PUB. 151

DISTANCES BETWEEN PORTS

Prepared and published by the
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Bethesda, Maryland

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ELEVENTH EDITION
2001

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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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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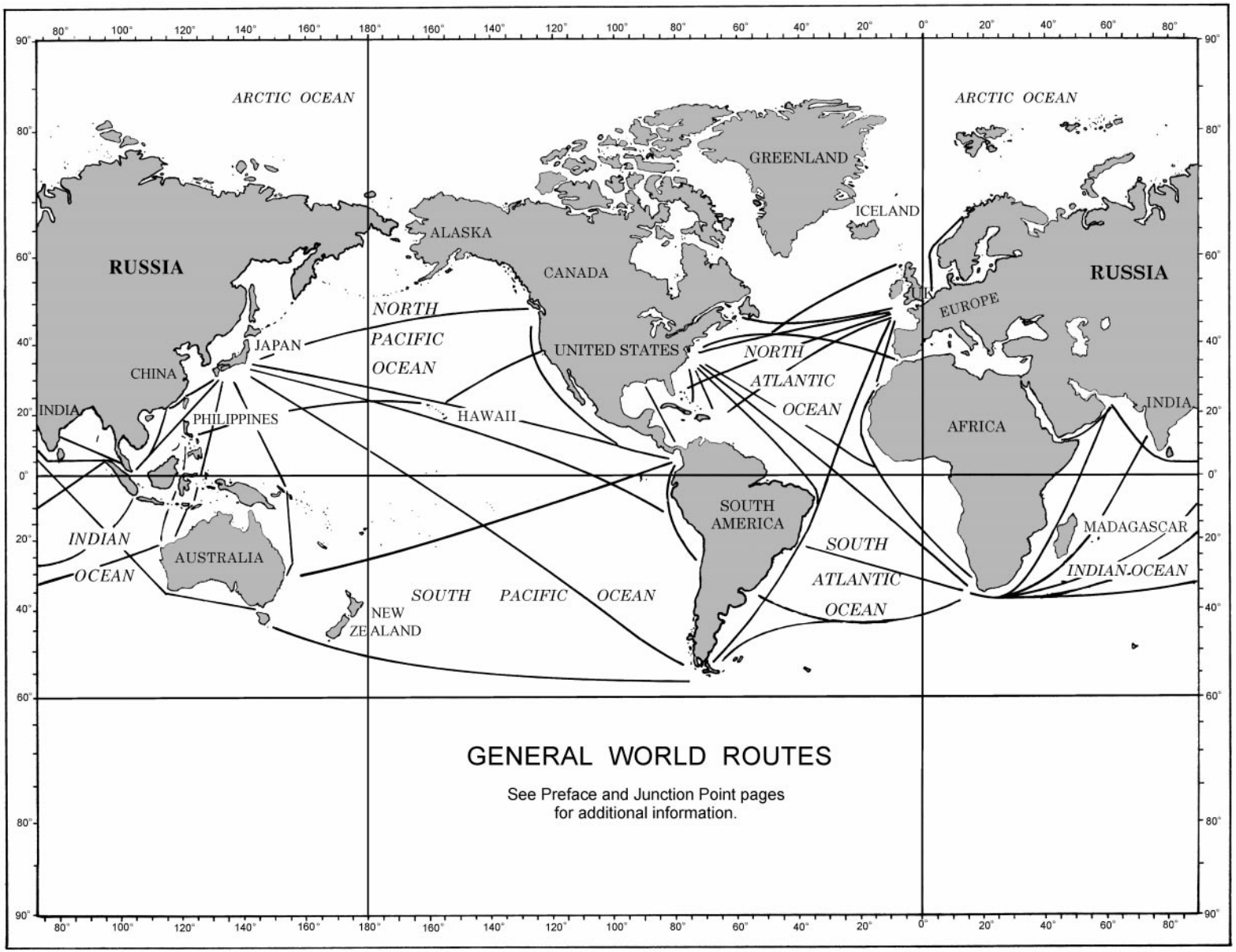
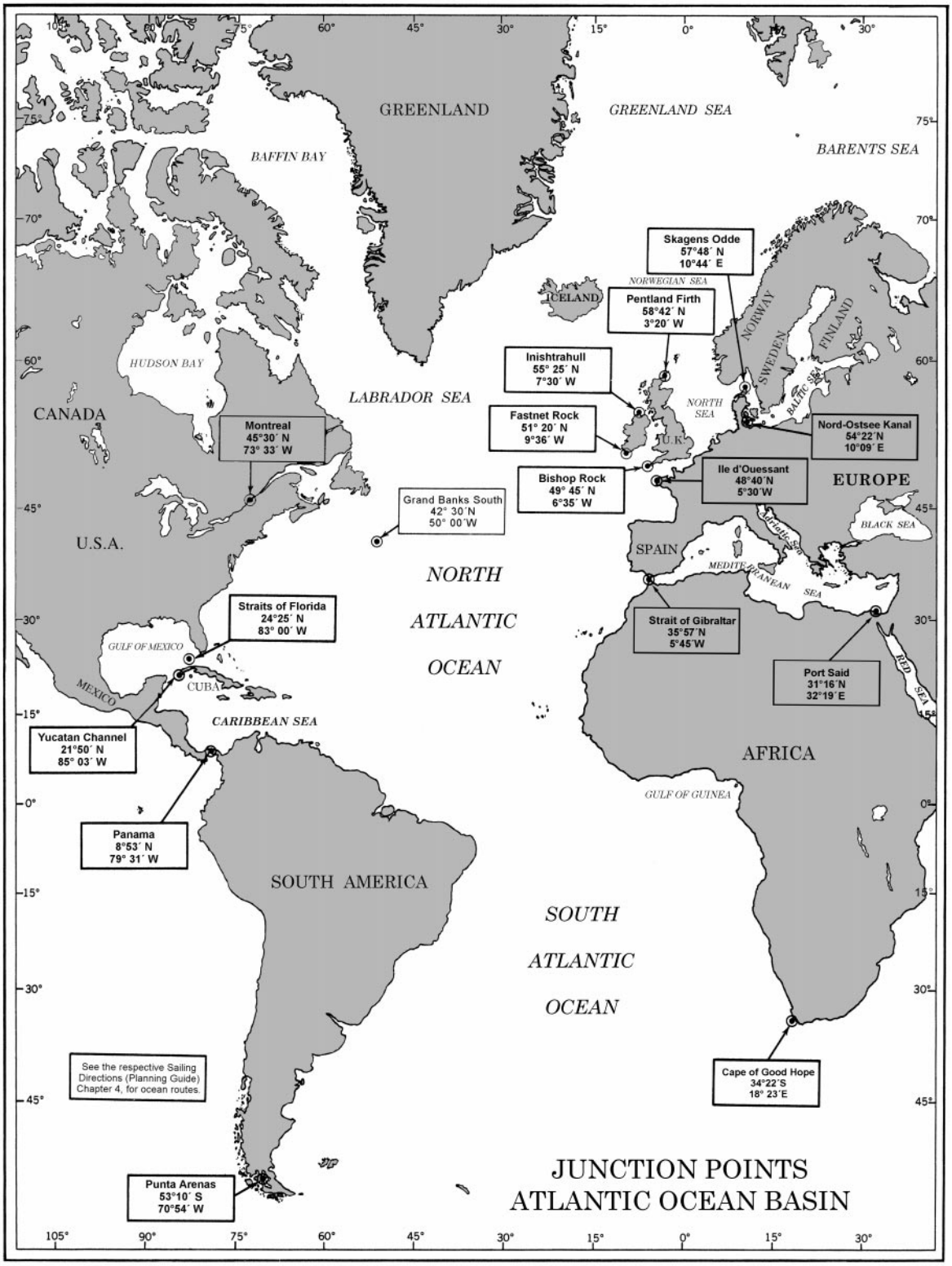
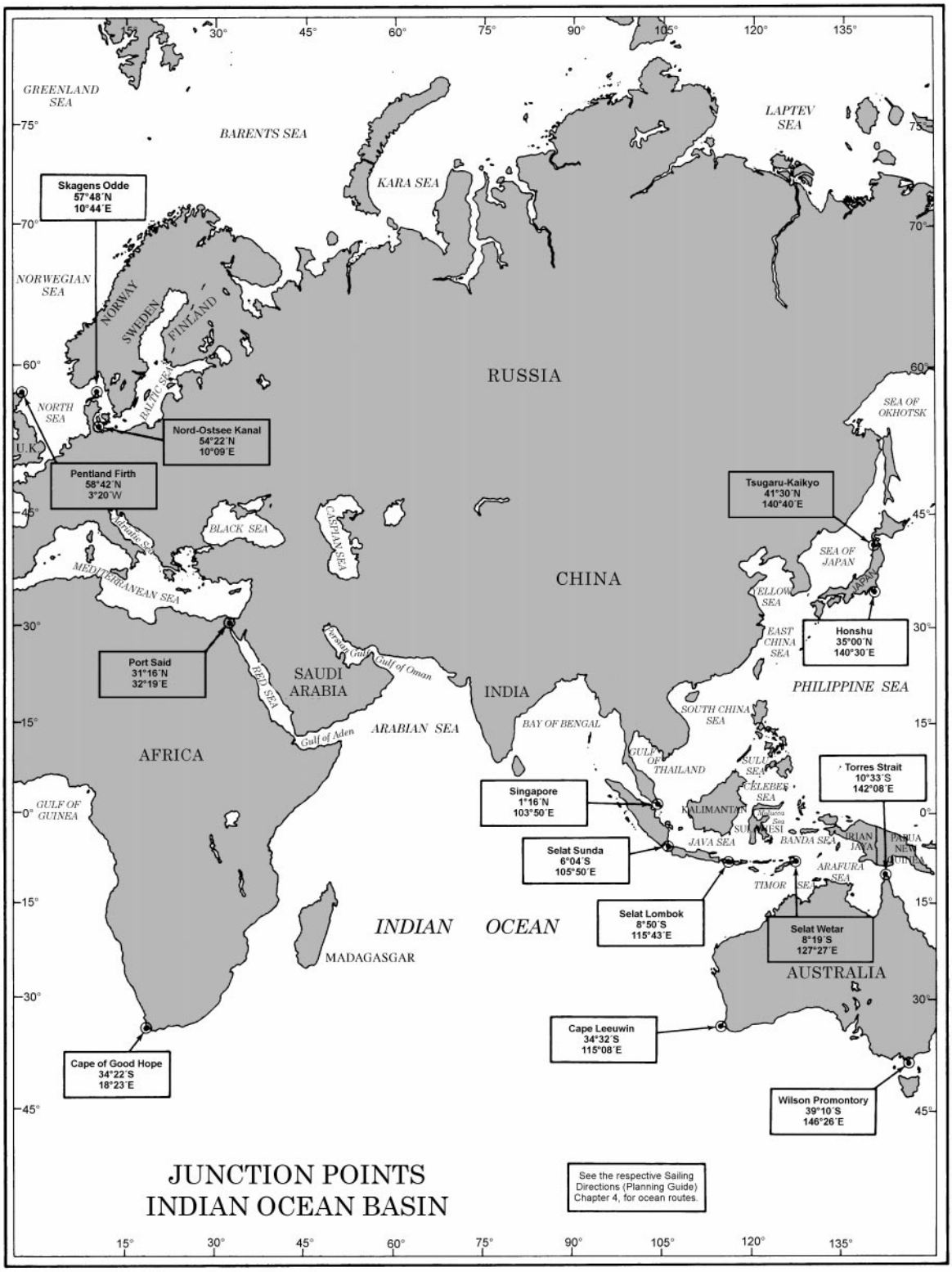
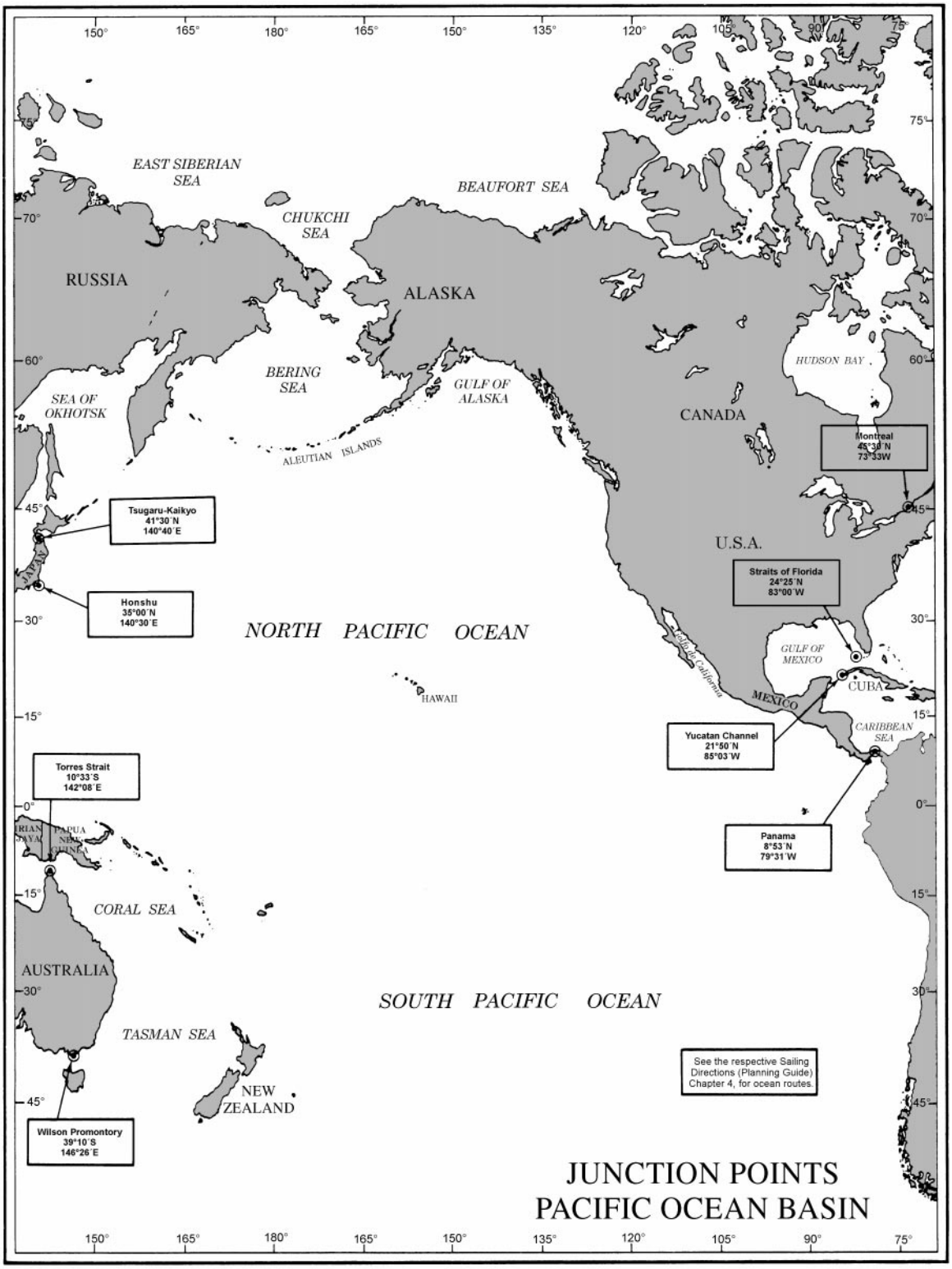

ARCTIC OCEAN
ARCTIC OCEAN
GREENLAND
ICELAND
ALASKA
RUSSIA
CANADA
RUSSIA
NORTH
PACIFIC
OCEAN
JAPAN
UNITED STATES
EUROPE
NORTH
ATLANTIC
OCEAN
CHINA
INDIA
PHILIPPINES
HAWAII
AFRICA
INDIA
SOUTH
AMERICA
MADAGASCAR
INDIAN
OCEAN
AUSTRALIA
SOUTH
ATLANTIC
OCEAN
INDIAN OCEAN
SOUTH PACIFIC OCEAN
NEW
ZEALAND
GENERAL WORLD ROUTES
See Preface and Junction Point pages
for additional information.

PUB. 151
JUNCTION POINTS

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


GREENLAND
GREENLAND SEA
BARENTS SEA
BAFFIN BAY
ICELAND
NORWEGIAN SEA
NORWAY
SWEDEN
FINLAND
BALTIC SEA
HUDSON BAY
LABRADOR SEA
CANADA
NORTH SEA
U.K.
EUROPE
BLACK SEA
U.S.A.
SPAIN
MEDITERRANEAN SEA
NORTH ATLANTIC OCEAN
GULF OF MEXICO
MEXICO
CUBA
CARIBBEAN SEA
RED SEA
AFRICA
GULF OF GUINEA
SOUTH AMERICA
SOUTH ATLANTIC OCEAN
Skagens Odde
57°48´ N
10°44´ E
Pentland Firth
58°42´ N
3°20´ W
Inishtrahull
55° 25´ N
7°30´ W
Fastnet Rock
51° 20´ N
9°36´ W
Bishop Rock
49° 45´ N
6°35´ W
Ile d'Ouessant
48°40´N
5°30´W
Nord-Ostsee Kanal
54°22´N
10°09´E
Montreal
45°30´ N
73° 33´ W
Grand Banks South
42° 30´N
50° 00´W
Straits of Florida
24°25´ N
83° 00´ W
Strait of Gibraltar
35°57´N
5°45´W
Port Said
31°16´N
32°19´E
Yucatan Channel
21°50´ N
85° 03´ W
Panama
8°53´ N
79° 31´ W
See the respective Sailing Directions (Planning Guide) Chapter 4, for ocean routes.
Cape of Good Hope
34°22´S
18° 23´E
Punta Arenas
53°10´ S
70°54´ W
JUNCTION POINTS
ATLANTIC OCEAN BASIN


GREENLAND SEA
BARENTS SEA
KARA SEA
LAPTEV SEA
Skagens Odde
57°48´N
10°44´E
NORWEGIAN SEA
NORWAY
SWEDEN
FINLAND
BALTIC SEA
RUSSIA
NORTH SEA
U.K.
Nord-Ostsee Kanal
54°22´N
10°09´E
Pentland Firth
58°42´N
3°20´W
SEA OF OKHOTSK
Tsugaru-Kaikyo
41°30´N
140°40´E
BLACK SEA
CASPIAN SEA
Adriatic Sea
MEDITERRANEAN SEA
CHINA
SEA OF JAPAN
JAPAN
YELLOW SEA
EAST CHINA SEA
Honshu
35°00´N
140°30´E
Port Said
31°16´N
32°19´E
RED SEA
SAUDI ARABIA
Persian Gulf
Gulf of Oman
INDIA
PHILIPPINE SEA
SOUTH CHINA SEA
Gulf of Aden
ARABIAN SEA
BAY OF BENGAL
AFRICA
GULF OF THAILAND
SULU SEA
CELEBES SEA
Torres Strait
10°33´S
142°08´E
Singapore
1°16´N
103°50´E
KALIMANTAN
Malacca Sea
SULAWESI
GULF OF GUINEA
JAVA SEA
BANDA SEA
IRIAN JAYA
PAPUA NEW GUINEA
Selat Sunda
6°04´S
105°50´E
ARAFURA SEA
TIMOR SEA
Selat Lombok
8°50´S
115°43´E
INDIAN OCEAN
Selat Wetar
8°19´S
127°27´E
MADAGASGAR
AUSTRALIA
Cape Leeuwin
34°32´S
115°08´E
Cape of Good Hope
34°22´S
18°23´E
Wilson Promontory
39°10´S
146°26´E
JUNCTION POINTS
INDIAN OCEAN BASIN
See the respective Sailing Directions (Planning Guide) Chapter 4, for ocean routes.


EAST SIBERIAN SEA
CHUKCHI SEA
BEAUFORT SEA
RUSSIA
ALASKA
BERING SEA
GULF OF ALASKA
SEA OF OKHOTSK
ALEUTIAN ISLANDS
HUDSON BAY
CANADA
Montreal
45°30´N
73°33W
Tsugaru-Kaikyo
41°30´N
140°40´E
JAPAN
Honshu
35°00´N
140°30´E
U.S.A.
Straits of Florida
24°25´N
83°00´W
NORTH PACIFIC OCEAN
GULF OF MEXICO
CUBA
MEXICO
HAWAII
CARIBBEAN SEA
Yucatan Channel
21°50´N
85°03´W
Torres Strait
10°33´S
142°08´E
PAPUA NEW GUINEA
Panama
8°53´N
79°31´W
CORAL SEA
AUSTRALIA
SOUTH PACIFIC OCEAN
TASMAN SEA
NEW ZEALAND
See the respective Sailing Directions (Planning Guide) Chapter 4, for ocean routes.
Wilson Promontory
39°10´S
146°26´E
JUNCTION POINTS
PACIFIC OCEAN BASIN

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
Hornmelvik, Norway, 586
Kristiansand, Norway, 340
Kristiansund, Norway, 498
Le Havre, France, 530
London, England, 431
Murmansk, Russia, 1,363
Oostende, Belgium, 415
Oslo, Norway, 490
Plymouth, England, 642
Portland, England, 564
Portsmouth, England, 514
Rotterdam, Netherlands, 391
Slagen, Norway, 450
Southampton, England, 532
Stavanger, Norway, 278
Torshavn, Faroe Islands, 345
Wilhelmshaven, Germany, 423
Zeebrugge, Belgium, 420

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

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

ABU DHABI, UNITED ARAB EMIRATES
(24˚34'13"N., 54˚19'49"E.) to:

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

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

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

Junction Points*

Panama, Panama, 1,426
Punta Arenas, Chile, 4,582

Ports

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

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

Junction Points*

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

Ports

Freetown, Sierra Leone, 955
Grand Bassam, Ivory Coast, 230
Lagos, Nigeria, 229
Lobito, Angola, 1,356
Marshall, Liberia, 671
Pointe Noire, Congo, 952
Porto Grande, Cape Verde Islands, 1,760
Sassandra, Ivory Coast, 362

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

Junction Points*

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

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

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
Petropavlovsk-Kamchatskiy, Russia (via Chetvertyy 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, 1090
Oran, Algeria, 1,590
Palermo, Sicily, 950
Palma, Balearic Islands, 1,435
Paphos, Cyprus, 256
Piraievs, 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
Piraievs, Greece (south of Greece), 1,079
Piraievs, 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
Piraievs, Greece (south of Greece), 1,246
Piraievs, 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, Frances, 384
Iraklion, Kriti, 863
Istanbul, Turkey (south of Greece), 1,168
Istanbul, Turkey (via Corinth Canal), 1,151
Izmir, Turkey (south of Greece), 1,014
Izmir, Turkey (via Corinth Canal), 997
La Spezia, Italy, 463
Livorno, Italy, 431
Malaga, Spain, 607
Marseille, France, 409
Messina, Sicily, 401
Napoli, Italy, 388
Odessa, Ukraine (south of Greece), 1,516
Odessa, Ukraine (via Corinth Canal), 1,499
Oran, Algeria, 444

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
Oostende, Belgium, 79
Oslo, Norway, 630
Plymouth, England, 366
Portland, England, 292
Portsmouth, England, 242
Rotterdam, Netherlands, 121
Southampton, England, 260
Stavanger, Norway, 525
Wilhelmshaven, Germany, 324
Zeebrugge, Belgium, 64

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

Ports

Akita, Japan, 158
Bukhta Shelikohova, Kuril Islands, Russia, 899
Kasatka, Japan, 441
Komatsushima, Japan, 813
Matsuga-hana, Japan, 350
Pago Pago, American Samoa, 4,358
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
Inishtrahull, Ireland, 4,161
Panama, Panama, 5,063
Pentland Firth, Scotland, 4,865
Punta Arenas, Chile, 5,225
Strait of Gibraltar, 3,117
Straits of Florida, 5,222
Yucatan Channel, 5,346

Ports

Abidjan, Ivory Coast, 490
Accra, Ghana, 221
Baltimore, Maryland, U.S.A., 5,085
Benguela, Angola, 1,284
Boma, Congo, 933
Boston, Massachusetts, U.S.A., 4,765
Calabar, Nigeria, 305
Charleston, South Carolina, U.S.A., 5,070
Colon, Panama, 5,155
Douala, Cameroon, 424
Georgetown, Ascension Island, 1,368
Grand Bassam, Ivory Coast, 478
Douala, Cameroon, 449
Marshall, Liberia, 903
Matadi, Congo, 1,002
Monrovia, Liberia, 928
Natal, Brazil, 2,432
New York, New York, U.S.A., 4,885
Norfolk, Virginia, U.S.A., 4,943
Philadelphia, Pennsylvania, U.S.A., 4,983
Pointe Noire, Congo, 838
Port Harcourt, Nigeria, 319
Port of Spain, Trinidad, 3,910
Porto Grande, Cape Verde Islands, 1,981
Santa Isabel, Bioko, Equatorial Guinea, 375
Sao Tome, Sao Tome, Gulf of Guinea, 421
Sassandra, Ivory Coast, 603
Sekondi, Ghana, 316
Tema, Ghana, 209
Victoria, Cameroon, 400
Willemstad, Curacao, 4,345

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Acapulco, Mexico, 4,638
Apra, Guam, 3,080
Auckland, New Zealand, 1,581
Avarua, Cook Islands, 819
Baie Taio-Hae, Marquesa Islands, 1,886
Brisbane, Australia, 2,177
Callao, Peru, 5,492
Christmas Island, Line Islands, 1,274
Enderbury Island, Phoenix Islands, 641
Funafuti, Tuvalu, 632
Hakodate, Japan, 4,252
Hobart, Tasmania, 2,776
Hong Kong, China, 4,869
Honolulu, Hawaii, U.S.A., 2,260
Johnston Island, 1,838
Levuka, Fiji Islands, 600
Los Angeles, California, U.S.A., 4,181
Malakal, Palau Islands, 3,446
Melbourne, Australia, 2,834
Midway Island, 2,546
Nagasaki, Japan, 4,414
Noumea, New Caledonia, 1,371
Nukualofa, Tonga Islands, 508
Pago Pago, American Samoa, 80
Papeete, French Polynesia, 1,301
Petropavlovsk-Kamchatskiy, Russia, 4,292
Ponape, Caroline Islands, 2,189
Rabaul, Papua New Guinea, 2,232
Raoul Island, Kermadec Islands, 1,008
Rotoava, Iles Tuamotu, 1,520
Salina Cruz, Mexico, 4,886

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

San Diego, California, U.S.A., 4,195
San Francisco, California, U.S.A., 4,161
Seattle, Washington, U.S.A., 4,613
Selwyn Bay, Solomon Islands, 1,582
Shanghai, China, 4,715
Suva, Fiji Islands, 647
Sydney, Australia, 2,355
Talomako, Vanuatu, 1,255
Valparaiso, Chile, 5,453
Vancouver, Canada, 4,675
Wellington, New Zealand, 1,872
Yap, Caroline Islands, 3,303
Yokohama, Japan, 4,057

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

Junction Points*

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

Ports

Apia, Samoa, 3,080
Auckland, New Zealand, 3,497
Avarua, Cook Islands, 3,889
Baie Taio-Hae, Marquesa Islands, 4,698
Barbers Point, Hawaii, U.S.A., 3,303
Bikini, Marshall Islands, 1,263
Brisbane, Australia, 2,659
Callao, Peru, 8,372
Canton, Phoenix Islands, 2,789
Cebu, Philippines, 1,344
Chimbote, Peru, 8,264
Chimu Wan, Ryukyu Islands, 1,228
Christmas Island, Line Islands, 3,518
Dagu, China, 2,133
Dalian, China, 1,974
Dutch Harbor, Alaska, U.S.A., 3,403
Enderbury Island, Phoenix Islands, 2,827
Eniwetak, Marshall Islands, 1,066
Funafuti, Tuvalu, 2,455
Guayaquil, Ecuador, 8,147
Hakodate, Japan, 1,739
Ho Chi Minh, Vietnam, 2,304
Hobart, Tasmania, 3,683
Hong Kong, China, 1,822
Honolulu, Hawaii, U.S.A., 3,318
Iloilo, Philippines, 1,366
Incheon, South Korea (via Tokara Kaikyo), 1,837
Iwakuni, Japan, 1,437
Jakarta, Indonesia (via Makasser 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, Papau New Guinea, 1,315
Levuka, Fiji Islands, 2,847
Lo hsing-ta Mao-ti, China, 1,617
Malakal, Palau Islands, 706
Manila, Philippines (north of Luzon), 1,742
Manila, Philippines (via San Bernardino Strait), 1,499
Melbourne, Australia, 3,631
Midway Island, 2,301
Nagasaki, Japan, 1,445
Nagoya, Japan, 1,378
Naha, Ryukyu Islands, 1,236
Nakagusuku, Ryukyu Islands, 1,216
Nandi Bay, Fiji Islands, 2,886
Nome, Alaska, U.S.A., 3,686
Noumea, New Caledonia, 2,528
Nukualofa, Tonga Islands, 3,202
Olongapo, Philippines (north of Luzon), 1,663
Pago Pago, American Samoa, 3,156
Papeete, French Polynesia, 4,335
Petropavlovsk-Kamchatskiy, Russia, 2,475
Ponape, Caroline Islands, 906
Port Darwin, Australia (via Selat Sele), 1,925
Prince Rupert, Canada, 4,586
Qingdao, China, 1,900
Rabaul, Papua New Guinea, 1,187
Raoul Island, Kermadec Islands, 3,369
Rongelap, Marshall Islands, 1,341
Rotoava, Iles Tuamotu, 4,513
San Diego, California, U.S.A., 5,379
San Francisco, California, U.S.A., 5,053
Seattle, Washington, U.S.A., 4,948
Selwyn Bay, Solomon Islands, 1,762
Semarang, Indonesia, 2,464
Seward, Alaska, U.S.A., 4,079
Shanghai, China, 1,687
Shimizu, Honshu, Japan, 1,351
Shimonoseki, Japan, 1,451
Sitka, Alaska, U.S.A., 4,407
Sorong, Irian Jaya, Indonesia, 1,171
Sukarnopura, Irian Jaya, Indonesia, 1,010
Surabaya, Indonesia, 2,334
Suva, Fiji Islands, 2,784
Sydney, Australia, 3,006
Talomako, Vanuatu, 2,177
Tinian, Mariana Islands, 127
Tokuyama, Japan, 1,427
Truk, Caroline Islands, 590
Valdivostok, Russia (via Tsugaru-Kaikyo), 2,155
Valparaiso, Chile, 8,510
Vinh Cam Ranh, Vietnam, 2,112
Vladivostok, Russia (via Shimonoseki Kaikyo), 2,019
Wake Island, 1,334
Wei-hae-wei, China (via Tokara Kaikyo), 1,901
Wotho, Marshall Islands, 1,294
Wotje Island, Marshall Islands, 1,547
Xiamen, China, 1,669
Yap, Caroline Islands, 458
Yantai, China (via Tokara Kaikyo), 1,935
Yokkaichi, Japan, 1,364
Yokohama, Japan, 1,352
Zamboanga, Philippines (south of Mindanao), 1,467
Zamboanga, Philippines (via Surigao Strait), 1,484

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

Junction Points*

Bishop Rock, England, 4,021
Cape of Good Hope, South Africa, 3,324
Fastnet Rock, Ireland, 4,046
Grand Banks South, 3,436
Ile d'Ouessant, France, 3,988
Inishtrahull, Ireland, 4,320
Panama, Panama, 3,526
Pentland Firth, Scotland, 4,602
Punta Arenas, Chile, 3,045
Strait of Gibraltar, 3,366
Straits of Florida, 3,822
Yucatan Channel, 3,869

Ports

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

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
Ivittuut, Greenland, 1,023
Key West, Florida, U.S.A., 1,953
Lisboa, Portugal, 2,101
New York, New York, U.S.A., 1,009
Norfolk, Virginia, U.S.A., 1,189
Philadelphia, Pennsylvania, U.S.A., 1,159
Portsmouth, New Hampshire, U.S.A., 779
Reykjavik, Iceland, 1,584
San Juan, Puerto Rico, 1,840

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

Junction Points*

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

Ports

Algiers, Algeria, 862
Alicante, Spain, 1,015
Arzew, Algeria, 1,038
Banghazi, 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 Vitiaz Strait), 5,489
Dalian, China (west of New Ireland), 5,469
Dutch Harbor, Alaska, U.S.A., 5,578
Fanning Island, 2,854
Guayaquil, Ecuador, 6,087
Hakodate, Japan, 5,104
Hobart, Tasmania, 1,521
Hong Kong, China, 5,060
Honolulu, Hawaii, U.S.A., 3,820
Jaluit, Marshall Islands, 2,595
Kobe, Japan, 4,875
Kodiak, Alaska, U.S.A., 5,942
Levuka, Fiji Islands, 1,175
Los Angeles, California, U.S.A., 5,658
Melbourne, Australia, 1,649
Midway Island, 3,937
Nagasaki, Japan (via Tanegashima 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 Vitiaz Strait), 5,149
Shanghai, China (west of New Ireland), 5,148
Shimonoseki, Japan, 4,944
Sitka, Alaska, U.S.A., 6,176
Suva, Fiji Islands, 1,149
Sydney, Australia, 1,280
Truk, Caroline Islands, 3,000

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

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

Junction Points*

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

Ports

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

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

Junction Points*

Panama, Panama, 5,092
Punta Arenas, Chile, 4,429

Ports

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

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

Junction Points*

Bishop Rock, England, 568
Cape of Good Hope, South Africa, 5,266
Fastnet Rock, Ireland, 644
Grand Banks South, 1,834
Ile d'Ouessant, France, 536
Inishtrahull, Ireland, 942
Panama, Panama, 4,186
Pentland Firth, Scotland, 1,194
Punta Arenas, Chile, 6,513
Strait of Gibraltar, 416
Straits of Florida, 3,778

Ports

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˚13'00"W.) to:

Junction Points*

Panama, Panama, 1,015
Straits of Florida, 864

Ports

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

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

Ports

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

BAIE TAIO-HAE, MARQUESA ISLANDS
(8˚56'00"S., 140˚05'00"W.) to:

Junction Points*

Panama, Panama, 3,826

Ports

Apia, Samoa, 1,886
Apra, Guam, 4,698
Honolulu, Hawaii, U.S.A., 2,102
Los Angeles, California, U.S.A., 2,858
Noumea, New Caledonia, 3,183
Papeete, French Polynesia, 761
San Francisco, California, U.S.A., 2,987

BAJO GRANDE, VENEZUELA
(10˚30'30"N., 171˚36'00"W.) Add 8 miles to Maracaibo distances.

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

Ports

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

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

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
Piraievs, 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
Piraievs, Greece (south of Greece), 749
Piraievs, 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
Piraievs, Greece (south of Greece), 1,172
Piraievs, 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
Piraievs, Greece, 647
Rhodes, Greece, 393
Rijeka, Croatia (south of Greece), 1,345
Rijeka, Croatia (via Corinth Canal), 1,312
Savona, Italy, 1,519
Sibenik, Croatia (south of Greece), 1,218
Sibenik, Croatia (via Corinth Canal), 1,184
Siracusa, Sicily, 1,013
Split, Croatia (south of Greece), 1,203
Split, Croatia (via Corinth Canal), 1,169
Tarabulus, Libya, 1,129
Taranto, Italy (south of Greece), 1,023
Taranto, Italy (via Corinth Canal), 1,000
Tarragona, Spain, 1,738
Thessaloniki, Greece, 783
Toulon, France, 1,568
Trieste, Italy (south of Greece), 1,379
Trieste, Italy (via Corinth Canal), 1,346
Tubruq, Libya, 595
Tunis, Tunisia, 1,263
Valencia, Spain, 1,770
Valletta, Malta, 1,049
Venezia, Italy (south of Greece), 1,387
Venezia, Italy (via Corinth Canal), 1,356
Volos, Greece, 725

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
Argentia, Canada, 1,949
Arkhangel'sk, Russia, 2,263
Avonmouth, England, 191
Baltimore, Maryland, U.S.A., 3,208
Barrow in Furness, England, 303
Bath, Maine, U.S.A., 2,696
Belem, Brazil, 3,769
Belfast, Northern Ireland, 320
Bergen, Norway, 911
Blyth, England, 610
Bodo, Norway, 1,405
Bordeaux, France, 397
Boston, Massachusetts, U.S.A., 2,769
Boulogne, France, 322
Bremerhaven, Germany, 657
Buenos Aires, Argentina, 5,947
Cadiz, Spain, 930
Caen, France, 264
Cairn Ryan, Scotland, 330
Calais, France, 333
Cap-Haitien, Haiti, 3,565
Cape Town, South Africa, 5,772
Cardiff, Wales, 176
Cartagena, Colombia, 4,138
Charleston, South Carolina, U.S.A., 3,368
Charlotte Amalie, Virgin Islands, 3,369
Cherbourg, France, 197
Christiansted, Virgin Islands, 3,370
Cienfuegos, Cuba (via Windward Passage), 4,063
Cobh, Ireland, 143
Colon, Panama (via Mona Passage), 4,408
Dakar, Senegal, 2,195
Dartmouth, England, 122
Den Helder, Netherlands, 509
Dieppe, France, 297
Douglas, Isle of Man, 276
Dover, England, 323
Dublin, Ireland, 232
Dundee, Scotland, 713
Dunkerque, France, 355
Egersund, Norway, 797
El Ferrol del Caudillo, Spain, 394
Emden, Germany, 606
Esbjerg, Denmark, 688
Fishguard, Wales, 161
Fleetwood, England, 307
Freetown, Sierra Leone, 2,673
Funchal, Madeira Island, 1,136
Georgetown, Guyana, 3,643
Glasgow, Scotland, 402
Granville, France, 267
Guantanamo, Cuba (via Windward Passage), 3,714
Halifax, Canada, 2,336
Hamburg, Germany, 717
Hamilton, Bermuda, 2,769
Hartlepool, England, 594
Holyhead, Wales, 232
Horta, Fayal, Azores, 1,158
Hull, England, 531
Ivittuut, Greenland (via 75 miles off Kap Farvel), 1,652
Ivittuut, Greenland (direct), 1,608
Jacksonville, Florida, U.S.A., 3,569
Key West, Florida, U.S.A. (via Florida Strait), 3,807
Kingston, Jamaica (via Windward Passage), 3,866
Kristiansand, Norway, 809
La Guaira, Venezuela, 3,777
La Habana, Cuba (via Florida Strait), 3,868
Las Palmas, Canary Islands, 1,360
Le Havre, France, 263
Leith, Scotland, 708
Lisboa, Portugal, 710
Liverpool, England, 297
London, England, 413
Londonderry, Northern Ireland, 396
Lorient, France, 202
Methil, Scotland, 698
Miami, Florida, U.S.A. (via Florida Strait), 3,663
Middlesbrough, England, 591
Milford Haven, Wales, 129
Montevideo, Uruguay, 5,834
Narvik, Norway, 1,505
New London, Connecticut, U.S.A., 2,849
New York, New York, U.S.A., 2,937
Newcastle, England, 616
Newport, Wales, 177
Norfolk, Virginia, U.S.A., 3,101
Oostende, Belgium, 400
Oslo, Norway, 947
Paramaribo, Suriname, 3,602
Philadelphia, Pennsylvania, U.S.A., 3,082
Plymouth, England, 106
Ponta Delgada, Azores, 1,103
Port au Prince, Haiti (via Windward Passage), 3,743
Port of Spain, Trinidad, 3,603
Port Talbot, Wales, 149
Portland, England, 181
Porto Grande, Cape Verde Islands, 2,165
Portsmouth, England (via Needles Channel), 225
Praia Da Vitoria, Terceira, Azores, 1,128
Providence, Rhode Island, U.S.A., 2,841
Recife, Brazil, 3,775
Rio de Janeiro, Brazil, 4,846
Rotterdam, Netherlands, 454
San Juan, Puerto Rico, 3,390
Santa Cruz de Tenerife, Canary Islands, 1,356
Santo Domingo, Dominican Republic, 3,585
Seaham Harbor, England, 625
Shoreham By Sea, England, 249
Southampton, England, 232
St. John's, Canada, 1,804
St. Malo, France, 90
Stavanger, Norway, 836
Sunderland, England, 605
Swansea, Wales, 155
Tromso, Norway, 1,597
Trondheim, Norway, 1,202
Vigo, Spain, 484
Villa do Porto, Santa Maria, Azores, 1,128
Walvisbaai, Namibia, 5,165
Washington, D.C., U.S.A., 3,221
Waterford, Ireland, 137
Wilhelmshaven, Germany, 651
Wilmington, North Carolina, U.S.A., 3,304
Zarate, Argentina, 6,075
Zeebrugge, Belgium, 393

BISSAU, GUINEA-BISSAU
(11˚51'00"N., 15˚38'00"W.) to:

Junction Points*

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

Ports

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

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

Ports

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

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

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

Junction Points*

Cape Leeuwin, Australia, 2,484
Torres Strait, Australia, 2,797
Wilson Promontory, Australia, 1,135

Ports

Botany Bay, Australia, 1,097
Dunedin, New Zealand, 147
Hobart, Australia, 930
Melbourne, Australia, 1,211
New Plymouth, New Zealand, 618
Picton, New Zealand, 465
Sydney, Australia, 1,105
Wellington, New Zealand, 455

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

Junction Points*

Bishop Rock, England, 610
Pentland Firth, Scotland, 290

Ports

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

BOCA DE TANAMO, CUBA
(20˚42'00"N., 75˚20'00"W.) to:

Junction Points*

Panama, Panama, 869
Straits of Florida, 489

Ports

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

BOCA GRANDE, FLORIDA, U.S.A.
(26˚40'00"N., 82˚19'27"W.) to:

Junction Points*

Straits of Florida, 148
Yucatan Channel, 329

Ports

Campeche, Mexico, 658
Tampico, Mexico, 891

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

Junction Points*

Panama, Panama, 187

Ports

Baltimore, Maryland, U.S.A., 1,975
Boston, Massachusetts, U.S.A., 2,231
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,638
Colon, Panama, 144
Halifax, Canada, 2,369
Kingston, Jamaica, 604
La Habana, Cuba, 981
Mobile, Alabama, U.S.A., 1,340
New Orleans, Louisiana, U.S.A. (via South Pass and inside route), 1,353
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2,048
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,853
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,020
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,637

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

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

Junction Points*

Bishop Rock, England, 1,405

Ports

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

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

Ports

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

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Abadan, Iran, 1,357
Ad Damman, Saudi Arabia, 1,373
Aden, Yemen, 1,657
Al Basrah, Iraq, 1,594
Al Jubayl, Saudi Arabia, 2,353
Belawan, Indonesia, 2,109
Bhavnager, India, 204
Calcutta, India, 2,128
Cochin, India, 392
Colombo, Sri Lanka, 895
Dampier, Australia, 3,624
Dar es Salaam, Tanzania, 2,500
Diego Garcia, Chagos Archipelago, 1,603
Durban, South Africa, 3,826
Fateh Terminal, United Arab Emirates, 1,146
Fremantle, Australia, 3,984
Galle, Sri Lanka, 944
Karachi, Pakistan, 504
Madras, India, 1,482
Malacca, Malaysia, 2,327
Marmagao, India, 235
Massawa, Ethiopia, 2,050
Mina al Ahmadi, Kuwait, 1,517
Mina Abd Allah, Kuwait, 1,514
Mina Az Zawr, Kuwait, 1,495
Mombasa, Kenya, 2,400
Okha, India, 341
Penang, Malaysia, 2,154
Port Darwin, Australia, 4,193
Port Louis, Mauritius, 2,517
Port Said, Egypt, 3,046
Port Sudan, Sudan, 2,310
Port Victoria, Mahe, Seychelles, 1,752
Rangoon, Burma, 2,139
Ras al Khafji, Saudi Arabia, 1,491
Sabang, Indonesia, 1,843
Tamatave, Madagascar, 2,621
Trincomalee, Sri Lanka, 1,218
Weipa, Australia (via south of Java), 4,844
Yenbo, Indonesia, 2,503
Zanzibar, Tanzania, 2,517

BONNY, NIGERIA
(4˚27'21"N., 7˚10'22"E.) Subtract 28 miles from Port Harcourt distances.

