

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.

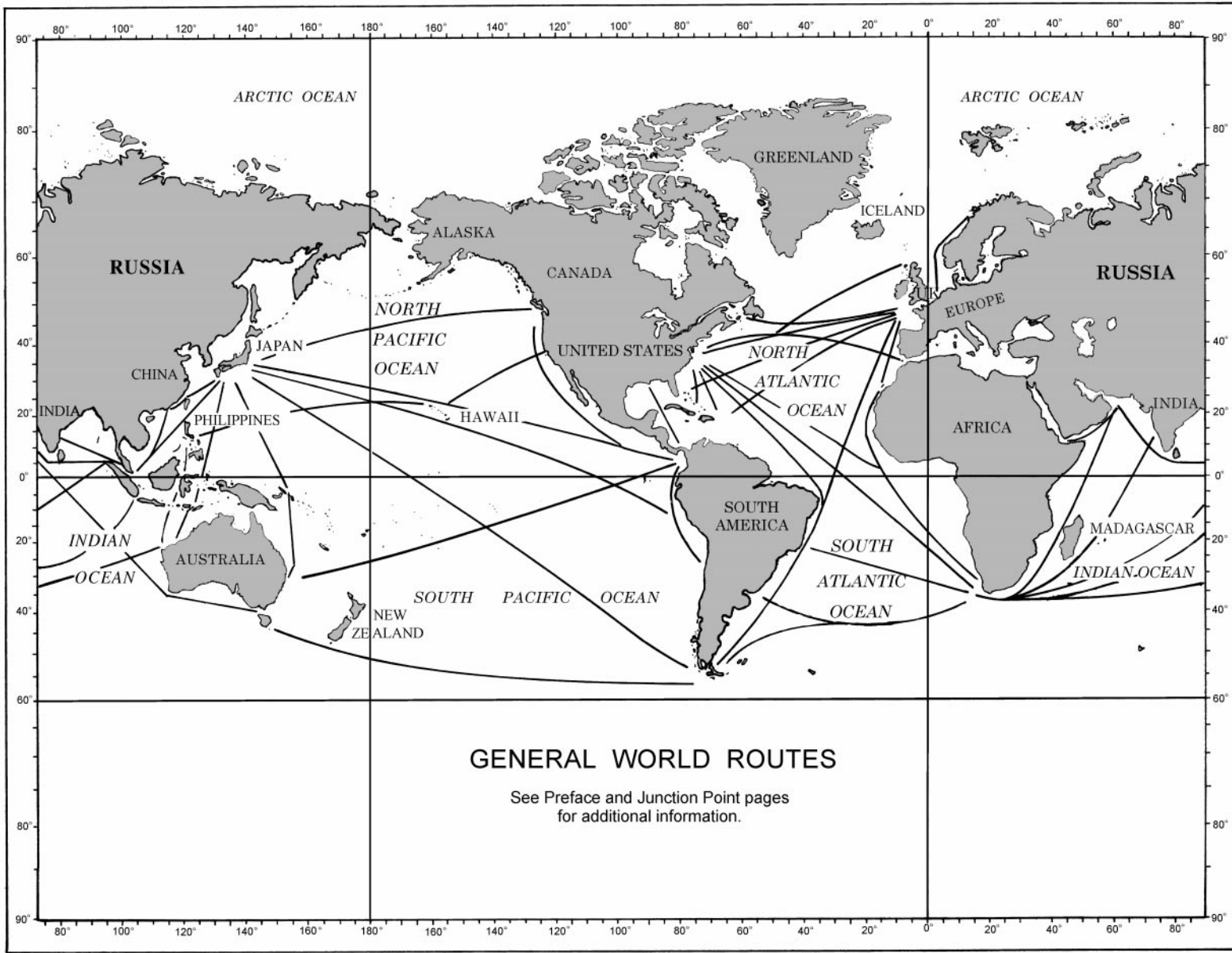
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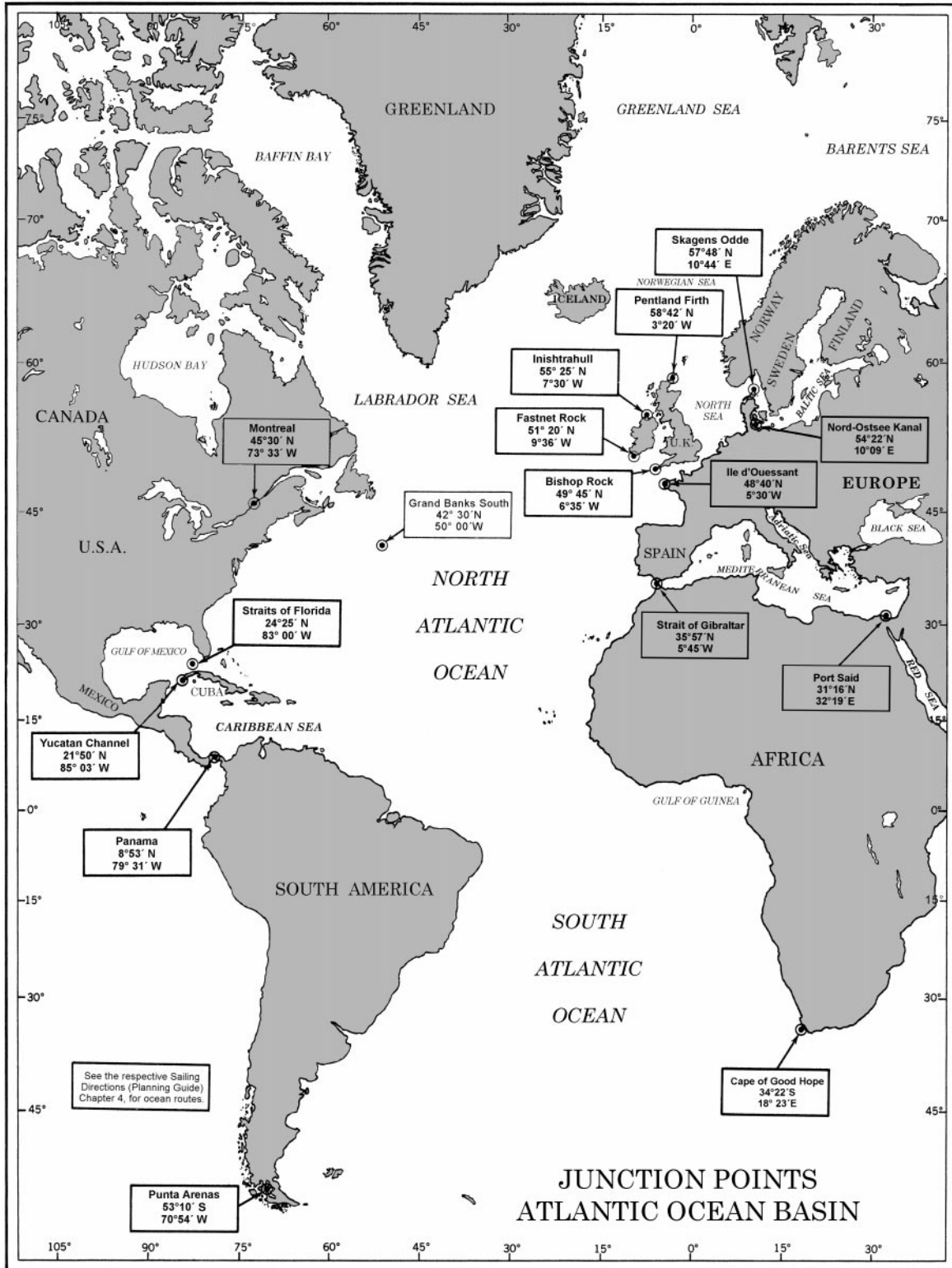
GENERAL WORLD ROUTES

