian Islands), 4,276  
Seward, Alaska, U.S.A. (South of Aleutian Islands), 3,363  
Shanghai, China (via Naikai), 1,117  
Shanghai, China (via Osumi Kaikyo), 1,040  
Shimizu, Honshu, Japan, 116  
Shimonoseki, Japan (via Bungo Suido), 545  
Shimonoseki, Japan (via Naikai), 581  
Shimotsui, Japan, 449  
Shiogama, Japan, 284  
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 3,620  
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,687  
Surabaya, Indonesia, 3,092  
Suva, Fiji Islands, 3,967  
Sydney, Australia, 4,330  
Tianjin, 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, Russia (via Tsugaru Kaikyo), 952  
Wake Island, Pacific, 1,740  
Weihai, China (via Bungo Suido and Shimonoseki Kaikyo), 1,106  
Weihai, China (via Naikai), 1,143  
Wellington, New Zealand, 5,041  
Weonsan, North Korea, 921  
Wotje Island, Marshall Islands, 2,318  
Xiamen, China (via Osumi Kaikyo), 1,335  
Yantai, China (via Bungo Suido and Shimonoseki Kaikyo), 1,140  
Yantai, China (via Naikai), 1,177  
Yantai, China (via Osumi Kaikyo), 1,194  
Yap, Caroline Islands, 1,571  
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.

**YOSU, SOUTH KOREA**  
(34°45'00"N., 127°45'30"E.) See Yeosu, South Korea.

**YUCATAN CHANNEL\***  
(21°50'00"N., 85°03'00"W.) to:

**Junction Points\***

Bishop Rock, England, 4,103  
Cape of Good Hope, South Africa, 6,770  
Fastnet Rock, Ireland, 3,988  
Inishtrahull, Ireland, 4,086  
Panama, Panama, 855  
Pentland Firth, Scotland, 4,266  
Punta Arenas, Chile (via east of South America), 6,874  
Strait of Gibraltar, 4,199  
Straits of Florida, 192

**Ports**

Almirante, Panama, 814  
Amuay, Venezuela, 1,050  
Barcelona, Venezuela, 1,378  
Barranquilla, Colombia, 881  
Belem, Brazil, 2,739  
Belize, Belize, 337  
Boston, Massachusetts, U.S.A. (via Nantucket Light Buoy), 1,615  
Bridgetown, Barbados (south of Hispaniola), 1,549  
Buenos Aires, Argentina, 5,910  
Campeche, Mexico, 291  
Cape Town, South Africa, 6,822  
Cardenas, Cuba, 269  
Cartagena, Colombia, 891  
Casilda, Cuba, 307  
Catia la Mar, Venezuela, 1,240  
Charleston, South Carolina, U.S.A., 815  
Charlotte Amalie, Virgin Islands, 1,200  
Cienfuegos, Cuba, 285  
Coatzacoalcos, Mexico, 625  
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, Guyana, 1,846  
Guantanamo, Cuba, 582  
Gulfport, Mississippi, U.S.A., 534  
Halifax, Canada, 1,817  
Hamilton, Bermuda, 1,335  
Isabel de Sagua, Cuba, 329  
Key West, Florida, U.S.A., 251  
Kingston, Jamaica, 550  
La Guaira, Venezuela, 1,242  
La Habana, Cuba, 186  
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, Guyana, 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  
Pensacola, Florida, U.S.A., 531  
Philadelphia, Pennsylvania, U.S.A., 1,339  
Pointe a Pitre, Guadeloupe, 1,410  
Porlamar, Venezuela, 1,407  
Port au Prince, Haiti, 741  
Port Antonio, Jamaica, 536  
Port Arthur, Texas, U.S.A., 681  
Port Castries, St. Lucia, 1,452  
Port of Spain, Trinidad, 1,517  
Portsmouth, New Hampshire, U.S.A. (via outside Nantucket Light Buoy), 1,632  
Puerto la Cruz, Venezuela, 1,381  
Puerto Barrios, Guatemala, 439  
Puerto Cabello, Venezuela, 1,203  
Puerto Cortes, Honduras, 399  
Puerto Sucre, Venezuela, 1,399  
Punta Cardon, Venezuela, 1,055  
Rio de Janeiro, Brazil (south of Hispaniola), 4,702  
Salvador, Brazil, 4,128  
San Felix, Venezuela, 1,861  
San Juan del Norte, Nicaragua, 681  
San Juan, Puerto Rico, 1,111  
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 Nicolaashaven, Aruba, 1,036  
St. John's, Canada, 2,305  
Swan Island, Honduras, 273  
Tampa, Florida, U.S.A., 404  
Tampico, Mexico, 716  
Turiamo, Venezuela, 1,221  
Tuxpan, Mexico, 689  
Veracruz, Mexico, 654  
Willemstad, Curacao, 1,094