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

Junction Points*

Bishop Rock, England, 397
Cape of Good Hope, South Africa, 5,838
Ile d'Ouessant, France, 321
Montreal, Canada (via Cape Race), 3,171
Panama, Panama (via Mona Passage), 4,597
Punta Arenas, Chile, 7,074
Strait of Gibraltar, 1,010
Straits of Florida, 4,172

Ports

Abidjan, Ivory Coast, 3,376
Accra, Ghana, 3,603
Baltimore, Maryland, U.S.A., 3,528
Bayonne, France, 200
Belem, Brazil, 3,868
Boston, Massachusetts, U.S.A., 3,073
Buenos Aires, Argentina, 6,009
Cadiz, Spain, 952
Cape Town, South Africa, 5,820
Charleston, South Carolina, U.S.A., 3,700
Dakar, Senegal, 2,243
Fort de France, Martinique, 3,607
Funchal, Madeira Island, 1,192
Halifax, Canada (via Cape Race), 2,663
Horta, Fayal, Azores, 1,348
La Guaira, Venezuela, 3,993
La Habana, Cuba (north of Little Bahama Bank), 4,153
La Habana, Cuba (via Northeast Providence Channel), 4,188
La Pallice, France, 103
Lagos, Nigeria, 3,817
Lisboa, Portugal, 732
Luanda, Angola, 4,623
New London, Connecticut, U.S.A., 3,153
New Orleans, Louisiana, U.S.A., 4,692
New York, New York, U.S.A., 3,241
Norfolk, Virginia, U.S.A., 3,405
Panama, Panama (via Mona Passage), 4,597
Philadelphia, Pennsylvania, U.S.A., 3,386
Pictou, Canada, 2,655
Point Noire, Congo, 4,437
Ponta Delgada, Azores, 1,256
Providence, Rhode Island, U.S.A., 3,145
Puerto de Pasajes, Spain, 178
Recife, Brazil, 3,823
Rio de Janeiro, Brazil, 4,908
San Sebastian, Spain, 210
Santa Cruz de Tenerife, Canary Islands, 1,406
St. Nazaire, France, 184
Washington, D.C., U.S.A., 3,543
Wilmington, North Carolina, U.S.A., 3,638

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

Junction Points*

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

Ports

Antilla, Cuba, 1,408
Argentia, 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
Piraievs, 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
Glassgow, 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 l/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
Piraievs, Greece (south of Greece), 480
Piraievs, 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, Papau New Guinea, 1,560
Levuka, Fiji Islands, 1,569
Los Angeles, California, U.S.A., 6,274
Lucinda, Australia, 804
Mackay, Australia, 512
Malakal, Palau Islands, 2,642
Midway Island, 3,757
Nandi Bay, Fiji Islands, 1,618
Nelson, New Zealand, 1,380
Nonouti, Gilbert Islands, 2,032
Noumea, New Caledonia, 807
Nukualofa, Tonga Islands, 1,819
Omura, Bonin Islands, 3,455
Pago Pago, American Samoa, 2,221
Papeete, French Polynesia, 3,234
Ponape, Caroline Islands, 2,108
Portland, Oregon, U.S.A., 6,421
Rabaul, Papua New Guinea, 1,434
Raoul Island, Kermadec Islands, 1,566
Rockhampton, Australia, 391
San Diego, California, U.S.A., 6,306
San Francisco, California, U.S.A., 6,193
Seattle, Washington, U.S.A., 6,471
Shanghai, China, 4,243
Suva, Fiji Islands, 1,548
Sydney, Australia, 529
Townsville, Australia, 677
Urangan, Australia, 282
Wellington, New Zealand, 1,453
Yokohama, Japan, 3,925

BRISTOL, ENGLAND
(51˚27'00"N., 2˚37'30"W.) For ocean distances add 6 miles to Avonmouth distances.

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

Junction Points*

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

Ports

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

BROOKLYN, NEW YORK, U.S.A.
(40˚40'00"N., 74˚01'00"W.) For ocean distances subtract 1 l/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 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
Kushiro, 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

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

Junction Points*

Cape of Good Hope, South Africa, 3,374
Panama, Panama, 3,149
Punta Arenas, Chile, 3,327

Ports

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

CABIMAS, VENEZUELA
(10˚23'00"N., 71˚28'00"W.) Add 21 miles to Maracaibo distances.

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

Ports

Amboim, Angola, 339
Boma, Congo, 89
Douala, Cameroon, 668
Port Gentil, Gabon, 393

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

Junction Points*

Bishop Rock, England, 930
Ile d'Ouessant, France, 894
Montreal, Canada, 3,209
Strait of Gibraltar, 50
Straits of Florida, 3,978

Ports

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

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

Junction Points*

Bishop Rock, England, 264
Ile d'Ouessant, France, 240

Ports

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

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

Junction Points*

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

Ports

Alexandria, Egypt, 1,136
Algiers, Algeria, 332
Alicante, Spain, 473
Banzart, Tunisia, 126
Barcelona, Spain, 379
Bari, Italy, 652
Cannes, France, 347
Castellammare di Stabia, Italy, 276
Catania, Sicily, 377
Ceuta, Morocco, 731
Civitavecchia, Italy, 239
Constanta, Romania (south of Greece), 1,330
Constanta, Romania (via Corinth Canal), 1,289
Genova, Italy, 359
Istanbul, Turkey (south of Greece), 1,133
Istanbul, Turkey (via Corinth Canal), 1,092
La Spezia, Italy, 336
Livorno, Italy, 304
Marseille, France, 360
Messina, Sicily, 328
Napoli, Italy, 272
Nice, France, 354
Oran, Algeria, 525
Palermo, Sicily, 221
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
Nuevitas, Cuba, 181
Pepel, Sierra Leone, 3,930
Walvisbaai, Namibia (via Mona Passage), 6,142

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

Junction Points*

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

Ports

Glasgow, Scotland, 82

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

Junction Points*

Torres Strait, Australia, 505
Wilson Promontory, Australia, 1,649

Ports

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

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

Junction Points*

Cape of Good Hope, South Africa, 2,458
Ile d'Ouessant, France, 4,054
Strait of Gibraltar, 3,420

Ports

Lagos, Nigeria, 391
Matadi, Congo, 818

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

Junction Points*

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

Ports

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

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

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

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
Talacahuano, 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
Piraievs, Greece (south of Greece), 1,023
Piraievs, 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

Argentia, Canada, 357
Baltimore, Maryland, U.S.A., 975
Bridgetown, Barbados, 1,965
Guantanamo, 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
Guantanamo, Cuba, 175
Gulfport, Mississippi, U.S.A., 1,145
Key West, Florida, U.S.A. (via Old Bahama Channel), 619
Kingston, Jamaica, 326
La Habana, Cuba, 631
New York, New York, U.S.A., 1,283
Philadelphia, Pennsylvania, U.S.A., 1,245
Pointe a Pitre, Guadeloupe (via Mona Passage), 703
Pointe a Pitre, Guadeloupe (via Virgin Passage), 702
Ponta Delgada, Azores, 2,646
Port au Prince, Haiti, 195
Port of Spain, Trinidad, 888
Port Castries, St. Lucia, 764
Puerto Cabello, Venezuela, 752
San Juan, Puerto Rico, 372
Santo Domingo, Dominican Republic, 392
Willemstad, Curacao (via Mona Passage), 674
Willemstad, Curacao (via Windward Passage), 697

CAPE COD CANAL (NORTH END), MASSACHUSETTS, U.S.A.
(41˚46'40"N., 70˚29'20"W.) to:

Junction Points*

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

Ports

Argentia, Canada, 838
Arkhangel'sk, Russia, 4,201
Boston, Massachusetts, U.S.A., 77
Halifax, Canada, 413
Hamilton, Bermuda, 651
Murmansk, Russia, 3,834
New York, New York, U.S.A., 174
Portland, Maine, U.S.A., 119
Reykjavik, Iceland, 2,341
Yarmouth, Canada, 228

CAPE COD CANAL (SOUTH END), MASSACHUSETTS, U.S.A.
(41˚37'49"N., 70˚41'52"W.) to:

Junction Points*

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

Ports

Antilla, Cuba, 1,274
Bahia Blanca, Argentina, 6,335
Belem, Brazil, 2,855
Buenos Aires, Argentina, 6,031
Fort de France, Martinique, 1,698
Kingston, Jamaica, 1,564
La Habana, Cuba, 1,272
Montevideo, Uraguay, 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
Argentia, 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
Sulima, Sierra Leone, 3,060
Swakopmund, South Africa, 743
Tabu, Ivory Coast, 2,751
Tamatave, Madagascar, 2,104
Tanga, Tanzania, 2,425
Telukbayur, Indonesia, 4,979
Tema, Ghana, 2,619
Tulear, Madagascar, 1,509
Umm Said, Qatar, 4,909
Victoria, Cameroon, 2,399
Victoria, Seychelles, 2,892
Zanzibar, Tanzania, 2,358

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

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

Junction Points*

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

Ports

Abidjan, Ivory Coast, 2,679
Baltimore, Maryland, U.S.A., 6,912
Boma, Congo, 1,760
Bordeaux, France, 5,820
Boston, Massachusetts, U.S.A., 6,707
Brunswick, Georgia, U.S.A., 6,857
Buenos Aires, Argentina, 3,831
Cadiz, Spain, 5,078
Charleston, South Carolina, U.S.A., 6,830
Cienfuegos, Cuba, 6,580
Cobh, Ireland, 5,894
Colon, Panama, 6,429
Dakar, Senegal, 3,593
El Ferrol del Caudillo, Spain, 5,421
Freetown, Sierra Leone, 3,164
Funchal, Madeira Island, 4,680
Guantanamo, Cuba, 6,260
Halifax, Canada, 6,490
Jacksonville, Florida, U.S.A., 6,854
Kingston, Jamaica, 6,278
La Habana, Cuba, 6,724
Lisboa, Portugal, 5,134
Luanda, Angola, 1,601
Luderitz Bay, Namibia, 479
Montevideo, Uruguay, 3,608
New York, New York, U.S.A., 6,786
Norfolk, Virginia, U.S.A., 6,790
Philadelphia, Pennsylvania, U.S.A., 6,867
Ponta Delgada, Azores, 5,040
Portland, Maine, U.S.A., 6,709
Recife, Brazil, 3,318
Rio de Janeiro, Brazil, 3,273
San Juan, Puerto Rico, 5,767
Santa Cruz de Tenerife, Canary Islands, 4,435
Santo Domingo, Dominican Republic, 5,934
Santos, Brazil, 3,409
Savannah, Georgia, U.S.A., 6,864
St. Helena Island, 1,697
St. John, Canada, 6,667
St. John's, Canada, 6,205
Swakopmund, South Africa, 719
Sydney, Canada, 6,425
Vigo, Spain, 5,322
Willemstad, Curacao, 5,740
Wilmington, North Carolina, U.S.A., 6.820

CARDENAS, CUBA
(23˚03'30"N., 81˚11'30"W.) to:

Junction Points*

Straits of Florida, 140
Yucatan Channel, 269

Ports

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

CARDIFF, WALES
(51˚27'00"N., 3˚09'00"W.) to:

Junction Points*

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

Ports

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

CARIPITO, VENEZUELA
(10˚09'15"N., 63˚02'00"W.) Add 5 miles to Guanoco distances.

CARMEN, MEXICO
(18˚38'00"N., 91˚50'00"W.) to:

Junction Points*

Panama, Panama, 1,289

Ports

Belize, Belize (west of Banco Chinchoro and Isla de Cozumel), 688
Cap-Haitien, Haiti, 1,228
Charlotte Amalie, Virgin Islands (via Yucatan Channel and south of Hispaniola), 1,675
Charlotte Amalie, Virgin Islands (via Yucatan Channel and Windward Passage), 1,658
Cienfuegos, Cuba, 770
Colon, Panama, 1,246
Galveston, Texas, U.S.A., 661
Gulfport, Mississippi, U.S.A., 725
Key West, Florida, U.S.A., 708
Kingston, Jamaica, 1,056
La Guaira, Venezuela, 1,714
La Habana, Cuba, 639
Mobile, Alabama, U.S.A., 749
New Orleans, Louisiana, U.S.A., 723
Pensacola, Florida, U.S.A., 745
Pointe a Pitre, Guadeloupe, 1,885
Port au Prince, Haiti, 1,219
Port of Spain, Trinidad, 1,992
Port Castries, St. Lucia, 1,927
Santo Domingo, Dominican Republic, 1,437
Tampico, Mexico, 401
Tuxpan, Mexico, 333
Veracruz, Mexico, 242
Willemstad, Curacao, 1,599

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

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

Junction Points*

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

Ports

Belize, Belize, 904
Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 2,036
Brunswick, Georgia, U.S.A., 1,417
Buenos Aires, Argentina, 5,240
Cap-Haitien, Haiti, 697
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,443
Charlotte Amalie, Virgin Islands, 811
Cienfuegos, Cuba, 778
Colon, Panama, 281
Galveston, Texas, U.S.A., 1,583
Guantanamo, Cuba, 586
Gulfport, Mississippi, U.S.A., 1,449
Jacksonville, Florida, U.S.A., 1,395
Key West, Florida, U.S.A. (via Windward Passage and Old Bahama Channel), 1,130
Kingston, Jamaica, 479
La Guaira, Venezuela, 612
La Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,142
Limon, Costa Rica, 447
Maracaibo, Venezuela, 465
Mobile, Alabama, U.S.A., 1,450
New Orleans, Louisiana, U.S.A. (via Yucatan Channel and Southwest Pass), 1,468
New York, New York, U.S.A. (via Windward Passage), 1,853
Norfolk, Virginia, U.S.A. (via Windward Passage), 1,658
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage), 1,825
Pointe a Pitre, Guadeloupe, 941
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 Lumbucan

*** 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
Pulupandan, Philippines, 225
Shanghai, China (via San Bernardino Strait, Steep Island Pass, and Pai-chieh Hsia), 1,322
Shantou, China (via Verde Island Passage and Jintotolo Channel), 952
Shimonoseki, Japan, 1,547
Tan-shui, Taiwan (via Peng-hu Lieh Tao and Balintang Channel), 1,006
Vladivostok, Russia, 2,026
Weihai, China, 1,679
Xiamen, China (via Balintang Channel), 965
Yantai, China, 1,713
Yokohama, Japan (via San Bernardino Strait), 1,766
Yokoshima, Japan (via San Bernardino Strait), 1,571
Zamboanga, Philippines, 260

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

Junction Points*

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

Ports

Alexandria, Egypt, 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
Piraievs, Greece (south of Greece), 1,488
Piraievs, 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
Argentia, 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, Walff, 306
Hamburg, Germany, 543
Holyhead, Wales, 377
Kristiansand, Norway, 632
Liverpool, England, 442
Oostende, Belgium, 203
Oslo, Norway, 784
Rotterdam, Netherlands, 282
Stavanger, Norway, 661
Wilhelmshaven, Germany, 472
Zeebrugge, Belgium, 218

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

Ports

Dagu, China, 1,013
Dalian, China, 852
Macau, China, 516
Misumi, Japan, 654
Naha, Ryukyu Islands, 337
Sanmen Wen, China, 248
Shanghai, China, 447
Uno, Japan, 903
Wenzhou, China, 204
Xiamen, China, 227
Yulin Gang, Hainan Dao, China, 830

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

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

Junction Points*

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

Ports

Angmagssalik, Greenland, 1,873
Argentia, 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˚l9'00"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
Viskakhapatman, 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 Qasigiannguit, Greenland.

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

Junction Points*

Bishop Rock, England, 3,370

Ports

Guantanamo, Cuba (north of

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

Hispaniola and Virgin Passage), 635
Horta, Azores, 2,259
Key West, Florida, U.S.A. (via Old Bahama Channel and Virgin Passage), 1,064
New York, New York, U.S.A. (via Virgin Passage), 1,465
San Juan, Puerto Rico, 104
Santa Barbara de Samana, Dominican Republic, 289

CHRISTMAS ISLAND, LINE ISLANDS
(1˚58'00"N., 157˚28'00"W.) to:

Junction Points*

Panama, Panama, 4,751

Ports

Apia, Samoa, 1,274
Apra, Guam, 3,518
Brisbane, Australia, 3,379
Enderbury Island, Phoenix Islands, 878
Honolulu, Hawaii, U.S.A., 1,161
Jarvis Island, 209
Johnston Island, 1,137
Midway Island, 1,949
Pago Pago, American Samoa, 1,256
Papeete, French Polynesia, 1,266
Pearl Harbor, Hawaii, U.S.A., 1,157
San Francisco, California, U.S.A., 2,895

CHURCHILL, CANADA
(58˚46'40"N., 94˚11'42"W.) to:

Junction Points*

Inishtrahull, Ireland (via 75 miles off Kap Farvel), 2,760
Pentland Firth, Scotland (via 75 miles off Kap Farvel), 2,820

Ports

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

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

Junction Points*

Bishop Rock, England, 4,056
Fastnet Rock, Ireland, 3,950
Inishtrahull, Ireland, 4,054
Panama, Panama, 815
Pentland Firth, Scotland, 4,234
Strait of Gibraltar, 4,102
Yucatan Channel, 285

Ports

Almirante, Panama, 788
Baltimore, Maryland, U.S.A., 1,578
Barranquilla, Colombia, 755
Belem, Brazil, 2,527
Belize, Belize, 545
Boston, Massachusetts, U.S.A. (via Yucatan Channel), 1,903
Buenos Aires, Argentina, 5,590
Campeche, Mexico, 691
Cap-Haitien, Haiti, 543
Cape Town, South Africa, 6,610
Cardenas, Cuba, 905
Carmen, Mexico, 770
Cartagena, Colombia, 778
Charleston, South Carolina, U.S.A. (via Straits of Florida), 1,107
Charlotte Amalie, Virgin Islands, 973
Colon, Panama, 772
Covenas, Colombia, 814
Fort de France, Martinique, 1,240
Galveston, Texas, U.S.A., 989
Guantanamo, Cuba, 366
Gulfport, Mississippi, U.S.A., 851
Halifax, Canada (via Straits of Florida), 2,102
Hamilton, Bermuda, 1,346
La Guaira, Venezuela, 1,050
La Habana, Cuba, 482
Manzanillo, Cuba, 266
Matanzas, Cuba, 526
Miami, Florida, U.S.A., 683
Montego Bay, Jamaica, 262
Nassau, Bahamas, 868
New York, New York, U.S.A., 1,657
Norfolk, Virginia, U.S.A., 1,456
Nuevitas, Cuba, 649
Pensacola, Florida, U.S.A., 825
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,654
Philadelphia, Pennsylvania, U.S.A. (via Yucatan Channel), 1,627
Pointe a Pitre, Guadeloupe, 1,204
Port au Prince, Haiti, 534
Port of Spain, Trinidad, 1,310
'Port Castries, St. Lucia, 1,246
'Puerto Cabello, Venezuela, 1,015
Rio de Janeiro, Brazil, 4,490
San Juan, Puerto Rico (south of Hispaniola), 930
San Juan, Puerto Rico (via Windward Passage and north of Hispaniola), 903
Santa Maria, Cuba, 149
Santiago de Cuba, Cuba, 334
Santo Domingo, Dominican Republic, 716
Tampico, Mexico, 1,009
Tuxpan, Mexico, 979
Veracruz, Mexico, 944
Willemstad, Curacao, 900

CIUDAD BOLIVAR, VENEZUELA
(8˚08'00"N., 63˚33'00"W.) Add 58 miles to San Felix distances.

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

Junction Points*

Port Said, Egypt, 1,243
Strait of Gibraltar, 907

Ports

Ajaccio, Corsica, 180
Alicante, Spain, 616
Bonifacio, Corsica, 131
Brindisi, Italy, 568
Cagliari, Sardinia, 239
Genova, Italy, 191
Haifa, Israel, 1,321
Istanbul, Turkey (south of Greece), 1,107
Istanbul, Turkey (via Corinth Canal), 1,066
Livorno, Italy, 120
Marseille, France, 316
Menton, France, 180
Messina, Sicily, 308
Napoli, Italy, 152
Odessa, Ukraine (south of Greece), 1,456
Odessa, Ukraine (via Corinth Canal), 1,414
Oran, Algeria, 703
Palermo, Sicily, 253
Patrai, Greece, 612
Pozzuoli, Italy, 147
Salerno, Italy, 204
Sfax, Tunisia, 520
Siracusa, Sicily, 373
Valletta, Malta, 421
Viareggio, Italy, 480

COATZACOALCOS, MEXICO
(18˚08'00"N., 94˚24'45"W.) to:

Junction Points*

Panama, Panama, 1,420
Straits of Florida, 757
Yucatan Channel, 625

Ports

Cartagena, Colombia, 1,484
Colon, Panama, 1,396
Galveston, Texas, U.S.A., 680
La Habana, Cuba, 840
Mobile, Alabama, U.S.A., 834
New Orleans, Louisiana, U.S.A., 801
Norfolk, Virginia, U.S.A., 1,736
Pensacola, Florida, U.S.A., 836
Port of Spain, Trinidad, 2,137
Port Arthur, Texas, U.S.A., 708
Tampico, Mexico, 320
Veracruz, Mexico, 127

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

Junction Points*

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

Ports

Barrow in Furness, England, 252
Belfast, Northern Ireland, 264
Cape Town, South Africa, 5,894
Cardiff, Wales, 204
Cherbourg, France, 315
Dublin, Ireland, 176
Falmouth, England, 182
Felixstowe, England, 493
Fishguard, Wales, 131
Galway, Ireland, 222
Glasgow, Scotland, 346
Holyhead, Wales, 182
Inverness, Scotland (via Pentland Firth), 659
Leith, England (via Pentland Firth), 765
Limerick, Ireland, 221
Liverpool, England, 246
Londonderry, Northern Ireland, 340
Newport, Wales, 210
Plymouth, England, 215

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Aden, Yemen (south of Socotra), 2,094
Akyab, Burma, 1,225
Al Basrah, Iraq, 2,359
Bassein, Burma, 1,194
Belawan, Indonesia, 1,240
Bhavnagar, India, 1,073
Bombay, India, 895
Calcutta, India, 1,258
Cochin, India, 318
Dar es Salaam, Tanzania, 2,565
Diego Garcia, Chagos Archipelago, 974
Dumai, Indonesia, 1,496
Durban, South Africa (via east of Madagascar), 3,615
Flying Fish Cove, Christmas Island, Indian Ocean, 1,888
Fremantle, Australia, 3,122
Karachi, Pakistan, 1,344
Madras, India, 611
Malacca, Malaysia, 1,458
Marmagao, India, 671
Massawa, Ethiopia, 2,486
Mombasa, Kenya, 2,518
Negappattinam, India, 476
New Mangalore, India, 499
Okha, India, 1,183
Penang, Malaysia, 1,285
Phuket, Thailand, 1,192
Port Darwin, Australia, 3,314
Port Louis, Mauritius, 2,098
Port Refuge, Cocos Islands, 1,539

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
Argentia, 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, 1,159
Freetown, Sierra Leone, 3,976
Funchal, Madeira Island, 3,742
Georgetown, Ascension Island, 4,181
Georgetown, Guyana, 1,515
Guantanamo, Cuba, 689
Gulfport, Mississippi, U.S.A., 1,388
Halifax, Canada, 2,295
Hamilton, Bermuda, 1,659
Horta, Azores, 3,260
Ivittuut, Greenland, 3,536
Jacksonville, Florida, U.S.A., 1,516
Jacmel, Haiti, 683
Key West, Florida, U.S.A., 1,065
Kingston, Jamaica, 551
La Ceiba, Honduras, 666
La Guaira, Venezuela, 841
Lagos, Nigeria, 5,049
Les Cayes, Haiti, 645
Limon, Costa Rica, 190
Lisboa, Portugal (via Mona Passage), 4,152
Liverpool, Canada, 2,244
Manzanillo, Cuba, 689
Maracaibo, Venezuela, 693
Miami, Florida, U.S.A., 1,214
Mobile, Alabama, U.S.A., 1,393
Montecristi, Dominican Republic, 83
Montevideo, Uruguay, 5,349
Nassau, Bahamas (via Windward Passage), 1,166
New Orleans, Louisiana, U.S.A., 1,389
New York, New York, U.S.A. (via Crooked Island Passage), 1,974
Norfolk, Virginia, U.S.A. (via Windward Passage), 1,779
Norfolk, Virginia, U.S.A. (via Yucatan Channel), 2,006
Pensacola, Florida, U.S.A., 1,369
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage), 1,946
Pointe a Pitre, Guadeloupe, 1,168
Ponta Delgada, Azores, 3,379
Porlamar, 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 Argentia 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
Argentia, 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 Belle Isle), 2,282
Punta Arenas, Chile, 7,274
Straits of Florida, 2,164

Ports

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

DALIAN, CHINA
(38˚56'00"N., 121˚39'00"E.) to:

Junction Points*

Panama, Panama (via Osumi Kaikyo), 8,843
Panama, Panama (via Tsugaru-Kaikyo), 8,627
Punta Arenas, Chile, 10,121
Singapore, 2,612

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 1,648
Apra, Guam, 1,974
Auckland, New Zealand (via Vitiaz Strait), 5,489
Auckland, New Zealand (west of New Ireland), 5,469
Busan, South Korea (via Maenggol Sudo), 543
Chi-lung, Taiwan, 852
Dagu, China, 207
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,435
Dutch Harbor, Alaska, U.S.A. (via Tsugaru-Kaikyo), 3,437
Gunsan, South Korea, 294
Hakodate, Japan, 1,226
Honolulu, Hawaii, U.S.A. (via Shimonoseki Kaikyo), 4,470
Honolulu, Hawaii, U.S.A., 4,531
Incheon, South Korea, 290
Kobe, Japan, 877
Lianyungang, China, 348
Lo-hsing-ta Mao-ti, China, 871
Manila, Philippines (east of Taiwan), 1,561
Manila, Philippines (via Formosa Strait), 1,571
Masan, South Korea, 546
Mogpo, South Korea (via south of Kasa Do), 377
Moji, Japan, 633
Nampo, North Korea, 180
Pago Pago, American Samoa, 5,035
Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 2,260
Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,285
Port Darwin, Australia, 3,204
Portland, Oregon, U.S.A., 5,240
Qingdao, China, 277
Qinhuangdao, China, 145
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,697
San Francisco, California, U.S.A. (via Tsugaru-Kaikyo), 5,456
Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,127
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,437
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and north of Aleutian Islands), 5,131
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and south of Aleutian Islands), 5,192
Shanghai, China, 560
Sydney, Australia (via west of New Ireland), 5,015
Sydney, Australia (via Vitiaz Strait), 4,976
Valparaiso, Chile (via Shimonoseki Kaikyo), 10,324
Valparaiso, Chile (via Tokara Kaikyo), 10,366
Vladivostok, Russia, 1,057
Weonsan, North Korea, 848
Xiamen, China, 1,008
Yokohama, Japan (via Osumi Kaikyo), 1,235

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

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

Ports

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

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Le Havre, France, 151
London, England, 292
Southampton, England, 100

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

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

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

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

DELFZIJL, NETHERLANDS
(53˚20'30"N., 6˚56'15"E.)
Subtract 10 miles from Emden, Germany distances.

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

Junction Points*

Bishop Rock, England, 509
Nord-Ostsee-Kanal (East Entrance), Germany, 263
Pentland Firth, Scotland, 447

Ports

Hamburg, Germany, 249
Rotterdam, Netherlands, 97

DERINCE, TURKEY
(40˚44'35"N., 29˚49'30"E.) to:

Junction Points*

Port Said, Egypt, 837
Strait of Gibraltar (south of Greece), 1,855

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

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 Udjung 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˚l0'00"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
Piraievs, Greece (via Corinth Canal), 339
Ploce, Croatia, 214
Preveza, Greece, 181
Salamis, Greece, 343
Split, Croatia, 216
Taranto, Italy, 183

DUTCH HARBOR, ALASKA, U.S.A.
(53˚54'00"N., 166˚30'00"W.) to:

Junction Points*

Panama, Panama, 5,246
Punta Arenas, Chile, 8,063
Singapore, 5,364

Ports

Anadyrskiy Limen, Russia, 824
Apra, Guam, 3,403
Auckland, New Zealand, 5,578
Brisbane, Australia, 5,369
Bukhta Shelihova, Kuril Islands, Russia, 1,411
Callao, Peru, 5,988
Dagu, China, 3,594
Dalian, China (via La Perouse Strait), 3,435
Dalian, China (via Tsugaru-Kaikyo), 3,437
Guayaquil, Ecuador, 5,552
Hakodate, Japan, 2,228
Ho Chi Minh, Vietnam, 4,894
Hobart, Tasmania, 6,365
Hong Kong, China, 4,026
Honolulu, Hawaii, U.S.A., 2,040
Juneau, Alaska, U.S.A., 1,136
Kasatka, Japan, 1,846
Kiska, Alaska, U.S.A., 596
Kobe, Japan, 2,833
Los Angeles, California, U.S.A., 2,382
Manila, Philippines (north of Luzon), 4,233
Matsuga-hana, Japan, 1,917
Melbourne, Australia, 6,321
Midway Island, 1,651
Nagasaki, Japan (South of Kyushu), 3,181
Nagasaki, Japan (via Tsugaru-Kaikyo), 3,011
Noumea, New Caledonia, 4,857
Pago Pago, American Samoa, 4,132
Papeete, French Polynesia, 4,400
Petersburg, Alaska, U.S.A., 1,215
Petropavlovsk-Kamchatskiy, Russia, 1,249
Port Darwin, Australia, 5,332
Prince Rupert, Canada, 1,274
Qingdao, China, 3,385
San Diego, California, U.S.A., 2,465
San Francisco, California, U.S.A., 2,051
Sand Bay, Alaska, U.S.A., 397
Sasebo, Japan (via Osumi Kaikyo), 3,207
Seattle, Washington, U.S.A., 1,707
Shanghai, China (via La Perouse Strait), 3,375
Shanghai, China (via Tsugaru-Kaikyo), 3,377
Shimonoseki, Japan, 2,892
Surabaya, Indonesia, 5,555
Suva, Fiji Islands, 4,493
Sweeper Cove, Alaska, U.S.A., 407
Sydney, Australia, 5,761
Tomari, Japan, 1,978
Truk, Caroline Islands, 3,493
Unalakleet, Alaska, U.S.A., 752
Valparaiso, Chile, 7,140
Vancouver, Canada, 1,724
Vladivostok, Russia, 2,518
Wake Island, 2,463
Whittier, Alaska, U.S.A., 817
Xiamen, China (via La Perouse Strait), 3,771
Xiamen, China (via Tsugaru-Kaikyo), 3,770
Yokohama, Japan, 2,551

EAST LONDON, SOUTH AFRICA
(33˚01'30"S., 27˚54'30"E.) to:

Junction Points*

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

Ports

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

EASTER ISLAND, SOUTH PACIFIC
(27˚08'30"S., 109˚26'30"W.) to:

Junction Points*

Panama, Panama, 2,785

Ports

Islas Juan Fernandez, 1,633

EGEDESMINDE, GREENLAND
(68˚42'33"N., 52˚53'12"W.) See Aasiaat

EGERSUND, NORWAY
(58˚27'00"N., 6˚00'00"E.) to:

Junction Points*

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

Ports

Aberdeen, Scotland, 273
Amsterdam, Netherlands, 380
Antwerp, Belgium, 484
Bremerhaven, Germany, 312
Calais, France, 475
Cherbourg, France, 621
Dover, England, 477
Dunkerque, France, 469
Emden, Germany, 327
Esbjerg, Denmark, 226
Hamburg, Germany, 351
Hull, England, 378
Kristiansand, Norway, 86
Le Havre, France, 589
Leith, Scotland, 336
London, England, 501
Newcastle, England, 329
Oostende, Belgium, 447
Oslo, Norway, 238
Plymouth, England, 706
Portland, England, 632
Portsmouth, England, 582
Rotterdam, Netherlands, 412
Southampton, England, 600
Wilhelmshaven, Germany, 306
Zeebrugge, Belgium, 440

EILAT, ISRAEL
(29˚32'42"N., 34˚57'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,155
Port Said, Egypt, 381
Singapore, 4,868

Ports

Aden, Yemen, 1,247

EL AAIUN, WESTERN SAHARA
(27˚05'37"N., 13˚26'55"W.) See Aaiun.

EL FERROL DEL CAUDILLO, SPAIN
(43˚28'30"N., 8˚15'00"W.) to:

Junction Points*

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

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

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 Castello, Portugal, 155

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Aberdeen, Scotland, 394
Antwerp, Belgium, 276
Bergen, Norway, 457
Bremerhaven, Germany, 128
Cherbourg, France, 428
Dover, England, 284
Dundee, Scotland, 400
Dunkerque, France, 264
Egersund, Norway, 327
Esbjerg, Denmark, 172
Hamburg, Germany, 185
Hartlepool, England, 308
Harwich, England, 252
Hull, England, 279
Inverness, Scotland, 487
Kristiansand, Norway, 316
Le Havre, France, 396
Leith, Scotland, 403
London, England, 318
Newcastle, England, 329
Oostende, Belgium, 242
Oslo, Norway, 451
Plymouth, England, 513
Portland, England, 439
Portsmouth, England, 389
Rotterdam, Netherlands, 199
Southampton, England, 407
Stavanger, Norway, 376
Wilhelmshaven, Germany, 120
Zeebrugge, Belgium, 230

ENDERBURY ISLAND, PHOENIX ISLANDS
(3˚08'00"S., 171˚06'00"W.) to:

Junction Points*

Panama, Panama, 5,599

Ports

Apia, Samoa, 641
Apra, Guam, 2,827
Christmas Island, Line Islands, 878
Seattle, Washington, U.S.A., 4,047

ENIWETAK, MARSHALL ISLANDS
(11˚25'51"N., 162˚21'30"E.) to:

Junction Points*

Panama, Panama, 7,086

Ports

Apra, Guam, 1,066
Honolulu, Hawaii, U.S.A., 2,375
Pearl Harbor, Hawaii, U.S.A., 2,347
San Francisco, California, U.S.A., 4,282

ENSENADA, MEXICO
(31˚51'30"N., 116˚38'00"W.) to:

Junction Points*

Panama, Panama, 2,791

Ports

Acapulco, Mexico, 1,369
Los Angeles, California, U.S.A., 151
Port Hueneme, California, U.S.A., 194

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

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

Junction Points*

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

Ports

Alexandria, Egypt, 657
Algiers, Algeria, 917
Ancona, Italy, 883
Ashdod, Israel, 885
Banzart, Tunisia, 585
Beirut, Lebanon, 920
Cartagena, Spain, 1,100
Castellon, Spain, 1,075
Dhekelia, Cyprus, 846
Genova, Italy, 950
Istanbul, Turkey, 833
Kherson, Ukraine, 1,255
Marsaxlokk, Malta, 360

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

Junction Points*

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

Ports

Aberdeen, Scotland, 373
Amsterdam, Netherlands, 255
Antwerp, Belgium, 362
Bergen, Norway, 361
Cherbourg, France, 514
Dover, England, 370
Dundee, Scotland, 394
Dunkerque, France, 350
Egersund, Norway, 226
Emden, Germany, 172
Hamburg, Germany, 172
Hartlepool, England, 336
Harwich, England, 338
Hull, England, 334
Inverness, Scotland, 455
Kristiansand, Norway, 206
Le Havre, France, 482
Leith, Scotland, 403
London, England, 403
Newcastle, England, 349
Oostende, Belgium, 328
Oslo, Norway, 341
Plymouth, England, 599
Portland, England, 525
Portsmouth, England, 475
Rotterdam, Netherlands, 287
Southampton, England, 493
Savanger, Norway, 278
Wilhelmshaven, Germany, 129
Zeebrugge, Belgium, 318

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

Junction Points*

Bishop Rock, England, 3,902
Cape of Good Hope, South Africa, 2,510
Fastnet Rock, Ireland, 3,955
Grand Banks South, 4,054
Ile d'Ouessant, France, 3,861
Inishtrahull, Ireland, 4246
Panama, Panama, 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

Ports

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

EVERETT, WASHINGTON, U.S.A.
(47˚58'53"N., 122˚14'06"W.)
Subtract 9 miles from Seattle, Washington distances.

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

FABORG, DENMARK
(55˚05'40"N., 10˚14'22"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 53
Skagens Odde, Denmark, 234

Ports

Gdansk, Poland, 368
Goteborg, Sweden, 222
Lubeck, Germany, 102

FAERINGEHAVN, GREENLAND
(63˚41'00"N., 51˚34'00"W.) See Kangerluarsoruseq, Greenland.

FALL RIVER, MASSACHUSETTS, U.S.A.
(41˚42'21"N., 71˚l0'00"W.) to:

Junction Points*

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

Ports

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

FALMOUTH, ENGLAND
(50˚09'20"N., 5˚03'30"W.) to:

Junction Points*

Ile d'Ouessant, France, 100

Ports

Brest, France, 137
Cardiff, Wales, 181
Cobh, Ireland, 182
Dublin, Ireland, 248
Hull, England, 464
Liverpool, England, 313
London, England, 351
Plymouth, England, 37
Southampton, England, 160

FAMAGUSTA, CYPRUS
(35˚07'20"N., 33˚56'40"E.) to:

Junction Points*

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

Ports

Alexandria, Egypt, 340
Ashdod, Israel, 203
Banghazi, Libya, 768
Marseille, France, 1,558
Piraievs, Greece, 604

FANNING ISLAND, NORTH PACIFIC
(3˚51'30"N., 159˚21'45"W.) to:

Junction Points*

Panama, Panama, 4,805

Ports

Auckland, New Zealand, 2,854
Honolulu, Hawaii, U.S.A., 1,056
Johnston Island, North Pacific, 1,032
Wellington, New Zealand, 3,114

FARGE, GERMANY
(53˚12'00"N., 8˚31'00"E.) Add 23 miles to Bremerhaven distances.

FARSUND, NORWAY
(58˚05'40"N., 6˚48'30"E.) to:

Junction Points*

Pentland Firth, Scotland, 332
Skagens Odde, Denmark, 132

Ports

Bergen, Norway, 182
London, England, 497
Oslo, Norway, 198

FASLANE BAY, SCOTLAND
(56˚04'00"N., 4˚49'00"W.)
Subtract 11 miles from Glasgow distances.

FASTNET ROCK, IRELAND*
(51˚20'00"N., 9˚36'00"W.) to:

Junction Points*

Bishop Rock, England, 149
Cape of Good Hope, South Africa, 5,880
Grand Banks South, 1,714
Ile d'Ouessant, France, 225
Inishtrahull, Ireland, 335
Panama, Panama (via Mona Passage), 4,247
Punta Arenas, Chile, 7,051
Montreal, Canada, 2,872
Pentland Firth, Scotland (via east coast of Ireland), 625
Pentland Firth, Scotland (via west coast of Ireland), 578
Strait of Gibraltar, 1,068
Straits of Florida, 3,761
Yucatan Channel, 4,058

Ports

Ardrossan, Scotland, 348
Argentia, Canada, 1,819
Avonmouth, England, 262
Baltimore, Maryland, U.S.A., 3,098
Barrow in Furness, England, 302
Belem, Brazil, 3,741
Belfast, Northern Ireland, 311
Boston, Massachusetts, U.S.A., 2,633
Cairn Ryan, Scotland, 338
Cardiff, Wales, 246
Charleston, South Carolina, U.S.A., 3,239
Charlotte Amalie, Virgin Islands, 3,279
Cienfuegos, Cuba, 3,992
Cobh, Ireland, 64
Colon, Panama, 4,243
Douglas, Isle of Man, 274
Dublin, Ireland, 223
Fishguard, Wales, 180
Fleetwood, England, 315
Funchal, Madeira Island, 1,177
Galway, Ireland, 166
Glasgow, Scotland, 395
Guantanamo, Cuba, 3,626
Halifax, Canada, 2,315
Hamilton, Bermuda, 2,655
Holyhead, Wales, 232
Jacksonville, Florida, U.S.A., 3,407
Key West, Florida, U.S.A., 3,685
Kingston, Jamaica, 3,748
La Habana, Cuba, 3,721
Limerick, Ireland, 157
Liverpool, England, 295
Londonderry, Northern Ireland (via west coast of Ireland), 371
Mathew Town, Great Inagua Island, 3,467
Miami, Florida, U.S.A., 3,554
Milford Haven, Wales, 178
New London, Connecticut, U.S.A., 2,723
New York, New York, U.S.A., 2,805
Newport, Wales, 258
Norfolk, Virginia, U.S.A., 2,977
Paramaribo, Suriname, 3,554
Philadelphia, Pennsylvania, U.S.A., 2,957
Port au Prince, Haiti, 3,619
Port Talbot, Wales, 218
Providence, Rhode Island, U.S.A., 2,712
Rio de Janeiro, Brazil, 4,873
San Juan, Puerto Rico (via Mona Passage), 3,299
Santo Domingo, Dominican Republic, 3,491
Swansea, Wales, 217
Washington, D.C., U.S.A., 3,112
Waterford, Ireland, 110
Willemstad, Curacao, 3,708
Wilmington, North Carolina, U.S.A., 3,183

FATEH TERMINAL, UNITED ARAB EMIRATES
(25˚36'00"N., 54˚31'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,733
Cape Leeuwin, Australia, 5,069
Selat Lombok, Indonesia, 4,314
Port Said, Egypt, 2,915
Singapore, 3,454
Selat Sunda, Indonesia, 3,661
Torres Strait, Australia (via South of Java), 5,863

Ports

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

FECAMP, FRANCE
(49˚46'00"N., 0˚21'45"E.) to:

Junction Points*

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

Ports

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

FELIXSTOWE, ENGLAND
(51˚56'56"N., 1˚l9'00"E.) to:

Junction Points*

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

Ports

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

FELTON, CUBA
(20˚50'00"N., 75˚44'00"W.) See Antilla.