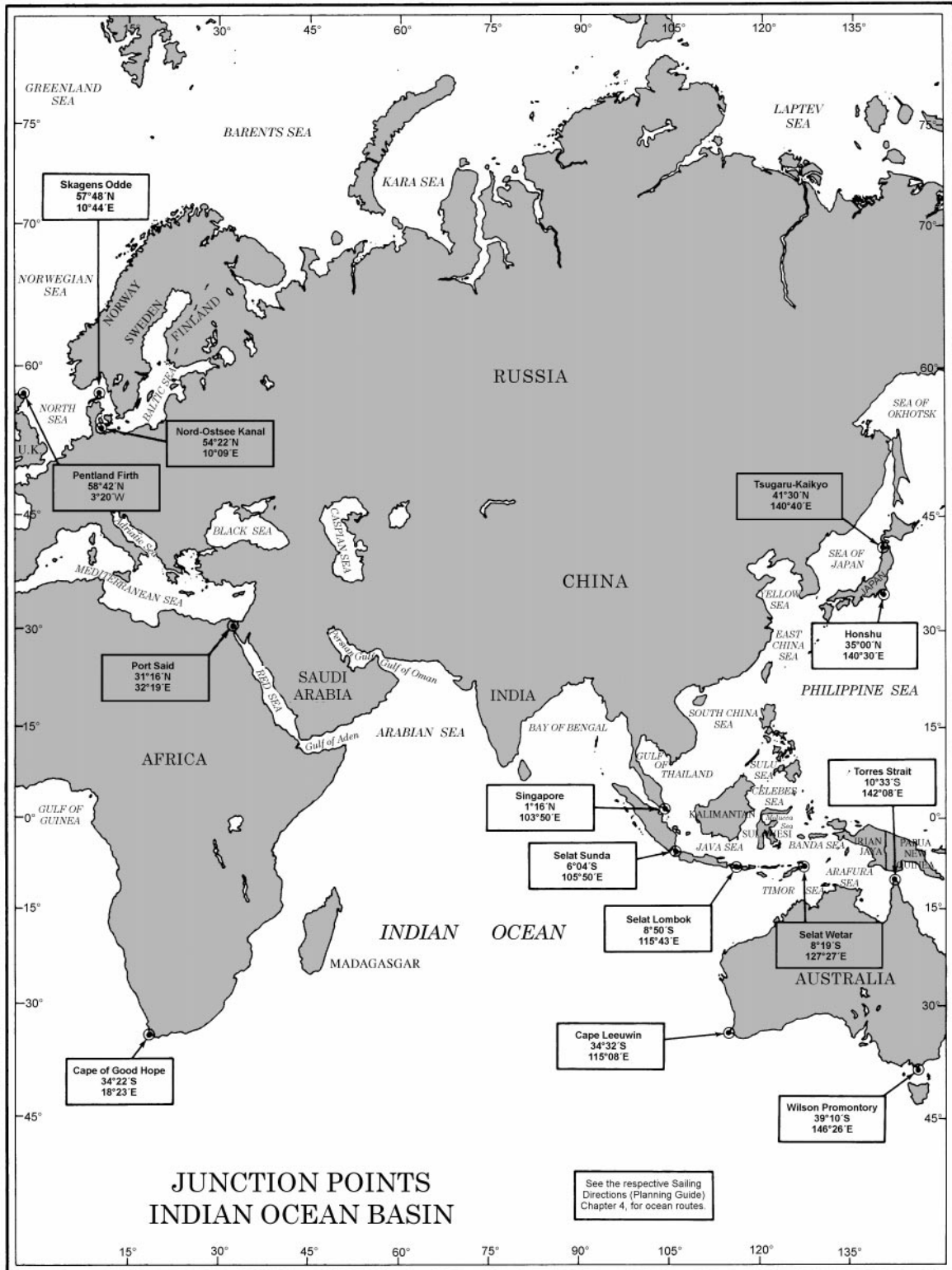
See Preface and Junction Point pages
for additional information.

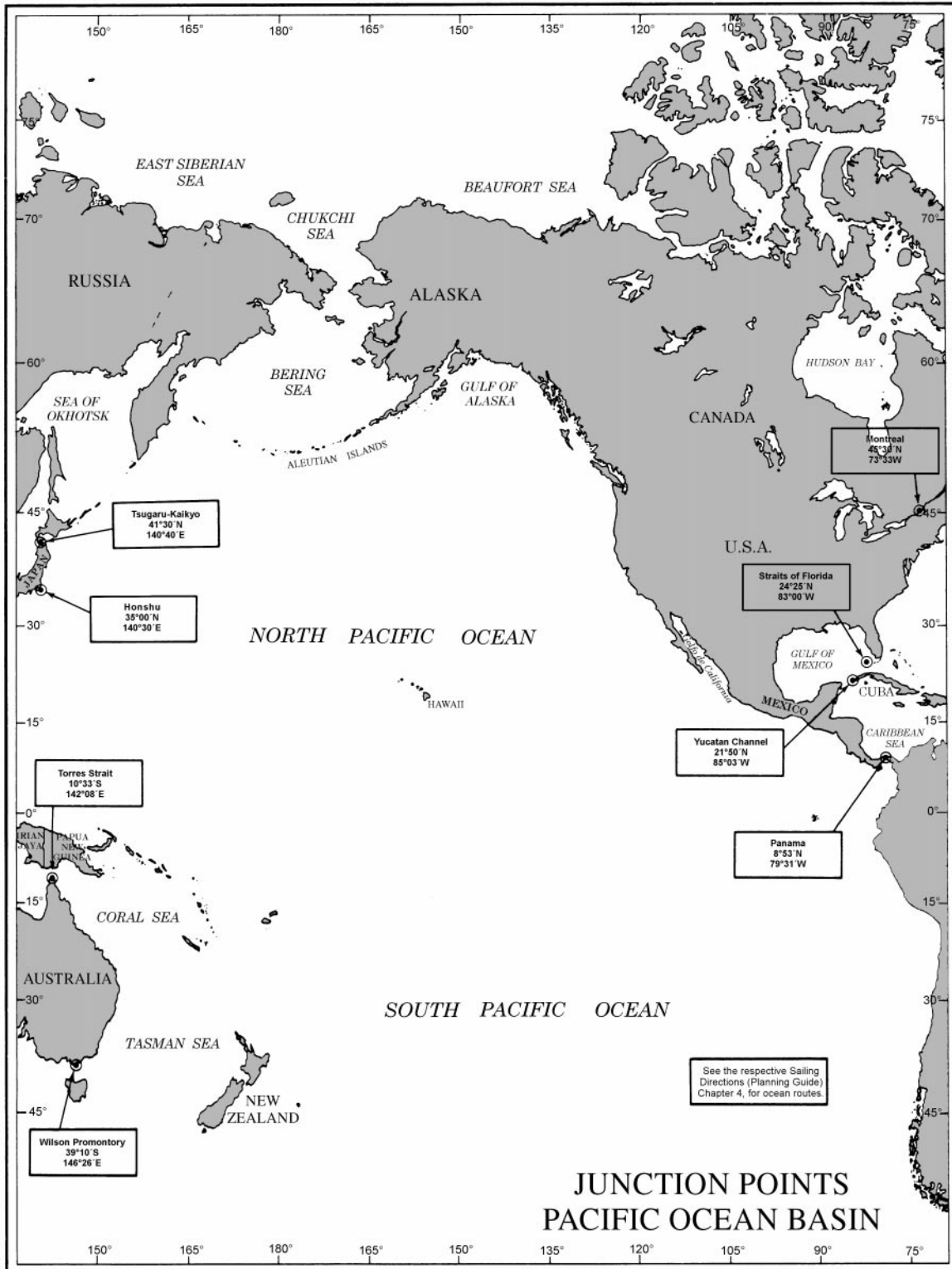
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JUNCTION POINTS**

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

Abenra, 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
Hormmelvik, 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

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

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
Petrovavlovsk-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

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
 Oostende, Belgium, 117
 Oslo, Norway, 522
 Plymouth, England, 390
 Portland, England, 316
 Portsmouth, England, 266
 Rotterdam, Netherlands, 67
 Southampton, England, 284
 Stavanger, Norway, 424
 Wilhelmshaven, Germany, 210
 Zeebrugge, Belgium, 104

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

Junction Points*

Panama, Panama, 678
 Yucatan Channel, 1,050

Ports

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

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, France, 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

Palermo, Sicily, 292
 Palma, Balearic Islands, 307
 Piraievs, Greece (south of Greece), 854
 Piraievs, 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
 Piraievs, 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
 Ostende, 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
 Shiogama, 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
 Inishrahull, 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

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 Kaiyo), 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 Kaiyo), 2,019
 Wake Island, 1,334
 Wei-hae-wei, China (via Tokara Kaiyo), 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 Kaiyo), 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
 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

ARBATAX, 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
 Ivittut, 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

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

ARRECIFE 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 Vitiiaz 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 Kaikyo and Koshiki Kaikyo), 4,930
 Nagasaki, Japan (via Tokara Kaikyo), 4,963
 Nandi Bay, Fiji Islands, 1,224
 Nelson, New Zealand, 633
 Nome, Alaska, U.S.A., 6,159
 Nukualofa, 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 Vitiiaz 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

Valparaiso, Chile, 5,247
 Vancouver, Canada, 6,191
 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

Argentia, 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°10'00"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

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

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

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
 Piraievs, Greece (south of Greece), 538
 Piraievs, 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
 Veracruz, 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

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

Valetta, Malta, 1,049

Venezia, Italy (south of Greece), 1,387

Venezia, Italy (via Corinth Canal), 1,356

Volos, Greece, 725

BEJAIA, 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

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, 2,320
 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

BELOMORSK, 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
 Dunkerque, 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

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
Inishtrahull, 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

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

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

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
 Piraevs, Greece (south of Greece), 480
 Piraevs, 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
 Uranang, 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
 Coatzacoalcas, 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

Junction Points*

Panama, Panama, 352

Ports

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

BUENOS AIRES, ARGENTINA

(34°35'00"S., 58°22'00"W.) to:

Junction Points*

Bishop Rock, England, 5,947
 Cape of Good Hope, 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