**YUMURTALIK, TURKEY**  
(36°45'00"N., 35°45'00"E.) to:

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



## 126 ZADAR, CROATIA

**Junction Points\***

Port Said, Egypt, 372  
Strait of Gibraltar, 1,672

**Ports**

Haifa, Israel, 240  
Iraklion, Kriti, 540  
Izmir, Turkey, 639

**ZADAR, CROATIA**  
(44°07'00"N., 15°13'00"E.) to:

**Junction Points\***

Port Said, Egypt, 1,214  
Strait of Gibraltar, 1,590

**Ports**

Ancona, Italy, 87  
Brindisi, Italy, 280  
Trieste, Italy, 142

**ZAMBOANGA, PHILIPPINES**  
(6°54'00"N., 122°04'00"E.) to:

**Junction Points\***

Selat Lombok, Indonesia, 1,047  
Panama, Panama (via south of  
Mindanao), 9,431  
Singapore, 1,197  
Selat Wetar, 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  
Iloilo, Philippines, 241  
Jolo, Philippines, 85  
Kota Kinabalu, Sabah, 412  
Kuching, Sarawak, 863  
Manila, Philippines, 532  
Port Darwin, Australia (via Basilan  
Strait, Selat Bangka and Selat  
Manipa), 1,303

Pulupandan, Philippines, 237  
Sandakan, Sabah, 251  
Tacolban, Philippines, 385

**ZANZIBAR, TANZANIA**  
(6°10'00"S., 39°11'00"E.) to:

**Junction Points\***

Cape of Good Hope, South  
Africa, 2,358  
Singapore, 4,060

**Ports**

Aden, Yemen, 1,731  
Belawan, Indonesia, 3,727  
Bombay, India (northeast  
monsoon), 2,538  
Bombay, India (southwest  
monsoon), 2,541  
Calcutta, India (via One and Half  
Degree Channel), 3,776  
Durban, South Africa, 1,607  
Fremantle, Australia, 4,536  
Malacca, Malaysia, 3,945  
Maputo, Mozambique, 1,388  
Penang, Malaysia, 3,772  
Port Darwin, Australia, 5,452  
Port Louis, Mauritius, 1,388  
Rangoon, Burma, 3,787  
Sabang, Indonesia, 3,451  
Tamatave, Madagascar, 1,116  
Tanga, Tanzania, 75  
Victoria, Sabah, 563  
Victoria, Seychelles, 1,011

**ZEEBRUGGE, BELGIUM**  
(51°21'00"N., 3°12'00"E.) to:

**Junction Points\***

Bishop Rock, England, 393  
Ile d'Ouessant, France, 380  
Nord-Ostsee-Kanal (East  
Entrance), Germany, 354  
Pentland Firth, Scotland, 505  
Skagens Odde, Denmark, 479

**Ports**

Aberdeen, Scotland, 402  
Amsterdam, Netherlands, 104

Antwerp, 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

**ZELINIKA, MONTENEGRO**  
(42°26'58"N., 18°34'05"E.) to:

**Junction Points\***

Port Said, Egypt, 1,023  
Strait of Gibraltar (via Strait of  
Messina), 1,398  
Strait of Gibraltar (via Strait of  
Sicily), 1,433

**Ports**

Ajaccio, Corsica, 764  
Alicante, Spain, 1,232  
Arzew, Algeria, 1,143  
Bar, Montenegro, 34  
Cartagena, Spain, 1,154  
Constanta, Romania, 1,064  
Haifa, Israel, 1,077  
Istanbul, Turkey, 868  
Marseille, France, 931  
Moni Anchorage, Cyprus, 328  
Piraeus, Greece, 555  
Sevastopol', Ukraine, 1,167  
Tangier, Morocco, 1,399  
Thessaloniki, Greece, 765

**ZHENJIANG, CHINA**  
(21°11'30"N., 110°24'00"E.) to:

**Junction Points\***

Singapore, 1,333  
Selat Sunda, Indonesia, 1,710

**Ports**

Ho Chi Minh, Vietnam, 838  
Hong Kong, China, 245

**ZHENJIANG, CHINA**  
(32°13'00"N., 119°27'00"E.) Add  
139 miles to Shang-hai distances  
for ports outside the Chang Chiang  
(Yangtze River).

**ZONGULDAK, TURKEY**  
(41°28'00"N., 31°49'00"E.) Add  
136 1/4 miles to Istanbul distances  
for ports outside the Black Sea.

**ZUEITINA, LIBYA**  
(30°56'00"N., 20°00'00"E.) to:

**Junction Points\***

Port Said, Egypt, 750  
Strait of Gibraltar, 1,401

**Ports**

Algiers, Algeria, 966  
Arzew, Algeria, 1,142  
Ayios Nikolaos, Greece, 475  
Beirut, Lebanon, 871  
Constanta, Romania, 980  
Corinth Canal (west side,  
Korinthos), Greece, 532  
Iraklion, Kriti, 433  
Kerch, Ukraine, 1,225  
Marseille, France, 1,031  
Novorossiysk, Russia, 1,240  
Trieste, Italy, 968  
Tripoli, Lebanon, 893  
Yumurtalik, Turkey, 910

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

**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	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
4,000	20-20	18-12	16-16	15-4	13-21	12-20	11-22	11-3	10-10	9-19	9-6	8-19	8-8	7-22	7-14	7-6	6-23	6-16	5-13
5,000	26-1	23-4	20-20	18-23	17-9	16-1	14-21	13-21	13-1	12-6	11-14	10-23	10-10	9-22	9-11	9-1	8-16	8-8	6-23
6,000	31-6	27-19	25-0	22-17	20-20	19-6	17-21	16-16	15-15	14-17	13-21	13-4	12-12	11-22	11-9	10-21	10-10	10-0	8-8