FERNANDINA, FLORIDA, U.S.A.
(30˚41'00"N., 81˚27'40"W.) to:

Ports

Nassau, Bahamas, 450
San Juan, Puerto Rico, 1,115

FERNANDO DE NORONHA, BRAZIL
(3˚50'00"S., 32˚25'00"W.) to:

Ports

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

FETHIYE, TURKEY
(36˚37'30"N., 29˚07'20"E.) to:

Junction Points*

Port Said, Egypt, 375

Strait of Gibraltar, 1,712

Ports

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

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Avonmouth, England, 145
Barrow in Furness, England, 157
Belfast, Northern Ireland, 182
Brest, France, 274
Cardiff, Wales, 130
Cherbourg, France, 306
Cobh, Ireland, 131
Douglas, Isle of Man, 131
Glasgow, Scotland, 247
London, England, 523
Southampton, England, 343
Swansea, Wales, 100

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

Junction Points*

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

Ports

Ajaccio, Corsica, 187
Antalya, Turkey, 1,067
Banzart, Tunisia, 273
Bar, Montenegro, 608
Cartagena, Spain, 664
Corinth Canal (west side, Korinthos), Greece, 645
Genova, Italy, 217
Iraklion, Kriti, 771
Kerch, Ukraine, 1,513
La Nouvelle, France, 423
Mersa El Hamra, Egypt, 1,058
Mitilini, Greece, 875
Oran, Algeria, 710
P'ot'i, Georgia, 1,675
Ravenna, Italy, 866
Tunis, Tunisia, 296

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

Junction Points*

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

Ports

Southampton, England, 485

FLEKKEFJORDEN, NORWAY
(58˚17'35"N., 6˚39'30"E.) to:

Junction Points*

Pentland Firth, Scotland, 325
Skagens Odde, Denmark, 155

Ports

Bergen, Norway, 170
London, England, 479
Oslo, Norway, 219

FLENSBURG, GERMANY
(54˚47'50"N., 9˚26'15"E.) to:

Junction Points*

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

Ports

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

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

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

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

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

Junction Points*

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

Ports

Colombo, Sri Lanka, 1,888

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

Junction Points*

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

Ports

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

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

Junction Points*

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

Ports

Belawan, Indonesia, 3,642
Fremantle, Australia, 3,593
Malacca, Malaysia, 3,860
Penang, Malaysia, 3,687
Port Darwin, Australia, 4,775
Sabang, Indonesia, 3,376

FORT DE FRANCE, MARTINIQUE
(14˚36'00"N., 61˚04'15"W.) to:

Junction Points*

Panama, Panama, 1,202
Straits of Florida, 1,389

Ports

Baltimore, Maryland, U.S.A., 1,718
Bordeaux, France, 3,607
Boston, Massachusetts, U.S.A., 1,799
Bridgetown, Barbados, 130
Cienfuegos, Cuba, 1,240
Colon, Panama, 1,159
Kingstown, St. Vincent, 89
La Habana, Cuba (via Mona Passage and Old Bahama Channel), 1,350
New York, New York, U.S.A., 1,717
Norfolk, Virginia, U.S.A., 1,597
Nuevitas, Cuba, 1,035
Philadelphia, Pennsylvania, U.S.A. (via Anegada Channel), 1,724
Pointe a Pitre, Guadeloupe, 108
Ponce, Puerto Rico, 381
Port Castries, St. Lucia, 37
Roseau, Dominica, 50
San Juan, Puerto Rico, 385
Santiago de Cuba, Cuba, 951
Willemstad, Curacao, 495

FORT LAUDERDALE, FLORIDA, U.S.A.
(26˚05'36"N., 80˚04'48"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,697
Grand Banks South, 1,778
Panama, Panama, 1,236
Punta Arenas, Chile, 6,874
Strait of Gibraltar, 3,778
Straits of Florida, 238

Ports

Cape Town, South Africa, 6,688
Elizabeth Harbor, Bahamas, 283
Georgetown, Guyana, 1,894
Hamilton, Bermuda, 883
Kingston, Jamaica, 769
La Habana, Cuba, 236
Lagos, Nigeria, 5,069
Matadi, Congo, 5,758
Port of Spain, Trinidad, 1,504
Recife, Brazil, 3,459
San Juan, Puerto Rico, 900

FORT-LIBERATE, HAITI
(19˚41'30"N., 71˚50'20"W.) to:

Junction Points*

Panama, Panama, 881
Straits of Florida, 692

Ports

New York, New York, U.S.A., 1,283
Nuevitas, Cuba, 339
San Juan, Puerto Rico, 373

FORTALEZA, BRAZIL
(3˚42'00"S., 38˚31'00"W.) to:

Junction Points*

Punta Arenas, Chile, 3,654

Ports

Belem, Brazil, 685
New York, New York, U.S.A., 3,304
Recife, Brazil, 425

FRAY BENTOS, URUGUAY
(33˚06'58"S., 58˚19'57"W.) Add 213 miles to Montevideo distances or 145 miles to Buenos Aires distances.

FREDERICIA, DENMARK
(55˚33'45"N., 9˚45'35"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 85
Skagens Odde, Denmark, 169

Ports

Gdynia, Poland, 384
Goteborg, Sweden, 181
Lubeck, Germany, 155

FREDERICKSHAAB, GREENLAND
(61˚59'00"N., 49˚43'00"W.) See Paamuit, Greenland.

FREDERIKSHAVN, DENMARK
(57˚26'00"N., 10˚33'15"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 200
Skagens Odde, Denmark, 24

Ports

Arkhangel'sk, Russia, 1,805
Gdynia, Poland, 395
Kobenhavn, Denmark, 142
Lubeck, Germany, 170

FREDERIKSTED, ST. CROIX
(17˚43'00"N., 64˚53'20"W.) to:

Ports

Roseau, Dominica, 252

FREDRIKSTAD, NORWAY
(59˚12'10"N., 10˚57'00"E.) to:

Junction Points*

Bishop Rock, England, 918
Ile d'Ouessant, France, 904
Nord-Ostsee-Kanal (East Entrance) (via Store Baelt), Germany, 330
Nord-Ostsee-Kanal (East Entrance) (via The Sound), Germany, 402
Pentland Firth, Scotland, 488
Skagens Odde, Denmark, 93

Ports

Bergen, Norway, 335
Oslo, Norway, 57

FREEPORT, BAHAMAS
(26˚31'00"N., 78˚46'45"W.) to:

Junction Points*

Panama, Panama (via Windward Passage), 1,280
Straits of Florida, 278
Yucatan Channel, 456

Ports

Baltimore, Maryland, U.S.A., 841
Jacksonville, Florida, U.S.A., 304
La Habana, Cuba, 286
Philadelphia, Pennsylvania, U.S.A., 890
San Juan, Puerto Rico, 872
Wilmington, North Carolina, U.S.A., 487

FREETOWN, SIERRA LEONE
(08˚30'00"N., 13˚14'00"W.) to:

Junction Points*

Bishop Rock, England, 2,673
Cape of Good Hope, South Africa, 3,190
Ile d'Ouessant, France, 2,630
Inishtrahull, Ireland, 3,024
Montreal, Canada, 4,019
Pentland Firth, Scotland, 3,272
Punta Arenas, Chile, 4,731
Strait of Gibraltar, 1,966
Straits of Florida, 4,137
Yucatan Channel, 4,229

Ports

Accra, Ghana, 955
Banjul, Gambia, 450
Boston, Massachusetts, U.S.A., 3,656
Buenos Aires, Argentina, 3,712
Cadiz, Spain, 1,979
Cape Town, South Africa, 3,164
Casablanca, Morocco, 1,812
Colon, Panama, 3,976
Dakar, Senegal, 496
Funchal, Madeira Island, 1,573
Georgetown, Ascension Island, 996
Guantanamo, Cuba, 3,650
Huelva, Spain, 1,999
Key West, Florida, U.S.A., 4,076
Las Palmas, Canary Islands, 1,317
Lisboa, Portugal, 2,023
Marshall, Liberia, 293
Monrovia, Liberia, 264
Natal, Brazil, 1,569
New York, New York, U.S.A., 3,757
Norfolk, Virginia, U.S.A., 3,821
Oporto, Portugal, 2,161
Philadelphia, Pennsylvania, U.S.A., 3,862
Pointe Noire, Congo, 1,788
Ponta Delgada, Azores, 1,941
Port of Spain, Trinidad, 2,896
Port Harcourt, Nigeria, 1,397
Porto Grande, Cape Verde Islands, 871
Portsmouth, New Hampshire, U.S.A., 3,654
Recife, Brazil, 1,632
Rio de Janeiro, Brazil, 2,613
San Juan, Puerto Rico, 3,141
Santa Cruz de Tenerife, Canary Islands, 1,342
St. Helena Island, 1,564
Takoradi, Ghana, 859
Vigo, Spain, 2,223

FREMANTLE, AUSTRALIA
(32˚03'00"S., 115˚44'20"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,755
Cape Leeuwin, Australia, 181
Selat Lombok, Indonesia, 1,440
Port Said, Egypt, 6,310
Selat Sunda, Indonesia, 1,691
Torres Strait, Australia, 2,531

Ports

Aden, Yemen (north of Chagos Archipelago), 4,921
Al Basrah, Iraq, 5,440
Al Manamah, Bahrain, 5,203
Albany, Australia, 349
Beira, Mozambique, 4,351
Berbera, Somalia, 4,933
Bombay, India, 3,986
Bushehr, Iran, 5,259
Calcutta, India (via west of Sumatra), 3,693
Calicut, India, 3,484
Colombo, Sri Lanka, 3,122
Dar es Salaam, Tanzania, 4,513
Diego Garcia, Chagos Archipelago, 2,850
Durban, South Africa, 4,244
East London, South Africa, 4,304
Fort Dauphin, Madagascar, 3,593
Geraldton, Australia, 213
Kakinada, India, 3,515
Karachi, Pakistan, 4,446
Madras, India, 3,393
Majunga, Madagascar, 4,132
Maputo, Mozambique, 4,283
Mocambique, Mozambique, 4,367
Mombasa, Kenya, 4,564
Mosselbaai, South Africa, 4,525
Port Darwin, Australia, 1,847
Port Louis, Mauritius (north of Mauritius), 3,202
Port Louis, Mauritius (south of Mauritius), 3,217
Rangoon, Burma (west of Sumatra), 3,248
Sabang, Indonesia, 2,601
Surabaya, Indonesia (via Bali Strait and north of Madura), 1,674
Surabaya, Indonesia (via Bali Strait and south of Madura), 1,627
Tamatave, Madagascar, 3,650
Tanga, Tanzania, 4,583
Tjilatjap, Indonesia, 1,519
Victoria, Seychelles, 3,752
Wyndham, Australia, 1,780
Yampi Sound, Australia, 586
Zanzibar, Tanzania, 4,536

FU-CHOU, CHINA
(26˚03'30"N., 119˚19'00"E.) See Fuzhou, China.

FUJAYRAH, UNITED ARAB EMIRATES
(25˚09'00"N., 56˚26'45"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,645
Cape Leeuwin, Australia, 4,909
Selat Lombok, Indonesia, 4,127
Port Said, Egypt, 2,447
Singapore, 3,356
Selat Sunda, Indonesia, 3,509
Torres Strait, Australia, 5,701

Ports

Aden, Yemen, 1,377
Belawan, Indonesia, 2,973
Calcutta, India, 2,961
Fremantle, Australia, 7,614
Penang, Malaysia, 3,007

FUNAFUTI, TUVALU
(8˚30'45"S., 179˚12'15"E.) to:

Junction Points*

Panama, Panama, 6,217

Ports

Apia, Samoa, 632
Apra, Guam, 2,455
Brisbane, Australia, 1,895
Hong Kong, China, 4,247
Honolulu, Hawaii, U.S.A., 2,249
Jaluit, Marshall Islands, 1,041
Midway Island, 2,220
Noumea, New Caledonia, 1,132
Papeete, French Polynesia, 1,910
San Francisco, California, U.S.A., 4,295
Seattle, Washington, U.S.A., 4,640

FUNCHAL, MADEIRA ISLAND
(32˚38'00"N., 16˚54'30"W.) to:

Junction Points*

Bishop Rock, England, 1,136
Cape of Good Hope, South Africa, 4,689
Fastnet Rock, Ireland, 1,177
Ile d'Ouessant, France, 1,089
Inishtrahull, Ireland, 1,466
Montreal, Canada, 2,850
Pentland Firth, Scotland, 1,714
Punta Arenas, Chile, 5,894
Strait of Gibraltar, 589
Straits of Florida, 3,503

Ports

Baltimore, Maryland, U.S.A., 3,028
Banjul, Gambia, 1,182
Bordeaux, France, 1,192
Boston, Massachusetts, U.S.A., 2,604
Brest, France, 1,110
Buenos Aires, Argentina, 4,823
Cadiz, Spain, 579
Cape Town, South Africa, 4,680
Casablanca, Morocco, 476
Colon, Panama, 3,742
Dakar, Senegal, 1,091
Freetown, Sierra Leone, 1,573
Guantanamo, Cuba, 3,194
Horta, Azores, 677
Huelva, Spain, 578
Key West, Florida, U.S.A., 3,445
Kingston, Jamaica, 3,349
Las Palmas, Canary Islands, 282
Lisboa, Portugal, 532
New York, New York, U.S.A. (direct), 2,761
Norfolk, Virginia, U.S.A., 2,907
Oporto, Portugal, 650
Philadelphia, Pennsylvania, U.S.A., 2,901
Plymouth, England, 1,234
Ponta Delgada, Azores, 550
Port of Spain, Trinidad, 2,819
Porto Grande, Cape Verde Islands, 1,043
Praia, Cape Verde Islands, 1,128
Rio de Janeiro, Brazil, 3,722
San Juan, Puerto Rico, 2,773
Santa Cruz de Tenerife, Canary Islands, 258
Tangier, Morocco, 588
Vigo, Spain, 702

FUZHOU, CHINA
(26˚03'30"N., 119˚19'00"E.)
Fuzhou is 9 miles above Lo hsing-ta Mao-ti, on the River Min. See Lo hsing-ta Mao-ti.

GAETA, ITALY
(41˚13'00"N., 13˚35'00"E.) to:

Junction 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
Coatzacoalcos, Mexico, 680
La Habana, Cuba, 769
Limon, Costa Rica, 1,394
Maracaibo, Venezuela, 1,810
Puerto Barrios, Guatemala, 1,041
Puerto Cabello, Venezuela, 1,899
Puerto Cortes, Honduras, 1,001
San Juan del Norte, Nicaragua (via inside route), 1,344
Santa Marta, Colombia, 1,588
Tampico, Mexico, 473
Tuxpan, Mexico, 530
Veracruz, Mexico, 623

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
Masnedsund, Denmark, 330
Middlefart, Denmark, 396
Musko Island, Sweden, 288
Naestved, Denmark, 383
Nakskov, Denmark, 335
Odense, Denmark, 438
Oxelosund, Sweden, 266
Peenemunde, Germany, 220
Pitea, Sweden, 687
Porkkala, Finland, 412
Randers, Denmark, 403
Ruch'i, 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
Piraievs, 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
Piraievs, Greece (south of Greece), 978
Piraievs, 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
Piraievs, Greece (south of Greece), 1,490
Piraievs, 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 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˚0l'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

Argentia, Canada, 1,976
Arkhangel'sk, Russia, 5,156
Bahia Honda, Cuba, 643
Barranquilla, Colombia, 534
Belem, Brazil, 2,214
Boston, Massachusetts, U.S.A. (via Windward Passage, Crooked Island Passage, and Nantucket Light Buoy), 1,495
Brest, France, 3,784
Buenos Aires, Argentina, 5,278
Cap-Haitien, Haiti, 175
Cape Town, South Africa, 6,290
Cardenas, Cuba, 539
Cartagena, Colombia, 586
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 900
Charlotte Amalie, Virgin Islands (north of Hispaniola and Puerto Rico), 607
Christiansted, St. Croix (north of Hispaniola and Puerto Rico), 635
Christiansted, St. Croix (south of Hispaniola), 689
Cienfuegos, Cuba, 366
Colon, Panama, 689
Dakar, Senegal, 3,312
Elizabeth Harbor, Bahamas, 334
Freetown, Sierra Leone, 3,650
Funchal, Madeira Island, 3,194
Georgetown, Guyana, 1,316
Gibraltar (via Turks Island Passage), 3,767
Halifax, Canada, 1,634
Hamilton, Bermuda, 992
Horta, Azores (via Mouchoir Passage), 2,666
Ivittuut, Greenland, 2,873
Jacksonville, Florida, U.S.A., 851
Key West, Florida, U.S.A. (via Old Bahama Channel), 587
Kingston, Jamaica, 180
Kralendijk, Bonaire, 620
La Guaira, Venezuela, 737
La Habana, Cuba (via Old Bahama Channel), 600
Lisboa, Portugal, 3,570
Manzanillo, Cuba, 206
Matanzas, Cuba, 553
Miami, Florida, U.S.A., 582
Monrovia, Liberia, 3,828
Montevideo, Uruguay, 5,I67
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

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

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
Piraievs, Greece, 650
Rijeka, Croatia (south of Greece), 1,342
Rijeka, Croatia (via Corinth Canal), 1,315
Savona, Italy, 1,515
Sayda, Lebanon, 49
Sibenik, Croatia (south of Greece), 1,214
Sibenik, Croatia (via Corinth Canal), 1,187
Siracusa, Sicily, 1,013
Split, Croatia (south of Greece), 1,199
Split, Croatia (via Corinth Canal), 1,172
Tarabulus, Lebanon, 118
Tarabulus, Libya, 1,109
Taranto, Italy (south of Greece), 1,020
Taranto, Italy (via Corinth Canal), 1,003
Thessaloniki, Greece, 786
Toulon, France, 1,565
Trieste, Italy (south of Greece), 1,375
Trieste, Italy (via Corinth Canal), 1,348
Tunis, Tunisia, 1,260
Valencia, Spain, 1,767
Valletta, Malta, 1,038
Venezia, Italy (south of Greece), 1,383
Venezia, Italy (via Corinth Canal), 1,359
Volos, Greece, 728
Yumurtalik, Turkey, 240

HAINES, ALASKA, U.S.A.
(59˚13'55"N., 135˚26'10"W.) to:

Junction Points*

Panama, Panama, 4,386
Punta Arenas, Chile, 7,545

Ports

Antofagasta, Chile, 6,145
Vancouver, Canada (via Queen Charlotte Sound), 822
Victoria, Canada, 861

HAIPHONG, VIETNAM
(20˚52'00"N., 106˚41'00"E.) to:

Ports

Cebu, Philippines (via Jintotolo Channel, Romblon, and Verde Island Passage), 1,276
Chang-Kan, China, 156
Ho Chi Minh, Vietnam, 802
Hong Kong, China, 477
Kobe, Japan, 1,833
Manila, Philippines, 936
Qui Nhon, Vietnam, 469
Sanya Gang, China, 253
Shanghai, China (via Pai-chieh Hsia, Steep Island Passage, and Hai-nan Tao), 1,285
Vinh Cam Ranh, Vietnam, 597

HAKATA, JAPAN
(33˚36'45"N., 130˚23'15"E.) to:

Ports

Hakodate, Japan, 709
Kobe, Japan, 304
Misumi, Japan, 161
Nagasaki, Japan, 121
Ube, Japan, 84
Yokohama, Japan, 608

HAKODATE, JAPAN
(41˚47'00"N., 140˚43'00"E.) to:

Junction Points*

Panama, Panama, 7,417
Punta Arenas, Chile, 9,457
Singapore (via Sea of Japan), 3,160

Ports

Akita, Japan, 150
Aleksandrovsk-Sakhalinskiy, Russia, 631
Apia, Samoa, 4,252
Apra, Guam, 1,739
Auckland, New Zealand, 5,104
Avarua, Cook Islands, 5,022
Bohang, South Korea, 665
Bukhta Shelikohova, Kuril Islands, Russia, 865
Busan, South Korea, 686
Cebu, Philippines (via outside route), 2,208
Cebu, Philippines (via Sea of Japan), 2,177
Chongjin, North Korea, 509
Dagu, China, 1,385
Dalian, China, 1,226
Dutch Harbor, Alaska, U.S.A., 2,228
Hachinohe, Japan, 108
Hakata, Japan, 709
Higashi-Iwase, Japan, 380
Hiroshima, Japan, 787
Hong Kong, China, 1,810
Honolulu, Hawaii, U.S.A., 3,314
Iloilo, Philippines (via Sea of Japan), 2,199
Incheon, South Korea, 1,080
Kakarta, Indonesia (east of Direction Island and Selat Gaspar), 3,468
Kaluit, Marshall Islands, 2,670
Kagoshima, Japan, 946
Kamaishi, Japan, 192
Kasatka, Japan, 407
Kimchaek, North Korea, 540
Kiska, Alaska, U.S.A., 1,656
Kobe, Japan (east of Honshu), 816
Kochi, Japan (east of Honshu), 832
Kochi, Japan (via Shimonoseki Kaikyo), 894
Kushiro, Japan, 210
Levuka, Fiji Islands, 4,271
Lo-hsing-ta Mao-ti, China, 1,429
Los Angeles, California, U.S.A., 4,576
Maizuru, Japan, 460
Manila, Philippines, 2,066
Matsuga-hana, Japan, 316
Midway Island, 2,198
Miike, Japan, 864
Mogpo, South Korea, 897
Nagasaki, Japan, 801
Nakhodka, Russia, 377
Nanao, Japan, 337
Nevel'sk, Russia, 389
Niigata, Japan, 247
Nome, Alaska, U.S.A., 2,347
Noumea, New Caledonia (via Canal Woodin and Canal de la Havannah), 4,176
Pago Pago, American Samoa, 4,326
Papeete, French Polynesia, 5,249
Petropavlovsk-Kamchatskiy, Russia, 1,075
Ponape, Caroline Islands, 2,298
Port Darwin, Australia (via Selat Sele), 3,422
Prince Rupert, Canada (north of Aleutian Islands), 3,487
Prince Rupert, Canada (south of Aleutian Islands), 3,569
Pabaul, Papua New Guinea, 2,894
Sumoi, Japan, 248
Skata, Japan, 189
San Francisco, California, U.S.A., 4,247
Seattle, Washington, U.S.A. (north of Aleutian Islands), 3,922
Seattle, Washington, U.S.A. (via composite sailing at 50˚N.), 3,982
Seward, Alaska, U.S.A. (via south of Aleutian Islands), 3,069
Shanghai, China, 1,166
Shimonoseki, Japan, 683
Shiogama, Japan, 281
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,392
Sydney, Australia, 4,688
Tan-shui, Taiwan, 1,384
Tomari, Japan, 301
Tsuruga, Japan, 447
Uglegorsk, Russia, 536
Ulsan, South Korea, 661
Unggi, North Korea, 486
Valparaiso, Chile, 9,197
Vladivostok, Russia, 437
Weihai, China, 1,169
Weonsan, North Korea, 638
Xiamen, China, 1,559
Yantai, China, 1,203
Yokohama, Japan, 533

HAKONSVERN, NORWAY
(60˚20'30"N., 5˚14'30"E.) to:

Junction Points*

Pentland Firth, Scotland, 287
Skagens Odde, Denmark, 296

Ports

Bremerhaven, Germany, 442
London, England, 616
Oslo, Norway, 371

HALDIA, INDIA
(22˚00'30"N., 88˚03'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,438
Cape Leeuwin, Australia, 3,740
Selat Lombok, Indonesia, 2,815
Port Said, Egypt (May-September, south of Socotra), 4,760
Port Said, Egypt (North of Socotra), 4,656
Port Said, Egypt (October-April, South of Socotra), 4,639
Singapore, 1,593
Selat Sunda, Indonesia, 2,084

Ports

Akyab, Sittwe Harbor, Burma, 46
Al Basrah, Iraq, 3,537
Assab, Ethiopia, 3,390
Belawan, Indonesia, 1,270
Bombay, India, 2,070
Chittagong, Bangladesh, 311
Colombo, Sri Lanka, 1,202
Dumai, Indonesia, 1,523
Fremantle, Australia, 3,637
Mombasa, Kenya, 3,647
Penang, Malaysia, 1,238
Yenbo, Saudi Arabia, 4,092
Zanzibar, Tanzania, 3,720

HALIFAX, CANADA
(44˚39'00"N., 63˚34'00"W.) to:

Junction Points*

Bishop Rock, England, 2,480
Cape of Good Hope, South Africa, 6,502
Fastnet Rock, Ireland, 2,364
Inishtrahull, Ireland, 2,462
Montreal, Canada (via Cabot Strait), 955
Montreal, Canada (via Strait of Canso), 895
Panama, Panama, 2,338
Pentland Firth, Scotland, 2,642
Punta Arenas, Chile, 6,799
Strait of Gibraltar, 2,708
Straits of Florida, 1,610
Yucatan Channel, 1,796

Ports

Argentia, Canada, 448
Arkhangel'sk, Russia, 3,663
Baltimore, Maryland, U.S.A., 911
Belem, Brazil, 2,904
Bocas del Toro, Panama, 2,369
Bordeaux, France, 2,786
Boston, Massachusetts, U.S.A., 380
Bridgeport, Connecticut, U.S.A., 552
Bridgetown, Barbados, 1,906
Brunswick, Georgia, U.S.A., 1,210
Buenos Aires, Argentina, 5,731
Cadiz, Spain, 2,674
Cape Town, South Africa, 6,492
Charleston, South Carolina, U.S.A., 1,077
Charlotte Amalie, Virgin Islands, 1,595
Charlottetown, Canada (via Strait of Canso), 268
Cienfuegos, Cuba, 1,998
Colon, Panama, 2,295
Dakar, Senegal, 2,956
Guantanamo, Cuba, 1,634
Hamilton, Bermuda, 756

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

Ivittuut, Greenland, 1,380
Jacksonville, Florida, U.S.A., 1,255
Key West, Florida, U.S.A., 1,556
Kingston, Jamaica, 1,795
La Guaira, Venezuela, 2,060
La Habana, Cuba, 1,614
Limon, Costa Rica, 2,368
Lisboa, Portugal, 2,500
Miami, Florida, U.S.A., 1,413
Montevideo, Uruguay, 5,617
Murmansk, Russia, 3,368
New Haven, Connecticut, U.S.A., 540
New York, New York, U.S.A., 600
Norfolk, Virginia, U.S.A., 790
Paamiut (Fredericksshaab), Greenland, 1,406
Parrsboro, Canada, 330
Philadelphia, Pennsylvania, U.S.A., 746
Ponta Delgada, Azores, 1,785
Port au Prince, Haiti, 1,671
Port of Spain, Trinidad, 2,059
Port Castries, St. Lucia, 1,850
Portland, Maine, U.S.A., 338
Portsmouth, New Hampshire, U.S.A., 359
Recife, Brazil, 3,558
Reykjavik, Iceland, 1,941
Rio de Janeiro, Brazil, 4,630
Salvador, Brazil, 3,949
San Juan, Puerto Rico, 1,580
Santa Cruz de Tenerife, Canary Islands, 2,480
Santiago de Cuba, Cuba, 1,683
Santo Domingo, Dominican Republic, 1,709
Savannah, Georgia, U.S.A., 1,150
St. John, Canada, 278
St. John's, Canada, 531
Vigo, Spain, 2,454
Wilmington, North Carolina, U.S.A., 1,016

HALMSTAD, SWEDEN
(56˚39'06"N., 12˚50'36"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 188
Skagens Odde, Denmark, 101

Ports

Oslo, Norway, 225
Stockholm, Sweden, 481
Szczecin, Poland, 227

HALSINGBORG, SWEDEN
(56˚02'30"N., 12˚41'30"E.) See Helsingborg, Sweden.

HALUL ISLAND, QATAR
(25˚40'25"N., 52˚27'16"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,836
Cape Leeuwin, Australia, 5,172
Selat Lombok, Indonesia, 4,415
Port Said, Egypt, 3,018
Singapore, 3,557
Selat Sunda, Indonesia, 3,764

Ports

Assab, Ethiopia, 1,773
Belawan, Indonesia, 3,226
Calcutta, India, 3,234
Colombo, Sri Lanka, 2,011
Karachi, Pakistan, 819
Tulear, Madagascar, 3,488
Umm Said, Qatar, 73

HAMBURG, GERMANY
(53˚32'30"N., 9˚69'00"E.) to:

Junction Points*

Bishop Rock, England, 717
Ile d'Ouessant, France, 703
Nord-Ostsee-Kanal (East Entrance), Germany, 91
Pentland Firth, Scotland, 555
Skagens Odde, Denmark, 360

Ports

Aberdeen, Scotland, 473
Amsterdam, Netherlands, 274
Antwerp, Belgium, 386
Bergen, Norway, 486
Cherbourg, France, 538
Den Helder, Netherlands, 249
Dover, England, 399
Dundee, Scotland, 485
Dunkerque, France, 374
Egersund, Norway, 351
Emden, Germany, 185
Esbjerg, Denmark, 172
Hartlepool, England, 406
Harwich, England, 362
Hull, England, 384
Inverness, Scotland, 562
Kristiansand, Norway, 333
Le Havre, France, 511
Leith, Scotland, 486
London, England, 425
Newcastle, England, 424
Oslo, Norway, 461
Plymouth, England, 628
Portland, England, 554
Portsmouth, England, 504
Rotterdam, Netherlands, 307
Southampton, England, 522
Stavanger, Norway, 403
Wilhelmshaven, Germany, 111
Zeebrugge, Belgium, 342

HAMILTON, BERMUDA
(32˚17'30"N., 64˚47'00"W.) to:

Junction Points*

Bishop Rock, England, 2,769
Cape of Good Hope, South Africa, 6,169
Fastnet Rock, Ireland, 2,651
Inishtrahull, Ireland, 2,749
Montreal, Canada, 1,621
Panama, Panama, 1,702
Pentland Firth, Scotland, 2,929
Punta Arenas, Chile, 6,287
Strait of Gibraltar, 2,903
Straits of Florida, 1,151
Yucatan Channel, 1,321

Ports

Baltimore, Maryland, U.S.A., 805
Barranquilla, Colombia, 1,465
Belem, Brazil, 2,274
Boston, Massachusetts, U.S.A., 704
Bridgetown, Barbados, 1,208
Buenos Aires, Argentina, 5,211
Cardenas, Cuba, 1,119
Charlotte Amalie, Virgin Islands, 872
Cienfuegos, Cuba, 1,346
Colon, Panama (via Caicos Passage), 1,659
Elizabeth Harbor, Bahamas, 813
Georgetown, Guyana, 1,591
Guantanamo, Cuba (via Caicos Passage), 992
Halifax, Canada, 756
Key West, Florida, U.S.A., 1,091
Kingston, Jamaica, 1,144
La Guaira, Venezuela, 1,335
La Habana, Cuba, 1,150
Limon, Costa Rica, 1,715
Manzanillo, Cuba, 1,187
Matanzas, Cuba, 1,129
Miami, Florida, U.S.A., 956
Montevideo, Uruguay, 5,097
Nassau, Bahamas, 829
New London, Connecticut, U.S.A., 667
New York, New York, U.S.A., 697
Norfolk, Virginia, U.S.A., 683
Nuevitas, Cuba, 988
Paramaribo, Suriname, 1,694
Philadelphia, Pennsylvania, U.S.A., 746
Plymouth, Montserrat, 966
Port au Prince, Haiti, 1,016
Port of Spain, Trinidad, 1,346
Port Castries, St. Lucia, 1,149
Portsmouth, New Hampshire, U.S.A., 723
Recife, Brazil, 3,038
Rio de Janeiro, Brazil, 4,110
Roseau, Dominica, 1,061
San Juan, Puerto Rico, 856
Santiago de Cuba, Cuba, 1,031
Santo Domingo, Dominican Republic, 992
Saint Nicolaashaven, Aruba, 1,263
St. Georges, Grenada, 1,256
Washington, D.C., U.S.A., 806
Wilmington, North Carolina, U.S.A., 746

HAMINA, FINLAND
(60˚30'40"N., 27˚11'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 747
Skagens Odde, Denmark, 797

Ports

Gdynia, Poland, 512
Riga, Latvia, 384
Stockholm, Sweden, 325

HAMMERFEST, NORWAY
(70˚40'00"N., 23˚41'00"E.) to:

Ports

Bergen, Norway, 817
Harstad, Norway, 200
Oslo, Norway, 1,187
Tromso, Norway, 124

HAMPTON ROADS, VIRGINIA, U.S.A.
(36˚57'00"N., 76˚22'00"W.)
Subtract 6 miles from Norfolk distances.

HAMRA, EGYPT
(30˚58'42"N., 28˚52'12"E.) See Mersa Al Hamra.

HANGO, FINLAND
(59˚49'03"N., 22˚56'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 564
Skagens Odde, Denmark, 625

Ports

Gdynia, Poland, 356
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
Norrkoping, Sweden, 307
Ornskolosvik, Sweden, 403
Oulu, Finland, 598
Oxelosund, Sweden, 268
Sankt-Peterburg, Russia, 172
Stockholm, Sweden, 239
Uusikaupunki, Finland, 293

HEYSHAM, ENGLAND
(54˚03'00"N., 2˚54'10"W.) to:

Junction Points*

Bishop Rock, England, 315
Fastnet Rock, Ireland, 309
Inishtrahull, Ireland, 216
Pentland Firth, Scotland, 435

Ports

Ardrossan, Scotland, 173
Belfast, Northern Ireland, 137
Brest, France, 422
Cardiff, Wales, 280
Cobh, Ireland, 248
Fishguard, Wales, 153
Newport, Wales, 290
Waterford, Ireland, 196

HIGASHI-IWASE, JAPAN
(36˚46'00"N., 137˚14'00"E.) to:

Ports

Busan, South Korea, 492
Hakodate, Japan, 380
Shanghai, China, 966
Shimonoseki, Japan, 466
Vladivostok, Russia, 471

HIGASHI-IWASE, JAPAN
(34˚46'45"N., 134˚38'00"E.) to:

Ports

Kobe, Japan, 34
Kure, Japan, 126
Nagasaki, Japan, 373
Nagoya, Japan, 259
Sakaide, Japan, 89
Shimotsui, Japan, 88
Yokohama, Japan, 368

HILO, HAWAII, U.S.A.
(19˚44'00"N., 155˚05'00"W.) to:

Junction Points*

Panama, Panama, 4,527

Ports

San Diego, California, U.S.A., 2,175
San Jose, Guatemala, 3,690
Seattle, Washington, U.S.A., 2,387

HIROSHIMA, JAPAN
(34˚20'45"N., 132˚28'15"E.) to:

Junction Points*

Selat Lombok, Indonesia (via south of Mindanao), 2,908
Panama, Panama (via east of Honshu), 8,167
Punta Arenas, Chile, 9,551
Singapore (east of Kyushu), 2,622
Singapore (west of Kyushu), 2,637

Ports

Hakodate, Japan, 787
Kobe, Japan, 179
Nagasaki, Japan (via Kudako Suido), 285
Nagasaki, Japan (via Moroshima Suido), 275
Nagasaki, Japan (via Nuwashima Suido), 277
Nagasaki, Japan (via Obatake Seto and north of Kasasa Jima), 264
Yokohama, Japan, 519

HIRTSHALS, DENMARK
(57˚36'00"N., 9˚58'00"E.) to:

Junction Points*

Pentland Firth, Scotland, 429
Skagens Odde, Denmark, 30

Ports

Bergen, Norway, 280
London, England, 541
Oslo, Norway, 145

HO CHI MINH, VIETNAM
(10˚46'00"N., 106˚42'15"E.) to:

Junction Points*

Selat Lombok, Indonesia, 1,408
Panama, Panama, 10,017
Singapore, 649
Torres Strait, Australia, 2,629

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 3,105
Apra, Guam, 2,304
Beihai, China, 837
Busan, South Korea, 1,999
Cebu, Philippines (north of North Danger Reef, Via Mindoro Strait, and Jintotolo Channel), 1,152
Chang-kan, China, 708
Da Nang, Vietnam, 519
Dutch Harbor, Alaska, U.S.A., 4,894
Guayaquil, Ecuador, 10,321
Haiphong, Vietnam, 802
Hong Kong, China, 917
Honolulu, Hawaii, U.S.A., 5,542
Iloilo, Philippines, 1,051
Incheon, South Korea, 2,057
Iwakuni, Japan, 2,108
Jakarta, Indonesia, 1,025
Kodiak, Alaska, U.S.A., 5,484
Kompong Som, Cambodia, 419
Los Angeles, California (via San Bernardino Strait), 7,403
Malakal, Palau Islands, 1,801
Manila, Philippines, 907
Midway Island, 4,421
Mogpo, South Korea, 1,904
Nampo, North Korea, 2,118
Nha Trang Bay, Vietnam, 264
Olongapo, Philippines, 872
Pago Pago, American Samoa, 5,216
Palembang, Indonesia, 869
Papeete, French Polynesia, 6,443
Petropavlovsk-Kamchatskiy, Russia (via Chetvertyy Kuril'sky 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˚l0'00"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 Paracel Islands), 917
Honolulu, Hawaii, U.S.A., 4,857
Hua-lien Kang, Taiwan, 518
Incheon, South Korea, 1,202
Jakarta, Indonesia, 1,782
Jaluit, Marshall Islands, 3,370
Kobe, Japan, 1,372
Kodiak, Alaska, U.S.A., 4,616
Levuka, Fiji Islands, 4,574
Lo hsing-ta Mao-ti, China, 459
Los Angeles, California, U.S.A., 6,380
Manila, Philippines, 631
Midway Island, 3,728
Mogpo, South Korea, 1,049
Nagasaki, Japan, 1,069
Nampo, North Korea, 1,263
Nha Trang Bay, Vietnam, 678
Nikolayevsk-Na-Amure, Russia, 2,394
Nome, Alaska, U.S.A., 4,145
Noumea, New Caledonia, 4,107
Olongapo, Philippines, 580
Pago Pago, American Samoa, 4,948
Papeete, French Polynesia, 6,132
Peng-hu Kang Taiwan, 314
Petropavlovsk-Kamchatskiy, Russia, 2,863
Ponape, Caroline Islands, 2,710
Port Darwin, Australia, 2,363
Prince Rupert, Canada (north of Aleutian Islands), 5,286
Prince Rupert, Canada (south of Aleutian Islands), 5,367
Qingdao, China, 1,120
Qui Nhon, Vietnam, 592
Rabaul, Papua New Guinea, 2,764
San Diego, California, U.S.A., 6,439
San Fernando, Philippines, 489
San Francisco, California, U.S.A. (via Osumi Kaikyo), 6,044
Sanmen Wen, China, 650
Sanya Gang, China, 391
Seattle, Washington, U.S.A. (via Osumi Kaikyo and composite sailing), 5,768
Seward, Alaska, U.S.A. (south of Aleutian Islands), 4,867
Shanghai, China (via Steep Island and Pai-chieh Hsia), 824
Shimonoseki, Japan, 1,179
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,095
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,191
Su-ao Kang, Taiwan, 554
Surabaya, Indonesia, 1,925
Suva, Fiji Islands, 4,541
Truk, Caroline Islands, 2,376
Tso-ying, Taiwan, 343
Valparaiso, Chile, 10,218
Vinh Cam Ranh, Vietnam, 707
Vladivostok, Russia, 1,646
Wake Island, 2,940
Weihai, China, 1,190
Wenzhou, China, 595
Weonsan, North Korea, 1,450
Xiamen, China, 290
Yantai, China, 1,224
Yokohama, Japan, 1,585
Zhenjiang, China, 245

HONIARA, SOLOMON ISLANDS
(9˚25'39"S., 159˚57'51"E.) to:

Junction Points*

Panama, Panama (via Central Route), 7,469
Punta Arenas, Chile, 6,502
Torres Strait, Australia, 1,179
Wilson Promontory, Australia, 2,072

Ports

Botany Bay, Australia, 1,605
Burnie Harbor, Australia, 2,106
Hobart, Tasmania, 2,218
Melbourne, Australia, 2,166
Rabaul, Papua New Guinea, 582
Yokohama, Japan, 2,935
Zamboanga, Philippines, 2,483

HONOLULU, HAWAII, U.S.A.
(21˚18'30"N., 157˚52'15"W.) to:

Junction Points*

Panama, Panama, 4,685
Punta Arenas, Chile, 6,370
Singapore (via Sulu Sea), 5,881
Torres Strait, Australia (via Bougainville Strait and China Strait), 4,191
Wilson Promontory, Australia, 4,792

Ports

Acapulco, Mexico, 3,289
Aleksandrovsk-Sakhalinskiy, Russia, 3,589
Apia, Samoa, 2,260
Apra, Guam, 3,318
Auckland, New Zealand, 3,820
Avarua, Cook Islands, 2,553
Baie Taio-Hae, Marquesa Islands, 2,102
Bikini, Marshall Islands, 2,179
Brisbane, Australia (via Northwest Channel), 4,117
Brito, Nicaragua, 4,155
Busan, South Korea, 3,973
Butaritari, Gilbert Islands, 2,050
Callao, Peru, 5,161
Cebu, Philippines, 4,610
Chimbote, Peru, 5,015
Christmas Island, Line Islands, 1,161
Dagu, China (via Osumi Kaikyo), 4,677
Dagu, China (via Shimonoseki Kaikyo), 4,628
Dalian, China, 4,531
Dalian, China (via Shimonoseki Kaikyo), 4,470
Dutch Harbor, Alaska, U.S.A., 2,040
Eniwetak, Marshall Islands, 2,375
Fanning Island, North Pacific, 1,056
Funafuti, Tuvalu, 2,249
Guayaquil, Ecuador, 4,853
Hakodate, Japan, 3,314
Ho Chi Minh, Vietnam, 5,542
Hobart, Tasmania, 4,930
Hong Kong, China, 4,857
Hot Springs Bay, Alaska, U.S.A., 2,076
Howland Island, 1,650
Iloilo, Philippines, 4,632
Incheon, South Korea (via Maenggol Suido and Bungo Suido), 4,323
Incheon, South Korea (via Osumi Kaikyo), 4,385
Islas Juan Fernandez, 5,595
Jaluit, Marshall Islands, 2,096
Johnston Island, 717
Kiska, Alaska, U.S.A., 2,185
Kobe, Japan, 3,669
Kodiak, Alaska, U.S.A., 2,231
Koniya, Ryukyu Islands, 3,948
Levuka, Fiji Islands, 2,730
Lo-hsing-ta Mao-ti, China, 4,487
Los Angeles, California, U.S.A., 2,228
Malakal, Palau Islands, 3,997
Manila, Philippines (north of Luzon), 4,869
Manila, Philippines (via San Bernardino Strait), 4,767
Midway Island, 1,149
Mogpo, South Korea (via Changjuk Sudo and Mango Strait), 4,146
Nagasaki, Japan, 3,986
Naknek, Alaska, U.S.A., 2,404
Nampo, North Korea, 4,417
Nome, Alaska, U.S.A., 2,674
Noumea, New Caledonia, 3,371
Nukualafa, Tonga Islands, 2,749
Ocean Island, 2,480
Pago Pago, American Samoa, 2,276
Papeete, French Polynesia, 2,381
Petropavlovsk-Kamchatskiy, Russia, 2,762
Ponape, Caroline Islands, 2,685
Port Hueneme, California, U.S.A., 2,170
Portland, Oregon, U.S.A., 2,332
Prince Rupert, Canada, 2,393
Qingdao, China, 4,456
Rabaul, Papua New Guinea, 3,357
Raoul Island, Kermadec Islands, 3,246
Rongelap, Marshall Islands, 2,114
Rotoava, Iles Tuamotu, 2,358
Saipan, Mariana Islands, 3,230
Salina Cruz, Mexico, 3,580
San Diego, California, U.S.A., 2,278
San Francisco, California, U.S.A., 2,091
Sandakan, Sabah, 5,044
Sasebo, Japan (via Osumi Kaikyo), 4,009
Seattle, Washington, U.S.A., 2,409
Selwyn Bay, Solomon Islands, 3,047
Seward, Alaska, U.S.A., 2,373
Shanghai, China (via Osumi Kaikyo), 4,336
Shanghai, China, 4,396
Shimonoseki, Japan (via Bungo Suido), 3,854
Sitka, Alaska, U.S.A., 2,386
Surabaya, Indonesia, 5,598
Suva, Fiji Islands, 2,776
Sweeper Cove, Alaska, U.S.A., 1,945
Sydney, Australia, 4,420
Talara, Peru, 4,806
Tinian, Mariana Islands, 3,230
Truk, Caroline Islands, 3,028
Unalakleet, Alaska, U.S.A., 2,407
Valparaiso, Chile, 5,919
Vancouver, Canada, 2,423
Victoria, Canada, 2,349
Vladivostok, Russia, 3,725
Wake Island, 2,004
Wellington, New Zealand, 4,113
Whittier, Alaska, U.S.A., 2,474
Weonsan, North Korea, 3,933
Wotho, Marshall Islands, 2,187
Wotje Island, Marshall Islands, 1,992
Xiamen, China, 4,592
Yap, Caroline Islands, 3,757
Yantai, China (via Osumi Kaikyo), 4,483
Yokohama, Japan (via rhumb line), 3,520
Yokohama, Japan, 3,395

HONSHU, JAPAN*
(35˚00'00"N., 140˚30'00"E.) to:

Junction Points*

Selat Lombok, Indonesia, 3,059
Panama, Panama, 7,614
Punta Arenas, Chile, 9,286
Singapore, 2,879
Sundra Strait, Indonesia, 3,171
Torres Strait, Australia, 3,265
Tsugaru-Kaikyo, Japan, 484
Selat Wetar, Indonesia, 2,838
Wilson Promontory, Australia, 4,881

Ports

Davao, Philippines, 1,986
Honolulu, Hawaii, U.S.A., 3,311
Kobe, Japan, 417
San Francisco, California, U.S.A., 4,454
Seattle, Washington, U.S.A., 4,155

HORNEFORS, SWEDEN
(63˚36'37"N., 19˚55'29"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East

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 Castello, 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,l73
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 Castello, 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
Talcahhuano, Chile, 1,147
Valparaiso, Chile, 929

ILOILO, PANAY, PHILIPPINES
(10˚42'00"N., 122˚34'40"E.) to:

Junction Points*

Selat Lombok, Indonesia, 1,247
Panama, Panama, 9,235
Singapore (via Lumbucan Channel), 1,268

Ports

Apra, Guam, 1,366
Batangas, Philippines, 270
Cebu, Philippines, 176
Dagu, China, 1,929
Hakodate, Japan (via Sea of Japan), 2,199
Ho Chi Minh, Vietnam, 1,051
Honolulu, Hawaii, U.S.A., 4,632
Incheon, South Korea, 1,678
Jakarta, Indonesia (via Lumbucan Channel and Selat Gaspar), 1,476
Kobe, Japan, 1,623
Kota Kinabalu, Sabah, 501
Kuching, Sarawak, 948
Lo hsing-ta Mao-ti, China (via Balintang Channel), 1,073
Manila, Philippines (via Verde Island Passage), 361
Nagasaki, Japan, 1,428
Petropavlovsk-Kamchatskiy, Russia, 3,123
San Francisco, California, U.S.A., 6,168
Shanghai, China, 1,343
Shimonoseki, Japan, 1,569
Vladivostok, Russia, 2,048
Weihai, China, 1,701
Xiamen, China, 987
Yantai, China, 1,735
Yokohama, Japan, 1,784
Zamboanga, Philippines, 241

ILULISSAT (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

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

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
Argentia, 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

ITOZAKICHO, 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˚l0'00"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
Ikenderun, Turkey, 652
Istanbul, Turkey, 292
Kavala, Greece, 209
Khalkis, Greece, 210
Kyrenia, Cyprus, 524
La Spezia, Italy, 1,101
Larnaca, Cyprus, 570
Limassol, Cyprus, 530
Livorno, Italy, 1,066
Malaga, Spain, 1,597
Marseille, France, 1,229
Mersin, Turkey, 594
Messina, Sicily, 655
Mitilini, Greece, 60
Napoli, Italy, 827
Navplion, Greece, 258
Odessa, Ukraine, 640
Oran, Algeria, 1,436
Palermo, Sicily, 772
Palma, Balearic Islands, 1,290
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 Lumbucan Channel), 1,563
Dagu, China, 3,088
Hakodate, Japan, 3,468
Ho Chi Minh, Vietnam, 1,025

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

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

JAKOBSHAVN, GREENLAND
(69˚13'30"N., 51˚05'30"W.) See Ilulissat, Greenland.