BUNDABERG, 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

Kimchaek, North Korea, 351
 Kobe, Japan, 361
 Kushiuro, 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 Cheju
 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
 Pelel, 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
 Buenos Aires, 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
 Piraievs, Greece (south of
 Greece), 820
 Piraievs, 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
 Nuevitias, Cuba, 181
 Pelel, 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 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
Talachahuano, 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

Ports

Argentina, Canada, 357
 Baltimore, Maryland, U.S.A., 975
 Bridgetown, Barbados, 1,965
 Guantánamo, 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
 Guantánamo, 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

Argentina, 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

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
 Suliima, 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, 6,480
 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
 Porlamar, Margarita, Venezuela, 785

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
 Piraievs, Greece (south of Greece), 1,271
 Piraievs, 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
 Dagu, 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 Lumbukan

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

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 Lih 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, 1802
 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

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
Sammen 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
Shanghai, 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 Qasiqianguit, 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

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
 Kangerluarsorseq, 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
 Qasigiannuit, 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
 Nuevitass, 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
 Negapattinam, 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

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
 Coatzacoalcos, 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, 1,519
 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
 Pointe Noire, Congo, 1,793
 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

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

Ports

Aleksandrovsk-Sakhalinskiy,
Russia (via Maenggol Sudo),
1,807
Apra, Guam, 2,133
Auckland, New Zealand (via Vitiaz
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 Kaikyo), 4,677
Honolulu, Hawaii, U.S.A. (via
Shimonoseki Kaikyo), 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-Kaikyo),
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 Kaikyo), 5,856
San Francisco, California, U.S.A.
(via Tsugaru-Kaikyo), 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 Kaikyo and South of
Aleutian Islands), 5,596
Seattle, Washington, U.S.A. (via
Tsugaru-Kaikyo and north of
Aleutian Islands), 5,290
Tsugaru-Kaikyo 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 Vitiaz
Strait), 5,135
Tianjin, China, 48
Valparaiso, Chile (via Shimonoseki
Kaikyo), 10,482
Vladivostok, Russia, 1,212
Weonsan, North Korea, 1,007
Xiamen, China, 1,169
Yantai, China, 205
Yokohama, Japan (via Osumi
Kaikyo), 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

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

DALHOUSIE, 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 Fourmosa 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

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

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
 Piraevs, 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

Anadyskiy 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

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
 Stavanger, 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, 4,246
 Panama, Panama, 5150
 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

<p>Ports</p> <p>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</p> <p>EVERETT, WASHINGTON, U.S.A. (47°58'53"N., 122°14'06"W.) Subtract 9 miles from Seattle, Washington distances.</p> <p>FAABORG, DENMARK (55°05'40"N., 10°14'22"E.) See Faborg, Denmark.</p> <p>FABORG, DENMARK (55°05'40"N., 10°14'22"E.) to:</p> <p>Junction Points*</p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 53 Skagens Odde, Denmark, 234</p> <p>Ports</p> <p>Gdansk, Poland, 368 Goteborg, Sweden, 222 Lubeck, Germany, 102</p> <p>FAERINGEHAVN, GREENLAND (63°41'00"N., 51°34'00"W.) See Kangerluarsorseq, Greenland.</p> <p>FALL RIVER, MASSACHUSETTS, U.S.A. (41°42'21"N., 71°10'00"W.) to:</p> <p>Junction Points*</p> <p>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</p> <p>Ports</p> <p>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</p> <p>FALMOUTH, ENGLAND (50°09'20"N., 5°03'30"W.) to:</p> <p>Junction Points*</p> <p>Ile d'Ouessant, France, 100</p> <p>Ports</p> <p>Brest, France, 137 Cardiff, Wales, 181 Cobh, Ireland, 182</p>	<p>Dublin, Ireland, 248 Hull, England, 464 Liverpool, England, 313 London, England, 351 Plymouth, England, 37 Southampton, England, 160</p> <p>FAMAGUSTA, CYPRUS (35°07'20"N., 33°56'40"E.) to:</p> <p>Junction Points*</p> <p>Port Said, Egypt, 257 Strait of Gibraltar, 1,991</p> <p>Ports</p> <p>Alexandria, Egypt, 340 Ashdod, Israel, 203 Banghazi, Libya, 768 Marseille, France, 1,558 Piraeus, Greece, 604</p> <p>FANNING ISLAND, NORTH PACIFIC (3°51'30"N., 159°21'45"W.) to:</p> <p>Junction Points*</p> <p>Panama, Panama, 4,805</p> <p>Ports</p> <p>Auckland, New Zealand, 2,854 Honolulu, Hawaii, U.S.A., 1,056 Johnston Island, North Pacific, 1,032 Wellington, New Zealand, 3,114</p> <p>FARGE, GERMANY (53°12'00"N., 8°31'00"E.) Add 23 miles to Bremerhaven distances.</p> <p>FARSUND, NORWAY (58°05'40"N., 6°48'30"E.) to:</p> <p>Junction Points*</p> <p>Pentland Firth, Scotland, 332 Skagens Odde, Denmark, 132</p> <p>Ports</p> <p>Bergen, Norway, 182 London, England, 497 Oslo, Norway, 198</p> <p>FASLANE BAY, SCOTLAND (56°04'00"N., 4°49'00"W.) Subtract 11 miles from Glasgow distances.</p> <p>FASTNET ROCK, IRELAND* (51°20'00"N., 9°36'00"W.) to:</p> <p>Junction Points*</p> <p>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</p>	<p>Straits of Florida, 3,761 Yucatan Channel, 4,058</p> <p>Ports</p> <p>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</p> <p>FATEH TERMINAL, UNITED ARAB EMIRATES (25°36'00"N., 54°31'00"E.) to:</p> <p>Junction Points*</p> <p>Cape of Good Hope, South Africa, 4,733 Cape Leeuwin, Australia, 5,069 Selat Lombok, Indonesia, 4,314</p>	<p>Port Said, Egypt, 2,915 Singapore, 3,454 Selat Sunda, Indonesia, 3,661 Torres Strait, Australia (via South of Java), 5,863</p> <p>Ports</p> <p>Aden, Yemen, 1,526 Belawan, Indonesia, 3,123 Bombay, India, 1,146 Fremantle, Australia, 5,000 Penang, Malaysia, 3,163</p> <p>FECAMP, FRANCE (49°46'00"N., 0°21'45"E.) to:</p> <p>Junction Points*</p> <p>Ile d'Ouessant, France, 246 Nord-Ostsee-Kanal (East Entrance), Germany, 482</p> <p>Ports</p> <p>Cherbourg, France, 79 Plymouth, England, 183 Rotterdam, Netherlands, 228</p> <p>FELIXSTOWE, ENGLAND (51°56'56"N., 1°19'00"E.) to:</p> <p>Junction Points*</p> <p>Bishop Rock, England, 377 Ile d'Ouessant, France, 303 Nord-Ostsee-Kanal (East Entrance), Germany, 377 Pentland Firth, Scotland, 460 Skagens Odde, Denmark, 478</p> <p>Ports</p> <p>Amsterdam, Netherlands, 144 Antwerp, Belgium, 141 Bergen, Norway, 544 Emden, Germany, 251 Rotterdam, Netherlands, 121 Stavanger, Norway, 477 Wilhelmshaven, Germany, 300</p> <p>FELTON, CUBA (20°50'00"N., 75°44'00"W.) See Antilla.</p> <p>FERNANDINA, FLORIDA, U.S.A. (30°41'00"N., 81°27'40"W.) to:</p> <p>Ports</p> <p>Nassau, Bahamas, 450 San Juan, Puerto Rico, 1,115</p> <p>FERNANDO DE NORONHA, BRAZIL (3°50'00"S., 32°25'00"W.) to:</p> <p>Ports</p> <p>Kingston, St. Vincent, 1,320 New York, New York, U.S.A., 3,517 Recife, Brazil, 300 Santos, Brazil, 1,560</p> <p>FETHIYE, TURKEY (36°37'30"N., 29°07'20"E.) to:</p> <p>Junction Points*</p> <p>Port Said, Egypt, 375</p>
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* **JUNCTION POINT.**—See Preface for use of junction points

Strait of Gibraltar, 1,712

Ports

Ashdod Yam, Israel, 416
Banghazi, Libya, 548
Piraeus, 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 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°33'00"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

FREPORT, 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 Points*

Port Said, Egypt, 1,150
Strait of Gibraltar, 986

Ports

Livorno, Italy, 228
Messina, Sicily, 209
Tunis, Tunisia, 315

GALEOTA POINT, TRINIDAD
(10°07'55"N., 61°00'55"W.) to:**Junction Points***

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

Ports

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

GALLE, SRI LANKA

(6°01'45"N., 80°13'20"E.) to:

Junction Points*

Singapore, 1,502

Ports

Bombay, India, 944
Calicut, India, 437
Karachi, Pakistan, 1,393
Trincomalee, Sri Lanka, 255

GALLIPOLI, ITALY

(40°02'00"N., 17°59'00"E.) to:

Junction Points*

Port Said, Egypt, 908
Strait of Gibraltar, 1,246

Ports

Durres, Albania, 137
Izmir, Turkey (south of Greece), 606
Messina, Sicily, 201

GALVESTON, TEXAS, U.S.A.

(29°19'00"N., 94°47'00"W.) to:

Junction Points*

Panama, Panama, 1,536
Straits of Florida, 698
Yucatan Channel, 696

Ports

Barranquilla, Colombia, 1,577
Belize, Belize, 935
Campeche, Mexico, 617
Carmen, Mexico, 661
Cartagena, Colombia, 1,583
Cienfuegos, Cuba, 989
Coatzacoalcas, 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

GALWAY, IRELAND

(53°15'00"N., 9°03'00"W.) to:

Junction Points*

Fastnet Rock, Ireland, 166
Inishtrahull, Ireland, 231
Strait of Gibraltar, 1,184

Ports

Dakar, Senegal, 2,383
Natal, Brazil, 3,786
St. John's, Canada, 1,678
Tromso, Norway, 1,352

GAMBA, GABON

(2°49'32"S., 9°56'46"E.) to:

Junction Points*

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

Ports

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

GAVLE, SWEDEN

(60°41'28"N., 17°13'50"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 615
Skagens Odde, Denmark, 676

Ports

Gdynia, Poland, 438

Helsinki, Finland, 292
Riga, Latvia, 355
Stockholm, Sweden, 153

GDANSK, POLAND

(54°22'00"N., 18°40'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 344
Skagens Odde, Denmark (via Store Baelt), 533
Skagens Odde, Denmark (via The Sound), 418

Ports

Assens, Denmark, 370
Faborg, Denmark, 368
Kobenhavn, Denmark, 468
Oslo, Norway (via Store Baelt), 657
Oslo, Norway (via The Sound), 540
Szczecin, Poland, 240

GDYNIA, POLAND

(54°32'00"N., 18°33'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 339
Skagens Odde, Denmark, 528

Ports

Aalborg, Denmark (via The Sound), 389
Flensburg, Germany, 358
Fredericia, Denmark, 384
Frederikshavn, Denmark, 395
Gavle, Sweden, 438
Grena, Denmark, 361
Hamina, Finland, 512
Hango, Finland, 356
Helsinki, Finland, 415
Kobenhavn, Denmark, 464
Korsor, Denmark, 344
Kyndbyvaerkets, Denmark, 334
Lubeck, Germany, 328
Masnedssund, Denmark, 330
Middlefart, Denmark, 396
Muskö 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

GEBE ISLAND, INDONESIA

(0°03'50"S., 129°22'44"E.) to:

Junction Points*

Honshu, Japan, 2,187
Selat Lombok, Indonesia, 1,078
Panama, Panama, 9,116

Singapore (via Karimata Strait), 2,019
Torres Strait, Australia, 1,062
Selat Wetar, Indonesia, 680

Ports

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

GEELONG, AUSTRALIA

(38°08'00"S., 144°22'00"E.) Add 6 miles to Melbourne distances.

GELA, ITALY

(37°03'35"N., 14°13'52"E.) to:

Junction Points*

Port Said, Egypt, 981
Strait of Gibraltar, 968

Ports

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

GELIBOLU, TURKEY

(40°24'18"N., 26°40'00"E.)

Subtract 113 miles from Istanbul distances for ports outside the Black Sea and Sea of Marmara.

GEMLICK, TURKEY

(40°25'46"N., 29°09'06"E.) to:

Junction Points*

Port Said, Egypt, 805
Strait of Gibraltar (south of Greece), 1,841

Ports

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

GENERAL SANTOS CITY, PHILIPPINES

(6°06'15"N., 125°10'07"E.) to:

Junction Points*

Honshu, Japan, 2,048
Selat Lombok, Indonesia, 1,096
Panama, Panama, 9,384
Punta Arenas, Chile, 8,757

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

GHENT, 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
Nuevitas, 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

Junction Points*

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

Ports

Aden, Yemen, 400
 Al Aqabah, Jordan, 988
 Massawa, Ethiopia, 222
 Port Sudan, Sudan, 403

GLADSTONE HARBOR, AUSTRALIA

(23°50'00"S., 151°15'30"E.) to:

Junction Points*

Cape Leeuwin, Australia, 2,688
 Torres Strait, Australia, 1,085

Ports

Brisbane, Australia, 314
 Port Moresby, Papua New Guinea, 1,389
 Wellington, New Zealand, 1,678

GLASGOW, SCOTLAND

(55°51'45"N., 4°18'00"W.) to:

Junction Points*

Bishop Rock, England, 402
 Fastnet Rock, Ireland, 395
 Inishtrahull, Ireland, 146
 Pentland Firth, Scotland (via The Minch), 384

Ports

Ardrossan, Scotland, 43
 Avonmouth, England, 390
 Barrow in Furness, England, 172
 Boulogne, France, 672
 Cairn Ryan, Scotland, 82
 Cardiff, Wales, 375
 Cobh, Ireland, 346
 Fishguard, Wales, 247
 Londonderry, Northern Ireland, 143
 Reykjavik, Iceland, 860
 Stornoway, Scotland, 283

GLOUCESTER, ENGLAND

(51°52'00"N., 2°13'00"W.) Add 34 miles to Avonmouth distances.

GODHAVN, GREENLAND

(69°14'00"N., 53°32'00"W.) See Qeqertarsauq, Greenland.

GODTHAB, GREENLAND

(64°10'45"N., 51°45'14"W.) See Nuuk, Greenland.

GOLCUK, TURKEY

(40°44'00"N., 29°49'00"E.) Add 34 miles to Istanbul distances for ports outside the Black Sea and Sea of Marmara.

GOLFITO, COSTA RICA

(8°38'30"N., 83°10'30"W.) to:

Junction Points*

Panama, Panama, 334

Ports

Acapulco, Mexico, 1,123
 Ampala, Honduras, 432
 Buenaventura, Colombia, 426
 La Union, El Salvador, 4326

GONAIVES, HAITI

(19°27'00"N., 72°42'00"W.) to:

Junction Points*

Panama, Panama, 805

Ports

Kingston, Jamaica, 263
 New York, New York, U.S.A., 1,328
 Port au Prince, Haiti, 70

GOOD HOPE, LOUISIANA, U.S.A.

(29°59'35"N., 90°24'00"W.) Add 24 miles to New Orleans distances.

GOOLE, ENGLAND

(53°42'00"N., 0°51'00"W.) Add 27 miles to Hull distances.

GOOSE BAY, CANADA

(53°22'00"N., 60°18'00"W.) to:

Junction Points*

Inishtrahull, Ireland, 1,812
 Strait of Gibraltar, 2,538

Ports

Churchill, Canada, 1,557
 Reykjavik, Iceland, 1,332
 St. John's, Canada, 588

GOTEBORG, SWEDEN

(57°42'00"N., 11°57'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 230
 Skagens Odde, Denmark, 42

Ports

Assens, Denmark, 197
 Bergen, Norway, 356
 Faborg, Denmark, 222
 Flensburg, Germany, 272
 Fredericia, Denmark, 181
 Grena, Denmark, 102
 Haderslev, Denmark, 203
 Hobro, Denmark, 123
 Kolding, Denmark, 330
 Middlefart, Denmark, 173
 Naestved, Denmark, 199
 Nakskov, Denmark, 201
 Oslo, Norway, 159
 Sonderborg, Denmark, 239
 Vejle, Denmark, 176

GOTHENBURG, SWEDEN

(57°42'00"N., 11°57'00"E.) See Goteborg, Sweden.

GOVE HARBOR, AUSTRALIA

(12°10'33"S., 136°38'43"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,489
 Cape Leeuwin, Australia, 2,457
 Torres Strait, Australia, 346
 Selat Wetar, Indonesia, 611

Ports

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

GRAND BANKS SOUTH*

(42°30'00"N., 50°00'00"W.) to:

Junction Points*

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

Ports

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

GRANGEMOUTH, SCOTLAND

(56°02'00"N., 3°41'20"W.) For distances outside the Firth of Forth add 15 miles to Leith distances.

GRANTON, SCOTLAND

(55°59'16"N., 3°13'13"W.) See Leith.

GRANVILLE, FRANCE

(48°50'00"N., 1°36'15"W.) to:

Junction Points*

Bishop Rock, England, 267
 Ile d'Ouessant, France, 158

Ports

Dover, England, 181
 Le Havre, France, 173
 Plymouth, England, 149

GRAVESEND, ENGLAND

(51°26'45"N., 0°22'30"E.) Subtract 16 miles from London distances.

GREENOCK, SCOTLAND

(55°57'00"N., 4°45'00"W.) Subtract 17 miles from Glasgow distances.

GREENVILLE, LIBERIA

(4°59'30"N., 9°02'55"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,826
 Ile d'Ouessant, France, 2,981

Ports

Dakar, Senegal, 831
 Takoradi, Ghana, 461

GRENA, DENMARK

(56°24'45"N., 10°56'20"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 140
 Skagens Odde, Denmark, 115

Ports

Gdynia, Poland, 361
 Goteborg, Sweden, 102
 Lubeck, Germany, 169

GRIMSBY, ENGLAND

(53°36'00"N., 0°01'00"W.) Subtract 14 miles from Hull distances.