JAKOBSTAD, FINLAND
(63˚43'00"N., 22˚41'30"E.) to:

Ports

Oulu, Finland, 133
Vassa, Finland, 99

JALUIT, MARSHALL ISLANDS
(5˚55'00"N., 169˚38'30"E.) to:

Junction Points*

Panama, Panama, 6,666
Punta Arenas, Chile, 6,815

Ports

Auckland, New Zealand (via Southeast Pass), 2,595
Brisbane, Australia (via Main and Howe Channels), 2,231
Callao, Peru, 6,832
Funafuti, Tuvalu, 1,041
Hakodate, Japan, 2,670
Hobart, Tasmania (via Southeast Pass), 3,223
Hong Kong, China (via Southeast Pass), 3,370
Honolulu; Hawaii, U.S.A., 2,096
Melbourne, Australia (via South Channel), 3,181
Midway Island, 1,535
Nagasaki, Japan (via Osumi Kaikyo), 2,808
Pago Pago, American Samoa, 1,700
Pearl Harbor, Hawaii, U.S.A., 2,101
Petropavlovsk-Kamchatskiy, Russia, 2,883
Ponape, Caroline Islands, 698
Saipan, Mariana Islands, 1,545
San Francisco, California, U.S.A., 4,150
Seattle, Washington, U.S.A., 4,296
Shanghai, China (via Southeast Pass), 3,138
Sydney, Australia (via Southeast Pass), 2,623
Tinian, Mariana Islands, 1,536
Truk, Caroline Islands, 1,078
Valparaiso, Chile, 7,034
Wake Island, 831
Yokohama, Japan (via Southeast Pass), 2,442

JARVIS ISLAND, LINE ISLANDS
(0˚22'30"S., 160˚01'45"W.) to:

Junction Points*

Panama, Panama, 4,804

Ports

Christmas Island, Line Islands, 209
Johnston Island, North Pacific, 1,173
Pago Pago, American Samoa, 1,050

JAZIREH-YE LAVAN, IRAN
(26˚47'05"N., 53˚20'15"E.) See Lavan Island.

JAZIREH-YE SIRRI, IRAN
(25˚54'25"N., 54˚33'44"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,831
Cape Leeuwin, Australia, 5,071
Selat Lombok, Indonesia, 4,285
Port Said, Egypt, 2,785
Singapore, 3,518
Selat Sunda, Indonesia, 3,667
Torres Strait, Australia, 5,901

Ports

Belawan, Indonesia, 3,179
Calcutta, India, 3,154
Malacca, Malaysia, 3,382
Port Darwin, Australia, 5,274
Rangoon, Burma, 3,214
Sabang, Indonesia, 2,913

JERSEY CITY, NEW JERSEY, U.S.A.
(40˚43'00"N., 74˚02'00"W.) For ocean distances add 1 1/2 miles to New York distances.

JIDDAH, SAUDI ARABIA
(21˚28'00"N., 39˚09'20"E.) to:

Junction Points*

Port Said, Egypt, 722

Ports

Aden, Yemen, 707
Al Aqabah, Jordan, 573
Massawa, Ethiopia, 364
Port Sudan, Sudan, 161

JINHAE, SOUTH KOREA
(35˚08'40"N., 128˚28'35"E.)
Subtract 3 miles from Masan distances.

JOHNSTON ISLAND, NORTH PACIFIC
(16˚45'00"N., 169˚30'30"W.) to:

Junction Points*

Panama, Panama, 5,359

Ports

Apia, Samoa, 1,838
Apra, Guam, 2,665
Christmas Island, Line Island, 1,137
Fanning Island, 1,032
Funafuti, Tuvalu, 1,654
Honolulu, Hawaii, U.S.A., 717
Jarvis Island, 1,173
Kahului, Hawaii, U.S.A., 798
Midway Island, 821
Papeete, French Polynesia, 2,371
San Francisco, California, U.S.A., 2,779
Seattle, Washington, U.S.A., 3,018

JOLO, PHILIPPINES
(6˚03'30"N., 120˚59'45"E.) to:

Ports

Batangas, Philippines, 480
Manila, Philippines (via Apo West Pass), 550
Sandakan, Sabah, 180
Tacloban, Philippines, 442
Zamboanga, Philippines, 85

JUBAIL, SAUDI ARABIA
(27˚01'00"N., 49˚42'00"E.) See Al Jubayl.

JUCARO, CUBA
(21˚35'41"N., 78˚51'15"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,559
Grand Banks South, 2,240
Panama, Panama, 764
Punta Arenas, Chile, 6,730
Strait of Gibraltar, 4,096
Yucatan Channel, 362

Ports

Belize, British Honduras, 582
Boston, Massachusetts, U.S.A., 1,788
Cape Town, South Africa, 6,552
Halifax, Canada, 1,991
Port au Prince, Haiti, 465
Rio de Janeiro, Brazil, 4,551
Savannah, Georgia, U.S.A., 1,302

JULIANEHAAB, GREENLAND
(60˚43'00"N., 46˚02'30"W.) See Qaqortoq, Greenland.

JUNEAU, ALASKA, U.S.A.
(58˚17'45"N., 134˚25'00"W.) to:

Ports

Prince Rupert, Canada, 322
Vancouver, Canada, 761

KAGOSHIMA, JAPAN
(31˚35'30"N., 130˚33'50"E.) to:

Junction Points*

Selat Lombok, Indonesia (via south of Mindanao), 2,761
Panama, Panama, 8,207
Punta Arenas, Chile, 9,477
Singapore (via Balintang Channel), 2,464
Singapore, 2,401

Ports

Hakodate, Japan, 946
Kamaishi, Japan, 875
Kobe, Japan (via Bungo Suido), 422
Kobe, Japan (via Tomogashima Suido), 379
Komatsushima, Japan, 344
Kure, Japan, 296
Misumi, Japan, 184
Nagasaki, Japan, 168
Niihana, 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

KALI LIMENES, KRITI, GREECE
(34˚55'45"N., 24˚49'15"E.) to:

Junction Points*

Port Said, Egypt, 446
Strait of Gibraltar, 1,504

Ports

Alexandria, Egypt, 338
Algiers, Algeria, 1,071
Alicante, Spain, 1,231
Ashdod, Israel, 525
Barcelona, Spain, 1,156
Beirut, Lebanon, 533
Cartagena, Spain, 1,57
Ceuta, Morocco, 1,478
Gemlik, Turkey, 528
Istanbul, Turkey, 525
Marseille, France, 1,005
Moni Anchorage, Cyprus, 435
Napoli, Italy, 671
Tangier, Morocco, 1,505
Trieste, Italy, 852

KALININGRAD, RUSSIA
(54˚42'30"N., 20˚28'00"E.) Add 21 1/2 miles to Baltiysk distances.

KALMAR, SWEDEN
(56˚39'45"N., 16˚22'30"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 289
Skagens Odde, Denmark (via Store Baelt), 470
Skagens Odde, Denmark (via The Sound), 342

Ports

Drammen, Norway (via The Sound), 455
Fredrikstad, Norway (via The Sound), 430
Halden, Norway (via The Sound), 430
Moss, Norway (via The Sound), 432
Oslo, Norway (via Store Baelt), 596
Oslo, Norway (via The Sound), 464

KALUNDBORG, DENMARK
(55˚40'07"N., 11˚05'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 111
Skagens Odde, Denmark, 141

Ports

Kobenhavn, Denmark, 115
Stockholm, Sweden, 531
Swinoujscie, Poland, 175

KAMAISHI, JAPAN
(39˚16'18"N., 141˚53'36"E.) to:

Junction Points*

Selat Lombok, Indonesia (south of Mindanao), 3,331
Panama, Panama, 7,422
Punta Arenas, Chile, 9,316
Singapore (via Balintang Channel), 3,171

Ports

Hakodate, Japan, 192
Kagoshima, Japan, 875
Kobe, Japan, 631
Nagasaki, Japan, 972
Yokohama, Japan, 348

KAMSAR, GUINEA
(10˚39'00"N., 14˚37'00"W.) to:

Junction Points*

Bishop Rock, England, 2,562
Cape of Good Hope, South Africa, 3,294
Fastnet Rock, Ireland, 2,625
Grand Banks South, 2,701
Ile d'Ouessant, France, 2,520
Inishtrahull, Ireland, 2,965
Panama, Panama, 3,866
Pentland Firth, Scotland, 3,187
Punta Arenas, Chile, 5,172
Strait of Gibraltar, 1,867
Straits of Florida, 3,985
Yucatan Channel, 4,145

Ports

Abidjan, Ivory Coast, 803
Accra, Ghana, 1,077
Buenos Aires, Argentina, 3,777
Cape Town, South Africa, 3,273
Casablanca, Morocco, 1,732
Dakar, Senegal, 368
Key West, Florida, U.S.A., 3,933
Lisboa, Portugal, 1,882
Monrovia, Liberia, 375
Natal, Brazil, 1,576
New York, New York, U.S.A., 3,633
Norfolk, Virginia U.S.A., 3,667
Port Harcourt, Nigeria, 1,475
Porto Grande, Cape Verde Islands, 713
Takoradi, Ghana, 955

KANDALAKSHA, RUSSIA
(67˚08'00"N., 33˚24'00"E.) Add 101 miles to Arkhangel'sk distances.

KANDLA, INDIA
(23˚02'00"N., 70˚13'30"E.) Add 76 l/2 miles to Okha distances.

KANEOHE BAY, HAWAII, U.S.A.
(21˚26'23"N., 157˚47'00"W.) to:

Junction Points*

Panama, Panama, 4,686

Ports

Apra, Guam, 3,354
Seattle, Washington, U.S.A., 2,388
Yokohama, Japan, 3,406

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˚l0'00"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
Piraievs, 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

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
Niihana, 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
Inishtrahull, Ireland, 4,438
Panama, Panama, 5,329
Pentland Firth, Scotland, 4,998
Punta Arenas, Chile, 5,326
Strait of Gibraltar, 3,853
Straits of Florida, 5,501
Yucatan Channel, 5,651

Ports

Abidjan, Ivory Coast, 761
Kribi, Cameroon, 114
Lagos, Nigeria, 361
Libreville, Gabon, 255
Lome, Togo, 460
Pointe Noire, Congo, 612
Tome, Sao Tome, 232

KOMATSUSHIMA, JAPAN
(34˚01'00"N., 134˚36'00"E.) to:

Ports

Aomori, Japan, 813
Kagoshima, Japan, 344
Kure, Japan, 217
Osaka, Japan, 58
Yokohama, Japan, 320

KOMPONG SOM, CAMBODIA
(10˚39'00"N., 103˚30'00"E.) to:

Junction Points*

Singapore, 638
Selat Sunda, Indonesia, 1,096

Ports

Bangkok, Thailand, 300
Ho Chi Minh, Vietnam, 419
Makassar, Sulawesi, 1,584

KONIYA, RYUKYU ISLANDS
(28˚08'30"N., 129˚18'45"E.) to:

Ports

Honolulu, Hawaii, U.S.A., 3,948
Midway Island, 2,799
Port Moresby, Papua New Guinea, 3,063
Saipan, Mariana Islands, 1,199
Wake Island, 2,107

KOPER, SLOVENIA
(45˚33'48"N., 13˚42'15"E.) to:

Junction Points*

Port Said, Egypt (via south of Greece), 1,310
Strait of Gibraltar, 1,682

Ports

Ajaccio, Corsica, 1,033
Algiers, Algeria, 1,236
Ashdod, Israel, 1,367
Barcelona, Spain, 1,296
Dhekelia, Cyprus, 1,283
Famagusta, Cyprus, 1,313
Istanbul, Turkey, 1,148
Mersa El Hamra, Egypt, 1,155
Messina, Sicily, Italy, 621
Oran, Algeria, 1,432
Ravenna, Italy, 91
Tunis, Tunisia, 917
Villefranche, France, 1,136

KORSAKOV, SAKHALIN, RUSSIA
(46˚37'30"N., 142˚45'30"E.) to:

Ports

Bukhta Shelikhova, Kuril Islands, Russia, 618
Matsuga-hana, Japan, 279
Nevel'sk, Russia, 115
Sovetskaya Gavan, Russia, 264
Tomari, Japan, 239

KORSOR, DENMARK
(55˚20'07"N., 11˚07'48"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 73
Skagens Odde, Denmark, 162

Ports

Gdynia, Poland, 344
Stockholm, Sweden, 524
Swinoujscie, Poland, 239

KOTA KINABALU, MALAYSIA
(6˚00'32"N., 116˚04'37"E.) to:

Junction Points*

Selat Lombok, Indonesia (via Balabac Strait), 1,362
Panama, Panama (via Surigao Strait), 9,860
Singapore, 807
Selat Sunda, Indonesia, 1,031

Ports

Cebu, Philippines (via Balabac Strait), 589
Ho Chi Minh, Vietnam, 761
Honolulu, Hawaii, U.S.A. (via Surigao Strait), 5,092
Makassar, Sulawesi (via west of Palawan), 616
Sandakan, Sabah (via Balabac Strait), 261
Zamboanga, Philippines, 442

KOTKA, FINLAND
(60˚27'00"N., 26˚59'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 694
Skagens Odde, Denmark, 755

Ports

Helsinki, Finland, 99
Riga, Latvia, 296
Stockholm, Sweden, 311
Vysotsk, Russia, 69

KOVDA, RUSSIA
(66˚42'00"N., 32˚52'00"E.) Add 76 l/2 miles to Arkhangel'sk distances.

KPEME, TOGO
(6˚11'22"N., 01˚30'20"E.) to:

Junction Points*

Bishop Rock, England, 4,099
Cape of Good Hope, South Africa, 2,615
Fastnet Rock, Ireland, 3,884
Grand Banks South, 4,036
Ile d'Ouessant, France, 3,815
Inishtrahull, Ireland, 4,147
Panama, Panama, 5,038
Pentland Firth, Scotland, 4,707
Punta Arenas, Chile, 5,180
Strait of Gibraltar, 3,562
Straits of Florida, 5,210
Yucatan Channel, 5,360

Ports

Abidjan, Ivory Coast, 405
Accra, Ghana, 159
Cape Town, South Africa, 1,316
New York, New York, U.S.A., 4,800
Pointe Noire, Congo, 903
Takoradi, Ghana, 255

KRAGERO, NORWAY
(58˚51'40"N., 9˚23'35"E.) to:

Junction Points*

Pentland Firth, Scotland, 441

Ports

Bergen, Norway, 289
London, England, 582
Oslo, Norway, 95

KRALENDIJK, BONAIRE
(12˚09'30"N., 68˚16'40"W.) to:

Ports

Guantanamo, Cuba, 620

KRIBI, CAMEROON
(2˚56'00"N., 9˚54'00"E.) to:

Ports

Douala, Cameroon, 81
Malabo, Equatorial Guinea, 106
Port Gentil, Gabon, 231
Takoradi, Ghana, 704

KRISTIANSAND, NORWAY
(58˚08'30"N., 7˚59'40"E.) to:

Junction Points*

Bishop Rock, England, 309
Ile d'Ouessant, France, 794
Pentland Firth, Scotland, 372
Skagens Odde, Denmark, 92

Ports

Aberdeen, Scotland, 338
Amsterdam, Netherlands, 381
Antwerp, Belgium, 488
Bergen, Norway, 226
Bodo, Norway, 733
Bremerhaven, Germany, 292
Calais, France, 486
Cherbourg, France, 632
Dover, England, 488
Dunkerque, France, 475
Egersund, Norway, 86
Emden, Germany, 316
Esbjerg, Denmark, 206
Hamburg, Germany, 333
Hull, England, 407
Kristiansund, Norway, 447
Le Havre, France, 600
Leith, Scotland, 394
London, England, 514
Newcastle, England, 376
Oostende, Belgium, 453
Oslo, Norway, 163
Plymouth, England, 717
Portland, England, 643
Portsmouth, England, 593
Rotterdam, Netherlands, 413
Southampton, England, 611
Stavanger, Norway, 142
Trondheim, Norway, 436
Wilhelmshaven, Germany, 286

KRISTIANSUND, NORWAY
(63˚06'40"N., 7˚45'00"E.) to:

Ports

Bergen, Norway, 232
Kristiansand, Norway, 447
Oslo, Norway, 599
Stavanger, Norway, 332

KRISTINESTAD, FINLAND
(62˚15'45"N., 21˚22'30"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East entrance), Germany, 703
Skagens Odde, Denmark (via the Sound), 764

Ports

Gdynia, Poland, 473
Helsinki, Finland, 279
Kobenhavn, Denmark, 587
Kotka, Finland, 342
Oulu, Finland, 214
Sankt-Peterburg, Russia, 433
Stockholm, Sweden, 232

KUNG THEP, THAILAND
See Bangkok.

KUCHING, SARAWAK
(1˚33'35"N., 110˚20'35"E.) to:

Junction Points*

Selat Lombok, Indonesia, 974
Singapore, 443

Ports

Iloilo, Philippines, 948
Jakarta, Indonesia, 627
Olongapo, Philippines, 992
Zamboanga, Philippines, 863

KUNSAN, JAPAN
(35˚59'18"N., 126˚43'00"E.) See Gunsan, South Korea.

KURE, JAPAN
(34˚14'00"N., 132˚32'00"E.) to:

Ports

Apra, Guam, 1,460
Hirohata, Japan, 126
Imabari, Japan, 63
Itozakicho, Japan, 73
Kagoshima, Japan, 296
Komatsushima, Japan, 217
Niihana, Japan, 76
Sakaide, Japan, 107
Shimizu, Honshu, Japan, 141
Shimonoseki, Japan, 116
Tokuyama, Japan, 76
Uno, Japan, 117
Wakamatsu, Japan, 125
Yokohama, Japan, 515

KUSHIRO, JAPAN
(42˚58'00"N., 144˚21'30"E.) to:

Ports

Busan, South Korea, 876
Hakodate, Japan, 210
Kobe, Japan, 876
Vladivostok, Russia, 624
Yokohama, Japan, 594

KWA IBO, NIGERIA
(4˚21'40"N., 8˚00'00"E.) See Qua Iboe.

KYNDBY, DENMARK
(55˚48'36"N., 11˚52'48"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 164
Skagens Odde, Denmark, 136

Ports

Gdynia, Poland, 334
Stockholm, Sweden, 493
Swinoujscie, Poland, 197

KYOMIPO, NORTH KOREA
(38˚44'00"N., 125˚37'00"E.) Add 16 miles to Nampo distances.

LA CEIBA, HONDURAS
(15˚46'30"N., 86˚50'00"W.) to:

Junction Points*

Panama, Panama, 709

Ports

Colon, Panama, 666
New York, New York, U.S.A., 1,743

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

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
Coatzacoalcos, Mexico (north of Banco de Campeche), 840
Corpus Christi, Texas, U.S.A., 864
Fort de France, Martinique (via Old Bahama Channel and Mona Passage), 1,350
Fort de France, Martinique (via Yucatan Channel), 1,655
Galveston, Texas, U.S.A., 769
Georgetown, Guyana, 1,830
Guantanamo, Cuba (via Old Bahama Channel and Windward Passage), 600
Gulfport, Mississippi, U.S.A., 564
Halifax, Canada, 1,640
Hamilton, Bermuda, 1,158
Isabel de Sagua, Cuba, 151
Jacksonville, Florida, U.S.A., 528
Key West, Florida, U.S.A., 92
Kingston, Jamaica (via Windward Passage), 762
Kingston, Jamaica (via Yucatan Channel), 737
La Guaira, Venezuela (via Old Bahama Channel and Windward Passage), 1,292
Lake Charles, Louisiana, U.S.A., 750
Limon, Costa Rica, 1,170
Maracaibo, Venezuela, 1,173
Miami, Florida, U.S.A., 222
Mobile, Alabama, U.S.A., 553
Nassau, Bahamas (via Northwest Providence Channel), 390
New Haven, Connecticut, U.S.A., 1,280
New Orleans, Louisiana, U.S.A., 602
New York, New York, U.S.A., 1,199
Norfolk, Virginia, U.S.A., 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

Ports

Alexandria, Egypt, 1,280
Algiers, Algeria, 540
Alicante, Spain, 588
Ancona, Italy, 979
Annaba, Algeria, 463
Banghazi, Libya, 876
Banzart, Tunisia, 414
Barcelona, Spain, 383
Bari, Italy, 775
Beirut, Lebanon, 1,473
Brindisi, Italy, 717
Cagliari, Sardinia, 336
Cartagena, Spain, 640
Castellammare di Stabia, Italy, 308
Ceuta, Morocco, 872
Gibraltar, 873
Haifa, Israel, 1,469
Iraklion, Kriti, 956
Istanbul, Turkey (south of Greece), 1,256
Istanbul, Turkey (via Corinth Canal), 1,214
Izmir, Turkey (south of Greece), 1,101
Izmir, Turkey (via Corinth Canal), 1,060
Malaga, Spain, 821
Marseille, France, 231
Messina, Sicily, 450
Napoli, Italy, 302
Odessa, Ukraine (south of Greece), 1,604
Odessa, Ukraine (via Corinth Canal), 1,562
Oran, Algeria, 701
Palermo, Sicily, 395
Palma, Balearic Islands, 474
Piraievs, Greece (south of Greece), 942
Piraievs, Greece (via Corinth Canal), 860
Rijeka, Croatia, 1,049
Sibenik, Croatia, 923
Siracusa, Sicily, 521
Split, Croatia, 908
Tarabulus, Libya, 790
Taranto, Italy, 669
Thessaloniki, Greece (south of Greece), 1,150
Thessaloniki, Greece (via Corinth Canal), 1,109
Toulon, France, 199
Trieste, Italy, 1,083
Tunis, Tunisia, 448
Valencia, Spain, 538
Valletta, Malta, 554
Venezia, Italy, 1,093
Volos, Greece (south of Greece), 1,091
Volos, Greece (via Corinth Canal), 1,050

LA UNION, EL SALVADOR
(13˚20'00"N., 87˚49'00"W.) to:

Junction Points*

Panama, Panama, 748

Ports

Corinto, Nicaragua, 73
Golfito, Costa Rica, 432
San Francisco, California, U.S.A., 2,586

LAE, PAPUA NEW GUINEA
(6˚44'30"S., 147˚01'00"E.) to:

Ports

Apra, Guam, 1,315
Brisbane, Australia, 1,560
Noumea, New Caledonia, 1,519
Port Moresby, Papua New Guinea, 2,635
Rabaul, Papua New Guinea, 448
Wellington, New Zealand, 2,635

LAGOS, NIGERIA
(6˚27'00"N., 3˚23'00"E.) to:

Junction Points*

Ile d'Ouessant, France, 3,746
Strait of Gibraltar, 3,100
Straits of Florida, 5,225

Ports

Accra, Ghana, 229
Baltimore, Maryland, U.S.A., 5,063
Benguela, Angola, 1,289
Boma, Congo, 977
Boston, Massachusetts, U.S.A., 4,774
Calabar, Nigeria, 391
Charleston, South Carolina, U.S.A., 5,065
Colon, Panama, 5,050
Douala, Cameroon, 442
Georgetown, Ascension Island, 1,375
Longji, Cameroon, 463
Malabo, Equatorial Guinea, 384
Mocamedes, Angola, 1,399
Natal, Brazil, 2,425
New York, New York, U.S.A., 4,883
Norfolk, Virginia, U.S.A., 4,941
Philadelphia, Pennsylvania, U.S.A., 4,985
Pointe Noire, Congo, 851
Port of Spain, Trinidad, 3,950
Port Harcourt, Nigeria, 318
Porto Grande, Cape Verde Islands, 1,991
Sao Tome, Sao Tome, Gulf of Guinea, 422
Sekondi, Ghana, 317
Tema, Ghana, 216
Victoria, Cameroon, 410
Willemstad, Curacao, 4,359

LAKE CHARLES, LOUISIANA, U.S.A.
(30˚13'30"N., 93˚14'00"W.) to:

Junction Points*

Straits of Florida, 677
Yucatan Channel, 689

Ports

Kingston, Jamaica, 1,190
La Habana, Cuba, 750
Veracruz, Mexico, 688

LAND SKRONA, SWEDEN
(55˚52'08"N., 12˚49'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 167
Skagens Odde, Denmark, 137

Ports

Oslo, Norway, 261
Stockholm, Sweden, 424
Szczecin, Poland, 170

LARNACA, CYPRUS
(34˚54'44"N., 33˚38'23"E.) to:

Junction Points*

Port Said, Egypt, 231
Strait of Gibraltar, 1,953

Ports

Al Latakia, Syria, 114
Beirut, Lebanon, 112
Constanta, Romania, 962
Istanbul, Turkey, 766
Izmir, Turkey, 570
Mersin, Turkey, 149
Nice, France, 1,457
Patrai, Greece (via south of Greece), 750
Patrai, Greece (via Corinth Canal), 658
Piraievs, Greece, 566
Pula, Croatia (via south of Greece), 1,245
Pula, Croatia (via Corinth Canal), 1,212
Rostov-na-Donu, Russia, 1,402
Sete, France, 1,579
Sfax, Tunisia, 1,163
Tarabulus, Libya, 1,050
Thessaloniki, Greece, 703

LARNE, ENGLAND
(54˚52'00"N., 5˚47'40"W.) to:

Junction Points*

Bishop Rock, England, 323
Fastnet Rock, Ireland, 312
Inishtrahull, Ireland, 86

Ports

Cardiff, Wales, 295
Cobh, Ireland, 251
Londonderry, Northern Ireland, 71
Milford Haven, Wales, 220
Stornoway, Scotland, 219
Workington, England, 85

LARVIK, NORWAY
(59˚03'00"N., 10˚01'35"E.) to:

Junction Points*

Pentland Firth, Scotland, 461

Ports

Bergen, Norway, 317
London, England, 604
Oslo, Norway, 72

LAS PALMAS, CANARY ISLANDS
(28˚08'30"N., 15˚25'00"W.) to:

Junction Points*

Bishop Rock, England, 1,360
Strait of Gibraltar, 681
Straits of Florida, 3,713

Ports

Baltimore, Maryland, U.S.A., 3,251
Brunswick, Georgia, U.S.A., 3,442
Charleston, South Carolina, U.S.A., 3,341
Charlotte Amalie, Virgin Islands, 2,791
Freetown, Sierra Leone, 1,317
Funchal, Madeira Island, 282
Horta, Azores, 914
Jacksonville, Florida, U.S.A., 3,467
Lisboa, Portugal, 712
New York, New York, U.S.A., 2,965
Norfolk, Virginia, U.S.A., 3,130
Plymouth, England, 1,432
Ponta Delgada, Azores, 774
Recife, Brazil, 2,453
Savannah, Georgia, U.S.A., 3,409

LAS PIEDRAS, VENEZUELA
(11˚42'15"N., 70˚13'15"W.) to:

Ports

Boston, Massachusetts, U.S.A., 1,907
Maracaibo, Venezuela, 126
New York, New York, U.S.A., 1,796
Philadelphia, Pennsylvania, U.S.A., 1,786

LATCHI, CYPRUS
(35˚06'00"N., 32˚27'00"E.) See Khrysokhou Bay, Cyprus.

LAUNCESTON, TASMANIA
(41˚27'00"S., 147˚07'00"E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,577
Torres Strait, Australia, 2,278

Ports

Melbourne, Australia, 246
Sydney, Australia, 514
Wellington, New Zealand, 1,326

LAUTOKA HARBOR, FIJI ISLANDS
(17˚36'09"S., 177˚26'16"E.) to:

Junction Points*

Torres Strait, Australia, 2,204
Wilson Promontory, Australia, 2,070

Ports

Apra, Guam, 2,899
Sydney, Australia, 1,732
Wellington, New Zealand, 1,554

LAVAN ISLAND, IRAN
(26˚47'05"N., 53˚20'15"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,785
Cape Leeuwin, Australia, 5,121
Port Said, Egypt, 2,967
Singapore, 3,506
Selat Sunda, Indonesia, 3,713

Ports

Abadan, Iran, 349
Aden, Yemen, 1,578
Assab, Ethiopia, 1,722
Bandar Abbas, Iran, 198

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˚l0'00"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 Castello, 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 l/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
Banghazi, Libya, 841
Banzart, Tunisia, 382
Barcelona, Spain, 386
Bari, Italy, 739
Beirut, Lebanon, 1,437
Brindisi, Italy, 681
Cagliari, Sardinia, 304
Cannes, France, 149
Cartagena, Spain, 636
Catania, Sicily, 464
Ceuta, Morocco, 868
Civitavecchia, Italy, 120
Gaeta, Italy, 228
Gibraltar, 869
Haifa, Israel, 1,433
Iraklion, Kriti, 920
Istanbul, Turkey (south of Greece), 1,220
Istanbul, Turkey (via Corinth Canal), 1,178
Izmir, Turkey (south of Greece), 1,066
Izmir, Turkey (via Corinth Canal), 1,024
Malaga, Spain, 817
Marseille, France, 236
Messina, Sicily, 414
Napoli, Italy, 267
Nice, France, 134
Odessa, Ukraine (south of Greece), 1,568
Odessa, Ukraine (via Corinth Canal), 1,527
Oran, Algeria, 691
Palermo, Sicily, 359
Palma, Balearic Islands, 470
Piraievs, Greece (south of Greece), 906
Piraievs, Greece (via Corinth Canal), 825
Rijeka, Croatia, 1,013
Sete, France, 298
Sibenik, Croatia, 887
Siracusa, Sicily, 486
Split, Croatia, 872
Tarabulus, Libya, 754
Taranto, Italy, 634
Thessaloniki, Greece (south of Greece), 1,114
Thessaloniki, Greece (via Corinth Canal), 1,073
Toulon, France, 204
Trieste, Italy, 1,047
Tunis, Tunisia, 417
Valencia, Spain, 539
Valletta, Malta, 519
Venezia, Italy, 1,057
Villefranche, France, 133
Volos, Greece (south of Greece), 1,056
Volos, Greece (via Corinth Canal), 1,014

LO-HSING-TA MAO-TI, CHINA
(25˚59'00"N., 119˚26'30"E.) to:

Junction Points*

Singapore, 1,817

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 1,868
Apra, Guam, 1,617

Busan, South Korea, 762
Cebu, Philippines (via Balintang Channel), 1,051
Dagu, China (via Steep Island Passage), 1,029
Dalian, China, 871
Hakodate, Japan, 1,429
Hong Kong, China, 459
Honolulu, Hawaii, U.S.A., 4,487
Iloilo, Philippines (via Balintang Channel), 1,073
Incheon, South Korea, 818
Kobe, Japan, 1,003
Manila, Philippines, 787
Mogpo, South Korea, 665
Nagasaki, Japan, 691
Nampo, North Korea, 879
Petropavlovsk-Kamchatskiy, Russia, 2,481
Qingdao, China (via Steep Island Passage), 715
Qinhuangdao, China, 977
Shanghai, China, 440
Shimonoseki, Japan, 799
Vladivostok, Russia, 1,264
Weihai, China (via Steep Island Passage), 801
Weonsan, North Korea, 1,068
Xiamen, China, 200
Yantai, China, 835
Yokohama, Japan, 1,217

LOBITO, ANGOLA
(12˚20'00"S., 13˚34'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 1,440
Ile d'Ouessant, France, 4,670

Ports

Accra, Ghana, 1,356
Luanda, Angola, 237
Pointe Noire, Congo, 473

LOME, TOGO
(6˚07'00"N., 1˚13'30"E.) to:

Ports

Malabo, Equatorial Guinea, 480
Monrovia, Liberia, 789
Pointe Noire, Congo, 910
Takoradi, Ghana, 200

LONDON, ENGLAND
(51˚30'00"N., 0˚01'00"E.) to:

Junction Points*

Bishop Rock, England, 413
Ile d'Ouessant, France, 397
Nord-Ostsee-Kanal (East Entrance), Germany, 439
Pentland Firth, Scotland, 536
Skagens Odde, Denmark, 554

Ports

Aberdeen, Scotland, 429
Alesund, Norway, 733
Amsterdam, Netherlands, 208
Antwerp, Belgium, 193
Arendal, Norway, 551
Arkhangel'sk, Russia, 2,061
Barrow in Furness, England, 665
Bergen, Norway, 613
Blyth, England, 318
Bremerhaven, Germany, 375
Cardiff, Wales, 526
Dartmouth, England, 292
Dundee, Scotland, 420
Dunkerque, France, 112
Egersund, Norway, 501
Emden, Germany, 318
Esbjerg, Denmark, 403
Falmouth, England, 351
Farsund, Norway, 497
Fishguard, Wales, 523
Flekkefjorden, Norway, 479
Grimstad, Norway, 542
Hakonsvern, Norway, 616
Hamburg, Germany, 425
Hirtshals, Denmark, 541
Holyhead, Wales, 594
Hull, England, 240
Kristiansand, Norway, 514
Kragero, Norway, 582
Larvik, Norway, 604
Le Havre, France, 205
Leith, Scotland, 417
Lillesand, Norway, 533
Liverpool, England, 659
Mandal, Norway, 503
Methil, Scotland, 407
Middlesbrough, England, 293
Narvik, Norway, 1,215
Newcastle, England, 325
Oostende, Belgium, 123
Oslo, Norway, 650
Plymouth, England, 321
Portland, England, 247
Portsmouth, England, 197
Risor, Norway, 572
Rotterdam, Netherlands, 184
Sandefjorden, Norway, 610
Seaham Harbor, England, 318
Shoreham By Sea, England, 161
Skien, Norway, 609
Southampton, England, 215
Stavanger, Norway, 539
Stockholm, Sweden, 1,251
Sunderland, England, 312
Tonsberg, Norway, 624
Tvedestrand, Norway, 565
Wilhelmshaven, Germany, 362
Zeebrugge, Belgium, 131

LONDONDERRY, NORTHERN IRELAND
(55˚00'00"N., 7˚19'00"W.) to:

Junction Points*

Bishop Rock, England, 396
Fastnet Rock, Ireland (west of Ireland), 371
Pentland Firth, Scotland, 310

Ports

Avonmouth, England, 384
Belfast, Northern Ireland (via Rathlin Sound), 102
Cardiff, Wales, 369
Cobh, Ireland, 340
Dublin, Ireland, 189
Glasgow, Scotland, 145
Liverpool, England, 215

LONG BEACH, CALIFORNIA, U.S.A.
(33˚46'12"N., 118˚13'18"W.)
Use Los Angeles distances.

LONGJI, CAMEROON
(3˚05'00"N., 9˚57'20"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,359
Ile d'Ouessant, France, 4,179

Ports

Lagos, Nigeria, 463
Matadi, Congo, 731

LONGYEARBYEN, SVALBARD
(78˚14'30"N., 15˚34'00"E.) to:

Ports

Arkhangel'sk, Russia, 1,051
Bergen, Norway, 1,124
Dikson, Russia, 1,148
Inverness, Scotland, 1,340
Kirkenes, Norway, 637
Murmansk, Russia, 695
Narvik, Norway, 659
Oslo, Norway, 1,482
Pechenga, Russia, 638
Reykjavik, Iceland (north of Iceland), 1,160
Reykjavik, Iceland (South of Iceland), 1,310
Tromso, Norway, 556
Trondheim, Norway, 943
Vardo, Norway, 586

LOOP TERMINAL, GULF OF MEXICO, U.S.A.
(28˚52'11"N., 89˚55'16"W.) to:

Junction Points*

Straits of Florida, 472
Yucatan Channel, 503

Ports

Campeche, Mexico, 545
La Habana, Cuba, 547
Tampico, Mexico, 602
Veracruz, Mexico, 679

LORIENT, FRANCE
(47˚43'45"N., 3˚21'51"W.) to:

Junction Points*

Bishop Rock, England, 202
Ile d'Ouessant, France, 107

Ports

Bilbao, Spain, 274

LOS ANGELES, CALIFORNIA, U.S.A.
(33˚45'00"N., 118˚16'15"W.) to:

Junction Points*

Panama, Panama, 2,913
Punta Arenas, Chile, 5,871
Singapore (via San Bernardino Strait), 7,867
Selat Sunda, Indonesia (via Makassar Strait), 7,976
Wilson Promontory, Australia, 6,879

Ports

Acapulco, Mexico, 1,501
Aleksandrovsk-Sakhalinskiy, Russia, 4,687
Antofagasta, Chile, 4,430
Apia, Samoa, 4,181
Arica, Chile, 4,219
Auckland, New Zealand, 5,658
Avarua, Cook Islands, 4,064
Baie Taio-Hae, Marquesa Islands, 2,858
Bangkok, Thailand (via Balintang Channel), 7,775
Brisbane, Australia, 6,274
Busan, South Korea, 5,229
Callao, Peru, 3,655
Corinto, Nicaragua, 2,281
Dutch Harbor, Alaska, U.S.A., 2,382
Ensenada, Mexico, 151
Guayaquil, Ecuador, 3,218
Guaymas, Mexico, 1,158
Hakodate, Japan, 4,576
Ho Chi Minh, Vietnam (via San Bernardino Strait), 7,403
Hong Kong, China, 6,380
Honolulu, Hawaii, U.S.A., 2,228
Kobe, Japan, 5,185
Manila, Philippines (north of Luzon), 6,530
Manila, Philippines (via San Bernardino Strait), 6,588
Manzanillo, Mexico, 1,205
Mazatlan, Mexico, 1,011
Melbourne, Australia, 7,032
Nagasaki, Japan, 5,572
Nampo, North Korea, 5,711
Newcastle, Australia, 6,456
Nome, Alaska, U.S.A., 2,968
Noumea, New Caledonia, 5,521
Nukualofa, Tonga Islands, 4,633
Ocean Island, 4,553
Pago Pago, American Samoa, 4,163
Papeete, French Polynesia, 3,571
Pearl Harbor, Hawaii, U.S.A., 2,233
Petropavlovsk Kamchatskiy, Russia, 3,615
Prince Rupert, Canada, 1,432
Puerto Armuelles, Panama, 2,645
Puntarenas, Costa Rica, 2,499
Salina Cruz, Mexico, 1,803
San Jose, Guatemala, 2,054
Santa Rosalia, Mexico, 1,192
Seward, Alaska, U.S.A., 2,045
Shanghai, China, 5,810
Sitka, Alaska, U.S.A., 1,640
Surabaya, Indonesia (via Makassar Strait), 7,622
Suva, Fiji Islands, 4,788
Sydney, Australia, 6,511
Valparaiso, Chile, 4,808
Victoria, Canada, 1,091
Vladivostok, Russia, 4,981
Wellington, New Zealand, 5,857
Weonsan, North Korea, 5,181
Yokohama, Japan, 4,839

LOTA, CHILE
(37˚05'40"S., 73˚09'40"W.) to:

Junction Points*

Panama, Panama, 2,825
Punta Arenas, Chile, 1,191

Ports

Acapulco, Mexico, 3,573
Antofagasta, Chile, 828
Arica, Chile, 1,134
Caldera, Chile, 628
Callao, Peru, 1,530
Coquimbo, Chile, 455
Corinto, Nicaragua, 3,081
Esmeraldas, Ecuador, 2,388
Guayaquil, Ecuador, 2,155
Guaymas, Mexico, 4,442
Iquique, Chile, 1,033

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
Grena, 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˚l0'00"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 l/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 Nagayeve.

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
Changjon, 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
Tandjung Uban, Indonesia, 1,075
Tjirebon, Indonesia, 156
Tso-ying, Taiwan, 1,757

MALABO, EQUATORIAL GUINEA
(3˚45'30"N., 8˚46'30"E.) to:

Ports

Boma, Congo, 689
Georgetown, Ascension Island, 1,561
Kribi, Cameroon, 106
Lagos, Nigeria, 384
Lome, Togo, 480
St. Helena Island, 1,472

MALACCA, MALAYSIA
(2˚10'00"N., 102˚14'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,464
Selat Lombok, Indonesia, 1,091
Port Said, Egypt, 4,906
Singapore, 117
Selat Sunda, Indonesia, 619
Torres Strait, Australia, 2,588

Ports

Aden, Yemen, 3,517
Al Basrah, Iraq, 3,771
Al Manamah, Bahrain, 3,534
Albany, Australia, 2,602
Beira, Mozambique, 4,405
Belawan, Indonesia, 253
Berbera, Somalia, 3,531
Bombay, India, 2,327
Bushehr, Iran, 3,590
Calcutta, India, 1,523
Calicut, India, 1,827
Colombo, Sri Lanka, 1,458
Dar es Salaam, Tanzania, 3,927
Diego Garcia, Chagos Archipelago, 2,078
Durban, South Africa, 4,757
East London, South Africa, 4,967
Fort Dauphin, Madagascar, 3,860
Jakarta, Indonesia, 613
Kakinada, India, 1,478
Karachi, Pakistan, 2,768
Madras, India, 1,470
Majunga, Madagascar, 3,730
Maputo, Mozambique, 4,654
Mocambique, Mozambique, 3,965
Mombasa, Kenya, 3,872
Mosselbaai, South Africa, 5,269
Penang, Malaysia, 252
Port Louis, Mauritius, 3,215
Rangoon, Burma, 986
Sabang, Indonesia, 486
Surabaya, Indonesia, 881
Tamatave, Madagascar, 3,560
Victoria, Seychelles, 2,952
Zanzibar, Tanzania, 3,945

MALAGA, SPAIN
(3˚42'44"N., 4˚27'00"W.) to:

Junction Points*

Port Said, Egypt, 1,873
Strait of Gibraltar, 78

Ports

Alexandria, Egypt, 1,752
Algiers, Algeria, 368
Alicante, Spain, 248
Ancona, Italy, 1,510
Annaba, Algeria, 607
Banghazi, Libya, 1,286
Banzart, Tunisia, 699
Barcelona, Spain, 464
Bari, Italy, 1,303
Beirut, Lebanon, 1,964
Brindisi, Italy, 1,245
Cartagena, Spain, 189
Catania, Sicily, 1,012
Derince, Turkey, 1,785
Genova, Italy, 798
Ghazaouet, Algeria, 158
Haifa, Israel, 1,961
Iraklion, Kriti, 1,446
Istanbul, Turkey, 1,752
Izmir, Turkey, 1,597
La Spezia, Italy, 821
Livorno, Italy, 817
Marseille, France, 641
Melilla, Morocco, 116
Mers el Kebir, Algeria, 194
Messina, Sicily, 979
Napoli, Italy, 932
Odessa, Ukraine, 2,100
Oran, Algeria, 195
Palermo, Sicily, 870
Palma, Balearic Islands, 401
Piraievs, Greece (south of Greece), 1,438
Piraievs, Greece (via Corinth Canal), 1,381
Rijeka, Croatia, 1,578
Savona, Italy, 783
Sibenik, Croatia, 1,452
Siracusa, Sicily, 985
Split, Croatia, 1,436
Tarabulus, Libya, 1,024
Taranto, Italy, 1,198
Tarragona, Spain, 431
Thessaloniki, Greece, 1,646
Toulon, France, 652
Trieste, Italy, 1,611
Valencia, Spain, 334
Valletta, Malta, 928
Venezia, Italy, 1,621
Villa Sanjurjo, Morocco, 93
Volos, Greece, 1,587

MALAKAL, PALAU ISLANDS
(7˚20'00"N., 134˚26'30"E.) to:

Junction Points*

Panama, Panama, 8,674
Singapore (via Basilan Strait), 2,006

Ports

Apia, Samoa, 3,446
Apra, Guam, 706
Brisbane, Australia, 2,642
Ho Chi Minh, Vietnam, 1,801
Honolulu, Hawaii, U.S.A., 3,997
Kodiak, Alaska, U.S.A., 4,579
Manila, Philippines (via Verde Island Passage and San Bernardino strait), 1,044
Noumea, New Caledonia, 2,612
Ponape, Caroline Islands, 1,418
Surabaya, Indonesia, 1,656
Suva, Fiji Islands, 3,041
Yokohama, Japan, 1,731

MALDOGADO, URUGUAY
(3˚56'00"S., 55˚00'00"W.) to:

Junction Points*

Panama, Panama, 5,352
Punta Arenas, Chile, 1,321

Ports

Santos, Brazil, 1,172

MALMO, SWEDEN
(55˚37'00"N., 13˚00'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 205
Skagens Odde, Denmark, 155

Ports

Oslo, Norway, 278
Stockholm, Sweden (via Drogen Channel), 435
Stockholm, Sweden (via Flint Channel), 422

MALTEPE, TURKEY
(40˚54'00"N., 29˚08'00"E.) Add 5 miles to Istanbul distances for Ports outside of the Black Sea and Sea of Marmara.

MANAUS, BRAZIL
(3˚08'00"S., 60˚01'00"W.) Add 920 miles to Belem distances.

MANCHESTER, ENGLAND
(53˚29'00"N., 2˚14'00"W.) Add 39 miles to Liverpool distances.

MANDAL, NORWAY
(58˚01'30"N., 7˚27'20"E.) to:

Junction Points*

Pentland Firth, Scotland, 351
Skagens Odde, Denmark, 110

Ports

Bergen, Norway, 201
London, England, 503
Oslo, Norway, 177

MANFREDONIA, ITALY
(41˚37'15"N., 15˚55'30"E.) to:

Junction Points*

Port Said, Egypt, 1,045
Strait of Gibraltar, 1,419

Ports

Ancona, Italy, 195
Dubrovnik, Croatia, 117
Durres, Albania, 161

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

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 Proliv 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
Pulupandan, 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 BURAYQAH, 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˚l9'10"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
Piraievs, Greece (south of Greece), 1,069
Piraievs, 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

MASNEDSUND, DENMARK
(55˚59'48"N., 11˚52'36"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 149
Skagens Odde, Denmark, 122

Ports

Gdynia, Poland, 330
Stockholm, Sweden, 531
Swinoujscie, Poland, 193

MASSAWA, ETHIOPIA
(15˚36'45"N., 39˚28'30"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,341
Cape Leeuwin, Australia, 5,345
Port Said, Egypt, 1,041
Singapore, 4,020
Torres Strait, Australia (via Eight Degree Channel), 6,420

Ports

Aden, Yemen, 400
Al Aqabah, Jordan, 897
Al Basrah, Iraq, 2,372
Bombay, India, 2,050
Calcutta, India, 3,695
Colombo, Sri Lanka, 2,481
Jiddah, Saudi Arabia, 364
Karachi, Pakistan, 1,865
Mombasa, Kenya, 2,006
Port Darwin, Australia (via One and Half Degree Channel), 5,749
Port Sudan, Sudan, 306
Rangoon, Burma, 3,705

MATADI, CONGO
(5˚49'00"S., 13˚27'00"E.) to:

Ports

Bata, Equatorial Guinea, 663
Calabar, Nigeria, 818
Cape Town, South Africa, 1,827
Longji, Cameroon, 731
Mayumba, Gabon, 282
Port Nolloth, South Africa, 1,559
Swakopmund, South Africa, 1,144
Victoria, Cameroon, 770

MATAGORDA BAY, TEXAS, U.S.A.
(28˚20'00"N., 96˚23'00"W.) to:

Junction Points*

Panama, Panama, 1,558
Straits of Florida, 754
Yucatan Channel, 729

Ports

Belize, Belize, 957
Tampico, Mexico, 380
Tuxpan, Mexico, 445
Veracruz, Mexico, 549

MATANZAS, CUBA
(23˚03'30"N., 81˚33'30"W.) to:

Junction Points*

Straits of Florida, 119
Yucatan Channel, 241

Ports

Antilla, Cuba, 407
Cienfuegos, Cuba, 526
Guantanamo, Cuba, 553
Hamilton, Bermuda, 1,131
Kingston, Jamaica, 717
New Orleans, Louisiana, U.S.A., 641
New York, New York, U.S.A., 1,167
Philadelphia, Pennsylvania, U.S.A., 1,147
Port au Prince, Haiti, 617
Puerto Padre, Cuba, 330
San Juan, Puerto Rico, 931
Santo Domingo, Dominican Republic, 901
Tampa, Florida, U.S.A. (via Northwest Channel), 325
Tampico, Mexico, 914

MATARANI, PERU
(16˚59'36"S., 72˚07'12"W.) to:

Junction Points*

Panama, Panama, 1,790
Punta Arenas, Chile, 2,380
Torres Strait, Australia, 8,324
Wilson Promontory, Australia (via 30˚S.), 7,398
Wilson Promontory, Australia (via 40˚S.), 7,154

Ports

Antofagasta, Chile, 423
Callao, Peru, 462

MATHEW TOWN, GREAT INAGUA ISLAND
(20˚57'30"N., 73˚40'40"W.) to:

Junction Points*

Fastnet Rock, Ireland, 3,467

Ports

Belize, Belize, 902
New York, New York, U.S.A. (via Crooked Island Passage), 1,205

MATRUH, EGYPT
(31˚22'30"N., 27˚14'30"E.) to:

Junction Points*

Port Said, Egypt, 281
Strait of Gibraltar, 1,695

Ports

Banghazi, Libya, 267
Haifa, Israel, 410
Iraklion, Kriti, 308

MAYAQUEZ, PUERTO RICO
(18˚13'21"N., 67˚11'50"W.) to:

Junction Points*

Bishop Rock, England, 3,504
Cape of Good Hope, South Africa, 5,823
Fastnet Rock, Ireland, 3,409
Grand Banks South, 1,752
Ile d'Ouessant, France, 3,536
Panama, Panama, 910
Punta Arenas, Chile, 5,991
Strait of Gibraltar, 3,471
Straits of Florida, 968

Ports

Abraham Bay, Bahamas, 411
Belem, Brazil, 1,688
Dakar, Senegal, 2,960
Freetown, Sierra Leone, 3,293
Georgetown, Guyana, 938
Halifax, Canada, 1,628
Horta, Azores, 2,419
New York, New York, U.S.A., 1,527
Portland, Maine, U.S.A., 1,535

MAYPORT, FLORIDA, U.S.A.
(30˚23'42"N., 81˚25'54"W.)
Subtract 18 miles from Jacksonville distances.

MAZATLAN, MEXICO
(23˚10'15"N., 106˚26'30"W.) to:

Junction Points*

Panama, Panama, 2,006

Ports

Acapulco, Mexico, 595
Amapala, Honduras, 1,350
Champerico, Guatemala, 1,078
Guaymas, Mexico, 388
Los Angeles, California, U.S.A., 1,011
Manzanillo, Mexico, 297
San Diego, California, U.S.A., 939
San Francisco, California, U.S.A., 1,337
San Jose, Guatemala, 1,149
Yokohama, Japan, 5,782

MEGARA, GREECE
(37˚58'37"N., 23˚21'33"E.) to:

Junction Points*

Port Said, Egypt, 617
Strait of Gibraltar (south of Greece), 1,541

Ports

Algiers, Algeria, 1,077
Alicante, Spain, 1,240
Arzew, Algeria, 1,253
Barcelona, Spain, 1,162
Cagliari, Sardinia, 814
Kerch, Ukraine, 801
La Spezia, Italy, 942
Navarino Bay, Greece, 194
Split, Croatia, 684
Tangier, Morocco, 1,511
Toulon, France, 1,036
Tubruq, Libya, 368

MELBOURNE, AUSTRALIA
(37˚49'15"S., 144˚56'00"E.) to:

Junction Points*

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

Ports

Adelaide, Australia, 512
Albany, Australia, 1,363
Apia, Samoa, 2,834
Apra, Guam, 3,631
Auckland, New Zealand, 1,649
Avarua, Cook Islands, 3,090
Bluff Harbor, New Zealand, 1,211
Burnie Harbor, Australia, 223
Dunedin, New Zealand, 1,309
Dutch Harbor, Alaska, U.S.A., 6,321
Hobart, Tasmania, 472
Honolulu, Hawaii, U.S.A., 4,942
Jaluit, Marshall Islands, 3,181
Launceston, Tasmania, 246
Levuka, Fiji Islands, 2,274
Los Angeles, California, U.S.A., 7,032
Lyttelton, New Zealand, 1,518
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
Piraievs, 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
Piraievs Greece (south of Greece), 496
Piraievs Greece (via Corinth Canal), 414
Pozzuoli, Italy, 177
Preveza, Greece, 274
Rethimnon, Kriti, 479
Rijeka, Croatia, 603
Salerno, Italy, 158
Savona, Italy, 496
Sete, France, 636
Sibenik, Croatia, 477
Siracusa, Sicily, 75
Soudha, Kriti, 473
Split, Croatia, 462
Tarabulus, Libya, 344
Taranto, Italy, 223
Thessaloniki, Greece (south of Greece), 704
Thessaloniki, Greece (via Corinth Canal), 663
Toulon, France, 546
Trapani, Sicily, 177
Trieste, Italy, 637
Tunis, Tunisia, 302
Valencia, Spain, 764
Valletta, Malta, 156
Venezia, Italy, 647
Volos Greece (south of Greece), 645
Volos Greece (via Corinth Canal), 604

METHIL, SCOTLAND
(56˚11'00"N., 3˚00'00"W.) to:

Junction Points*

Bishop Rock, England, 698
Pentland Firth, Scotland, 246

Ports

London, England, 407

MIAMI, FLORIDA, U.S.A.
(25˚47'00"N., 80˚11'00"W.) to:

Junction Points*

Bishop Rock, England, 3,634
Cape of Good Hope, South Africa, 6,685
Fastnet Rock, Ireland, 3,578
Inishtrahull, Ireland, 3,618
Pentland Firth, Scotland, 3,856
Straits of Florida, 217
Yucatan Channel, 387

Ports

Belize, Belize, 734
Charlotte Amalie, Virgin Islands, 991
Cienfuegos, Cuba (via Windward Passage), 947
Cienfuegos, Cuba (via Yucatan Channel), 671
Colon, Panama (via Windward Passage), 1,249
Colon, Panama (via Yucatan Channel), 1,214
Elizabeth Harbor, Bahamas, 354
Georgetown, Guyana, 1,788
Guantanamo, Cuba, 582
Halifax, Canada, 1,413
Hamilton, Bermuda, 956
Kingston, Jamaica, 746
La Habana, Cuba, 216
Nassau, Bahamas, 191
Pointe a Pitre, Guadeloupe, 1,247
Port au Prince, Haiti, 643
Port of Spain, Trinidad, 1,482
Port Castries, St. Lucia, 1,352
Recife, Brazil, 3,500
San Juan, Puerto Rico, 960
Santiago de Cuba, Cuba, 630
Santo Domingo, Dominican Republic, 930

MIDDLEFART, DENMARK
(55˚30'30"N., 9˚44'14"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 84
Skagens Odde, Denmark, 186

Ports

Gdynia, Poland, 396
Goteborg, Sweden, 173
Lubeck, Germany, 149

MIDDLESBROUGH, ENGLAND
(54˚34'45"N., 1˚13'00"W.) to:

Junction Points*

Bishop Rock, England, 591
Pentland Firth, Scotland, 326

Ports

Leith, Scotland, 133
London, England, 293

MIDWAY ISLAND, NORTH PACIFIC
(28˚13'00"N., 177˚22'00"W.) to:

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

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 Bashrah, 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
Piraievs, 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 l/2 miles to Paramaribo distances.

MOGADISHU, SOMALIA
(2˚01'21"N., 45˚21'02"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,855
Port Said, Egypt, 2,493
Singapore, 3,611

Ports

Aden, Yemen, 1,106
Mombasa, Kenya, 502

MOGPO, SOUTH KOREA
(34˚46'45"N., 126˚23'00"E.) to:

Junction Points*

Selat Lombok, Indonesia, 2,725
Singapore, 2,407
Selat Sunda, Indonesia, 2,760
Selat Wetar, Indonesia (via Molucca Passage), 2,632

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 1,330
Balikpapan, Kalimantan, Indonesia, 2,308
Bangkok, Thailand, 2,438
Busan, South Korea, 225
Dagu, China (south of Kasa Do), 536
Dalian, China (south of Kasa Do), 377
Hakodate, Japan, 897
Ho Chi Minh, Vietnam, 1,904
Hong Kong, China, 1,049
Honolulu, Hawaii, U.S.A., 4,146
Incheon, South Korea (south of Ka Do), 236
Incheon, South Korea (via Myondo Do), 189
Jakarta, Indonesia, 2,741
Lo hsing-ta Mao-ti, China, 665
Makassar, Sulawesi, 2,483
Manila, Philippines (east of Taiwan), 1,338
Nagasaki, Japan, 261
Nampo, North Korea (south of Kasa Do), 320
Nampo, North Korea (via Myondo Sudo), 288
Osaka, Japan, 544
Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 1,943
Petropavlovsk-Kamchatskiy, Russia (via Myongyangdo), 1,923
Port Darwin, Australia, 2,916
Qingdao, China, 336
Qinhuangdao China (south of Kasa Do), 484
San Francisco, California, U.S.A., 5,125
Shanghai, China (via South Channel), 369
Tongyeong, South Korea, 189
Vladivostok, Russia, 726
Weihai, China (south of Kasa Do), 308
Weonsan, North Korea, 530
Xiamen, China, 790
Yantai, China (south of Kasa Do), 342
Yeosu, South Korea, 151
Yokohama, Japan, 838

MOHAMMEDIA, MOROCCO
(33˚42'52"N., 7˚23'52"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,951
Ile d'Ouessant, France, 944

Ports

Dakar, Senegal, 1,338
Tangier, Morocco, 158

MOI RANA, NORWAY
(66˚18'31"N., 14˚06'57"E.) to:

Junction Points*

Bishop Rock, England (via Dover Strait), 1,382
Ile d'Ouessant, France, 1,367
Nord-Ostsee-Kanal (East Entrance), Germany, 971
Pentland Firth, Scotland, 685
Skagens Odde, Denmark, 776

Ports

Bergen, Norway, 474
Brevik, Norway, 762
Hammerfest, Norway, 433
Hull, England, 908
Oslo, Norway, 824
Reykjavik, Iceland, 1,0l0
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), 2,681
Fastnet 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

Argentia, 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 Cabot Strait), 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˚l0'00"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˚l0'00"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
Hvalfjordhur, 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
Seydhisfjordhur, Iceland, 1,173
Stavanger, Norway, 1,199
Qaanaaq (Thule), Greenland, 3,462
Trondheim, Norway, 875

MURORAN, JAPAN
(42˚19'20"N., 140˚58'40"E.) to:

Ports

Bukhta Shelikhova, Kuril Islands, Russia, 859
Hachinohe, Japan, 123
Hakodate, Japan, 64
Kastka, Japan, 401
Kawasaki, Japan, 551
Matsuga-hana, Japan, 310
Moji, Japan (via Shimonoseki Strait), 736
Osaka, Japan, 834
Sasebo, Japan (via Korean Strait), 831
Shimonoseki, Japan, 736
Tokyo, Japan, 557
Tomari, Japan, 295

MUTRAH, OMAN
(23˚38'13"N., 58˚34'50"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,487
Cape Leeuwin, Australia, 4,760
Selat Lombok, Indonesia, 3,982
Port Said, Egypt, 2,289
Singapore, 3,207
Selat Sunda, Indonesia, 3,364
Torres Strait, Australia, 5,590

Ports

Aden, Yemen, 1,254
Al Basrah, Iraq, 847
Belawan, Indonesia, 2,866
Karachi, Pakistan, 496
Malacca, Malaysia, 3,068
Penang, Malaysia, 2,902

MYRTLE GROVE, LOUISIANA, U.S.A.
(29˚38'32"N., 89˚56'50"W.)
Subtract 34 miles from New Orleans distances.

NAESTVED, DENMARK
(55˚13'33"N., 11˚45'24"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 74
Skagens Odde, Denmark, 212

Ports

Gdynia, Poland, 383
Goteborg, Sweden, 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
Piraievs, Greece (south of Greece), 667
Piraievs, Greece (via Corinth Canal), 586
Port Vendres, France, 521
Porto di Milazzo, Sicily, 54
Porto Vecchio di Piombino, Italy, 227
Reggio Di Calabria, Sicily, 179
Rijeka, Croatia, 775
Savona, Italy, 350
Sete, France, 515
Sibenik, Croatia, 648
Siracusa, Sicily, 247
Split, Croatia, 633
Tarabulus, Libya, 516
Taranto, Italy, 395
Thessaloniki, Greece (south of Greece), 876
Thessaloniki, Greece (via Corinth Canal), 834
Toulon, France, 424
Trapani, Italy, 198
Trieste, Italy, 808
Tunis, Tunisia, 313
Valencia, Spain, 690
Valletta, Malta, 327
Venezia, Italy, 818
Villa San Giovanni, Italy, 173
Villefranche, France, 369
Volos, Greece (south of Greece), 817
Volos, Greece (via Corinth Canal), 775

NARSARSUAQ, GREENLAND
(61˚09'45"N., 45˚27'45"W.) to:

Junction Points*

Pentland Firth, Scotland, 1,384
Strait of Gibraltar, 2,257

Ports

Churchill, Canada, 1,513
Reykjavik, Iceland, 830
St. John's, Canada, 916

NARVIK, NORWAY
(68˚25'30"N., 17˚25'00"E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 1,505
Ile d'Ouessant, France, 1,498

Ports

Aberdeen, England, 869
Antwerp, Belgium, 1,211
Bergen, Norway, 824
Bremerhaven, Germany, 1,058
Dundee, England, 920
Le Havre, France, 1,304
Leith, England, 948
London, England, 1,215
Longyearbyen, Svalbard, 659
Oslo, Norway, 993
Pechenga, Russia, 500
Philadelphia, Pennsylvania, U.S.A., 3,911
Rotterdam, Netherlands, 1,139
Stavanger, Norway, 713
Stockholm, Sweden, 1,612
Teesport, England, 993
Trondheim, Norway, 408

NASIPIT, PHILIPPINES
(8˚59'27"N., 125˚20'03"E.) to:

Junction Points*

Honshu, Japan, 1,770
Selat Lombok, Indonesia, 1,332

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
Piraievs, Greece, 142

NEGAPPATTINAM, INDIA
(10˚46'00"N., 79˚55'00"E.) to:

Junction Points*

Singapore, 1,568

Ports

Colombo, Sri Lanka, 476

NELSON, NEW ZEALAND
(41˚14'00"S., 173˚15'00"E.) to:

Junction Points*

Cape Leeuwin, Australia, 2,794
Torres Strait, Australia, 2,646

Ports

Auckland, New Zealand, 633
Brisbane, Australia, 1,380
Sydney, Australia, 1,166

NEVELS'K, RUSSIA
(46˚40'00"N., 141˚51'00"E.) to:

Ports

Akita, Japan, 450
Hakodate, Japan, 389
Korsakov, Sakhalin, Russia, 115
Niigata, Japan, 549
Otaru, Japan, 213

NEW AMSTERDAM, GUYANA
(6˚25'00"N., 57˚28'36"W.) to:

Junction Points*

Panama, Panama, 1,581
Yucatan Channel, 1,907

Ports

Belem, Brazil, 859
Charlotte Amalie, Virgin Islands, 903
Port of Spain, Trinidad, 437

NEW HAVEN, CONNECTICUT, U.S.A.
(41˚17'24"N., 75˚54'30"W.) to:

Junction Points*

Inishtrahull, Ireland, 2,867
Panama, Panama, 2,106
Strait of Gibraltar, 3,161

Ports

Halifax, Canada, 540
La Habana, Cuba, 1,280

NEW LONDON, CONNECTICUT, U.S.A.
(41˚21'30"N., 72˚05'30"W.) to:

Junction Points*

Bishop Rock, England, 2,849
Fastnet Rock, Ireland, 2,727
Inishtrahull, Ireland, 2,831
Pentland Firth, Scotland, 3,041
Strait of Gibraltar, 3,106

Ports

Bordeaux, France, 3,153
Hamilton, Bermuda, 667

NEW MANGALORE, INDIA
(12˚5'32"N., 74˚48'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,523
Cape Leeuwin, Australia, 3,695
Selat Lombok, Indonesia, 2,939
Port Said, Egypt, 3,091
Singapore, 2,124
Selat Sunda, Indonesia, 2,308
Torres Strait, Australia, 4,549

Ports

Al Basrah, Iraq, 1,907
Bombay, India, 402
Calcutta, India, 1,487
Colombo, Sri Lanka, 495
Okha, India, 659
Trincomalee, Sri Lanka, 703
Victoria, Seychelles, 1,562

NEW ORLEANS, LOUISIANA, U.S.A.
(29˚57'00"N., 90˚03'30"W.) to:

Junction Points*

Panama, Panama (via South Pass), 1,433
Straits of Florida (via South Pass), 524
Yucatan Channel, 577

Ports

Barranquilla, Colombia, 1,458
Belize, Belize (via South Pass), 850
Bocas del Toro, Panama (via South Pass and inside route), 1,353
Campeche, Mexico (via Southwest Pass), 650
Carmen, Mexico, 723
Cartagena, Colombia, 1,468
Coatzacoalcos, Mexico, 801
Colon, Panama, 1,389
La Habana, Cuba (via South Pass), 602
Maracaibo, Venezuela (via South Pass), 1,629
Matanzas, Cuba, 641
Progreso, Mexico, 556
Puerto Barrios, Guatemala, 961
Puerto Cortes, Honduras (via South Pass), 916
San Juan del Norte, Nicaragua, 1,262
Tampico, Mexico (via Southwest Pass), 711
Tela, Honduras, 915
Tuxpan, Mexico (via Southwest Pass), 739
Veracruz, Mexico (via Southwest Pass), 789

NEW PLYMOUTH, NEW ZEALAND
(39˚02'08"S., 174˚02'30"E.) to:

Junction Points*

Panama, Panama, 6,712
Punta Arenas, Chile (via 50˚S), 4,690
Torres Strait, Australia, 2,502
Wilson Promontory, Australia, 1,282

Ports

Hobart, Tasmania, 1,213
Kobe, Japan (via Bougainville Strait), 4,946
Melbourne, Australia (via west of Timor), 1,410
Suva, Fiji Islands, 1,317
Sydney, Australia, 1,124
Yokohama, Japan (via Bougainville Strait), 4,881

NEW WESTMINSTER, CANADA
(49˚12'00"N., 122˚54'30"W.) to:

Ports

Nanaimo, Canada, 47
Port Angeles, Washington, U.S.A., 90
Prince Rupert, Canada, 492
Seattle, Washington, U.S.A., 126

NEW YORK, NEW YORK, U.S.A.
(40˚42'00"N., 74˚01'00"W.) to:

Junction 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
Argentia, Canada, 1,009
Arkhangel'sk, Russia (Clear of general maximum winter solid pack ice in the vicinity of Iceland), 4,320
Arkhangel'sk, Russia, 4,216
Bahia de Samana, Dominican Republic, 1,328
Bahia Blanca, Argentina, 6,154
Bahia Honda, Cuba (outside), 1,226
Banes, Cuba (via Crooked Island Passage), 1,216
Baracoa, Cuba, 1,226
Barranquilla, Colombia, 1,801
Basse-Terre, Guadeloupe (via Anegada Channel), 1,624
Basseterre, Saint Kitts and Nevis, 1,531
Belem, Brazil, 3,015
Bilbao, Spain, 3,160
Bocas del Toro, Panama (via Crooked Island Passage), 2,048
Boma, Congo, 5,591
Bordeaux, France, 3,241
Brest, France, 3,022
Bridgetown, Barbados, 1,829
Buenos Aires, Argentina, 5,871
Cadiz, Spain, 3,155
Cap-Haitien, Haiti, 1,283
Cape Town, South Africa, 6,786
Cartagena, Colombia (via Crooked Island Passage), 1,853
Charlotte Amalie, Virgin Islands, 1,434
Charlottetown, Canada (via Strait of Canso), 832
Christiansted, Virgin Islands (via Virgin Passage), 1,465
Cienfuegos, Cuba (via Crooked Island Passage), 1,682
Colon, Panama (via Crooked Island Passage), 1,974
Colon, Panama (via Yucatan Channel), 2,176
Corunna, Spain, 2,917
Dakar, Senegal, 3,335
Elizabeth Harbor, Bahamas, 1,048
Fernando de Noronha, 3,517
Fort de France, Martinique (via Anegada Channel), 1,717
Fort Liberte, Haiti, 1,283
Fortaleza, Brazil, 3,304
Freetown, Sierra Leone, 3,757
Funchal, Madeira Island, 2,761
Georgetown, Ascension Island, 4,395
Georgetown, Guyana, 2,317
Gibara, Cuba (via Crooked Island Passage), 1,216
Gonaives, Haiti, 1,328
Grand Turk, Grand Turk Island, 1,167
Guantanamo, Cuba (via Crooked Island Passage), 1,312
Halifax, Canada, 600
Hamilton, Bermuda, 697
Horta, Fayal, Azores, 2,098
Isabel Segunda, Isla de Vieques, 1,430
Ivittuut, Greenland, 1,933
Jacmel, Haiti, 1,489
Kingston, Jamaica (via Crooked Island Passage), 1,474
Kingstown, St. Vincent, 1,791
La Ceiba, Honduras, 1,743
La Guaira, Venezuela (via Mona Passage), 1,848
La Habana, Cuba, 1,186
Lagos, Nigeria, 4,883
Las Cayes, Haiti, 1,447
Las Palmas, Canary Islands, 2,965
Las Piedras, Venezuela, 1,796
Limon, Costa Rica (via Crooked Island Passage), 2,047
Lisboa, Portugal, 2,980
Liverpool, Canada, 536
Luanda, Angola, 5,670
Luderitz Bay, Namibia, 6,393
Maracaibo, Venezuela, 1,890
Matanzas, Cuba, 1,167
Mathew Town, Great Inagua Island (via Crooked Island Passage), 1,205
Monrovia, Liberia, 3,965
Montecristi, Dominican Republic, 1,265
Montevideo, Uruguay, 5,753
Murmansk, Russia (north of Iceland), 3,844
Murmansk, Russia (south of Iceland), 3,948
Nassau, Bahamas (via Northwest Providence Channel), 962
Natal, Brazil, 3,541
Nuevitas, Cuba (via Crooked Island Passage), 1,274
Oporto, Portugal, 2,953
Paamiut (Frederikshaab), Greenland, 1,959
Paramaribo, Suriname, 2,334
Parrsboro, Canada, 591
Plymouth, Montserrat, 1,574
Pointe a Pitre, Guadeloupe, 1,652
Ponce, Puerto Rico (via Mona Passage), 1,462
Ponta Delgada, Azores, 2,246
Porlamar, Venezuela (via Virgin Passage), 1,879
Port au Prince, Haiti (via Crooked Island Passage), 1,372
Port of Spain, Trinidad (via Virgin Passage), 1,939
Port Antonio, Jamaica (via Crooked Island Passage), 1,423
Port Castries, St. Lucia, 1,747
Porto Grande, Cape Verde Islands, 2,913
Praia Da Vitoria, Terceira, Azores, 2,173
Progreso, Mexico, 1,609
Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,804
Puerto Cortes, Honduras (via Straits of Florida, southbound), 1,764
Puerto Manati, Cuba, 1,244
Qaqortoq (Julianehaab), Greenland, 1,911
Recife, Brazil, 3,698
Reykjavik, Iceland, 2,495
Rio de Janeiro, Brazil, 4,770
Roosevelt Roads, Puerto Rico, 1,429
Salvador, Brazil, 4,089
San Juan del Norte, Nicaragua (via Crooked Island Passage), 2,032
San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,047
San Juan, Puerto Rico, 1,399
Santa Barbara de Samana, Dominican Republic, 1,334
Santa Cruz de Tenerife, Canary Islands, 2,936
Santa Marta, Colombia (via Crooked Island Passage), 1,783
Santiago de Cuba, Cuba (via Crooked Island Passage), 1,362
Santo Domingo, Dominican Republic, 1,489
Santos, Brazil, 4,957
Sint Nicolaashaven, Aruba (via Mona Passage), 1,761
Sint Nicolaashaven, Aruba (via Windward Passage), 1,805
St. John, Canada (via Vineyard Sound and Long Island Sound), 486
St. John, Canada (Nantucket Light Buoy), 545
St. John's, Canada, 1,093
St. John's, Antigua (via Anegada Channel), 1,572
St. Pierre, Martinique (via Anegada Channel), 1,705
Sydney, Canada, 808
Vigo, Spain, 2,914
Villa do Porto, Azores, 2,279
Vitoria, Brazil, 4,507
Walvisbaai, Namibia, 6,228
Willemstad, Curacao, 1,771
Yarmouth, Canada (Nantucket Light Buoy), 464
Yarmouth, Canada (via Pollok Rip Channel), 440

NEWARK, NEW JERSEY, U.S.A.
(40˚42'00"N., 74˚09'00"W.) See Port Newark.

NEWCASTLE, AUSTRALIA
(32˚55'30"S., 151˚47'00"E.) to:

Junction Points*

Panama, Panama, 7,654

Ports

Los Angeles, California, U.S.A., 6,456
Portland, Oregon, U.S.A., 6,833
San Francisco, California, U.S.A., 6,467

NEWCASTLE, CANADA
(47˚00'04"N., 65˚34'00"W.) Add 4 miles to Chatham distances.

NEWCASTLE, ENGLAND
(54˚58'00"N., 1˚35'00"W.) to:

Junction Points*

Bishop Rock, England, 616
Ile d'Ouessant, France, 604
Nord-Ostsee-Kanal (East Entrance), Germany, 439
Pentland Firth, Scotland, 265
Skagens Odde, Denmark, 445

Ports

Amsterdam, Netherlands, 286
Antwerp, Belgium, 351
Bergen, Norway, 403
Bremerhaven, Germany, 374
Dunkerque, France, 307
Egersund, Norway, 329
Emden, Germany, 329
Esbjerg, Denmark, 349
Hamburg, Germany, 424
Hull, England, 143
Kristiansand, Norway, 376
Le Havre, France, 411
London, England, 325
Oostende, Belgium, 291
Oslo, Norway, 528
Plymouth, England, 524
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 Perouse Strait), 4,913
Qingdao, China, 1,750
San Francisco, California, U.S.A. (via Unimak Pass), 4,099
Seattle, Washington, U.S.A. (via Unimak Pass), 3,748
Shanghai, China, 1,742
Sovetskaya Gavan, Russia (via South Channel), 276
Tomari, Japan, 694
Xiamen, China (via South Channel), 2,138
Zaliv Urkt, Russia (north of Sakhalin), 209

NOME, ALASKA, U.S.A.
(64˚29'00"N., 165˚25'00"W.) to:

Junction Points*

Panama, Panama, 5,834

Ports

Apra, Guam, 3,686
Auckland, New Zealand, 6,159
Callao, Peru, 6,578
Cordova, Alaska, U.S.A., 1,409
Hakodate, Japan, 2,347
Hong Kong, China, 4,145
Honolulu, Hawaii, U.S.A. (via Unimak Pass), 2,674
Los Angeles, California, U.S.A., 2,968
Manila, Philippines, 4,379
Pago Pago, American Samoa, 4,748
Petropavlovsk-Kamchatskiy, Russia, 1,317
Pevek, Russia, 700
Prince Rupert, Canada, 1,846
San Francisco, California, U.S.A., 2,636
Sasebo, Japan (via Osumi Kaikyo), 3,373
Seattle, Washington, U.S.A. (via Juan de Fuca Strait), 2,288
Sydney, Australia, 6,280
Valparaiso, Chile, 7,728
Vancouver, Canada, 2,304
Yokohama, Japan, 2,696

NORD-OSTSEE-KANAL (EAST ENTRANCE), GERMANY*
(54˚22'00"N., 10˚09'00"E.) to:

Junction Points*

Bishop Rock, England, 727
Ile d'Ouessant, France, 716
Pentland Firth, Scotland, 565
Skagens Odde, Denmark, 224

Ports

Aalborg, Denmark, 207
Aarhus, Denmark, 131
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
Masnedsund, Denmark, 149
Middlefart, Denmark, 84
Musko Island, Sweden, 473
Naestved, Denmark, 94
Nakskov, Denmark, 46
Newcastle, England, 439
Norrkoping, Sweden, 459
Odense, Denmark, 117
Oostende, Belgium, 364
Ornskolosvik, Sweden, 733
Oulu, Finland, 918
Oxelosund, Sweden, 420
Peenemunde, Germany, 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
Vejle, 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,l65

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

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
Nuevitas, Cuba, 1,076
Parrsboro, Canada, 784
Pointe a Pitre, Guadeloupe, 1,527
Ponta Delgada, Azores, 2,401
Port au Prince, Haiti, 1,178
Port Antonio, Jamaica (via Crooked Island Passage), 1,228
Port Castries, St. Lucia, 1,720
Port of Spain, Trinidad, 1,799
Porto Grande, Cape Verde Islands, 2,971
Puerto Barrios, Guatemala, 1,603
Puerto Cortes, Honduras (via Straits of Florida), 1,568
Recife, Brazil, 3,651
Reykjavik, Iceland, 2,677
Rio de Janeiro, Brazil, 4,723
Salvador, Brazil, 4,042
San Juan del Norte, Nicaragua (via Straits of Florida), 1,846
San Juan del Norte, Nicaragua (via Windward Passage), 1,837
San Juan, Puerto Rico, 1,252
Santa Cruz de Tenerife, Canary Islands, 3,057
Santa Marta, Colombia (via Crooked Island Passage), 1,588
Santiago de Cuba, Cuba, 1,167
Santo Domingo, Dominican Republic, 1,329
Santos, Brazil, 4,910
Sint Nicolaashaven, Aruba (via Mona Passage), 1,600
Sint Nicolaashaven, Aruba (via Windward Passage), 1,611
St. John, Canada, 731
St. John's, Canada, 1,277
Sydney, Canada, 996
Takoradi, Ghana, 4,620
Vigo, Spain, 3,099
Willemstad, Curacao, 1,611
Yarmouth, Canada, 656

NORRKOPING, SWEDEN
(58˚36'00"N., 16˚12'54"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 459
Skagens Odde, Denmark, 520

Ports

Helsinki, Finland, 307
Riga, Latvia, 300
Stockholm, Sweden, 143

NOUADHIBOU, MAURITANIA
(20˚52'40"N., 17˚00'12"W.) to:

Junction Points*

Bishop Rock, England, 1,812
Cape of Good Hope, South Africa, 4,379
Fastnet Rock, Ireland, 1,865
Grand Banks South, 2,104
Ile d'Ouessant, France, 1,770
Inishtrahull, Ireland, 2,133
Panama, Panama, 3,697
Pentland Firth, Scotland, 2,437
Punta Arenas, Chile, 5,296
Strait of Gibraltar, 1,160
Straits of Florida, 3,667
Yucatan Channel, 3,985

Ports

Accra, Ghana, 1,756
Boma, Congo, 2,666
Casablanca, Morocco, 936
Dakar, Senegal, 373
Freetown, Sierra Leone, 850
Galway, Ireland, 1,979
Greenville, Liberia, 1,166
Lisboa, Portugal, 1,149
Monrovia, Liberia, 1,061
Port of Spain, Trinidad, 2,634
Tangier, Morocco, 1,085
Vigo, Spain, 1,352

NOUAKCHOTT, MAURITANIA
(18˚02'02"N., 16˚02'02"W.) to:

Junction Points*

Bishop Rock, England, 2,044
Cape of Good Hope, South Africa, 4,248
Fastnet Rock, Ireland, 2,068
Grand Banks South, 2,275
Ile d'Ouessant, France, 1,971
Inishtrahull, Ireland, 2,335
Panama, Panama, 3,752
Pentland Firth, Scotland, 2,637
Punta Arenas, Chile, 5,164
Strait of Gibraltar, 1,329
Straits of Florida, 3,777
Yucatan Channel, 4,052

Ports

Accra, Ghana, 1,605
Boma, Congo, 4,250
Cape Town, South Africa, 5,547
Casablanca, Morocco, 1,114
Dakar, Senegal, 217
Freetown, Sierra Leone, 699
Galway, Ireland, 2,167
Lagos, Nigeria, 1,823
New York, New York, U.S.A., 3,256
Port of Spain, Trinidad, 2,674
Qua Iboe, Nigeria, 2,078
Recife, Brazil, 1,252
Sassandra, Ivory Coast, 1,250
Vigo, Spain, 1,530
Villa Cisneros, Western Sahara, 367

NOUMEA, NEW CALEDONIA
(22˚16'30"S., 166˚27'00"E.) to:

Junction Points*

Panama, Panama, 6,982
Punta Arenas, Chile (composite sailing with 49˚S. the limiting latitude), 5,745
Punta Arenas, Chile (via great circle), 5,527
Torres Strait, Australia (via Raine Island entrance), 1,622

Ports

Apia, Samoa, 1,371
Apra, Guam, 2,528
Auckland, New Zealand, 998
Avarua, Cook Islands, 1,887
Baie Taio-Hae, Marquesa Islands, 3,183
Baker Island, 1,707
Bowen, Australia, 1,342
Brisbane, Australia, 807
Cairns Harbor, Australia, 1,250
Callao, Peru, 6,541
Dagu, China, 4,667
Dunedin, New Zealand, 1,552
Dutch Harbor, Alaska, U.S.A., 4,857
Funafuti, Tuvalu, 1,132
Guayaquil, Ecuador, 6,686
Hakodate, Japan (via Canal Woodin and Canal de la Havannah), 4,176
Hobart, Tasmania, 1,604
Hong Kong, China, 4,107
Honolulu, Hawaii, U.S.A., 3,371
Kodiak, Alaska, U.S.A., 5,281
Lae, Papua New Guinea, 1,519
Lele, Caroline Islands, 1,722
Levuka, Fiji Islands, 776
Los Angeles, California, U.S.A., 5,521
Mackay, Australia, 1,253
Malakal, Palau Islands, 2,612
Manila, Philippines, 3,616
Melbourne, Australia, 1,595
Midway Island, 3,207
Nagasaki, Japan (via Bougainville Strait), 3,967
Nukualofa, Tonga Islands, 1,059
Pago Pago, American Samoa (via Kandavu Passage), 1,416
Papeete, French Polynesia, 2,497
Petropavlovsk-Kamchatskiy, Russia, 4,587
Ponape, Caroline Islands, 1,892
Port Augusta, Australia, 2,179
Qingdao, China, 4,416
Rabaul, Papua New Guinea, 1,383
Raoul, Kermadec Islands, 957
Rockhampton, Australia, 902
Rotoava, Iles Tuamotu, 2,737
San Diego, California, U.S.A., 5,491
San Francisco, California, U.S.A., 5,410
Seattle, Washington, U.S.A., 5,760
Shanghai, China, 4,185
Sitka, Alaska, U.S.A., 5,613
Suva, Fiji Islands, 734
Sydney, Australia, 1,069
Talomako, Vanuatu, 524
Townsville, Australia, 1,155
Truk, Caroline Islands, 2,068
Valparaiso, Chile, 6,115
Vladivostok, Russia, 4,590
Wake Island, Pacific, 2,551
Wallaroo, Australia, 2,099
Wotje Island, Marshall Islands, 1,972
Xiamen, China, 4,031
Yap Island, Caroline Islands, 2,568
Yokohama, Japan (via Bougainville Strait), 3,837

NOVOROSSIYSK, RUSSIA
(44˚43'00"N., 037˚47'00"E.) to:

Junction Points*

Port Said, Egypt, 1,260
Strait of Gibraltar (south of Greece), 2,277
Strait of Gibraltar (via Corinth Canal), 2,260

Ports

Bat'umi, Georgia, 255
Constanta, Romania, 403
Istanbul, Turkey, 460
Odessa, Ukraine, 369
Thessaloniki, Greece, 794

NUEVA GERONA, CUBA
(21˚55'00"N., 82˚48'00"W.)
Subtract 82 miles from Surgidero de Batabano distances.