GRIMSTAD, NORWAY

(58°20'20"N., 8°36'05"E.) to:

Junction Points*

Pentland Firth, Scotland, 399

Ports

Bergen, Norway, 250
 London, England, 542
 Oslo, Norway, 135

GROTON, CONNECTICUT, U.S.A.

(41°21'30"N., 72°05'15"W.) Use New London distances.

GUANICA, PUERTO RICO

(17°58'00"N., 66°55'30"W.) to:

Ports

Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 572
 Santiago de Cuba, Cuba (south of Hispaniola), 584

GUANTA, VENEZUELA

(10°14'43"N., 64°35'30"W.) Add 1 mile to Puerto la Cruz distances.

GUANTANAMO, CUBA

(19°54'00"N., 75°11'00"W.) to:

Junction Points*

Bishop Rock, England (via 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

Ports

Argentina, 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
 Porlamar, 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
 Amapala, 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
 Dalien, 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

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
 Hoilo, 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 Kaikyō), 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
 Ulgorsk, 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

Argentina, 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

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 Saïd, 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
 Guantánamo, 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
 Tromsø, 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
 Rankt-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

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

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
Norrköping, Sweden, 307
Ornskölsvik, Sweden, 403
Oulu, Finland, 598
Oxelösund, 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 Proliv, 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
Tandjung 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
Avarua, 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

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
 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

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

HORSENS, 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.

HUDIKSVALL, 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
Arkhangel'sk, 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

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

ILLICHIVS'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 Lumbukan 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 Lumbukan 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 (JAKOBSHAVN), GREENLAND
 (69°13'30"N., 51°05'30"W.) to:

Junction Points*

Pentland Firth, Scotland, 1,972
 Strait of Gibraltar, 2,819

Ports

Churchill, Canada, 1,532
 Reykjavik, Iceland, 1,418
 St. John's, Canada, 1,341

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 Maenggol 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 Maenggol Sudo), 2,120
 Petropavlovsk-Kamchatskiy, Russia (via Osumi Kaikyo), 2,449
 Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,136

Port Darwin, Australia (via Molucca 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 Malmul 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 Suido), 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
 Piraievs, Greece, 175
 Rhodes, Greece, 171
 Rijeka, Croatia, 831
 Salamis, Greece, 190
 Savona, Italy, 1,002
 Sibenik, Croatia, 704
 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
 Piraievs, 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

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
 Piraievs, 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

ITOUZAKICHO, JAPAN
 (34°23'00"N., 133°06'00"E.) to:

Ports

Kobe, Japan, 113
 Kure, Japan, 73
 Sasebo, Japan, 271
 Shimonoseki, Japan, 133
 Shiogama, Japan, 662
 Yokohama, Japan, 446

IVITTUUT, GREENLAND
 (61°12'30"N., 48°10'00"W.) to:

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

Argentia, 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.) to:

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.) to:

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
 Iskenderun, 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
 Piraievs, 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.) to:

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.) to:

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 Lumbacan 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

Hong Kong, China, 1,782
Iloilo, Philippines (via Lumbucan 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 Kaikyō), 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
Niihama, 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

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

KALILIMENES, 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

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, 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
Inishtrahull, 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
Argentia, 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

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
Manila, Philippines, 3,664
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

KLAKSVIG, 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

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
Niihanna, 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
Vejle, Denmark, 149
Wismar, Germany, 132

KOCHI, JAPAN

(33°32'06"N., 133°33'30"E.) to:

Ports

Hakodate, Japan (east of Honshu), 832
Hakodate, Japan (via Shimonoseki Kaikyo), 894
Nagasaki, Japan (via Osumi

Kaikyo), 366
Yokohama, Japan, 372

KODIAK, ALASKA, U.S.A.

(57°47'00"N., 152°25'00"W.) to:

Junction Points*

Panama, Panama, 4,907
Singapore, 6,020

Ports

Apra, Guam, 3,928
Auckland, New Zealand, 5,942
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
Inshtrahull, 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:

<p>Ports</p> <p>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</p> <p>KOPER, SLOVENIA (45°33'48"N., 13°42'15"E.) to:</p> <p>Junction Points*</p> <p>Port Said, Egypt (via south of Greece), 1,310 Strait of Gibraltar, 1,682</p> <p>Ports</p> <p>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</p> <p>KORSAKOV, SAKHALIN, RUSSIA (46°37'30"N., 142°45'30"E.) to:</p> <p>Ports</p> <p>Bukhta Shelikhova, Kuril Islands, Russia, 618 Matsuga-hana, Japan, 279 Nevel'sk, Russia, 115 Sovetskaya Gavan, Russia, 264 Tomari, Japan, 239</p> <p>KORSOR, DENMARK (55°20'07"N., 11°07'48"E.) to:</p> <p>Junction Points*</p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 73 Skagens Odde, Denmark, 162</p> <p>Ports</p> <p>Gdynia, Poland, 344 Stockholm, Sweden, 524 Swinoujscie, Poland, 239</p> <p>KOTA KINABALU, MALAYSIA (6°00'32"N., 116°04'37"E.) to:</p> <p>Junction Points*</p> <p>Selat Lombok, Indonesia (via Balabac Strait), 1,362 Panama, Panama (via Surigao Strait), 9,860 Singapore, 807 Selat Sunda, Indonesia, 1,031</p> <p>Ports</p> <p>Cebu, Philippines (via Balabac Strait), 589 Ho Chi Minh, Vietnam, 761 Honolulu, Hawaii, U.S.A. (via Surigao Strait), 5,092</p>	<p>Makassar, Sulawesi (via west of Palawan), 616 Sandakan, Sabah (via Balabac Strait), 261 Zamboanga, Philippines, 442</p> <p>KOTKA, FINLAND (60°27'00"N., 26°59'00"E.) to:</p> <p>Junction Points*</p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 694 Skagens Odde, Denmark, 755</p> <p>Ports</p> <p>Helsinki, Finland, 99 Riga, Latvia, 296 Stockholm, Sweden, 311 Vysotsk, Russia, 69</p> <p>KOVDA, RUSSIA (66°42'00"N., 32°52'00"E.) Add 76 1/2 miles to Arkhangel'sk distances.</p> <p>KPEME, TOGO (6°11'22"N., 01°30'20"E.) to:</p> <p>Junction Points*</p> <p>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</p> <p>Ports</p> <p>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</p> <p>KRAGERO, NORWAY (58°51'40"N., 9°23'35"E.) to:</p> <p>Junction Points*</p> <p>Pentland Firth, Scotland, 441</p> <p>Ports</p> <p>Bergen, Norway, 289 London, England, 582 Oslo, Norway, 95</p> <p>KRALENDIJK, BONAIRE (12°09'30"N., 68°16'40"W.) to:</p> <p>Ports</p> <p>Guantanamo, Cuba, 620</p> <p>KRIBI, CAMEROON (2°56'00"N., 9°54'00"E.) to:</p> <p>Ports</p> <p>Douala, Cameroon, 81</p>	<p>Malabo, Equatorial Guinea, 106 Port Gentil, Gabon, 231 Takoradi, Ghana, 704</p> <p>KRISTIANSAND, NORWAY (58°08'30"N., 7°59'40"E.) to:</p> <p>Junction Points*</p> <p>Bishop Rock, England, 309 Ile d'Ouessant, France, 794 Pentland Firth, Scotland, 372 Skagens Odde, Denmark, 92</p> <p>Ports</p> <p>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</p> <p>KRISTIANSUND, NORWAY (63°06'40"N., 7°45'00"E.) to:</p> <p>Ports</p> <p>Bergen, Norway, 232 Kristiansand, Norway, 447 Oslo, Norway, 599 Stavanger, Norway, 332</p> <p>KRISTINESTAD, FINLAND (62°15'45"N., 21°22'30"E.) to:</p> <p>Junction Points*</p> <p>Nord-Ostsee-Kanal (East entrance), Germany, 703 Skagens Odde, Denmark (via the Sound), 764</p> <p>Ports</p> <p>Gdynia, Poland, 473 Helsinki, Finland, 279 Kobenhavn, Denmark, 587 Kotka, Finland, 342 Oulu, Finland, 214 Sankt-Peterburg, Russia, 433 Stockholm, Sweden, 232</p> <p>KUNG THEP, THAILAND See Bangkok.</p> <p>KUCHING, SARAWAK (1°33'35"N., 110°20'35"E.) to:</p>	<p>Junction Points*</p> <p>Selat Lombok, Indonesia, 974 Singapore, 443</p> <p>Ports</p> <p>Iloilo, Philippines, 948 Jakarta, Indonesia, 627 Olongapo, Philippines, 992 Zamboanga, Philippines, 863</p> <p>KUNSAN, JAPAN (35°59'18"N., 126°43'00"E.) See Gunsan, South Korea.</p> <p>KURE, JAPAN (34°14'00"N., 132°32'00"E.) to:</p> <p>Ports</p> <p>Apra, Guam, 1,460 Hirohata, Japan, 126 Imabari, Japan, 63 Itozakicho, Japan, 73 Kagoshima, Japan, 296 Komatsushima, Japan, 217 Niihama, Japan, 76 Sakaide, Japan, 107 Shimizu, Honshu, Japan, 141 Shimonoseki, Japan, 116 Tokuyama, Japan, 76 Uno, Japan, 117 Wakamatsu, Japan, 125 Yokohama, Japan, 515</p> <p>KUSHIRO, JAPAN (42°58'00"N., 144°21'30"E.) to:</p> <p>Ports</p> <p>Busan, South Korea, 876 Hakodate, Japan, 210 Kobe, Japan, 876 Vladivostok, Russia, 624 Yokohama, Japan, 594</p> <p>KWA IBO, NIGERIA (4°21'40"N., 8°00'00"E.) See Qua Iboe.</p> <p>KYNDBY, DENMARK (55°48'36"N., 11°52'48"E.) to:</p> <p>Junction Points*</p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 164 Skagens Odde, Denmark, 136</p> <p>Ports</p> <p>Gdynia, Poland, 334 Stockholm, Sweden, 493 Swinoujscie, Poland, 197</p> <p>KYOMIPO, NORTH KOREA (38°44'00"N., 125°37'00"E.) Add 16 miles to Nampo distances.</p> <p>LA CEIBA, HONDURAS (15°46'30"N., 86°50'00"W.) to:</p> <p>Junction Points*</p> <p>Panama, Panama, 709</p> <p>Ports</p> <p>Colon, Panama, 666 New York, New York, U.S.A., 1,743</p>
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* **JUNCTION POINT.**—See Preface for use of junction points