NUEVA PALMIRA, URUGUAY
(33˚52'54"S., 58˚25'28"W.) Add 155 miles to Montevideo distances.

NUEVITAS, CUBA
(21˚32'40"N., 77˚12'40"W.) to:

Junction Points*

Straits of Florida, 386
Yucatan Channel, 528

Ports

Abraham Bay, Bahamas, 243
Bahia de Samana, Dominican Republic, 510
Baltimore, Maryland, U.S.A. (via Florida Strait), 1,187
Boston, Massachusetts, U.S.A., 1,447
Caibarien, Cuba, 181
Casilda, Cuba (via Windward Passage), 610
Charleston, South Carolina, U.S.A., 750
Cienfuegos, Cuba, 649
Fort de France, Martinique, 1,035
Fort Liberte, 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 Masnedsund distances.

OAKLAND, CALIFORNIA, U.S.A.
(37˚48'12"N., 122˚19'30"W.)
Add 3 miles to San Francisco distances.

OCEAN ISLAND, PACIFIC
(0˚52'30"S., 169˚35'00"E.) to:

Junction Points*

Panama, Panama, 6,724

Ports

Honolulu, Hawaii, U.S.A., 2,480
Los Angeles, California, U.S.A., 4,553
Pago Pago, American Samoa, 1,409
Papeete, French Polynesia, 2,609
San Francisco, California, U.S.A., 4,406
Seattle, Washington, U.S.A., 4,611
Suva, Fiji Islands, 1,207
Yokohama, Japan, 2,761

ODENSE, DENMARK
(55˚24'40"N., 10˚23'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 117
Skagens Odde, Denmark, 126

Ports

Gdynia, Poland, 438
Stockholm, Sweden, 609
Swinoujscie, Poland, 293

ODESSA, UKRAINE
(46˚29'47"N., 30˚44'40"E.) to:

Junction Points*

Port Said, Egypt, 1,152
Strait of Gibraltar, 2,169

Ports

Alexandria, Egypt, 1,090
Algiers, Algeria, 1,741
Alicante, Spain, 1,908
Ancona, Italy (south of Greece), 1,407
Ancona, Italy (via Corinth Canal), 1,310
Annaba, Algeria, 1,516
Banghazi, Libya, 1,064
Banzart, Tunisia, 1,411
Barcelona, Spain (south of Greece), 1,737
Barcelona, Spain (via Corinth Canal), 1,793
Bari, Italy (south of Greece), 1,200
Bari, Italy (via Corinth Canal), 1,103
Bat'umi, Georgia, 569
Beirut, Lebanon, 1,194
Brindisi, Italy, 1,142
Cartagena, Spain, 1,932
Ceuta, Morocco, 2,150
Civitavecchia, Italy (south of Greece), 1,456
Civitavecchia, Italy (via Corinth Canal), 1,414
Constanta, Romania, 186
Genova, Italy (south of Greece), 1,639
Genova, Italy (via Corinth Canal), 1,598
Gibraltar (south of Greece), 2,152
Gibraltar (via Corinth Canal), 2,135
Haifa, Israel, 1,197
Iraklion, 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
Shimonoseki, Japan, 81
Ube, Japan, 69
Yokohama, Japan, 489
Yokoshima, Japan, 116
Yokosuka, Japan, 483

OKHA, INDIA
(22˚28'30"N., 69˚05'15"E.) to:

Junction Points*

Port Said, Egypt, 2,887

Ports

Bombay, India, 341
Colombo, Sri Lanka, 1,183
Karachi, Pakistan, 194
Garmgao, India, 533

OKHA, SAKHALIN, RUSSIA
(53˚34'00"N., 143˚05'00"E.) to:

Ports

Bukhta, Nagayeva, Russia, 441
Nikolayevsk-Na-Amure, Russia (north of Sakhalin), 209

OLBIA, SARDINIA
(40˚55'18"N., 9˚31'24"E.) to:

Junction Points*

Port Said, Egypt, 1,278
Strait of Gibraltar, 828

Ports

Banzart, Tunisia, 236
Genova, Italy, 221
Napoli, Italy, 222

OLONGAPO, PHILIPPINES
(14˚49'00"N., 120˚16'30"E.) to:

Junction Points*

Singapore, 1,335

Ports

Apra, Guam (north of Luzon), 1,663
Ho Chi Minh, Vietnam, 872
Hong Kong, China, 580
Kuching, Sarawak, 992
Pago Pago, American Samoa (via San Bernardino Strait), 4,622

OLYMPIA, WASHINGTON, U.S.A.
(47˚03'06"N., 122˚54'18"W.)
Add 44 miles to Seattle distances.

ONEGA, RUSSIA
(63˚54'00"N., 38˚06'00"E.) Add 102 miles to Arkhangel'sk distances.

OOSTENDE, BELGIUM
(51˚14'00"N., 2˚55'00"E.) to:

Junction Points*

Bishop Rock, England, 400
Ile d'Ouessant, France, 365
Nord-Ostsee-Kanal (East Entrance), Germany, 364
Pentland Firth, Scotland, 509
Skagens Odde, Denmark, 489

Ports

Aberdeen, Scotland, 406
Amsterdam, Netherlands, 117
Antwerp, Belgium, 79
Bergen, Norway, 563
Bremerhaven, Germany, 299
Cherbourg, France, 203
Dundee, Scotland, 398
Egersund, Norway, 447
Emden, Germany, 242
Esbjerg, Denmark, 328
Hartlepool, England, 265

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

Hull, England, 207
Inverness, Scotland, 510
Kristiansand, Norway, 453
Le Havre, France, 168
Leith, Scotland, 396
London, England, 123
Newcastle, England, 291
Oslo, Norway, 596
Plymouth, England, 288
Portland, England, 214
Portsmouth, England, 174
Rotterdam, Netherlands, 86
Southampton, England, 192
Stavanger, Norway, 488
Wilhelmshaven, Germany, 286

OPORTO, PORTUGAL
(41˚08'30"N., 8˚41'00"W.) to:

Junction Points*

Ile d'Ouessant, France, 494
Strait of Gibraltar, 432

Ports

Cadiz, Spain, 399
Dakar, Senegal, 1,682
Freetown, Sierra Leone, 2,161
Funchal, Madeira Island, 650
Lisboa, Portugal, 176
New York, New York, U.S.A., 2,923
Ponta Delgada, Azores, 815
Puerto de Pasajes, Spain, 473
Santa Cruz de Tenerife, Canary Islands, 849
Vigo, Spain, 74

OPUA, NEW ZEALAND
(35˚18'50"S., 174˚07'25"E.) to:

Junction Points*

Panama, Panama, 6,675
Punta Arenas, Chile (via 50˚S), 4,760
Torres Strait, Australia, 2,472
Wilson Promontory, Australia, 1,419

Ports

Auckland, New Zealand, 115
Chimbote, Peru, 5,911
Hobart, Tasmania, 1,431
Honolulu, Hawaii, U.S.A., 3,753
Los Angeles, California, 5,625
Seattle, Washington, U.S.A., 6,218
Yokohama, Japan, 4,742

ORAN, ALGERIA
(35˚42'52"N., 0˚38'00"W.) to:

Junction Points*

Port Said, Egypt, 1,711
Strait of Gibraltar, 282

Ports

Alcudia, Balearic Islands, 281
Alexandria, Egypt, 1,590
Algeciras, Spain, 229
Algiers, Algeria, 205
Alicante, Spain, 159
Ancona, Italy, 1,349
Annaba, Algeria, 444
Banghazi, Libya, 1,124
Banzart, Tunisia, 538
Barcelona, Spain, 365
Bari, Italy, 1,142
Beirut, Lebanon, 1,803
Brindisi, Italy, 1,084
Cagliari, Sardinia, 525
Cannes, France, 594
Cartagena, Spain, 115
Ceuta, Morocco, 232
Civitavecchia, Italy, 703
Genova, Italy, 686
Gibraltar, 237
Haifa, Israel, 1,800
Iraklion, Kriti, 1,284
Istanbul, Turkey (south of Greece), 1,590
Istanbul, Turkey (via Corinth Canal), 1,573
Izmir, Turkey (south of Greece), 1,436
Izmir, Turkey (via Corinth Canal), 1,418
La Spezia, Italy, 701
Livorno, Italy, 691
Malaga, Spain, 195
Marseille, France, 536
Melilla, Morocco, 120
Messina, Sicily, 818
Napoli, Italy, 775
Odessa, Ukraine, 1,939
Palermo, Sicily, 709
Palma, Balearic Islands, 281
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
Flekkefjorden, Norway, 219
Fredrikstad, Norway, 57
Gdansk, Poland (via Store Baelt), 657
Gdansk, Poland (via The Sound), 540
Goteborg, Sweden, 159
Hakonsvern, Norway, 371
Halmstad, Sweden, 225
Hamburg, Germany, 461
Hammerfest, Norway, 1,187
Helsingborg, Sweden, 250
Helsingor, Denmark, 249
Hirtshals, Denmark, 145
Hull, England, 559
Kalmar, Sweden (via Store Baelt), 596
Kalmar, Sweden (via The Sound), 464
Klaipeda, Lithuania (via Store Baelt and south of Bornholm), 716
Klaipeda, Lithuania (via The Sound), 584
Kobenhavn, Denmark, 272
Kragero, Norway, 95
Kristiansand, Norway, 163
Kristiansund, Norway, 539
Landskrona, Sweden, 26l
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
Jailut, 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
Piraievs, Greece (south of Greece), 612
Piraievs, Greece (via Corinth Canal), 531
Porto di Milazzo, Sicily, 97
Reggio Di Calabria, Sicily, 124
Rijeka, Croatia, 719
Salerno, Italy, 167
Savona, Italy, 434
Sibenik, Croatia, 593
Siracusa, Sicily, 192
Split, Croatia, 578
Tarabulus, Libya, 460
Taranto, Italy, 339
Terracina, Italy, 191
Thessaloniki, Greece (south of Greece), 820
Thessaloniki, Greece (via Corinth Canal), 779
Toulon, France, 464
Trieste, Italy, 753
Tunis, Tunisia, 193
Valencia, Spain, 656
Valletta, Malta, 242
Venezia, Italy, 763
Villa San Giovanni, Italy, 118
Volos, Greece (south of Greece), 761
Volos, Greece (via Corinth Canal), 720

PALM BEACH, FLORIDA, U.S.A.
(26˚46'18"N., 80˚01'32"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,771
Grand Banks South, 1,743
Montreal, Canada, 2,360
Panama, Panama, 1,312
Punta Arenas, Chile, 6,920
Strait of Gibraltar, 3,824
Straits of Florida, 300

Ports

Accra, Ghana, 4,937
Casablanca, Morocco, 3,709
Dakar, Senegal, 3,585
Halifax, Canada, 1,336
Hamilton, Bermuda, 862

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

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
Piraievs, Greece (via Corinth Canal), 1,049
Piraievs (south of Greece), 1,131
Rijeka, Croatia, 1,238
Sant Antioco Ponti, Sardinia, 298
Savona, Italy, 433
Sibenik, Croatia, 1,112
Siracusa, Sicily, 668
Split, Croatia, 1,096
St. Raphael, France, 347
Tarabulus, Libya, 708
Taranto, Italy, 858
Tarragona, Spain, 131
Thessaloniki, Greece (south of Greece), 1,339
Thessaloniki, Greece (via Corinth Canal), 1,297
Toulon, France, 308
Trieste, Italy, 1,271
Tunis, Tunisia, 435
Valencia, Spain, 146
Valletta, Malta, 619
Venezia, Italy, 1,281
Volos, Greece (south of Greece), 1,280
Volos, Greece (via Corinth Canal), 1,238

PALUA, VENEZUELA
(8˚21'45"N., 62˚41'30"W.)
Subtract 2 miles from Puerto Ordaz distances.

PANAMA, PANAMA*
(8˚53'00"N., 79˚31'00"W.) to:

Junction Points*

Bishop Rock, England (via Mona Passage), 4,388
Cape of Good Hope, South Africa, 6,466
Fastnet Rock, Ireland (via Mona Passage), 4,247
Grand Banks South, 2,555
Honshu, Japan, 7,614
Ile d'Ouessant, France (via Mona Passage), 4,374
Montreal, Canada, 3,204
Punta Arenas, Chile, 3,932
Singapore (via San Bernardino Strait), 10,505
Strait of Gibraltar (via Anegada Channel), 4,351
Torres Strait, Australia (via Raine Island entrance), 8,451
Tsugaru-Kaikyo, Japan, 8,004
Wilson Promontory, Australia (via Cook Strait), 7,842
Wilson Promontory, Australia (via Foveaux Strait), 7,770
Yucatan Channel, 855

Ports

Abraham Bay, Bahamas, 922
Acajutla, El Salvador, 833
Acapulco, Mexico, 1,426
Almirante, Panama, 198
Amapala, Honduras, 745
Amuay, Venezuela, 678
Angra dos Reis, Brazil, 4,557
Antilla, Cuba, 887
Antofagasta, Chile, 2,140
Apia, Samoa, 5,710
Apra, Guam, 7,988
Arica, Chile, 1,921
Auckland, New Zealand, 6,516
Avarua, Cook Islands, 5,092
Bahia de Samana, Dominican Republic, 1,015
Bahia Blanca, Argentina, 5,776
Bahia de las Calderas, Dominican Republic, 810
Baie Taio-Hae, Marquesa Islands, 3,826
Moa, Cuba, 853
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,944
Barahona, Dominican Republic, 796
Barbers Point, Hawaii, U.S.A., 4,694
Barcelona, Venezuela, 1,014
Belize, Belize, 859
Bikini, Marshall Islands, 4,915
Boca de Tanamo, Cuba, 869
Bocas del Toro, Panama, 187
Bordeaux, France (via Mona Passage), 4,641
Boston, Massachusetts, U.S.A. (via Crooked Island Passage), 2,200
Bridgeport, Connecticut, U.S.A., 2,118
Bridgetown, Barbados, 1,280
Brisbane, Australia, 7,687
Brunswick, Georgia, U.S.A., 1,581
Buenaventura, Colombia, 352
Cabedelo, Brazil, 3,149
Caibarien, Cuba, 1,138
Caldera, Chile, 2,302
Caleta Olivia, Argentina, 6,204
Callao, Peru, 1,350
Campeche, Mexico, 1,210
Cap-Haitien, Haiti, 860
Cape Town, South Africa, 6,508
Carmen, Mexico, 1,289
Cartagena, Colombia, 324
Casilda, Cuba, 792
Catia la Mar, Venezuela, 873
Champerico, Guatemala, 954
Charleston, South Carolina, U.S.A., 1,607
Charlotte Amalie, Virgin Islands, 1,072
Charlottetown, Canada, 2,578
Chimbote, Peru, 1,158
Christmas Island, Line Islands, 4,751
Cienfuegos, Cuba, 815
Coatzacoalcos, Mexico, 1,420
Colon, Panama, 44
Comodoro Rivadavia, Argentina, 6,185
Coquimbo, Chile, 2,448
Corinto, Nicaragua, 683
Covenas, Colombia, 308
Dagu, China (via Osumi Kaikyo), 9,002
Dagu, China (via Tsugaru-Kaikyo), 8,786
Dakar, Senegal, 3,738
Dalian, China (via Osumi Kaikyo), 8,843
Dalian, China (via Tsugaru-Kaikyo), 8,627
Dutch Harbor, Alaska, U.S.A., 5,246
Enderbury Island, Phoenix Islands, 5,599
Eniwetak, Marshall Islands, 7,086
Ensenada, Mexico, 2,791
Esmeraldas, Ecuador, 472
Fanning Island, 4,805
Fort de France, Martinique, 1,202
Fort Liberte, Haiti, 881
Funafuti, Tuvalu, 6,217
Galveston, Texas, U.S.A., 1,536
Georgetown, Guyana, 1,558
Golfito, Costa Rica, 334
Gonaives, Haiti, 805
Guantanamo, Cuba, 732
Guayaquil, Ecuador, 824
Guaymas, Mexico, 2,370
Guiria, Venezuela, 1,200
Gulfport, Mississippi, U.S.A. (northbound), 1,431
Hakodate, Japan, 7,417
Halifax, Canada, 2,338
Hamilton, Bermuda, 1,702
Hilo, Hawaii, U.S.A., 4,527
Ho Chi Minh, Vietnam, 10,017
Hobart, Tasmania, 7,630
Hong Kong, China, 9,195
Honolulu, Hawaii, U.S.A., 4,685
Iloilo, Philippines, 9,235
Incheon, South Korea, 8,474
Iquique, Chile, 1,987
Isabel Segunda, Isla de Vieques, 1,060
Jacksonville, Florida, U.S.A., 1,559
Jaluit, Marshall Islands, 6,666
Jarvis Island, 1,173
Johnston Island, 5,359
Kahului, Hawaii, U.S.A., 4,605
Kaneohe Bay, Hawaii, U.S.A., 4,686
Kaunakakai, Hawaii, U.S.A., 4,633
Key West, Florida, U.S.A., 1,108
Kingston, Jamaica, 594
Kobe, Japan, 7,964
Kodiak, Alaska, U.S.A., 4,907
La Ceiba, Honduras, 709
La Guaira, Venezuela, 884
La Libertad, Ecuador, 674
La Libertad, El Salvador, 806
La Palma, Panama, 104
La Romana, Dominican Republic, 889
La Union, El Salvador, 748
Les Cayes, Haiti, 688
Levuka, Fuji Islands, 6,288
Limon, Costa Rica, 234
Los Angeles, California, U.S.A., 2,913
Lota, Chile, 2,825
Lucea, Jamaica, 579
Makassar, Sulawesi (via Selat Sagewin and Selat Salajar), 9,855
Malakal, Palau Islands, 8,674
Manila, Philippines (via Balintang Channel), 9,347
Manila, Philippines (via San Bernardino Strait), 9,370
Manzanillo, Cuba, 732
Mar del Plata, Argentina, 5,543
Maracaibo, Venezuela, 737
Matagorda Bay, Texas, U.S.A., 1,558
Matarani, Peru, 1,790
Mazatlan, Mexico, 2,006
Melbourne, Australia (via Foveaux Strait), 7,928
Midway Island, 5,707
Miller Anchorage, Bahamas, 1,115
Montecristi, Dominican Republic, 881
Monterey, California, U.S.A., 3,165
Montevideo, Uruguay, 5,379
Nagasaki, Japan (east of Honshu), 8,200
Nagasaki, Japan (west of Honshu), 8,299
Naknek, Alaska, U.S.A., 5,604
Nassau, Bahamas (via Windward Passage), 1,210
New Amsterdam, Guyana, 1,581
New Haven, Connecticut, U.S.A., 2,106
New Orleans, Louisiana, U.S.A. (northbound via South Pass), 1,444
New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2,018
Newcastle, Australia, 7,654
Nicaro, Cuba, 881
Nikolayevsk-Na-Amure, Russia (south of Aleutian Islands), 7,293
Nikolayevsk-Na-Amure, Russia (via Unimak Passage), 7,296
Nome, Alaska, U.S.A., 5,834
Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,822
Noumea, New Caledonia, 6,982
Nukualofa, Tonga Islands, 5,953
Ocean Island, 6,724
Omura, Japan, 7,766
Oranjestad, Aruba, 661
Osaka, Japan, 7,969
Paamiut (Frederikshaab), Greenland, 3,558
Pago Pago, American Samoa, 5,656
Papeete, French Polynesia, 4,493
Paramaribo, Suriname, 1,691
Paranagua, Brazil, 4,607

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

Pearl Harbor, Hawaii, U.S.A., 4,692
Pedregal, Panama, 308
Petropavlovsk-Kamchatskiy, Russia, 6,492
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked island Passage.), 1,989
Pisco, Peru, 1,458
Pointe a Pitre, Guadeloupe, 1,211
Ponape, Caroline Islands, 7,321
Ponce, Puerto Rico, 976
Port au Prince, Haiti, 817
Port Antonio, Jamaica, 625
Port Castries, St. Lucia, 1,203
Port Hueneme, California, U.S.A., 2,958
Port Limon, Costa Rica, 218
Port Newark, New Jersey, U.S.A., 2,021
Port Pirie, Australia, 8,467
Port of Spain, Trinidad, 1,202
Portland, Maine, U.S.A. (via Crooked Island Passage), 2,241
Portland, Oregon, U.S.A., 3,869
Porto Alegre, Brazil, 5,148
Prince Rupert, Canada, 4,303
Progreso, Mexico, 1,069
Puerto de Hierro, Venezuela, 1,192
Puerto la Cruz, Venezuela, 1,016
Puerto Armuelles, Panama, 306
Puerto Barrios, Guatemala, 823
Puerto Bolivar, 774
Puerto Cabello, Venezuela, 845
Puerto Cabezas, Nicaragua, 390
Puerto Cortez, Honduras, 776
Puerto Deseado, Argentina, 6,222
Puerto Madryn, Argentina, 6,012
Puerto Manati, Cuba, 959
Puerto Montt, Chile, 3,177
Puerto Padre, Cuba, 948
Puerto Sandino, Nicaragua, 649
Puerto Sucre, Venezuela, 1,035
Puerto Vita, Cuba, 915
Punta Cardon, Venezuela, 674
Puntarenas, Costa Rica, 471
Quepos, Costa Rica, 415
Qingdao, China, 8,575
Rabaul, Papua New Guinea, 7,807
Raoul Island, Kermadec Islands, 6,125
Rio Gallegos, Argentina, 6,455
Rio Haina, Dominican Republic, 845
Roosevelt Roads, Puerto Rico, 1,054
Rotoava, Iles Tuamotu, 4,256
Salaverry, Peru, 1,109
Salina Cruz, Mexico, 1,170
Salvador, Brazil, 3,741
San Antonio, Chile, 2,644
San Diego, California, U.S.A., 2,843
San Felix, Venezuela, 1,535
San Francisco, California, U.S.A., 3,245
San Jose, Guatemala, 886
San Juan del Sur, Nicaragua, 590
San Juan, Peru, 1,590
San Juan, Puerto Rico, 1,036
San Lorenzo, Honduras, 762
Santa Barbara, California, U.S.A., 2,980
Santa Cruz del Sur, Cuba, 731
Santa Maria, Cuba, 814
Santa Rosalia, Mexico, 2,390
Santiago de Cuba, Cuba, 726
Santo Domingo, Dominican Republic, 846
Santos, Brazil, 4,609
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,606
Seattle, Washington, U.S.A., 4,020
Seward, Alaska, U.S.A., 4,916
Shanghai, China (via Osumi Kaikyo), 8,648
Shanghai, China (via Tsugaru-Kaikyo), 8,566
Shimonoseki, Japan (east of Honshu), 8,153
Shimonoseki, Japan (west of Honshu), 8,081
Sitka, Alaska, U.S.A., 4,524
Skagway, Alaska, U.S.A., 4,739
St. Gorges, Grenada, 1,161
St. John, Canada, 2,361
St. John's, Canada, 2,742
St. Marc, Haiti, 796
Suva, Fiji Islands, 6,325
Swan Island, Honduras, 605
Sweeper Cove, Alaska, U.S.A., 5,586
Sydney, Australia, 7,674
Talara, Peru, 826
Talcahuano, Chile, 2,805
Taltal, Chile, 2,225
Tampico, Mexico, 1,528
Tela, Honduras, 749
Tocopilla, Chile, 2,068
Truk, Caroline Islands, 7,685
Turbo, Colombia, 311
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 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 l/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

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
Hvalfjordhur, 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
Kangerluarsoruseq, 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
Qasigiannguit, 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 Kurliskiy Proliv and La Perouse Strait), 4,194
Singapore (via Tsugaru-Kaikyo and Formosa Strait), 4,227
Selat Sunda, Indonesia (via Soya Strait), 4,574
Selat Wetar, Australia (via Dampier Strait and Selat Manipa), 4,106

Ports

Aleksandrovsk-Sakhalinskiy, Russia (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 1,158
Apia, Samoa, 4,292
Apra, Guam, 2,475
Auckland, New Zealand, 5,466
Avarua, Cook Islands, 4,951
Bangkok, Thailand, outer bar (via La Perouse Strait), 4,252
Bukhta Nagayeva, Russia, 864
Busan, South Korea (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 1,731
Cebu, Philippines, 3,101
Dagu, China (via La Perouse Strait), 2,419
Dagu, China (via Tsugaru-Kaikyo), 2,444
Dalian, China (via La Perouse Strait), 2,260
Dalian, China (via Tsugaru-Kaikyo), 2,285
Dutch Harbor, Alaska, U.S.A., 1,249
Hakodate, Japan, 1,075
Ho Chi Minh, Vietnam (via Chetvertyy Kuril'skiy Proliv, La Perouse Strait and Korea Strait), 3,718
Hong Kong, China (via Osumi Kaikyo), 2,938
Hong Kong, China (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,863
Hong Kong, China (via Tsugaru-Kaikyo), 2,870
Honolulu, Hawaii, U.S.A., 2,762
Iloilo, Philippines, 3,123
Incheon, South Korea (via La Perouse Strait and Maenggol Sudo), 2,120
Incheon, South Korea (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,114
Incheon, South Korea (via Tsugaru-Kaikyo), 2,138
Jakarta, Indonesia (east of Japan, and via Balintang Channel), 4,530
Jakarta, Indonesia (via La Perouse Strait), 4,555
Jaluit, Marshall Islands, 2,883
Kiska, Alaska, U.S.A., 724
Kobe, Japan, 1,705
Levuka, Fiji Islands, 4,518
Lo hsing-ta Mao-ti, China (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,481
Los Angeles, California, U.S.A., 3,615
Manila, Philippines (east of Japan and via Balintang Channel), 3,112
Manila, Philippines (via Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 3,117
Manila, Philippines (via San Bernardino Strait), 3,256
Manila, Philippines (via Tsugaru-Kaikyo), 3,124
Matsuga-hana, Japan, 765
Midway Island, Pacific, 1,831
Mogpo, South Korea (via La Perouse Strait and Changjuk Sudo), 1,943
Mogpo, South Korea (via 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 Chetvertyy Kuril'skiy Proliv and La Perouse Strait), 2,249
Yantai, China (via Tsugaru-Kaikyo), 2,263
Yokohama, Japan, 1,422

PEVEK, RUSSIA
(69˚43'40"N., 170˚28'00"E.) to:

Ports

Ambarchik, Russia, 201
Nome, Alaska, U.S.A., 700
Provideniya, Russia, 719
Tiksi, Russia., 854

PHILADELPHIA, PENNSYLVANIA, U.S.A.
(39˚57'00"N., 75˚08'00"W.) to:

Junction Points*

Bishop Rock, England, 3,092
Cape of Good Hope, South Africa, 6,874
Fastnet Rock, Ireland, 2,985
Inishtrahull, Ireland, 3,083
Montreal, Canada (via Cabot Strait), 1,671
Panama, Panama, 1,989
Pentland Firth, Scotland, 3,263
Punta Arenas, Chile, 6,994
Strait of Gibraltar, 3,320
Straits of Florida, 1,150
Yucatan Channel (outside route), 1,336

Ports

Antilla, Cuba, 1,197
Argentia, Canada, 1,159
Arkhangel'sk, Russia, 4,369
Bahia Blanca, Argentina, 6,201
Banes, Cuba (via Crooked Island Passage), 1,188
Baracoa, Cuba, 1,198
Belem, Brazil, 2,950
Bocas del Toro, Panama, 2,020
Bordeaux, France, 3,406
Brest, France, 3,183
Bridgetown, Barbados, 1,839
Buenos Aires, Argentina, 5,918
Cadiz, Spain, 3,286
Cap-Haitien, Haiti, 1,245
Cape Town, South Africa, 6,861
Cardenas, Cuba, 1,124
Cartagena, Colombia (via Crooked Island Passage), 1,825
Charlotte Amalie, Virgin Islands, 1,434
Charlottetown, Canada, 982
Cienfuegos, Cuba (via Crooked Island Passage), 1,654
Colon, Panama (via Crooked Island Passage), 1,946
Dakar, Senegal, 3,441
Elizabeth Harbor, Bahamas, 1,018
Fort de France, Martinique (via Anegada Channel), 1,724
Freetown, Sierra Leone, 3,862
Funchal, Madeira Island, 2,901
Georgetown, Ascension Island, 4,469
Georgetown, Guyana, 2,223
Guantanamo, Cuba, 1,284
Halifax, Canada, 746
Hamilton, Bermuda, 746
Ivittuut, Greenland, 2,086
Jacmel, Haiti, 1,461
Kingston, Jamaica (via Crooked Island Passage), 1,446
La Guaira, Venezuela, 1,838
La Habana, Cuba, 1,156
Lagos, Nigeria, 4,985
Las Piedras, Venezuela, 1,786
Les Cayes, Haiti, 1,419
Limon, Costa Rica (via Crooked Island Passage), 2,019
Lisboa, Portugal, 3,112
Liverpool, Canada, 686
Maracaibo, Venezuela (via Windward Passage), 1,849
Matanzas, Cuba, 1,147
Montecristi, Dominican Republic, 1,250
Montevideo, Uruguay, 5,804
Murmansk, Russia, 4,042
Narvik, Norway, 3,880
Nassau, Bahamas, 930
Nuevitas, Cuba, 1,243
Paramaribo, Suriname, 2,327
Parrsboro, Canada, 743
Pointe a Pitre, Guadeloupe, 1,658
Ponce, Puerto Rico, 1,454
Ponta Delgada, Azores, 2,388
Porlamar, Venezuela (via Virgin Passage), 1,878
Port au Prince, Haiti (via Crooked Island Passage), 1,343
Port of Spain, Trinidad, 1,938
Port Antonio, Jamaica (via Crooked Island Passage), 1,395
Port Castries, St. Lucia, 1,753
Porto Grande, Cape Verde Islands, 3,011
Puerto la Cruz, Venezuela, 1,900
Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,774
Puerto Cabello, Venezuela (via Mona Passage), 1,845
Puerto Cortes, Honduras, 1,739
Puerto Sucre, Venezuela, 1,907
Recife, Brazil, 3,745
Reykjavik, Iceland, 2,648
Rio de Janeiro, Brazil, 4,817
Salvador, Brazil, 4,136
San Juan del Norte, Nicaragua (via Crooked Island Passage), 2,004
San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,017
San Juan, Puerto Rico, 1,395
Santa Cruz de Tenerife, Canary Islands, 3,062
Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,755
Santander, Spain, 3,272
Santiago de Cuba, Cuba (via Crooked Island Passage), 1,334
Santo Domingo, Dominican Republic, 1,480
Santos, Brazil, 5,004
Sint Nicolaashaven, Aruba, 1,732
St. Georges, Grenada, 1,848
St. Helena Island, 5,169
St. John, Canada (via Nantucket Light Buoy), 698
St. John, Canada (via Vineyard Sound), 673
St. John's, Canada, 1,254
Sydney, Canada, 958
Vigo, Spain, 3,066
Vitoria, Brazil, 4,554
Walvisbaai, Namibia, 6,318
Willemstad, Curacao, 1,762
Yarmouth, Canada, 616

PHNOM PENH, CAMBODIA
(11˚36'00"N., 104˚54'00"E.) Via Vung Tau pilot station (10˚20'30''N, 107˚04'00''E) Add 157 1/2 miles to Ho Chi Minh distances.

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

Junction Points*

Port Said, Egypt, 4,629
Singapore, 538

Ports

Calcutta, India, 1,124
Colombo, Sri Lanka, 1,192
Penang, Malaysia, 187

PIMENTEL, PERU
(6˚50'00"S., 79˚58'00"W.) to:

Ports

Callao, Peru, 363
Salaverry, Peru, 104
Talara, Peru, 182

PINA, PANAMA
(9˚20'00"N., 80˚05'00"W.) to:

Junction Points*

Yucatan Channel, 816

Ports

Cienfuegos, Cuba, 777
Kingston, Jamaica, 558
San Juan, Puerto Rico, 1,219

PIRAIEVS, GREECE
(37˚56'26"N., 23˚38'08"E.) to:

Junction Points*

Port Said, Egypt, 599
Strait of Gibraltar (south of Greece), 1,508
Strait of Gibraltar (via Corinth Canal), 1,451

Ports

Alexandria, Egypt, 515
Algiers, Algeria (south of Greece), 1,079
Algiers, Algeria (via Corinth Canal), 1,022
Alicante, Spain (south of Greece), 1,246
Alicante, Spain (via Corinth Canal), 1,186
Ancona, Italy (south of Greece), 745
Ancona, Italy (via Corinth Canal), 608
Annaba, Algeria (south of Greece), 854
Annaba, Algeria (via Corinth Canal), 797
Antalya, Turkey, 383
Banghazi, Libya, 404
Banzart, Tunisia (south of Greece), 749
Banzart, Tunisia (via Corinth Canal), 692
Barcelona, Spain (south of Greece), 1,172
Barcelona, Spain (via Corinth Canal), 1,091
Bari, Italy (south of Greece), 538
Bari, Italy (via Corinth Canal), 402
Beirut, Lebanon, 647
Brindisi, Italy (south of Greece), 480
Brindisi, Italy (via Corinth Canal), 343
Cagliari, Sardinia (south of Greece), 820
Cagliari, Sardinia (via Corinth Canal), 738
Cannes, France (south of Greece), 1,023
Cannes, France (via Corinth Canal), 942
Cartagena, Spain (south of Greece), 1,271
Cartagena, Spain (via Corinth Canal), 1,214
Ceuta, Morocco (south of Greece), 1,488
Ceuta, Morocco (via Corinth Canal), 1,431
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
Larnaca, Cyprus, 566
Livorno, Italy (south of Greece), 906
Livorno, Italy (via Corinth Canal), 825
Malaga, Spain (south of Greece), 1,438
Malaga, Spain (via Corinth Canal), 1,381
Marseille, France (south of Greece), 1,069
Marseille, France (via Corinth Canal), 988
Mersin, Turkey, 598
Messina, Sicily (south of Greece), 496
Messina, Sicily (via Corinth Canal), 414
Mitilini, Greece, 191
Napoli, Italy (south of Greece), 667
Napoli, Italy (via Corinth Canal), 586
Navplion, Greece, 142
Odessa, Ukraine, 712
Oran, Algeria (south of Greece), 1,276
Oran, Algeria (via Corinth Canal), 1,219
Palermo, Sicily (south of Greece), 612
Palermo, Sicily (via Corinth Canal), 531
Palma, Balearic Islands (south of Greece), 1,131

Palma, Balearic Islands (via Corinth Canal), 1,049
Preveza, Greece, 197
Rethimnon, Kriti, 151
Rhodes, Greece, 261
Rijeka, Croatia (south of Greece), 814
Rijeka, Croatia (via Corinth Canal), 675
Sarande, Albania, 253
Savona, Italy (south of Greece), 988
Savona, Italy (via Corinth Canal), 906
Sibenik, Croatia (south of Greece), 687
Sibenik, Croatia (via Corinth Canal), 548
Siracusa, Sicily (south of Greece), 484
Siracusa, Sicily (via Corinth Canal), 418
Soudha, Kriti, 159
Split, Croatia (south of Greece), 672
Split, Croatia (via Corinth Canal), 533
Tarabulus, Libya, 640
Taranto, Italy (south of Greece), 493
Taranto, Italy (via Corinth Canal), 363
Thessaloniki, Greece, 259
Toulon, France (south of Greece), 1,038
Toulon, France (via Corinth Canal), 956
Trieste, Italy (south of Greece), 848
Trieste, Italy (via Corinth Canal), 709
Tubruq, Libya, 359
Tunis, Tunisia (south of Greece), 737
Tunis, Tunisia (via Corinth Canal), 680
Valencia, Spain (south of Greece), 1,244
Valencia, Spain (via Corinth Canal), 1,174
Valletta, Malta, 524
Venezia, Italy (south of Greece), 856
Venezia, Italy (via Corinth Canal), 719
Vlores, Albania, 295
Volos, Greece, 200

PISAGUA, CHILE
(19˚34'30"S., 70˚14'00"W.) to:

Junction Points*

Panama, Panama, 1,962

Ports

San Francisco, California, U.S.A., 4,593

PISCO, PERU
(13˚43'30"S., 76˚14'30"W.) to:

Junction Points*

Panama, Panama, 1,458
Punta Arenas, Chile, 2,578

Ports

Acapulco, Mexico, 2,309
Antofagasta, Chile, 713
Arica, Chile, 492
Caldera, Chile, 880
Callao, Peru, 128
Coquimbo, Chile, 1,036
Corinto, Nicaragua, 1,718
Esmeraldas, Ecuador, 1,021
Guayaquil, Ecuador, 788
Guaymas, Mexico, 3,227
Iquique, Chile, 560
Lota, Chile, 1,432
Monterey, California, U.S.A., 4,017
Puntarenas, Costa Rica, 1,533
Salina Cruz, Mexico, 2,117
San Diego, California, U.S.A., 3,695
San Francisco, California, U.S.A., 4,097
San Jose, Guatemala, 1,875
Santa Barbara, California, U.S.A., 3,832
Talcahuano, Chile, 1,411
Valparaiso, Chile, 1,207

PITEA, SWEDEN
(65˚17'40"N., 21˚28'20"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 864
Skagens Odde, Denmark, 925

Ports

Gdynia, Poland, 678
Sankt-Peterburg, Russia, 678
Stockholm, Sweden, 402

PLOCE, CROATIA
(43˚03'00"N., 17˚25'42"E.) to:

Junction Points*

Port Said, Egypt, 1,132
Strait of Gibraltar, 1,487

Ports

Ancona, Italy, 167
Durres, Albania, 214
Rijeka, Croatia, 230

PLYMOUTH, ENGLAND
(50˚21'40"N., 4˚09'10"W.) to:

Junction Points*

Bishop Rock, England, 106
Ile d'Ouessant, France, 117
Nord-Ostsee-Kanal (East Entrance), Germany, 639
Skagens Odde, Denmark, 756

Ports

Aberdeen, Scotland, 638
Amsterdam, Netherlands, 390
Antwerp, Belgium, 366
Bergen, Norway, 819
Bremerhaven, Germany, 573
Calais, France, 244
Dieppe, France, 206
Dover, England, 229
Dundee, Scotland, 621
Dunkerque, France, 264
Egersund, Nor way, 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
Nuevitas, Cuba, 398
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage), 1,395
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,012

PORT ARTHUR, TEXAS, U.S.A.
(29˚52'00"N., 93˚56'00"W.) to:

Junction Points*

Straits of Florida, 677
Yucatan Channel, 681

Ports

Cienfuegos, Cuba (via Yucatan Peninsula), 976
Coatzacoalcos, Mexico, 708

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
Shimonoseki, Japan (via Selat Sele), 2,883
Sitka, Alaska, U.S.A., 6,338
Tamatave, Madagascar, 4,702
Tanga, Tanzania, 5,466
Tjilatjap, Indonesia, 1,321
Truk, Caroline Islands (via Selat Sele), 2,142
Victoria, Seychelles, 4,494
Vinh Cam Ranh, Vietnam, 2,169
Vladivostok, Russia (via Higashi Suido), 3,426
Vladivostok, Russia (via Selat Sele), 3,445
Wake Island, 3,187
Weonsan, North Korea, 3,242
Wyndham, Australia, 274
Xiamen, China, 2,411
Yampi Sound, Australia, 1,457
Yokohama, Japan (via Selat Sele), 2,989
Zamboanga, Philippines, 1,303
Zanzibar, Tanzania, 5,452

PORT DES GALETS, REUNION ISLAND
(20˚55'15"S., 55˚17'30"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,120
Cape Leeuwin, Australia, 3,241
Port Said, Egypt, 3,747
Singapore, 3,450

Ports

Durban, South Africa, 1,418

PORT ETIENNE, MAURITANIA
(20˚40'00"N., 17˚04'12"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,018
Ile d'Ouessant, France, 1,826

Ports

Casablanca, Morocco, 1,032
Dakar, Senegal, 394

PORT EVERGLADES, FLORIDA, U.S.A.
(26˚05'36"N., 80˚04'48"W.) See Fort Lauderdale.

PORT GENTIL, GABON
(0˚43'00"S., 8˚47'30"E.) to:

Ports

Boma, Congo, 470
Cabinda, Cabinda, 393
Douala, Cameroon, 29
Kribi, Cameroon, 231
Pointe Noire, Congo, 341

PORT HARCOURT, NIGERIA
(4˚46'15"N., 7˚00'12"E.) to:

Junction Points*

Ile d'Ouessant, France, 3,974

Ports

Freetown, Sierra Leone, 1,397
Horta, Azores, 3,391
Lagos, Nigeria, 318
Luanda, Angola, 941
Pointe Noire, Congo, 677

PORT HEDLAND, AUSTRALIA
(20˚17'45"S., 118˚34'50"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,225
Cape Leeuwin, Australia, 1,104
Selat Lombok, Indonesia, 715
Port Said, Egypt, 6,187
Selat Sunda, Indonesia, 1,208
Torres Strait, Australia, 1,637

Ports

Aden, Yemen, 4,800
Bombay, India, 3,702
Busan, South Korea (via west of Timor and Korea Strait), 3,484
Colombo, Sri Lanka, 2,833
Fremantle, Australia, 972
Geraldton, Australia, 769
San Francisco, California, U.S.A. (via west of Timor), 7,646

PORT HUENEME, CALIFORNIA, U.S.A.
(34˚09'00"N., 119˚12'24"W.) to:

Junction Points*

Panama, Panama, 2,958

Ports

Ensenada, Mexico, 194
Honolulu, Hawaii, U.S.A., 2,170
Sweeper Cove, Alaska, U.S.A., 2,686
Vancouver, Canada, 1,102

PORT KAMSAR, GUINEA
(10˚39'00"N., 14˚37'00"W.) to:

Junction Points*

Bishop Rock, England, 2,560
Cape of Good Hope, South Africa, 3,294
Fastnet Rock, Ireland, 2,625
Grand Banks South, 2,701
Ile d'Ouessant, France, 2,520
Inishtrahull, Ireland, 2,925
Panama, Panama, 3,863
Pentland Firth, Scotland, 3,256
Punta Arenas, Chile, 5,098
Strait of Gibraltar, 1,867
Straits of Florida, 3,984
Yucatan Channel, 4,143

Ports

Abidjan, Ivory Coast, 834
Agadir, Morocco, 1,422
Belem, Brazil, 2,171
Bordeaux, France, 2,493
Buenos Aires, Argentina, 3,747
Cape Town, South Africa, 3,274
Dakar, Senegal, 330
Freetown, Sierra Leone, 153
Galway, Ireland, 2,692
Libreville, Gabon, 1,652
Monrovia, Liberia, 372
New York, New York, U.S.A., 3,634
San Juan, Puerto Rico, 3,018
Tangier, Morocco, 1,788
Villa Cisneros, Western Sahara, 892

PORT KELANG, MALAYSIA
(3˚00'00"N., 101˚24'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,369
Port Said, Egypt, 4,817
Singapore, 220

Ports

Aden, Yemen, 3,430
Akyab, Sittwe Harbor, Burma, Bombay, India, 2,238
Chittagong, Bangladesh, 1,311
Rangoon, Burma, 911
Trincomalee, Sri Lanka, 1,253

PORT KEMBLA, AUSTRALIA
(34˚28'30"S., 150˚53'00"E.) to:

Junction Points*

Selat Lombok, Indonesia, 3,388
Torres Strait, Australia, 1,817

Ports

Hobart, Tasmania, 593
Nukualofa, Tonga Islands, 1,987
Wellington, New Zealand, 1,229

PORT LAVACA, TEXAS, U.S.A.
(28˚35'44"N., 96˚33'51"W.) See Point Comfort.

PORT LEGASPI, PHILIPPINES
(13˚09'00"N., 123˚45'30"E.) See Legaspi Port.

PORT LINCOLN, AUSTRALIA
(34˚43'00"S., 135˚52'00"E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,100
Torres Strait, Australia, 2,811

Ports

Albany, Australia, 953
Hobart, Tasmania, 830
Melbourne, Australia, 588

PORT LOUIS, MAURITIUS
(20˚09'15"S., 57˚29'45"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,266
Cape Leeuwin, Australia, 3,165
Singapore, 3,333
Torres Strait, Australia, 4,933

Ports

Aden, Yemen, 2,341
Albany, Australia, 3,340
Beira, Mozambique, 1,448
Belawan, Indonesia, 2,997
Bombay, India, 2,517
Calcutta, India, 3,212
Colombo, Sri Lanka, 2,098
Durban, South Africa, 1,560
Fort Dauphin, Madagascar, 654
Fremantle, Australia (north of Mauritius), 3,202
Fremantle, Australia (south of Mauritius), 3,217
Malacca, Malaysia, 3,215
Maputo, Mozambique, 1,448
Penang, Malaysia, 3,042
Port Adelaide, Australia, 4,323
Port Darwin, Australia (north of Scott Reef), 4,252
Port Darwin, Australia (south of Scott Reef), 4,246
Sabang, Indonesia, 2,731
Tamatave, Madagascar, 474
Victoria, Seychelles, 943
Wellington, New Zealand, 5,900
Zanzibar, Tanzania, 1,388

PORT MORESBY, PAPUA NEW GUINEA
(9˚28'45"S., 147˚08'40"E.) to:

Junction Points*

Panama, Panama, 8,292
Punta Arenas, Chile (via 50˚S.), 6,897
Torres Strait, Australia, 339
Wilson Promontory, Australia, 2,287

Ports

Gladstone Harbor, Australia, 1,389
Koniya, Ryukyu Islands, 3,063
Lae, Papua New Guinea, 1,044
Mackay, Australia, 1,168
Port Pirie, Australia, 2,754
Townsville, Australia, 595

PORT NADOR, MOROCCO
(35˚17'00"N., 2˚56'00"W.) See Melilla.

PORT NECHES, TEXAS, U.S.A.
(29˚59'35"N., 93˚56'20"W.) Add 13 miles to Port Arthur distances.

PORT NEWARK, NEW JERSEY, U.S.A.
(40˚42'00"N., 74˚09'00"W.) For ocean distances, add 4 1/2 miles to New York distances.

PORT OF SPAIN, TRINIDAD
(10˚38'45"N., 61˚31'00"W.) to:

Junction Points*

Bishop Rock, England, 3,603
Cape of Good Hope, South Africa, 5,393
Inishtrahull, Ireland, 3,706
Montreal, Canada (via Cabot Strait), 2,901
Panama, Panama, 1,202
Pentland Firth, Scotland, 3,913
Punta Arenas, Chile, 5,430
Strait of Gibraltar, 3,403
Straits of Florida (via Mona Passage), 1,533
Yucatan Channel, 1,517

Ports

Baltimore, Maryland, U.S.A., 1,918
Barcelona, Venezuela, 218
Basseterre, Saint Kitts and Nevis, 419

Belem, Brazil, 1,212
Belize, Belize, 1,637
Boston, Massachusetts, U.S.A., 2,022
Bridgetown, Barbados (via Boca Grande), 211
Brunswick, Georgia, U.S.A., 1,694
Campeche, Mexico, 1,913
Cap-Haitien, Haiti, 888
Cape Town, South Africa, 5,387
Carmen, Mexico, 1,992
Cartagena, Colombia, 932
Carupano, Venezuela, 109
Catia la Mar, Venezuela, 335
Charleston, South Carolina, U.S.A., 1,682
Charlotte Amalie, Virgin Islands, 518
Cienfuegos, Cuba, 1,310
Coatzacoalcos, Mexico, 2,137
Colon, Panama, 1,159
Covenas, Colombia, 968
Dakar, Senegal, 2,628
Elizabeth Harbor, Bahamas, 1,170
Freetown, Sierra Leone, 2,896
Funchal, Madeira Island, 2,819
Georgetown, Guyana (via Serpents Mouth), 376
Guantanamo, Cuba, 987
Halifax, Canada, 2,059
Hamilton, Bermuda, 1,346
Horta, Azores, 2,461
Isabel Segunda, Isla de Vieques, 531
Jacksonville, Florida, U.S.A., 1,685
Key West, Florida, U.S.A. (via Mona Passage and Old Bahama Channel), 1,484
Kingston, Jamaica, 1,003
La Guaira, Venezuela (south of Isla de Margarita), 329
La Habana, Cuba (via Old Bahama Channel and Mona Passage), 1,494
Lagos, Nigeria, 3,950
Limon, Costa Rica, 1,313
Lisboa, Portugal, 3,287
Miami, Florida, U.S.A., 1,482
Monrovia, Liberia, 3,045
New Amsterdam, Guyana, 437
New York, New York, U.S.A. (via Virgin Passage), 1,939
Norfolk, Virginia, U.S.A., 1,799
Oranjestad, St. Eustatius, 432
Paramaribo, Suriname, 546
Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,938
Pointe a Pitre, Guadeloupe, 358
Port au Prince, Haiti, 1,053
Port Castries, St. Lucia (east of Grenadine Islands), 231
Port Castries, St. Lucia (west of Grenadine Islands), 230
Portsmouth, New Hampshire, U.S.A., 2,024
Puerto la Cruz, Venezuela, 214
Puerto Cabello, Venezuela, 395
Puerto Cortes, Honduras, 1,599
Puerto Sucre, Venezuela, 200
Punta Cardon, Venezuela, 574
Rio de Janeiro, Brazil, 3,271
Roosevelt Roads, Puerto Rico, 525
San Juan del Norte, Nicaragua, 1,342
San Juan, Puerto Rico, 574
Santa Cruz de Tenerife, Canary Islands, 2,804
Santo Domingo, Dominican Republic, 681
Savannah, Georgia, U.S.A., 1,714
Sint Nicolaashaven, Aruba, 515
St. Georges, Grenada, 102
St. John, Canada, 2,113
St. John's, Canada, 2,288
St. John's, Antigua, 411
Sydney, Canada, 2,189
Takoradi, Ghana, 3,632
Turiamo, Venezuela, 384
Tuxpan, Mexico, 2,201
Veracruz, Mexico, 2,182
Willemstad, Curacao, 456
Wilmington, North Carolina U.S.A., 1,703

PORT PIRIE, AUSTRALIA
(33˚10'20"S., 138˚00'45"E.) to:

Junction Points*

Panama, Panama, 8,467
Singapore, 3,564

Ports

Melbourne, Australia, 689
Port Adelaide, Australia, 246
Port Moresby, Papua New Guinea, 2,754

PORT RAYSUT, OMAN
(16˚56'58"N., 54˚02'00"E.) See Mina Raysut.

PORT REFUGE, COCOS ISLANDS
(12˚05'20"S., 96˚51'54"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,428
Cape Leeuwin, Australia, 1,678
Selat Lombok, Indonesia, 1,132
Selat Sunda, Indonesia, 647

Ports

Colombo, Sri Lanka, 1,539

PORT ROYAL, JAMAICA
(17˚56'00"N., 76˚51'00"W.)
Subtract 5 miles from Kingston distances.

PORT SAN CARLOS, FALKLAND ISLANDS
(51˚30'00"S., 59˚00'00"W.) See Stanley, Falkland Islands.

PORT SAID, EGYPT*
(31˚16'00"N., 32˚19'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,340
Cape Leeuwin, Australia, 6,389
Selat Lombok, Indonesia, 5,892
Singapore, 5,035
Strait of Gibraltar, 1,943
Selat Sunda, Indonesia (via Eight Degree Channel), 5,224
Selat Sunda, Indonesia (via One and Half Degree Channel), 5,335
Torres Strait, Australia (via Eight Degree Channel), 7,423
Torres Strait, Australia (via One and Half Degree Channel), 7,409

Ports

Ad Damman, Saudi Arabia, 3,142
Aden, Yemen, 1,400
Ajaccio, Corsica, 1,355
Akyab, Burma, 4,672
Al Aqabah, Jordan, 380
Al Basrah, Iraq, 3,371
Al Latakia, Syria, 310
Al Manamah, Bahrain, 3,132
Alcudia, Balearic Islands, 1,536
Alexandria, Egypt, 164
Alexandroupolis, Greece, 699
Algeciras, Spain, 1,927
Algiers, Algeria, 1,514
Alicante, Spain, 1,680
Almeria, Spain, 1,780
Ancona, Italy, 1,206
Annaba, Algeria, 1,289
Antalya, Turkey, 346
Arzew, Algeria, 1,692
As Sukhayrah, Tunisia, 1,156
Ashdod, Israel, 126
Assab, Ethiopia, 1,258
Augusta, Sicily, 932
Bandar Abbas, Iran, 2,842
Bandar Khomeini, Iran, 3,322
Banghazi, Libya, 673
Baniyas, Syria, 299
Banzart, Tunisia, 1,184
Barcelona, Spain, 1,600
Bari, Italy, 999
Barletta, Italy, 1,023
Bassein, Burma, 4,638
Bastia, Corsica, 1,337
Bat'umi, Georgia, 1,391
Beaulieu, France, 1,453
Beira, Mozambique, 3,990
Beirut, Lebanon, 230
Bejaia, Algeria, 1,423
Belawan, Indonesia, 4,668
Bombay, India, 3,046
Bonifacio, Corsica, 1,307
Brindisi, Italy, 941
Bunbury, Australia, 6,343
Bur Safaga, Egypt, 310
Cagliari, Sardinia, 1,255
Calcutta, India, 4,691
Cannes, France, 1,472
Cartagena, Spain, 1,705
Catania, Sicily, 942
Ceuta, Morocco, 1,923
Chalna, Bangladesh, 4,705
Chioggia, Italy, 1,307
Chittagong, Bangladesh, 4,739
Civitavecchia, Italy, 1,243
Cochin, India, 3,237
Colombo, Sri Lanka, 3,481
Constanta, Romania, 1,000
Dar es Salaam, Tanzania, 3,238
Darnah, Libya, 514
Derince, Turkey, 837
Djibouti, Djibouti, 1,374
Dubrovnik, Croatia, 1,038
Dumai, Indonesia, 4,943
Durban, South Africa, 4,567
Durres, 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
Mocambique, Mozambique, 3,522
Mogadishu, Somalia, 2,493
Mombasa, Kenya, 3,006
Monaco, Monaco, 1,450
Monopoli, Italy, 953
Mostaganem, Algeria, 1,678
Mtwara, Tanzania, 3,265
Napoli, Italy, 1,116
Navplion, Greece, 613
Nice, France, 1,456
Novorossiysk, Russia, 1,260
Odessa, Ukraine, 1,152
Okha, India, 2,887
Olbia, Sardinia, 1,278
Oran, Algeria, 1,711
Palermo, Sicily, 1,061
Palma, Balearic Islands, 1,555
Patrai, Greece (via south of Greece), 762
Patrai, Greece (via Corinth Canal), 690
Penang, Malaysia, 4,733
Phuket, Thailand, 4,629
Piraievs, 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

Argentia, 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
Piraievs, 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.

PRINCE RUPERT, CANADA
(54˚19'00"N., 130˚20'00"W.) to:

Junction Points*

Panama, Panama, 4,303
Punta Arenas, Chile, 7,247
Singapore, 6,683

Ports

Apra, Guam, 4,586
Auckland, New Zealand, 6,209
Callao, Peru, 5,047
Dutch Harbor, Alaska, U.S.A., 1,274
Hakodate, Japan (alternate route, north of Aleutian Islands), 3,487
Hakodate, Japan (south of Aleutian Islands), 3,525
Hong Kong, China (alternate route, north of Aleutian Islands), 5,286
Hong Kong, China (south of Aleutian Islands), 5,323
Honolulu, Hawaii, U.S.A., 2,393
Juneau, Alaska, U.S.A., 322
Los Angeles, California, U.S.A., 1,432
Manila, Philippines (south of Aleutian Islands, and north of Luzon), 5,510
Nanaimo, Canada, 453
New Westminster, Canada, 492
Nome, Alaska, U.S.A., 1,846
Pago Pago, American Samoa, 4,652
Petropavlovsk-Kamchatskiy Russia (via Unimak Pass), 2,504
San Francisco, California, U.S.A., 1,090
Seattle, Washington, U.S.A., 577
Seward, Alaska, U.S.A., 734
Sitka, Alaska, U.S.A., 285
Sydney, Australia, 6,671
Valparaiso, Chile, 6,199
Vancouver, Canada, 477
Victoria, Canada, 531
Yokohama, Japan (alternate route, north of Aleutian Islands), 3,810
Yokohama, Japan (south of Aleutian Islands), 3,827

PROGRESO, MEXICO
(21˚21'00"N., 89˚40'00"W.) to:

Junction Points*

Panama, Panama, 1,069

Ports

Baltimore, Maryland, U.S.A., 1,530
Boston, Massachusetts, U.S.A., 1,838
Colon, Panama, 1,026
La Habana, Cuba, 430
New Orleans, Louisiana, U.S.A., 556
New York, New York, U.S.A., 1,609
Tampico, Mexico, 469
Veracruz, Mexico, 401

PROVIDENCE, RHODE ISLAND, U.S.A.
(41˚48'30"N., 71˚24'00"W.) to:

Junction Points*

Bishop Rock, England, 2,841
Fastnet Rock, Ireland, 2,719
Inishtrahull, Ireland, 2,823
Pentland Firth, Scotland, 3,047
Strait of Gibraltar, 3,122

Ports

Bordeaux, France, 3,145

PROVIDENIYA, RUSSIA
(64˚22'00"N., 173˚17'30"W.) to:

Ports

Anadyrskiy Zaliv, Russia, 254
Pevek, Russia, 719
Tiksi, Russia, 1,500

PUERTO ARMUELLES, PANAMA
(8˚16'15"N., 82˚51'30"W.) to:

Junction Points*

Panama, Panama, 306

Ports

Corinto, Nicaragua, 409
Los Angeles, California, U.S.A., 2,645
San Francisco, California, U.S.A., 2,973

PUERTO BARRIOS, GUATEMALA
(15˚43'00"N., 88˚37'00"W.) to:

Junction Points*

Panama, Panama, 823
Yucatan Channel, 439

Ports

Baltimore, Maryland, U.S.A., 1,725
Cartagena, Colombia, 901
Colon, Panama, 780
Galveston, Texas, U.S.A., 1,041
Kingston, Jamaica, 715
La Habana, Cuba, 608
Mobile, Alabama, U.S.A., 950
New Orleans, Louisiana, U.S.A. (via South Pass), 955
New York, New York, U.S.A., 1,804
Norfolk, Virginia, U.S.A., 1,603
Philadelphia, Pennsylvania, U.S.A., 1,774
Santiago de Cuba, Cuba, 792
Savannah, Georgia, U.S.A., 1,224
Veracruz, Mexico, 985

PUERTO CABELLO, VENEZUELA
(10˚29'15"N., 68˚00'30"W.) to:

Junction Points*

Panama, Panama, 845
Straits of Florida (via Windward Passage), 1,299
Yucatan Channel, 1,203

Ports

Baltimore, Maryland, U.S.A., 1,818
Belize, Belize, 1,289
Boston, Massachusetts, U.S.A. (via Mona Passage), 1,976
Campeche, Mexico, 1,595
Cap-Haitien, Haiti, 752
Charlotte Amalie, Virgin Islands, 506
Cienfuegos, Cuba, 1,015
Colon, Panama, 802
Galveston, Texas, U.S.A., 1,899
Key West, Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 1,248
Kingston, Jamaica, 697
La Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,260
Paramaribo, Suriname, 887
Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,845
Pointe a Pitre, Guadeloupe, 520
Port au Prince, Haiti, 769
Port Castries, St. Lucia, 465
Port of Spain, Trinidad, 395
Santo Domingo, Dominican Republic, 492
Tuxpan, Mexico, 1,883
Veracruz, Mexico, 1,848
Willemstad, Curacao, 116

PUERTO CABEZAS, NICARAGUA
(14˚01'00"N., 83˚22'30"W.) to:

Junction Points*

Panama, Panama, 390

Ports

Kingston, Jamaica, 451
La Ceiba, Honduras, 316
Oranjestad, St. Eustatius, 1,195

PUERTO CORTES, HONDURAS
(15˚50'00"N., 87˚57'20"W.) to:

Junction Points*

Panama, Panama, 776
Yucatan Channel, 399

Ports

Baltimore, Maryland, U.S.A., 1,690
Barranquilla, Colombia, 873
Buenos Aires, Argentina, 5,909
Cartagena, Colombia, 854
Charlotte Amalie, Virgin Islands, 1,343
Colon, Panama, 733
Dakar, Senegal, 4,077
Galveston, Texas, U.S.A., 1,001
Georgetown, Guyana, 1,933
Guantanamo, Cuba, 770
Kingston, Jamaica, 671
La Guaira, Venezuela, 1,294
Limon, Costa Rica, 623
Mobile, Alabama, U.S.A., 915
New Orleans, Louisiana, U.S.A. (via South Pass), 916
New York, New York, U.S.A., 1,764
Norfolk, Virginia, U.S.A., 1,568
Philadelphia, Pennsylvania, U.S.A., 1,739
Port Castries, St. Lucia, 1,578
Port of Spain, Trinidad, 1,599
Recife, Brazil, 3,737
Rio de Janeiro, Brazil, 4,813
San Juan, Puerto Rico, 1,284
Savannah, Georgia, U.S.A., 1,189
St. John's, Antigua, 1,511
Swan Island, Honduras, 254
Tampico, Mexico, 993
Veracruz, Mexico, 948

PUERTO DE HIERRO, VENEZUELA
(10˚37'00"N., 62˚05'30"W.) to:

Junction Points*

Panama, Panama, 1,192
Straits of Florida, 2,086

Ports

Barranquilla, Colombia, 838
Belem, Brazil, 1,215

PUERTO DE LA LUZ, CANARY ISLANDS
(28˚08'30"N., 15˚25'00"W.) See Las Palmas.

PUERTO DE PASAJES, SPAIN
(43˚19'30"N., 1˚55'00"W.) to:

Junction Points*

Ile d'Ouessant, France, 340
Strait of Gibraltar, 894

Ports

Bordeaux, France, 178
El Ferrol del Caudillo, Spain, 300
Horta, Azores, 1,260

PUERTO DESEADO, ARGENTINA
(47˚45'20"S., 65˚55'05"W.) to:

Junction Points*

Panama, Panama, 6,222
Punta Arenas, Chile, 440

Ports

Buenos Aires, Argentina, 965

PUERTO LA CRUZ, VENEZUELA
(10˚14'50"N., 64˚35'57"W.) to:

Junction Points*

Panama, Panama, 1,016
Yucatan Channel, 1,381

Ports

La Guaira, Venezuela, 145
Philadelphia, Pennsylvania, U.S.A., 1,900
Port of Spain, Trinidad, 214

PUERTO MADRYN, ARGENTINA
(42˚45'45"S., 65˚01'35"W.) to:

Junction Points*

Panama, Panama, 6,012
Punta Arenas, Chile, 760

Ports

Buenos Aires, Argentina, 748

PUERTO MANATI, CUBA
(21˚21'40"N., 76˚49'20"W.) to:

Junction Points*

Panama, Panama, 959
Straits of Florida, 397

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

Ports

La Habana, Cuba, 353
New York, New York, U.S.A., 1,244
San Juan, Puerto Rico, 639

PUERTO MIRANDA, VENEZUELA
(10˚45'30"N., 71˚33'15"W.)
Subtract 8 1/2 miles from Maracaibo distances.

PUERTO MONTT, CHILE
(41˚29'00"S., 72˚57'00"W.) to:

Junction Points*

Panama, Panama, 3,177
Punta Arenas, Chile, 992

Ports

Islas Juan Fernandez, 616
Valparaiso, Chile, 623

PUERTO ORDAZ, VENEZUELA
(8˚21'00"N., 62˚43'00"W.) Add 4 miles to San Felix distances.

PUERTO PADRE, CUBA
(21˚13'00"N., 76˚34'00"W.) to:

Junction Points*

Panama, Panama, 948
Straits of Florida, 409

Ports

Maracaibo, Venezuela, 834
Matanzas, Cuba, 330
San Juan, Puerto Rico, 625

PUERTO PLATA, DOMINICAN REPUBLIC
(19˚49'00"N., 70˚41'30"W.) to:

Junction Points*

Panama, Panama, 942
Straits of Florida, 764

Ports

Baltimore, Maryland, U.S.A., 1,215
Guantanamo, Cuba (via Windward Passage), 262
New York, New York, U.S.A., 1,270
Philadelphia, Pennsylvania, U.S.A., 1,250
Santiago de Cuba, Cuba, 311
Santo Domingo, Dominican Republic, 295

PUERTO PRINCESA, PHILIPPINES
(9˚44'31"N., 118˚43'26"E.) to:

Junction Points*

Honshu, Japan, 2,044
Selat Lombok, Indonesia, 1,168
Panama, Panama, 9,742
Punta Arenas, Chile, 9,346
Singapore, 1,060
Selat Sunda, Indonesia, 1,373
Torres Strait, Australia, 1,906

Ports

Alexandrovsk-Sakhalinskiy, Russia, 2,800
Ho Chi Minh, Vietnam, 836
Manila, Philippines, 364
Shanghai, China, 1,622
Vladivostok, Russia, 2,217

PUERTO SANDINO, NICARAGUA
(12˚09'00"N., 86˚49'30"W.) to:

Junction Points*

Panama, Panama, 649

Ports

Acapulco, Mexico, 825
Callao, Peru, 1,608

PUERTO SUCRE, VENEZUELA
(10˚27'45"N., 64˚11'43"W.) to:

Junction Points*

Panama, Panama, 1,035
Yucatan Channel, 1,399

Ports

La Guaira, Venezuela, 205
Philadelphia, Pennsylvania, U.S.A., 1,907
Port of Spain, Trinidad, 200

PUERTO TANAMO, CUBA
(20˚42'00"N., 75˚20'00"W.) See Boca de Tanamo, Cuba.

PUERTO VITA, CUBA
(21˚04'45"N., 75˚57'08"W.) to:

Junction Points*

Straits of Florida, 455

Ports

Charleston, South Carolina, U.S.A., 814
New York, New York, U.S.A., 1,224
Nuevitas, Cuba, 90
Port Antonia, Jamaica, 315

PULA, CROATIA
(44˚52'08"N., 13˚50'07"E.) to:

Junction Points*

Port Said, Egypt, 1,256
Strait of Gibraltar, 1,628

Ports

Catania, Sicily, 594
Constanta, Romania (south of Greece), 1,305
Constanta, Romania (via Corinth Canal), 1,206
Iskenderun, Turkey (south of Greece), 1,341
Iskenderun, Turkey (via Corinth Canal), 1,301
Istanbul, Turkey, 1,124
Kerch, Ukraine (south of Greece), 1,543
Kerch, Ukraine (via Corinth Canal), 1,444
Larnaca, Cyprus, 1,245
Mersin, Turkey, 1,260
Patrai, Greece, 555
Rostov-na-Donu, Russia (south of Greece), 1,745
Rostov-na-Donu, Russia (via Corinth Canal), 1,646
Sete, France, 1,216

PULUPANDAN, PHILIPPINES
(10˚31'00"N., 122˚47'30"E.) to:

Junction Points*

Singapore, 1,504
Torres Strait, Australia, 1,962

Ports

Cebu, Philippines, 225
Manila, Philippines, 363
Zamboanga, Philippines, 237

PUNTA ARENAS, CHILE*
(53˚10'00"S., 70˚54'00"W.) to:

Junction Points*

Bishop Rock, England, 7,019
Cape of Good Hope, South Africa, 4,262
Fastnet Rock, Ireland, 7,051
Grand Banks South, 6,440
Honshu, Japan, 9,286
Ile d'Ouessant, France, 6,986
Inishtrahull, Ireland, 7,315
Montreal, Canada, 7,515
Panama, Panama, 3,932
Pentland Firth, Scotland, 7,563
Strait of Gibraltar, 6,352
Straits of Florida, 6,783
Torres Strait, Australia (via 30˚S. and Raine Island entrance), 7,217
Tsugaru-Kaikyo, Japan, 9,449
Wilson Promontory, Australia (via Foveaux Strait and 49˚S.), 5,820
Wilson Promontory, Australia (via 30˚S. and Cook Strait), 7,460
Wilson Promontory, Australia (via 60˚S.), 5,305
Yucatan Channel, 6,794

Ports

Acapulco, Mexico, 4,582
Angra dos Reis, Brazil, 2,212
Antofagasta, Chile, 1,996
Apia, Samoa, 5,207
Apra, Guam, 8,071
Arica, Chile, 2,301
Auckland, New Zealand (via 30˚S.), 6,132
Auckland, New Zealand (via 49˚S.), 4,814
Avarua, Cook Islands, 4,429
Bahia Blanca, Argentina, 1,004
Baltimore, Maryland, U.S.A., 7,002
Belem, Brazil, 4,363
Bordeaux, France, 7,074
Boston, Massachusetts, U.S.A., 6,910
Brisbane, Australia (via 30˚S.), 7,369
Brisbane, Australia (via 49˚S.), 6,063
Buenos Aires, Argentina, 1,394
Cabedelo, Cuba, 3,327
Caldera, Chile, 1,795
Caleta Olivia, Argentina, 570
Callao, Peru, 2,671
Cape Town, South Africa, 4,279
Charleston, South Carolina, U.S.A., 6,868
Charlotte Amalie, Virgin Islands, 5,714
Charlottetown, Canada, 6,907
Chimbote, Peru, 2,843
Colon, Panama, 6,451
Comodoro Rivadavia, Argentina, 585
Coquimbo, Chile, 1,623
Corinto, Nicaragua, 4,180
Dagu, China (north of Marshall Islands), 10,843
Dakar, Senegal, 4,928
Dalian, China, 10,687
Dutch Harbor, Alaska, U.S.A., 8,063
Esmeraldas, Ecuador, 3,486
Fortaleza, Brazil, 3,654
Freetown, Sierra Leone, 4,731
Funchal, Madeira Island, 5,894
Georgetown, Guyana, 5,030
Guayaquil, Ecuador, 3,307
Guaymas, Mexico, 5,401
Hakodate, Japan (via 30˚S.), 9,672
Halifax, Canada, 6,799
Hamilton, Bermuda, 6,273
Honolulu, Hawaii, U.S.A. (via 30˚S.), 6,414
Iquique, Chile, 2,201
Jacksonville, Florida, U.S.A., 6,879
Jaluit, Marshall Islands, 6,815
Kobe, Japan (via 30˚S.), 9,872
La Habana, Cuba (via Old Bahama Channel and east of South America), 6,742
La Libertad, Ecuador, 3,258
Levuka, Fiji Islands, 5,342
Lisboa, Portugal, 6,398
Los Angeles, California, U.S.A., 5,871
Lota, Chile, 1,191
Maceio, Brazil, 3,137
Mar del Plata, Argentina, 1,112
Matarani, Peru, 2,380
Midway Island, 7,382
Monterey, California, U.S.A., 6,113
Montevideo, Uruguay (via west of English Bank), 1,300
Nagasaki, Japan (via 30˚S.), 10,126
Natal, Brazil, 3,400
New York, New York, U.S.A., 6,934
Norfolk, Virginia, U.S.A., 6,880
Noumea, New Caledonia, 5,527
Pago Pago, American Samoa, 5,181
Papeete, French Polynesia, 4,233
Paranagua, Brazil, 2,001
Philadelphia, Pennsylvania, U.S.A., 6,978
Pisco, Peru, 2,578
Ponape, Caroline Islands, 7,260
Port Castries, St. Lucia, 5,451
Port of Spain, Trinidad, 5,350
Portland, Maine, U.S.A., 6,939
Portland, Oregon, U.S.A., 6,813
Porto Alegre, Brazil, 1,686
Porto Concepcion, Argentina, 624
Prince Rupert, Canada, 7,247
Puerto Deseado, Argentina, 440
Puerto Madryn, Argentina, 760
Puerto Montt, Chile, 992
Puntarenas, Costa Rica, 4,010
Quequen, Argentina, 1,053
Rabaul, Papua New Guinea (via 30˚S.), 7,980
Recife, Brazil, 3,252
Rio de Janeiro, Brazil, 2,238

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

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

QASIGIANNGUIT, 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,l51
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

Callao, Peru, 1,387

QUEQUEN, ARGENTINA
(38˚35'00"S., 58˚41'30"W.) to:

Junction Points*

Panama, Panama, 5,202
Punta Arenas, Chile, 1,053

Ports

Buenos Aires, Argentina, 350
Santos, Brazil, 1,437

QUI NHON, VIETNAM
(13˚45'00"N., 109˚15'00"E.) to:

Junction Points*

Singapore, 856
Selat Sunda, Indonesia, 1,241

Ports

Haiphong, Vietnam, 469
Ho Chi Minh, Vietnam, 361
Hong Kong, China, 592

QUINFUGUENA, ANGOLA
(6˚19'28"S., 12˚14'20"E.) to:

Junction Points*

Bishop Rock, England, 4,518
Cape of Good Hope, South Africa, 1,777
Fastnet Rock, Ireland, 4,534
Grand Banks South, 4,669
Ile d'Ouessant, France, 4,465
Inishtrahull, Ireland, 4,798
Panama, Panama, 5,672
Pentland Firth, Scotland, 5,357
Punta Arenas, Chile, 4,985
Strait of Gibraltar, 4,213
Straits of Florida, 5,844
Yucatan Channel, 5,994

Ports

Abidjan, Ivory Coast, 1,197
Boma, Congo, 56
Cape Town, South Africa, 1,727
Dakar, Senegal, 2,261
Freetown, Sierra Leone, 1,799
Georgetown, Ascension Island, 1,590
Lisboa, Portugal, 3,784
Moni Matadi, Congo, 78
New York, New York, U.S.A., 5,528
Pointe Noire, Congo, 97
Port Harcourt, Nigeria, 745
Porto Grande, Cape Verde Islands, 2,630
Tangier, Morocco, 3,720
Vigo, Spain, 3,988

QUONSET POINT, RHODE ISLAND, U.S.A.
(41˚35'00"N., 71˚24'00"W.)
Subtract 13 miles from Providence distances.

RA'S AL KHAFJI, SAUDI ARABIA
(28˚24'00"N., 48˚33'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,078
Cape Leeuwin, Australia, 5,414
Port Said, Egypt, 3,260
Singapore, 3,799

Ports

Aden, Yemen, 1,871
Bombay, India, 1,491

RA'S AS SIDR, EGYPT
(29˚34'36"N., 32˚42'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,189
Port Said, Egypt, 112
Singapore, 4,902

Ports

Aden, Yemen, 1,282

RA'S GHARIB, EGYPT
(28˚20'30"N., 33˚07'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,114
Port Said, Egypt, 187
Singapore, 4,827

Ports

Aden, Yemen, 1,207

RA'S SHUKHAYR, EGYPT
(28˚07'04"N., 33˚19'04"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 5,200
Cape Leeuwin, Australia, 6,094
Selat Lombok, Indonesia, 5,557
Port Said, Egypt, 203
Singapore, 4,848
Selat Sunda, Indonesia, 5,057
Torres Strait, Australia, 7,226

Ports

Aden, Yemen, 1,191
Assab, Ethiopia, 1,055
Calcutta, India, 4,488
Kharg Island, Iran, 2,993
Massawa, Ethiopia, 857

RA'S TANNURAH, SAUDI ARABIA
(26˚39'00"N., 50˚10'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,980
Cape Leeuwin, Australia, 5,316
Port Said, Egypt, 3,162
Singapore, 3,701

Ports

Al Basrah, Iraq, 295

RABAUL, PAPUA NEW GUINEA
(4˚12'30"S., 152˚12'00"E.) to:

Junction Points*

Panama, Panama, 7,807
Punta Arenas, Chile (via 49˚S.), 7,036

Ports

Apia, Samoa, 2,232
Apra, Guam, 1,187
Auckland, New Zealand, 2,345
Avarua, Cook Islands, 2,993
Brisbane, Australia, 1,434
Callao, Peru, 7,713
Dagu, China, 3,294
Hakodate, Japan, 2,894
Hong Kong, China, 2,764
Honolulu, Hawaii, U.S.A., 3,355
Lae, Papua New Guinea, 448
Levuka, Fiji Islands, 1,836
Mackay, Australia, 1,871
Manila, Philippines, 2,281
Melbourne, Australia, 2,408
Midway Island, 2,688
Nagasaki, Japan, 2,612
Noumea, New Caledonia, 1,383
Papeete, French Polynesia, 3,527
Petropavlovsk-Kamchatskiy, Russia, 3,555
Ponape, Caroline Islands, 853
Qingdao, China, 3,043
Rotoava, Iles Tuamotu, 3,743
San Francisco, California, U.S.A., 5,396
Seattle, Washington, U.S.A., 5,509
Sorong, New Guinea, 1,304
Sydney, Australia, 1,844
Talomako, Vanuatu, 1,104
Valparaiso, Chile, 7,461
Wallaroo Australia, 2,911
Whyalla, Australia, 2,957
Xiamen, China, 2,659
Yap Islands, Caroline Islands, 1,196
Yokohama, Japan, 2,526

RABIGH, SAUDI ARABIA
(22˚43'58"N., 38˚58'05"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,932
Cape Leeuwin, Australia, 5,732
Selat Lombok, Indonesia, 5,194
Port Said, Egypt, 650
Singapore, 4,374
Selat Sunda, Indonesia, 4,568
Torres Strait, Australia, 6,788

Ports

Aden, Yemen, 754
Al Jubayl, Saudi Arabia, 2,679
Assab, Ethiopia, 633
Bombay, India, 2,403
Massawa, Ethiopia, 428
Port Darwin, Australia, 6,119
Penang, Malaysia, 4,077
Port Sudan, 212
Rangoon, Burma, 4,077

RADA DI VADO, ITALY
(44˚16'00"N., 8˚27'00"E.) Use Savona distances.

RANDERS, DENMARK
(56˚27'48"N., 10˚03'48"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 188
Skagens Odde, Denmark, 96

Ports

Gdynia, Poland, 403
Stockholm, Sweden, 604
Swinoujscie, Poland, 266

RANGOON, BURMA
(16˚46'00"N., 96˚l0'00"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
Guiria, Venezuela, 2,208
Halifax, Canada, 3,558
Hamilton, Bermuda, 3,038
Jacksonville, Florida, U.S.A., 3,636
Key West, Florida, U.S.A., 3,488
La Habana, Cuba, 3,499
Las Palmas, Canary Islands, 2,453
Lisboa, Portugal, 3,156
Miami, Florida, U.S.A., 3,456
Montevideo, Uruguay, 2,067
New York, New York, U.S.A., 3,698
Norfolk, Virginia, U.S.A., 3,651
Philadelphia, Pennsylvania, U.S.A., 3,745
Ponta Delgada, Azores, 2,803
Port Castries, St. Lucia, 2,151
Portland, Maine, U.S.A., 3,700
Puerto Cortes, Honduras, 3,737
Salvador, Brazil, 399
San Juan, Puerto Rico (outside all islands), 2,609
Savannah, Georgia, U.S.A., 3,681
St. John's, Canada, 3,491
Sydney, Canada, 3,553
Vigo, Spain, 3,346
Washington, D.C., U.S.A., 3,787

REGGIO DI CALABRIA, ITALY
(38˚07'35"N., 15˚39'00"E.) to:

Junction Points*

Port Said, Egypt, 939
Strait of Gibraltar, 1,052

Ports

Banghazi, Libya, 425
Napoli, Italy, 179
Palermo, Sicily, 124

RETHIMNON, KRITI
(35˚22'30"N., 24˚28'00"E.) to:

Junction Points*

Port Said, Egypt, 489
Strait of Gibraltar, 1,485

Ports

Izmir, Turkey, 277
Messina, Sicily, 479
Piraievs, 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
Argentia, Canada, 1,584
Arkhangel'sk, Russia (north of Iceland), 1,874
Arkhangel'sk, Russia (south of Iceland), 1,901
Bergen, Norway, 872
Bjornoya Island (north of Iceland), 1,152
Bjornoya Island, 1,234
Boston, Massachusetts, U.S.A., 2,293
Brest, France, 1,193
Camp Lloyd, Greenland, 1,274
Churchill, Canada (via 75 miles off Kap Farvel), 2,290
Colon, Panama, 4,098
Frederiksdal, Greenland, 714
Glasgow, Scotland, 860
Goose Bay, Canada, 1,332
Guantanamo, Cuba, 3,434
Halifax, Canada, 1,941
Ilulissat (Jakobshavn), Greenland, 1,418
Iokan'ga, Russia, 1,646
Ivittuut, Greenland (via 75 miles off Kap Farvel), 980
Ivittuut, Greenland, 887
Kangerluarsoruseq, Greenland, 1,043
Longyearbyen, Svalbard (north of Iceland), 1,160
Longyearbyen, Svalbard (south of Iceland), 1,310
Maniitsoq, Greenland, 1,146
Molde, Norway, 875
Mosjoen, Norway, 1,023
Murmansk, Russia (north of Iceland), 1,501
Murmansk, Russia (south of Iceland), 1,529
Namsos, Norway, 1,018
Nanortalik, Greenland, 737
Narsarsuaq, Greenland, 830
New York, New York, U.S.A., 2,495
Norfolk, Virginia, U.S.A., 2,677
Nuuk (Godthab), Greenland, 1,076
Oslo, Norway, 1,173
Pechenga, Russia, 1,460
Philadelphia, Pennsylvania, U.S.A., 2,648
Portsmouth, New Hampshire, U.S.A., 2,271
Qaanaaq (Thule), Greenland, 1,898
Qaqortoq (Julianehaab), Greenland (via 75 miles off Kap Farvel), 892
Qaqortoq (Julianehaab), Greenland, 795
Qasigiannguit, 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
Piraievs, 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
Ornskolosvik, 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
Piraievs, Greece (south of Greece), 814
Piraievs, 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.