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
Guiria, Venezuela, 339
Gulfport, Mississippi, U.S.A. (via Old Bahama Channel and Windward Passage), 1,806
Gulfport, Mississippi, U.S.A. (via Yucatan Channel), 1,801
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 a 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
Coatzacoalcas, 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., 992

Nuevitas, Cuba, 344
Pensacola, Florida, U.S.A., 515
Philadelphia, Pennsylvania, U.S.A., 1,162
Pointe a Pitre, Guadeloupe (via Mona Passage), 1,309
Pointe a 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

<p>Ports</p> <p>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</p> <p>LA UNION, EL SALVADOR (13°20'00"N., 87°49'00"W.) to:</p> <p>Junction Points*</p> <p>Panama, Panama, 748</p> <p>Ports</p> <p>Corinto, Nicaragua, 73 Golfito, Costa Rica, 432 San Francisco, California, U.S.A., 2,586</p> <p>LAE, PAPUA NEW GUINEA (6°44'30"S., 147°01'00"E.) to:</p>	<p>Ports</p> <p>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</p> <p>LAGOS, NIGERIA (6°27'00"N., 3°23'00"E.) to:</p> <p>Junction Points*</p> <p>Ile d'Ouessant, France, 3,746 Strait of Gibraltar, 3,100 Straits of Florida, 5,225</p> <p>Ports</p> <p>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</p> <p>LAKE CHARLES, LOUISIANA, U.S.A. (30°13'30"N., 93°14'00"W.) to:</p> <p>Junction Points*</p> <p>Straits of Florida, 677 Yucatan Channel, 689</p> <p>Ports</p> <p>Kingston, Jamaica, 1,190 La Habana, Cuba, 750 Veracruz, Mexico, 688</p> <p>LAND SKRONA, SWEDEN (55°52'08"N., 12°49'00"E.) to:</p> <p>Junction Points*</p> <p>Nord-Ostsee-Kanal (East Entrance), Germany, 167 Skagens Odde, Denmark, 137</p> <p>Ports</p> <p>Oslo, Norway, 261</p>	<p>Stockholm, Sweden, 424 Szczecin, Poland, 170</p> <p>LARNACA, CYPRUS (34°54'44"N., 33°38'23"E.) to:</p> <p>Junction Points*</p> <p>Port Said, Egypt, 231 Strait of Gibraltar, 1,953</p> <p>Ports</p> <p>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</p> <p>LARNE, ENGLAND (54°52'00"N., 5°47'40"W.) to:</p> <p>Junction Points*</p> <p>Bishop Rock, England, 323 Fastnet Rock, Ireland, 312 Inishtrahull, Ireland, 86</p> <p>Ports</p> <p>Cardiff, Wales, 295 Cobh, Ireland, 251 Londonderry, Northern Ireland, 71 Milford Haven, Wales, 220 Stornoway, Scotland, 219 Workington, England, 85</p> <p>LARVIK, NORWAY (59°03'00"N., 10°01'35"E.) to:</p> <p>Junction Points*</p> <p>Pentland Firth, Scotland, 461</p> <p>Ports</p> <p>Bergen, Norway, 317 London, England, 604 Oslo, Norway, 72</p> <p>LAS PALMAS, CANARY ISLANDS (28°08'30"N., 15°25'00"W.) to:</p> <p>Junction Points*</p> <p>Bishop Rock, England, 1,360 Strait of Gibraltar, 681 Straits of Florida, 3,713</p> <p>Ports</p> <p>Baltimore, Maryland, U.S.A., 3,251 Brunswick, Georgia, U.S.A., 3,442 Charleston, South Carolina,</p>	<p>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</p> <p>LAS PIEDRAS, VENEZUELA (11°42'15"N., 70°13'15"W.) to:</p> <p>Ports</p> <p>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</p> <p>LATCHI, CYPRUS (35°06'00"N., 32°27'00"E.) See Khrysohou Bay, Cyprus.</p> <p>LAUNCESTON, TASMANIA (41°27'00"S., 147°07'00"E.) to:</p> <p>Junction Points*</p> <p>Cape Leeuwin, Australia, 1,577 Torres Strait, Australia, 2,278</p> <p>Ports</p> <p>Melbourne, Australia, 246 Sydney, Australia, 514 Wellington, New Zealand, 1,326</p> <p>LAUTOKA HARBOR, FIJI ISLANDS (17°36'09"S., 177°26'16"E.) to:</p> <p>Junction Points*</p> <p>Torres Strait, Australia, 2,204 Wilson Promontory, Australia, 2,070</p> <p>Ports</p> <p>Apra, Guam, 2,899 Sydney, Australia, 1,732 Wellington, New Zealand, 1,554</p> <p>LAVAN ISLAND, IRAN (26°47'05"N., 53°20'15"E.) to:</p> <p>Junction Points*</p> <p>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</p> <p>Ports</p> <p>Abadan, Iran, 349 Aden, Yemen, 1,578 Assab, Ethiopia, 1,722 Bandar Abbas, Iran, 198</p>
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* **JUNCTION POINT.**—See Preface for use of junction points

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

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

Argentia, 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
 Arkhangel'sk, 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
 Benghazi, 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

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, 525
 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

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
 Faborg, Denmark, 102
 Flensburg, Germany, 131
 Fredericia, Denmark, 155
 Frederikshavn, Denmark, 155
 Gdynia, Poland, 328
 Grenaa, Denmark, 169

Inaderslev, Denmark, 137
 Kobenhavn, Denmark, 148
 Middlefart, Denmark, 149
 Naestved, Denmark, 136
 Stockholm, Sweden, 491
 Vejle, Denmark, 173

LUCINDA, AUSTRALIA
 (18°31'15"S., 146°20'00"E.) to:

Junction Points*

Torres Strait, Australia, 634
 Wilson Promontory, Australia, 1,621

Ports

Brisbane, Australia, 804
 Wellington, New Zealand, 2,102

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 Nagayeye.

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
 Changion, 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

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, 4,464
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
Durrës, Albania, 161

MANGALORE, INDIA

(12°55'32"N., 74°48'00"E.) See New Mangalore.

MANIITSOQ, 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

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 Chetvertyy 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

MARMAGAO, 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

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
 Piraevs, Greece (south of Greece), 1,069
 Piraevs, Greece (via Corinth Canal), 988
 Port Vendres, France, 109
 Porto 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

MASNEDESUND, 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 Points*

Cape Leeuwin, Australia, 1,497
Panama, Panama (via Foveaux Strait), 7,928
Wilson Promontory, Australia, 154

Ports

Adelaide, Australia, 512
Albany, Australia, 1,363
Apia, Samoa, 2,834
Apra, Guam, 3,631
Auckland, New Zealand, 1,649
Avarua, Cook Islands, 3,090
Bluff Harbor, New Zealand, 1,211
Burnie Harbor, Australia, 223
Dunedin, New Zealand, 1,309
Dutch Harbor, Alaska, U.S.A., 6,321
Hobart, Tasmania, 472
Honolulu, Hawaii, U.S.A., 4,942
Jaluit, Marshall Islands, 3,181
Launceston, Tasmania, 246
Levuka, Fiji Islands, 2,274
Los Angeles, California, U.S.A., 7,032
Lytelton, 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
Pozzuoli, 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 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

MIIKE, 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
 Honshu, 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

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 Kasa 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 Myongyandao), 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
 Uglegorsk, 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
 Banghazi, 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

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.**MOSSELBAAI, 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 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
Hvalfjörður, 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
Qaanaq (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, 1396
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
Miike, 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:

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 Vitia
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
Teessport, 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
Dhekelia, 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
Piraeus, 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 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 Liberté, 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
Nuevas, 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
Portland, England, 453
Portsmouth, England, 403
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 Pouse 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
Abenra, 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
Faborg, Denmark, 53
Fecamp, France, 482
Flensburg, Germany, 52
Fredericia, Denmark, 85
Frederikshavn, Denmark, 200
Gavle, Sweden, 615
Gdansk, Poland, 344
Gdynia, Poland, 339
Goteborg, Sweden, 230
Grena, Denmark, 140
Haderslev, Denmark, 72
Halmsted, Sweden, 188
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
Karlskrona, Sweden, 235
Klaipeda, Lithuania, 400
Kobenhavn, Denmark (via Store Baelt), 202
Kobenhavn, Denmark (via The Sound), 162
Koge, Denmark, 153
Kolding, Denmark, 86
Korsor, Denmark, 73
Kotka, Finland, 694
Kyndbyvaerkets, Denmark, 164
Landskrona, Sweden, 167
Le Havre, France, 522
Limhamn, Sweden, 159
London, England, 439
Lubeck, Germany, 99
Lulea, Sweden, 875
Malmo, Sweden, 205
Masnedund, Denmark, 149
Middelfart, 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
Oxelosund, 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
Vejlø, 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

Argentia, 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
Coatzacoalcos, 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

Guantanamo, Cuba, 1,117
 Halifax, Canada, 790
 Hamilton, Bermuda, 683
 Ivittuut, Greenland, 2,116
 Kingston, Jamaica (via Crooked Island Passage), 1,279
 La Guaira, Venezuela, 1,687
 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
 Nuevitás, Cuba, 1,076
 Parrsboro, Canada, 784
 Pointe à 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

NOVOROSSISK, 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
 Bahía 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
 Nicaro, 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 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
 Benghazi, 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, Kriti, 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
 Piraievs, 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
 Shimomoseki, 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

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
 Benghazi, 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
 Piraievs, Greece (south of
 Greece), 1,276
 Piraievs, 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
 Flekkefjord, 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
 Oostende, Belgium, 596
 Plymouth, England, 869
 Portland, England, 795
 Portsmouth, England, 745
 Reykjavik, Iceland, 1,173
 Riga, Latvia (via Store Baelt), 871
 Riga, Latvia (via The Sound), 739
 Risor, Norway, 106
 Ronne, Denmark (via Store Baelt),
 491
 Rosyth, Scotland, 550
 Rotterdam, Netherlands, 554
 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

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
 Jaitut, 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
 Banghazi, 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
 Sibeni, 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

Kingston, Jamaica, 836
La Habana, Cuba, 302
Nassau, Bahamas, 328

PALMA, BALEARIC ISLANDS

(39°33'52"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
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
Nicarao, 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
 Turiamo, Venezuela, 858
 Tuxpan, Mexico, 1,498
 Unalakleet, Alaska, U.S.A., 5,967
 Valparaiso, Chile, 2,616
 Vancouver, Canada, 4,032
 Veracruz, Mexico, 1,463
 Victoria, Canada, 3,962
 Vladivostok, 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
 Wotho, 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

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

PATRAI, 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 Pemba

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
 Guantanamo, Cuba, 3,864
 Hakonsvern, Norway, 287
 Halifax, Canada, 2,580
 Hamburg, Germany, 555
 Hamilton, Bermuda, 2,921
 Hirtshals, Denmark, 429
 Holyhead, Wales, 422
 Horta, Azores, 1,575
 Hvalfjardhur, 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
 Kangerluarsorseq, Greenland, 1,597
 Keflavik, Iceland, 671
 Key West, Florida, U.S.A., 3,952
 Kingston, Jamaica, 4,027
 Kragero, 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
 Mosjoen, 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
 Reykjavik, Iceland, 687
 Rio de Janeiro, Brazil, 5,391
 Risor, 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
 Seydhisfjordhur, 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
 Lome, 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 Kurlikskiy 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
 Dagou, China (via La Perouse Strait), 2,419
 Dagou, 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 Myongyangdo), 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
 Shimonoseki, 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

Xiamen, China (via Osumi Kaikyo), 2,684
 Xiamen, China (via Tsugaru-Kaikyo), 2,617
 Yantai, China (via Maenggol Sudo), 2,226
 Yantai, China (via Chetverty 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
 Argentina, 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 Anegada Channel), 1,724
 Freetown, Sierra Leone, 3,862
 Funchal, Madeira Island, 2,901
 Georgetown, Ascension Island, 4,469
 Georgetown, Guyana, 2,223
 Guantnamo, 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
 Durres, 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
 Lamaca, 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
 Mtilini, 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

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
 Saranda, 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

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
 Tulear, 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
 Nuevitras, 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 Molucca 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

Shanghai, China, 2,804
 Shimomoseki, 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, 2,238
 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

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 Nicolashaven, 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
 Chiggia, 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
 Durrës, 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
 Ghazaouet, 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
 Mozambique, 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, 6,629
 Piraieus, 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

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

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

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**

Anadyskiy 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

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
 Nuevas, 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

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

PUSAN, 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

QUINHON, 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

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
Guirra, 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
Kangerluarsorseq, 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
Qaanaaq (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

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
Guiria, 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
Maceio, Brazil, 972
Montevideo, Uruguay, 1,037
Natal, Brazil, 1,228
New York, New York, U.S.A., 4,762
Norfolk, Virginia, U.S.A., 4,723
Paramaribo, Suriname, 2,713
Philadelphia, Pennsylvania, U.S.A., 4,817
Ponce, Puerto Rico, 3,659
Ponta Delgada, Azores, 3,875
Port au Prince, Haiti, 4,157
Port 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
Guiria, 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.

ROCHFORD, FRANCE

(45°56'12"N., 0°57'15"W.) Add 17 miles to La Pallice distances.

ROCHESTER, ENGLAND

(51°23'30"N., 0°30'12"E.)
Subtract 19 miles from London distances.

ROCKHAMPTON, AUSTRALIA

(23°23'00"S., 150°32'00"E.) to:

Junction Points*

Torres Strait, Australia, 1,034

Wilson Promontory, Australia, 1,213

Ports

Brisbane, Australia, 391
Noumea, New Caledonia, 902
Wellington, New Zealand, 1,685

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"E.) 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

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

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
Cabeldo, 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.

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, 5,655
Baie du Controleur, Marquesa 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-Kaikyo), 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

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
 Dagou, 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 Proлив Kruzenshterna), 4,563
 Vladivostok, Russia (via La Perouse Strait, Chetverty Kuril'skiy Proлив, 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
 Argentia, Canada, 1,840
 Arkhangel'sk, Russia, 5,001
 Moa, Cuba, 533
 Bahía de las Calderas, Dominican Republic, 273
 Bahía 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 Liberte, Haiti, 373
 Freetown, Sierra Leone, 3,141
 Funchal, Madeira Island, 2,773

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"E.) 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
 Ventpils, 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

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
Nuevititas, 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
Guánica, Puerto Rico (via north of Hispaniola), 572
Guánica, 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

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 Nantucket 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

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
 Piraievs, Greece (south of Greece), 988
 Piraievs, 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 Kruzenshterna), 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
 Shimonoseki, 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
 Banjarmasin, 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

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

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

SEYDHISEJORDHUR, 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

SEAX, 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 Vitiavz 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

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
 Huku, 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
 Kimchaek, 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
 Palma, Balearic Islands, 1,112
 Piraievs, Greece (south of Greece), 687
 Piraievs, 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 Berhalal), 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

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 Lumbucan 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, 2,029
 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
 Benghazi, 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

Petrovavlovsk-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
 Masnedssund, Denmark, 122
 Middlefart, Denmark, 186
 Molde, Norway, 492
 Mosjoen, Norway, 732
 Musko Island, Sweden, 524
 Naestved, Denmark, 212
 Nakskov, Denmark, 213
 Namsos, Norway, 696
 Newcastle, England, 445
 Norrkoping, Sweden, 520
 Odense, Denmark, 126
 Oostende, Belgium, 489
 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

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
 Piraeus, 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
 Oostende, Belgium, 192
 Oslo, Norway, 763
 Plymouth, England, 134
 Portland, England, 57
 Rotterdam, Netherlands, 261
 Stavanger, Norway, 640
 Sunderland, England, 400
 Wilhelmshaven, Germany, 451
 Zeebrugge, Belgium, 197

SOVETSKAYA 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

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
Hvalfjorður, Iceland, 1,437
Ilulissat (Jakobshavn), Greenland, 1,341
Ivittuut, 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
Qasigiannuit, Greenland, 1,333
Qutuligssat, 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
Seydhisfjorður, 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.

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 Dalero 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 Flintranran), 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
Crotone, Italy, 1,412
Dakar, Senegal, 1,487
Derince, Turkey, 1,855
Dubrovnik, Croatia, 1,420
Dures, 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, Kiti, 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

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
 Piraievs, Greece (south of Greece), 1,508
 Piraievs, 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
 Seydhisfjrdhur, 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
 Argentina, 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
 Coatzacoalcas, 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

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 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
Tromso, 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
Nukualofa, 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

Marjel, 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

Ports

Dutch Harbor, Alaska, U.S.A., 407
Honolulu, Hawaii, U.S.A., 1,945
Port Hueneeme, 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
Masnedssund, 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

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
Coatzacoalcas, 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

Ports

Belfast, Northern Ireland (via north of Ireland), 338
 Cobh, Ireland, 193
 Larne, Northern Ireland (via west of Ireland), 336
 Limerick, Ireland, 30

TARRAGONA, SPAIN
 (41°06'25"N., 1°14'30"E.) to:

Junction Points*

Port Said, Egypt, 1,634
 Strait of Gibraltar, 501

Ports

Beirut, Lebanon, 1,738
 Malaga, Spain, 431
 Oran, Algeria, 336
 Palma, Balearic Islands, 134
 Siracusa, Sicily, 746
 Toulon, France, 251
 Valencia, Spain, 124

TATIBANA KO, JAPAN
 (33°52'10"N., 134°40'00"E.) to:

Junction Points*

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

Ports

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

TAURANGA, NEW ZEALAND
 (37°36'14"S., 176°12'10"E.) to:

Junction Points*

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

Ports

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

TAWAU, MALAYSIA
 (4°13'32"N., 117°53'33"E.) to:

Junction Points*

Selat Lombok, Indonesia, 856

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

Ports

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

TEES RIVER, ENGLAND
 (54°40'57"N., 1°06'20"W.) to:

Junction Points*

Bishop Rock, England, 584
 Ile d'Ouessant, France, 578
 Nord-Ostsee-Kanal (East Entrance), Germany, 421
 Pentland Firth, Scotland, 266
 Skagens Odde, Denmark, 435

Ports

Amsterdam, Netherlands, 256
 Antwerp, Belgium, 327
 Bergen, Norway, 406
 Dover, England, 270
 Emden, Germany, 303
 Hamburg, Germany, 404
 London, England, 286
 Oslo, Norway, 525

TELA, HONDURAS
 (15°46'30"N., 87°27'00"W.) to:

Junction Points*

Panama, Panama, 749

Ports

Colon, Panama, 706
 New Orleans, Louisiana, U.S.A., 915
 San Juan, Puerto Rico, 1,258
 Tampico, Mexico, 974

TELUKBAYUR, INDONESIA
 (1°00'00"S., 100°22'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,979
 Singapore, 1,011
 Selat Sunda, Indonesia, 488

Ports

Durban, South Africa, 4,307
 Penang, Malaysia, 931
 Tjilatjap, Indonesia, 738

TEMA, GHANA
 (5°37'33"N., 0°00'45"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,619
 Ile d'Ouessant, France, 3,597

Ports

Lagos, Nigeria, 216
 Takoradi, Ghana, 117

TERNEUZEN, NETHERLANDS
 (51°20'00"N., 3°49'00"E.)

Subtract 36 miles from Antwerp distances.

TETNEY TERMINAL, ENGLAND
 (53°32'22"N., 0°06'53"E.) to:

Junction Points*

Bishop Rock, England, 511
 Ile d'Ouessant, France, 503
 Nord-Ostsee-Kanal (East Entrance), Germany, 381
 Pentland Firth, Scotland, 311
 Skagens Odde, Denmark, 442

Ports

Amsterdam, Netherlands, 216
 Bremerhaven, Germany, 321
 Le Havre, France, 337
 Oslo, Norway, 533
 Trondheim, Norway, 724
 Wilhelmshaven, Germany, 326

TEXAS CITY, TEXAS, U.S.A.
 (29°22'30"N., 94°53'15"W.) Add 5 miles to Galveston distances.

THAMES HAVEN, ENGLAND
 (51°30'00"N., 0°30'30"E.)
 Subtract 23 miles from London distances.

THESSALONIKI, GREECE
 (40°37'56"N., 22°55'48"E.) to:

Junction Points*

Port Said, Egypt, Strait of Gibraltar, 1,716

Ports

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

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

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

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 Torshavn.

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

TIENSIN, 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, 6,269
 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

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, 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
Guirra, 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, SRILANKA
(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°53'30"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

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
 Shimonoseki, 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
 Bangllazi, Libya, 248
 Beirut, Lebanon, 595
 Genova, Italy, 1,048
 Iskenderun, Turkey, 667
 Piraeus, 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
 Piraeus, Greece (south of Greece), 737

Piraeus, 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

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, Kriti, 1,252
Istanbul, Turkey (south of

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

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
 Piraievs, Greece (south of Greece), 1,244
 Piraievs, 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
 Piraievs, 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 Controleur, 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 Kaikyo), 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 Kaikyo), 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

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, 124
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
Mocarnbique, 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

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 Kruzensherna), 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

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
 Piraevs, 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

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, Chetvertvy 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

WENZHOU, 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

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

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 Vitiaz 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 Vitiaz 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
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
Moji, 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. (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), 359
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
Coatzacoalcas, 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 Nicolashaven, 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

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
Tacloban, 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

ZELNIKA, 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

CONVERSION TABLE FOR NAUTICAL AND STATUTE MILES

1 nautical mile = 6,076.11549 . . . feet

1 statute mile = 5,280 feet

Nautical miles to Statute miles				Statute miles to Nautical miles			
Nautical miles	Statute miles	Nautical miles	Statute miles	Statute miles	Nautical miles	Statute miles	Nautical miles
1	1.151	51	58.690	1	0.869	51	44.318
2	2.302	52	59.840	2	1.738	52	45.187
3	3.452	53	60.991	3	2.607	53	46.056
4	4.603	54	62.142	4	3.476	54	46.925
5	5.754	55	63.293	5	4.345	55	47.794
6	6.905	56	64.444	6	5.214	56	48.663
7	8.055	57	65.594	7	6.083	57	49.532
8	9.206	58	66.745	8	6.952	58	50.401
9	10.357	59	67.896	9	7.821	59	51.270
10	11.508	60	69.047	10	8.690	60	52.139
11	12.659	61	70.197	11	9.559	61	53.008
12	13.809	62	71.348	12	10.428	62	53.877
13	14.960	63	72.499	13	11.297	63	54.746
14	16.111	64	73.650	14	12.166	64	55.615
15	17.262	65	74.801	15	13.035	65	56.484
16	18.412	66	75.951	16	13.904	66	57.353
17	19.563	67	77.102	17	14.773	67	58.222
18	20.714	68	78.253	18	15.642	68	59.091
19	21.865	69	79.404	19	16.511	69	59.959
20	23.016	70	80.554	20	17.380	70	60.828
21	24.166	71	81.705	21	18.249	71	61.697
22	25.317	72	82.856	22	19.118	72	62.566
23	26.468	73	84.007	23	19.986	73	63.435
24	27.619	74	85.158	24	20.855	74	64.304
25	28.769	75	86.308	25	21.724	75	65.173
26	29.920	76	87.459	26	22.593	76	66.042
27	31.071	77	88.610	27	23.462	77	66.911
28	32.222	78	89.761	28	24.331	78	67.780
29	33.373	79	90.911	29	25.200	79	68.649
30	34.523	80	92.062	30	26.069	80	69.518
31	35.674	81	93.213	31	26.938	81	70.387
32	36.825	82	94.364	32	27.807	82	71.256
33	37.976	83	95.515	33	28.676	83	72.125
34	39.126	84	96.665	34	29.545	84	72.994
35	40.277	85	97.816	35	30.414	85	73.863
36	41.428	86	98.967	36	31.283	86	74.732
37	42.579	87	100.118	37	32.152	87	75.601
38	43.730	88	101.268	38	33.021	88	76.470
39	44.880	89	102.419	39	33.890	89	77.339
40	46.031	90	103.570	40	34.759	90	78.208
41	47.182	91	104.721	41	35.628	91	79.077
42	48.333	92	105.871	42	36.497	92	79.946
43	49.483	93	107.022	43	37.366	93	80.815
44	50.634	94	108.173	44	38.235	94	81.684
45	51.785	95	109.324	45	39.104	95	82.553
46	52.936	96	110.475	46	39.973	96	83.422
47	54.087	97	111.625	47	40.842	97	84.291
48	55.237	98	112.776	48	41.711	98	85.160
49	56.388	99	113.927	49	42.580	99	86.029
50	57.539	100	115.078	50	43.449	100	86.898

To convert Nautical miles to Statute miles, multiply Nautical miles by 1.15.

To convert Statute miles to Nautical miles, multiply Statute miles by 0.87.

Table for Estimating Time of Transit

Distance	Speed in knots																		
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	30
Nautical miles	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours
10	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
20	0-3	0-2	0-2	0-2	0-2	0-2	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
30	0-4	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-1	0-1	0-1	0-1	0-1	0-1
40	0-5	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-1
50	0-6	0-6	0-5	0-5	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2
60	0-8	0-7	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-2	0-2
70	0-9	0-8	0-7	0-6	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-2
80	0-10	0-9	0-8	0-7	0-7	0-6	0-6	0-5	0-5	0-4	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