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

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

ROCKHAMPTON, AUSTRALIA
(23˚23'00"S., 150˚32'00"E.) to:

Junction Points*

Torres Strait, Australia, 1,034

Wilson Promontory, Australia, 1,213

Ports

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

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˚l0'00"N., 65˚34'00"W.) to:

Junction Points*

Panama, Panama, 1,054
Straits of Florida, 1,063

Ports

New York, New York, U.S.A., 1,429
Port of Spain, Trinidad, 525
Willemstad, Curacao, 440

ROSARIO, ARGENTINA
(32˚56'30"S., 60˚38'00"W.) Add 191 miles to Buenos Aires distances.

ROSEAU, DOMINICA
(15˚17'15"N., 61˚24'00"W.) to:

Ports

Basse-Terre, Guadeloupe, 48
Fort de France, Martinique, 50
Frederiksted, St. Croix, 252
Hamilton, Bermuda, 1,061
Pointe a Pitre, Guadeloupe, 60

ROSTOCK, GERMANY
(54˚05'52"N., 12˚09'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 92
Skagens Odde, Denmark, 254

Ports

Klaipeda, Lithuania, 347
Kobenhavn, Denmark, 231
Stockholm, Sweden, 456

ROSTOV-NA-DONU, RUSSIA
(47˚11'30"N., 39˚40'10"E.) to:

Junction Points*

Port Said, Egypt, 1,440
Strait of Gibraltar, 2,458

Ports

Constanta, Romania, 572
Derince, Turkey, 685
Iskenderun, Turkey, 1,483
Istanbul, Turkey, 640
Kerch, Georgia, 208
Larnaca, Cyprus, 1,402
Mersin, Turkey, 1,426
Pula, Croatia (south of Greece), 1,745
Pula, Croatia (via Corinth Canal), 1,646
Sfax, Tunisia, 1,684

ROSYTH, SCOTLAND
(56˚01'15"N., 3˚27'00"W.) to:

Junction Points*

Pentland Firth, Scotland, 263
Skagens Odde, Denmark, 478

Ports

Hull, England, 248
Oslo, Norway, 550
Rotterdam, Netherlands, 393

ROTA, SPAIN
(36˚37'15"N., 6˚20'00"W.) to:

Junction Points*

Ile d'Ouessant, France, 885
Strait of Gibraltar, 70

Ports

Casablanca, Morocco, 202
Horta, Azores, 1,096

ROTOAVA, ILES TUAMOTU
(16˚02'30"S., 145˚37'00"W.) to:

Junction Points*

Panama, Panama, 4,256

Ports

Apia, Samoa, 1,520
Apra, Guam, 9,513
Honolulu, Hawaii, U.S.A., 2,358
Levuka, Fiji Islands, 2,060
Noumea, New Caledonia, 2,737
Papeete, French Polynesia, 244
Rabaul, Papua New Guinea, 3,743
San Francisco, California, U.S.A., 3,503

ROTTERDAM, NETHERLANDS
(51˚54'00"N., 4˚28'00"E.) to:

Junction Points*

Bishop Rock, England, 454
Ile d'Ouessant, France, 444
Nord-Ostsee-Kanal (East Entrance), Germany, 323
Pentland Firth, Scotland, 495
Skagens Odde, Denmark, 447

Ports

Aberdeen, Scotland, 391
Amsterdam, Netherlands, 67
Antwerp, Belgium (via Westkapelle), 117
Bergen, Norway, 533
Bremerhaven, Germany, 256
Brest, France, 457
Cherbourg, France, 282
Den Helder, Netherlands, 97
Dover, England, 138
Dundee, Scotland, 383
Egersund, Norway, 412
Emden, Germany, 199
Esbjerg, Denmark, 287
Fecamp, France, 228
Hamburg, Germany, 307
Hartlepool, England, 269
Hull, England, 211
Inverness, Scotland, 496
Kristiansand, Norway, 413
Le Havre, France, 250
Leith, Scotland, 381
London, England, 184
Narvik, Norway, 1,139
Newcastle, England, 285
Oostende, Belgium, 86
Oslo, Norway, 554
Plymouth, England, 367
Portland, England, 293
Portsmouth, England, 243
Rosyth, Scotland, 393
Seaham Harbor, England, 278
Southampton, England, 261
Stavanger, Norway, 455
Sunderland, England, 286
Vardo, Norway, 1,513
Wilhelmshaven, Germany, 243
Zeebrugge, Belgium, 73

ROUEN, FRANCE
(49˚26'30"N., 1˚04'00"E.) Add 69 miles to Le Havre distances.

RUCH'I, RUSSIA
(59˚45'30"N., 28˚25'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 766
Skagens Odde, Denmark, 816

Ports

Gdynia, Poland, 530
Riga, Latvia, 403
Stockholm, Sweden, 344

RUMOI, JAPAN
(43˚57'30"N., 141˚38'00"E.) to:

Ports

Busan, South Korea, 793
Hakodate, Japan, 248
Otaru, Japan, 57
Shimonoseki, Japan, 812
Vladivostok, Russia, 452

SABANG, INDONESIA
(5˚53'30"N., 95˚19'15"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,980
Cape Leeuwin, Australia, 2,711
Selat Lombok, Indonesia, 1,575
Port Said, Egypt, 4,422
Singapore, 601
Selat Sunda, Indonesia, 1,103
Torres Strait, Australia, 3,072

Ports

Aden, Yemen, 3,033
Al Basrah, Iraq, 3,287
Al Manamah, Bahrain, 3,050
Beira, Mozambique, 3,921
Belawan, Indonesia, 268
Berbera, Somalia, 3,047
Bombay, India, 1,843
Bushehr, Iran, 3,106
Calcutta, India (via Duncan Passage), 1,131
Calicut, India, 1,343
Dar es Salaam, Tanzania, 3,443
Diego Garcia, Chagos Archipelago, 1,594
Durban, South Africa, 4,273
Fort Dauphin, Madagascar, 3,376
Fremantle, Australia, 2,601
Kakinada, India, 1,019
Karachi, Pakistan, 2,284
Madras, India, 994
Majunga, Madagascar, 3,246
Malacca, Malaysia, 486
Maputo, Mozambique, 3,481
Mocambique, Mozambique, 3,481
Mombasa, Kenya, 3,388
Mosselbaai, South Africa, 4,785
Penang, Malaysia, 313
Port Elizabeth, South Africa, 4,610
Port Louis, Mauritius, 2,731
Rangoon, Burma, 664
Tamatave, Madagascar, 3,076
Victoria, Seychelles, 2,468
Zanzibar, Tanzania, 3,46l

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

Kobe, Japan, 107
Kure, Japan, 107
Shimonoseki, Japan, 169
Yokohama, Japan (via Kii Suido), 449

SAKATA, JAPAN
(38˚55'30"N., 139˚48'00"E.) to:

Ports

Busan, South Korea, 577
Hakodate, Japan, 189
Maizuru, Japan, 314
Shimonoseki, Japan, 554
Vladivostok, Russia, 442

SALAMIS, GREECE
(37˚57'30"N., 23˚29'12"E.) to:

Junction Points*

Port Said, Egypt, 614
Strait of Gibraltar, 1,520

Ports

Durres, Albania, 343
Iraklion, Kriti, 190
Izmir, Turkey, 225

SALAVERRY, PERU
(8˚14'30"S., 78˚58'00"W.) to:

Junction Points*

Panama, Panama, 1,109

Ports

Callao, Peru, 266
Guayaquil, Ecuador, 440
Pimentel, Peru, 104
San Francisco, California, U.S.A., 3,750

SALAWATI, INDONESIA
(1˚21'00"S., 130˚59'00"E.) to:

Junction Points*

Honshu, Japan, 2,308
Selat Lombok, Indonesia, 1,099
Panama, Panama, 9,134
Singapore (via Karimata Strait), 2,047
Torres Strait, Australia, 925
Selat Wetar, Indonesia, 495

Ports

Davao, Philippines, 623
Ho Chi Minh, Vietnam, 1,770
Manila, Philippines, 1,298
San Francisco, California, U.S.A., 6,582
Yokohama, Japan, 2,332

SALDANHA BAY, SOUTH AFRICA
(33˚05'25"S., 17˚52'20"E.) to:

Junction Points*

Bishop Rock, England, 5,752
Fastnet Rock, Ireland, 5,792
Grand Banks South, 5,880
Ile d'Ouessant, France, 5,709
Inishtrahull, Ireland, 6,065
Panama, Panama, 6,449
Punta Arenas, Chile, 4,255
Strait of Gibraltar, 5,031
Straits of Florida, 6,738
Yucatan Channel, 6,783

Ports

Accra, Ghana, 4,090
Baltimore, Maryland, U.S.A., 6,846
Cape Town, South Africa, 57
Cristobal, Panama, 6,392
Galway, Ireland, 5,894
Natal, Brazil, 3,374
New York, New York, U.S.A., 6,729
Port of Spain, Trinidad, 5,265
Victoria, Cameroon, 2,302

SALEEF, YEMEN
(15˚18'00"N., 42˚40'00"E.) See As Salif.

SALERNO, ITALY
(40˚40'15"N., 14˚45'00"E.) to:

Junction Points*

Port Said, Egypt, 1,095
Strait of Gibraltar, 1,018

Ports

Civitavecchia, Italy, 204
Messina, Sicily, 158
Palermo, Sicily, 167

SALINA CRUZ, MEXICO
(16˚10'00"N., 95˚12'00"W.) to:

Junction Points*

Panama, Panama, 1,170
Punta Arenas, Chile, 4,478

Ports

Acapulco, Mexico, 314
Antofagasta, Chile, 2,799
Apia, Samoa, 4,886
Arica, Chile, 2,579
Callao, Peru, 2,005
Coquimbo, Chile, 3,091
Corinto, Nicaragua, 525
Esmeraldas, Ecuador, 1,290
Guayaquil, Ecuador, 1,495
Guaymas, Mexico, 1,260
Honolulu, Hawaii, U.S.A., 3,580
Iquique, Chile, 2,645
La Libertad, El Salvador, 391
Los Angeles, California, U.S.A., 1,803
Lota, Chile, 3,430
Monterey, California, U.S.A., 2,055
Pago Pago, American Samoa, 4,839
Pisco, Peru, 2,117
San Diego, California, U.S.A., 1,733
San Francisco, California, U.S.A., 2,132
San Juan del Sur, Nicaragua, 619
Santa Barbara, California, U.S.A., 1,820
Talcahuano, Chile, 3,414
Valparaiso, Chile, 3,247

SALINAS, ECUADOR
(2˚12'00"S., 80˚59'00"W.) Use La Libertad distances.

SALVADOR, BRAZIL
(12˚58'00"S., 38˚31'00"W.) to:

Junction Points*

Ile d'Ouessant, France, 4,134
Montreal, Canada (via Cabot Strait), 4,673
Panama, Panama, 3,741
Punta Arenas, Chile, 2,920
Strait of Gibraltar, 3,516
Straits of Florida, 3,931

Ports

Angra dos Reis, Brazil, 902
Baltimore, Maryland, U.S.A., 4,163
Boston, Massachusetts, U.S.A., 4,060
Bridgetown, Barbados, 2,476
Brunswick, Georgia, U.S.A., 4,063
Buenos Aires, Argentina, 1,849
Cabedelo, Brazil, 468
Charleston, South Carolina, U.S.A., 4,040
Charlotte Amalie, Virgin Islands, 2,907
Charlottetown, Canada, 4,049
Colon, Panama, 3,608
Georgetown, Guyana, 2,172
Halifax, Canada, 3,949
Maceio, Brazil, 285
Montevideo, Uruguay, 1,735
New York, New York, U.S.A., 4,089
Norfolk, Virginia, U.S.A., 4,042
Philadelphia, Pennsylvania, U.S.A., 4,136
Port Castries, St. Lucia, 2,593
Portland, Maine, U.S.A., 4,091
Recife, Brazil, 399
Rio de Janeiro, Brazil, 748
Savannah, Georgia, U.S.A., 4,072
Sydney, Canada, 3,967
Vitoria, Brazil, 477
Wilmington, North Carolina, 4,023

SAMBU, INDONESIA
(1˚10'00"N., 103˚54'00"E.) Use Singapore distances.

SAMSON POINT, AUSTRALIA
(20˚31'58"S., 117˚14'00"E.) See Port Walcott.

SAMSUN, TURKEY
(41˚19'36"N., 36˚22'00"E.) Add 370 miles to Istanbul distances for ports outside the Black Sea.

SAN ANTONIO, CHILE
(33˚35'00"S., 71˚39'00"W.) to:

Junction Points*

Panama, Panama, 2,644
Punta Arenas, Chile, 1,410

Ports

Antofagasta, Chile, 600
Callao, Peru, 1,328
Tocopilla, Chile, 692

SAN CIPRIAN, SPAIN
(43˚42'20"N., 07˚25'32"W.) to:

Junction Points*

Bishop Rock, England, 365
Cape of Good Hope, South Africa, 6,011
Fastnet Rock, Ireland, 466
Grand Banks South, 1,846
Ile d'Ouessant, France, 308
Inishtrahull, Ireland, 749
Panama, Panama, 4,288
Pentland Firth, Scotland, 1,082
Punta Arenas, Chile, 6,769
Strait of Gibraltar, 706
Straits of Florida, 3,855

Ports

Bilbao, Spain, 197
Bordeaux, France, 303
Boston, Massachusetts, U.S.A., 4,746
Cape Town, South Africa, 5,438
Casablanca, Morocco, 683
Dakar, Senegal, 1,863
Huelva, Spain, 573
La Pallice, France, 303
Lorient, France, 297
Marin, Spain, 154
Norfolk, Virginia, U.S.A., 5,230
Setubal, Portugal, 397
Villagarcia, Spain, 143

SAN DIEGO, CALIFORNIA, U.S.A.
(32˚43'00"N., 117˚10'30"W.) to:

Junction Points*

Panama, Panama, 2,843
Punta Arenas, Chile, 5,801
Singapore, 7,736
Wilson Promontory, Australia (south of Fiji Islands), 6,873

Ports

Acapulco, Mexico, 1,431
Aleksandrovsk-Sakhalinskiy, Russia, 4,779
Amapala, Honduras, 2,181
Antofagasta, Chile, 4,360
Apia, Samoa, 4,195
Apra, Guam, 5,379
Arica, Chile, 4,149
Auckland, New Zealand, 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
Dagu, China (via Osumi Kaikyo), 5,856
Dagu, China (via Tsugaru-Kaikyo), 5,615
Dalian, China (via Tsugaru Strait), 5,456
Dutch Harbor, Alaska, U.S.A., 2,051
Eniwetak, Marshall Islands, 4,282
Esmeraldas, Ecuador, 3,342
Funafuti, Tuvalu, 4,295
Guaymas, Mexico, 1,490
Hakodate, Japan, 4,246
Ho Chi Minh, Vietnam, 6,878
Hong Kong, China, 6,044
Honolulu, Hawaii, U.S.A., 2,091
Iloilo, Philippines, 6,168
Iquique, Chile, 4,620
Jakarta, Indonesia (via Balintang Channel), 7,642
Jaluit, Marshall Islands, 4,150
Johnston Island, 2,779
Juneau, Alaska, U.S.A., 1,371
Kiska, Alaska, U.S.A., 2,629
Kobe, Japan, 4,819
Kodiak, Alaska, U.S.A., 1,693
La Union, El Salvador, 2,586
Levuka, Fiji Islands, 4,705
Lota, Chile, 5,282
Manila, Philippines (via Balintang Channel), 6,221
Manila, Philippines (via San Bernardino Strait), 6,299
Manzanillo, Mexico, 1,538
Mazatlan, Mexico, 1,337
Melbourne, Australia (via South Channel), 6,970
Midway Island, 2,792
Mogpo, South Korea, 5,125
Nagasaki, Japan, 5,029
Newcastle, Australia, 6,467
Nikolayevsk-Na-Amure, Russia (via Unimak Pass), 4,099
Nome, Alaska, U.S.A., 2,636
Noumea, New Caledonia, 5,410
Ocean Island, 4,406
Pago Pago, American Samoa, 4,150
Papeete, French Polynesia, 3,663
Petropavlovsk-Kamchatskiy, Russia (via Unimak Pass), 3,292
Pisco, Peru, 4,097
Ponape, Caroline Islands, 4,641
Port Darwin, Australia, 6,984
Prince Rupert, Canada, 1,090
Puerto Armuelles, Panama, 2,973
Puntarenas, Costa Rica, 2,831
Qingdao, China, 5,403
Rabaul, Papua New Guinea, 5,396
Rotoava, Iles Tuamotu, 3,503
Salaverry, Peru, 3,750
Salina Cruz, Mexico, 2,135
San Jose, Guatemala, 2,395
Sasebo, Japan (via Osumi Kaikyo), 5,185
Seward, Alaska, U.S.A., 1,701
Shanghai, China (via Tsugaru Strait), 5,398
Shantou, China (via Osumi Kaikyo), 5,900
Shimonoseki, Japan (via Tsugaru-Kaikyo), 4,910
Sitka, Alaska, U.S.A., 1,302
Surabaya, Indonesia, 7,343
Suva, Fiji Islands, 4,749
Sydney, Australia, 6,448
Talara, Peru, 3,494
Talcahuano, Chile, 5,270
Taltal, Chile, 4,838
Tocopilla, Chile, 4,699
Truk, Caroline Islands, 4,931
Valparaiso, Chile, 5,140
Vancouver, Canada (via Active Pass), 812
Vancouver, Canada (via Haro Strait), 823
Victoria, Canada, 745
Vladivostok, Russia (via La Perouse Strait and Proliv Kruzenshterna), 4,563
Vladivostok, Russia (via La Perouse Strait, Chetvertyy Kuril'skiy Proliv, and Unimak Pass), 4,570
Wake Island, 3,821
Weihai, China (via Tsugaru-Kaikyo), 5,402
Wellington, New Zealand, 5,900
Weonsan, North Korea, 4,866
Xiamen, China (via Osumi Kaikyo), 5,797
Xiamen, China (via Tsugaru-Kaikyo), 5,788
Yokohama, Japan, 4,536

SAN JOSE, GUATEMALA
(13˚55'00"N., 90˚49'45"W.) to:

Junction Points*

Panama, Panama, 886
Punta Arenas, Chile, 4,296

Ports

Acapulco, Mexico, 574
Amapala, Honduras, 204
Antofagasta, Chile, 2,557
Arica, Chile, 2,338
Callao, Peru, 1,763
Coquimbo, Chile, 2,864
Corinto, Nicaragua, 238
Esmeraldas, Ecuador, 1,016
Guayaquil, Ecuador, 1,242
Guaymas, Mexico, 1,520
Hilo, Hawaii, U.S.A., 3,690
Iquique, Chile, 2,404
Los Angeles, California, U.S.A., 2,054
Lota, Chile, 3,220
Manzanillo, Mexico, 840
Mazatlan, Mexico, 1,149
Monterey, California, U.S.A., 2,315
Pisco, Peru, 1,875
Puntarenas, Costa Rica, 465
San Diego, California, U.S.A., 1,993
San Francisco, California, U.S.A., 2,395
Santa Barbara, California, U.S.A., 2,130
Talcahuano, Chile, 3,202
Valparaiso, Chile, 3,024

SAN JUAN, PERU
(15˚20'36"S., 75˚09'36"W.) to:

Junction Points*

Panama, Panama, 1,590
Punta Arenas, Chile, 1,660

Ports

Antofagasta, Chile, 575
Callao, Peru, 248

SAN JUAN, PUERTO RICO
(18˚27'50"N., 66˚06'40"W.) to:

Junction Points*

Bishop Rock, England, 3,390
Fastnet Rock, Ireland (via Mona Passage), 3,299
Inishtrahull, Ireland, 3,436
Panama, Panama, 1,036
Pentland Firth, Scotland, 3,638
Strait of Gibraltar, 3,336
Straits of Florida, 1,017
Yucatan Channel, 1,111

Ports

Abraham Bay, Bahamas, 476
Argentia, Canada, 1,840
Arkhangel'sk, Russia, 5,001
Moa, Cuba, 533
Bahia de las Calderas, Dominican Republic, 273
Bahia de Samana, Dominican Republic, 185
Baltimore, Maryland, U.S.A., 1,374
Barahona, Dominican Republic, 294
Barranquilla, Colombia, 705
Basse-Terre, Guadeloupe, 314
Basseterre, Saint Kitts and Nevis, 214
Belem, Brazil, 1,692
Boca de Tanamo, Cuba, 549
Boston, Massachusetts, U.S.A., 1,486
Bridgetown, Barbados (west of St. Croix and via Virgin Passage), 517
Brunswick, Georgia, U.S.A., 1,132
Buenos Aires, Argentina, 4,753
Cadiz, Spain, 3,312
Cap-Haitien, Haiti, 372
Cape Town, South Africa, 5,772
Cardenas, Cuba, 917
Cartagena, Colombia, 782
Catia la Mar, Venezuela, 556
Charleston, South Carolina, U.S.A., 1,138
Christiansted, St. Croix, 104
Cienfuegos, Cuba (north of Hispaniola), 903
Cienfuegos, Cuba (south of Hispaniola), 930
Colon, Panama, 993
Corunna, Spain, 3,255
Dakar, Senegal, 2,812
Elizabeth Harbor, Bahamas, 642
Fernandina, Florida, U.S.A., 1,115
Fort de France, Martinique, 385
Fort 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".) to:

Junction Points*

Panama, Panama, 762

Ports

Acapulco, Mexico, 791
Callao, Peru, 1,701

SAN LORENZO, VENEZUELA
(9˚47'00"N., 71˚05'30"W.) Add 95 miles to Maracaibo distances.

SAN NICOLAS, ARGENTINA
(33˚19'30"S., 60˚13'00"W.) Add 188 miles to Buenos Aires distances.

SAN NICOLAS, PERU
(15˚14'42"S., 75˚14'26"W.) to:

Junction Points*

Panama, Panama, 1,573
Punta Arenas, Chile, 2,469
Torres Strait, Australia, 8,209
Wilson Promontory, Australia (via 30˚S.), 8,119
Wilson Promontory, Australia (via 40˚S.), 7,099

Ports

Antofagasta, Chile, 571
Arica, Chile, 350
Callao, Peru, 230
Corinto, Nicaragua, 1,837
Pisco, Peru, 135
Salina Cruz, Mexico, 902
Supe Bay, Peru, 314
Talcahuano, Chile, 1,300
Valparaiso, Chile, 1,089

SAN PEDRO, ARGENTINA
(33˚42'00"S., 59˚39'00"W.) Add 151 miles to Buenos Aires distances.

SAN PEDRO, IVORY COAST
(4˚44'00"N., 6˚36'24"W.) to:

Junction Points*

Bishop Rock, England, 3,397
Cape of Good Hope, South Africa, 2,735
Fastnet Rock, Ireland, 3,413
Grand Banks South, 3,552
Ile d'Ouessant, France, 3,344
Inishtrahull, Ireland, 3,677
Panama, Panama, 4,555
Pentland Firth, Scotland, 4,236
Punta Arenas, Chile, 4,811
Strait of Gibraltar, 3,091
Straits of Florida, 4,727
Yucatan Channel, 4,876

Ports

Abidjan, Ivory Coast, 157
Accra, Ghana, 398
Bordeaux, France, 3,160
Cape Town, South Africa, 2,718
Dakar, Senegal, 994
Freetown, Sierra Leone, 532
Galway, Ireland, 3,356
Lagos, Nigeria, 616
Monrovia, Liberia, 312
Natal, Brazil, 1,826
New York, New York, U.S.A., 4,284
Nouadhibou, Mauritania, 1,368
Port of Spain, Trinidad, 3,302
Tangier, Morocco, 2,304

SAN PEDRO DE MACORIS, DOMINICAN REPUBLIC
(18˚26'45"N., 69˚18'20"W.) to:

Ports

Kingston, Jamaica, 461
Port au Prince, Haiti, 473
Romana, Dominican Republic, 21
San Juan, Puerto Rico, 199

SAN SEBASTIAN, SPAIN
(43˚19'00"N., 1˚59'30"W.) to:

Junction Points*

Ile d'Ouessant, France, 353
Strait of Gibraltar, 892

Ports

Bordeaux, France, 210
El Ferrol del Caudillo, Spain, 302
Horta, Azores, 957

SAN VICENTE, CHILE
(36˚43'55"S., 73˚10'00"W.) to:

Junction Points*

Panama, Panama, 2,800
Punta Arenas, Chile, 1,210
Wilson Promontory, Australia (via Cook Strait), 6,485

Ports

Antofagasta, Chile, 791
Arica, Chile, 1,104
Corinto, Nicaragua, 3,063
Kodiak, Alaska, 6,943
Pisco, Peru, 1,428
Wellington, New Zealand, 4,878
Yokohama, Japan, 9,248

SAN-MEN WEN, CHINA
(29˚03'00"N., 121˚45'00"E.) See Sanmen Wen, China.

SAN-YA CHIANG, CHINA
(18˚14'00"N., 109˚26'00"E.) See Sanya Gang, China.

SANDAKAN, SABAH
(5˚50'00"N., 118˚07'00"E.) to:

Junction Points*

Selat Lombok, Indonesia (via Makassar Strait), 1,010
Panama, Panama (via Surigao Strait), 9,618
Singapore (via Balabac Strait), 1,130
Selat Sunda, Indonesia (via Balabac Strait), 1,368
Torres Strait, Australia, 1,853

Ports

Honolulu, Hawaii, U.S.A., 5,044
Jolo, Philippines, 180
Victoria, Sabah, 412
Zamboanga Philippines, 251

SANDEFJORDEN, NORWAY
(59˚07'25"N., 10˚13'50"E.) to:

Junction Points*

Pentland Firth, Scotland, 518

Ports

Bergen, Norway, 317
Bremerhaven, Germany, 373
London, England, 610

SANKT-PETERBURG, RUSSIA
(59˚55'00"N., 30˚15'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 779
Skagens Odde, Denmark (via Store Baelt), 971
Skagens Odde, Denmark (via The Sound), 841

Ports

Hango, Finland, 233
Helsinki, Finland, 172
Karlskrona, Sweden, 563
Kobenhavn, Denmark, 917
Oslo, Norway (via Store Baelt), 1,095
Oslo, Norway (via The Sound), 963
Pitea, Sweden, 687
Stockholm, Sweden, 386
Sundsvall, Sweden, 507
Tallinn, Estonia, 189
Umea, Sweden, 574
Ventspils, Latvia, 374

SANMEN WEN, CHINA
(29˚03'00"N., 121˚45'00"E.) to:

Ports

Chi-lung, Taiwan, 248
Hong Kong, China, 650
Incheon, South Korea, 628
Nagoya, Japan, 143
Qingdao, China, 528
Shanghai, China, 270

SAINT ANTIOCO PONTI, SARDINIA
(39˚03'12"N., 8˚28'12"E.) to:

Junction 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 Vincente, 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
Nuevitas, Cuba, 447
San Juan, Puerto Rico, 1,079

SANTA MARIA, CUBA
(21˚17'00"N., 78˚34'00"W.) to:

Junction Points*

Panama, Panama, 814
Yucatan Channel, 381

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
Makasar, Celebes, 422
Manila, Philippines, 952
Sorong, New Guinea, 953

SANTANA, BRAZIL
(0˚04'09"S., 51˚06'44"W.) to:

Junction Points*

Bishop Rock, England, 3,782
Cape of Good Hope, South Africa, 4,546
Fastnet Rock, Ireland, 3,754
Grand Banks South, 2,595
Ile d'Ouessant, France, 3,776
Inishtrahull, Ireland, 3,980
Montreal, Canada, 3,648
Panama, Panama, 2,253
Pentland Firth, Scotland, 4,228
Punta Arenas, Chile, 4,545
Strait of Gibraltar, 3,226
Straits of Florida, 2,710
Yucatan Channel, 2,722

Ports

Bordeaux, France, 3,874
Buenos Aires, Argentina, 3,534
Dakar, Senegal, 2,039
Halifax, Canada, 2,831
Kingston, Jamaica, 2,091
Lisboa, Portugal, 2,527
Natal, Brazil, 1,220
New York, New York, U.S.A., 2,924

SANTANDER, SPAIN
(43˚27'30"N., 3˚48'00"W.) to:

Junction Points*

Ile d'Ouessant, France, 323

Ports

Barranquilla, Colombia, 753
Cienfuegos, Cuba, 149
Santiago de Cuba, Cuba, 300

SANTIAGO DE CUBA, CUBA
(20˚01'00"N., 75˚50'15"W.) to:

Junction Points*

Panama, Panama, 726
Straits of Florida (via Windward Passage), 676
Yucatan Channel, 548

Ports

Amuay, Venezuela, 600
Baltimore, Maryland, U.S.A., 1,289
Barcelona, Venezuela, 936
Barranquilla, Colombia, 549
Boston, Massachusetts, U.S.A. (via Nantucket Light Buoy), 1,545
Brunswick, Georgia, U.S.A., 926
Casilda, Cuba, 288
Charleston, South Carolina, U.S.A. (via Crooked Island Passage), 952
Cienfuegos, Cuba, 334
Colon, Panama, 683
Fort de France, Martinique, 951
Guanica, Puerto Rico (via north of Hispaniola), 572
Guanica, Puerto Rico (via south of Hispaniola), 584
Halifax, Canada, 1,683
Hamilton, Bermuda, 1,031
Jacksonville, Florida, U.S.A. (via Windward Passage), 904
Key West, Florida, U.S.A. (via Windward Passage), 637
Kingston, Jamaica, 176
La Habana, Cuba, 650
Manzanillo, Cuba, 168
Miami, Florida, U.S.A., 630
Montego Bay, Jamaica, 154
Nassau, Bahamas, 566
New York, New York, U.S.A., 1,362
Norfolk, Virginia, U.S.A., 1,167
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage), 1,334
Ponce, Puerto Rico, 587
Puerto Barrios, Guatemala, 792
San Juan, Puerto Rico, 584
Santa Maria, Cuba, 300
Santo Domingo, Dominican Republic, 429
Savannah, Georgia, U.S.A. (via Crooked Island Passage), 951
Willemstad, Curacao, 627
Wilmington, North Carolina, U.S.A., 1,003

SANTO DOMINGO, DOMINICAN REPUBLIC
(18˚28'00"N., 69˚52'30"W.) to:

Junction Points*

Bishop Rock, England, 3,585
Fastnet Rock, Ireland, 3,491
Inishtrahull, Ireland (via Mona Passage), 3,641
Montreal, Canada (via Mona

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

Piraievs, 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

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
Bandjermasin, Kalimantan, Indonesia, 357
Belawan, Indonesia, 1,342
Bunbury, Australia, 1,510
Calcutta, India, 2,614
Calicut, India, 2,916
Cebu, Philippines, 1,278
Flying Fish Cove, Christmas Island, 603
Fremantle, Australia, 1,440
Geraldton, Australia, 1,242
Ho Chi Minh, Vietnam, 1,408
Hong Kong, China (via Linapacan Strait), 2,029
Iloilo, Philippines, 1,247
Incheon, South Korea, 2,885
Jakarta, Indonesia, 615
Kakinada, India, 2,567
Kuching, Sarawak, 974
Madras, India, 2,559
Makassar, Sulawesi, 339
Malacca, Malaysia, 1,091
Manila, Philippines (via Mindoro Strait, Cuyo West Pass, Sibutu Passage, and Makassar Strait), 1,514
Mogpo, South Korea, 2,725
Nampo, North Korea, 2,946
Port Darwin, Australia (south of Pulau Roti), 926

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
Sundra 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
Sundra 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

SEYDHISFJORDHUR, ICELAND
(65˚15'06"N., 14˚00'12"W.) to:

Junction Points*

Pentland Firth, Scotland, 500
Strait of Gibraltar, 1,899

Ports

Bergen, Norway, 634
Murmansk, Russia, 1,173
St. John's, Canada, 1,690

SFAX, TUNISIA
(34˚43'39"N., 10˚46'30"E.) to:

Junction Points*

Port Said, Egypt, 1,131
Strait of Gibraltar, 1,043

Ports

Almeria, Spain, 881
Civitavecchia, Italy, 520
Derince, Turkey, 1,081
Gibraltar, 1,026
Iskenderun, Turkey, 1,282
Larnaca, Cyprus, 1,163
Rostov-na-Donu, Russia, 1,684

SHANGHAI, CHINA
(31˚14'00"N., 121˚29'30"E.) to:

Junction Points*

Selat Lombok, Indonesia (via Pai-chieh Hsia, Steep Island Pass, east of Taiwan, Mindoro Strait and Sibutu Passage), 2,577
Panama, Panama (via Osumi Kaikyo), 8,648
Panama, Panama (via Tsugaru-Kaikyo), 8,566
Punta Arenas, Chile, 9,827
Singapore, 2,207
Selat Sunda, Indonesia (via Pai-chieh Hsia, Steep Island Pass, west of Macclesfield Bank, east of South Natuna Island, and through Selat Gaspar), 2,535
Selat Wetar, Indonesia, 2,553

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 1,597
Apia, Samoa, 4,715
Apra, Guam, 1,687
Auckland, New Zealand (via west of New Ireland), 5,148
Avarua, Cook Islands, 5,533
Brisbane, Australia, 4,243
Busan, South Korea (north of Cheju Do and via South Channel), 491
Cebu, Philippines (via South Channel, Pai-chieh Hsia, Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,322
Chi-lung, Taiwan, 447
Chimu Wan, Ryukyu Islands, 527
Dagu, China (via outside islands), 720
Dalian, China, 560
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,375
Dutch Harbor, Alaska, U.S.A. (via Tsugaru-Kaikyo), 3,377
Guayaquil, Ecuador, 8,872
Gunsan, South Korea, 457
Haiphong, Vietnam (via Pai-chieh Hsia, Steep Island Pass and Hainan Strait), 1,285
Hakodate, Japan, 1,166
Hankou, China, 592
Higashi-Iwase, Japan, 966
Ho Chi Minh, Vietnam (via Bonham Strait), 1,679
Hong Kong, China (via Pai-chieh Hsia, Steep Island Pass, and Formosa Strait), 831
Honolulu, Hawaii, U.S.A., 4,336
Hua-lien Kang, Taiwan, 533
Iloilo, Philippines (via South Channel, Pai-chieh Hsia, and Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,343
Incheon, South Korea (via South Channel), 503
Jakarta, Indonesia, 2,522
Jaluit, Marshall Islands, 3,138
Kobe, Japan (via Inland Sea), 789
Kobe, Japan (via Osumi Kaikyo), 826
Kodiak, Alaska, U.S.A., 3,967
Levuka, Fiji Islands, 4,528
Lianyungang, China, 414
Lo hsing-ta Mao-ti, China (via South Channel, Pai-chieh Hsia, and Steep Island Pass), 440
Los Angeles, California, U.S.A. (via Osumi Kaikyo), 5,810
Los Angeles, California, U.S.A. (via Tsugaru-Kaikyo), 5,699
Maizuru, Japan, 800
Manila, Philippines (east of Taiwan), 1,156
Manila, Philippines (via Formosa Strait), 1,166
Midway Island, 3,184
Misumi, Japan, 490
Mogpo, South Korea, 369
Nagasaki, Japan, 463
Naha, Ryukyu Islands, 479
Nakagusuku, Ryukyu Islands, 515
Nakhodka, Russia, 991
Nampo, North Korea, 561
Nikolayevsk-Na-Amure, Russia, 1,742
Noumea, New Caledonia (via Passé de Dunbea), 4,185
Otaru, Japan, 1,233
Pago Pago, American Samoa, 4,794
Papeete, French Polynesia, 5,907
Peng-hu Kang, Taiwan, 605
Petropavlovsk-Kamchatskiy, Russia (via La Perouse Strait), 2,200
Petropavlovsk-Kamchatskiy, Russia (via Tsugaru-Kaikyo), 2,224
Ponape, Caroline Islands, 2,545
Port Darwin, Australia, 2,804
Qingdao, China (via outside islands), 401
Qinhuangdao, China (via outside islands), 668
Rabaul, Papua New Guinea, 2,812
San Diego, California, U.S.A. (via Tsugaru-Kaikyo), 5,396
San Francisco, California, U.S.A. (via Tsugaru-Kaikyo), 5,396
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,502
Sanmen Wen, China, 270
Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,067
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,242
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and north of Aleutian Islands), 5,071
Seattle, Washington, U.S.A.(via Tsugaru-Kaikyo and south of Aleutian Islands), 5,131
Shantou, China, 708
Shimonoseki, Japan, 548
Sitka, Alaska, U.S.A., 4,446
Su-ao Kang, Taiwan, 498
Surabaya, Indonesia, 2,626
Suva, Fiji Islands, 4,467
Sydney, Australia (via west of New Ireland), 4,642
Sydney, Australia (via Vitiaz Strait), 4,636
Tai-tung Kang, Taiwan, 612
Tianjin, China (via Chang-shan Shuitao), 740
Truk, Caroline Islands, 2,261
Tsuruga, Japan, 823
Valparaiso, Chile (via Tokara Kaikyo), 10,148
Vinh Cam Ranh, Vietnam, 1,520
Vladivostok, Russia (via north of Cheju Do), 998
Vladivostok, Russia (via south of Cheju Do), 997
Wakamatsu, Japan, 541
Wake Island, 2,550
Weihai, China (via South Channel), 483
Wenzhou, China, 365
Weonsan, North Korea (via north of Cheju Do and South Channel), 797
Xiamen, China (via outside islands), 603
Yantai, China (via outside islands), 523
Yokohama, Japan (via Naikai), 1,117

SHARJAH, UNITED ARAB EMIRATES
(25˚23'00"N., 55˚20'48"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 4,701
Cape Leeuwin, Australia, 5,037
Selat Lombok, Indonesia, 4,288
Port Said, Egypt, 2,883
Singapore, 3,422
Selat Sunda, Indonesia, 3,629
Torres Strait, Australia (via south of Java), 5,831

Ports

Aden, Yemen, 1,494
Al Basrah, Iraq, 518
Belawan, Indonesia, 3,091
Calcutta, India, 3,099
Fremantle, Australia, 4,968
Penang, Malaysia, 3,131

SHARPNESS, ENGLAND
(51˚43'00"N., 2˚29'00"W.) Add 17 miles to Avonmouth distances.

SHEERNESS, ENGLAND
(51˚26'30"N., 0˚44'00"E.)
Subtract 31 miles from London distances.

SHELBURNE, CANADA
(43˚45'00"N., 65˚l9'00"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
Hulu Dao, China, 781
Iloilo, Philippines, 1,569
Imabari, Japan, 123
Incheon, South Korea, 489
Itozakicho, Japan, 133
Iwakuni, Japan, 93
Jakarta, Indonesia, 2,838
Kagoshima, Japan (via Bungo Suido), 295
Kagoshima, Japan (west of Kyushu), 306
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 Berhala), 532
Tsugaru-Kaikyo, Japan, 3,343
Selat Wetar, Indonesia (via Selat Riouw and Selat Karimata), 1,587

Ports

Ad Damman, Saudi Arabia, 3,681
Aden, Yemen, 3,627
Akyab, Burma, 1,365
Al Basrah, Iraq, 3,916
Al Gurdagah, Egypt, 4,754
Al Manamah, Bahrain, 3,652
Albany, Australia, 2,525
Aleksandrovsk-Sakhalinskiy, Russia, 3,608
Apra, Guam (via Sulu Sea), 2,585
Assab, Ethiopia, 3,769
Balikpapan, Kalimantan, Indonesia, (via Selat Riouw), 1,053
Bandar Abbas, Iran, 3,381
Bandar Khomeini, Iran, 3,872

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

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, 5,209
Port Louis, Mauritius, 3,333
Port Pirie, Australia, 3,564
Port Swettenham, Malaysia, 210
Portland, Oregon, U.S.A., 7,142
Prince Rupert, Canada, 6,683
Pulupandan, Philippines, 1,504
Qingdao, China, 2,466
Qui Nhon, Vietnam, 856
Rangoon, Burma, 1,109
Ras al Khafji, Saudi Arabia, 3,799
Ras as Sidr, Egypt, 4,902
Ras Gharib, Egypt, 4,827
Ras Tannurah, Saudi Arabia, 3,701
Rongelap, Marshall Islands, 3,669
Sabang, Indonesia, 601
San Diego, California, U.S.A., 7,736
San Fernando, Philippines, 1,379
San Francisco, California, U.S.A. (via Balintang Channel), 7,353
San Francisco, California, U.S.A. (via Tawitawi Island), 7,735
Sandakan, Sabah (via Banggi South Channel), 1,071
Seattle, Washington, U.S.A., 7,062
Shanghai, China, 2,207
Shimonoseki, Japan, 2,527
Sitka, Alaska, U.S.A., 6,433
Sorido, Indonesia, 2,202
Sorong, New Guinea, 1,894
Suakin, Sudan, 4,251
Surabaya, Indonesia, 763
Tamatave, Madagascar, 3,675
Tandjung Uban, Indonesia, 27
Tanga, Tanzania, 4,037
Tarakan, Indonesia, 1,286
Telukbayur, Indonesia, 1,011
Tjirebon, Indonesia, 624
Truk, Caroline Islands, 3,052
Umm Said, Qatar, 3,630
Vancouver, Canada, 7,078
Victoria, Sabah, 762
Victoria, Seychelles, 3,067
Vinh Cam Ranh, Vietnam, 786
Vladivostok, Russia, 3,004
Weihai, China, 2,548
Wake Island (via Surigao Strait), 3,885
Wallaroo, Australia, 3,500
Whyalla, Australia, 3,546
Weonsan, South Korea, 2,808
Wotho, Marshall Islands, 3,614
Xiamen, China, 1,649
Yantai, China, 2,582
Yokohama, Japan, 2,889
Zamboanga, Philippines (via Balabac Strait), 1,197
Zanzibar, Tanzania, 4,060
Zhenjiang, China, 1,333

SINT NICOLAASHAVEN, ARUBA
(12˚25'45"N., 69˚54'30"W.) to:

Junction Points*

Yucatan Channel, 1,036

Ports

Boston, Massachusetts, U.S.A., 1,853
Colon, Panama, 633
Georgetown, Guyana, 856
Guantanamo, Cuba, 544
Hamilton, Bermuda, 1,263
Kingston, Jamaica, 528
La Guaira, Venezuela, 207
New York, New York, U.S.A. (via Mona Passage), 1,761
New York, New York, U.S.A. (via Windward Passage), 1,805
Norfolk, Virginia, U.S.A. (via Mona Passage), 1,600
Norfolk, Virginia, U.S.A. (via Windward Passage), 1,611
Philadelphia, Pennsylvania, U.S.A., 1,732
Pointe a Pitre, Guadeloupe, 550
Port Castries, St. Lucia, 532
Port of Spain, Trinidad, 515
St. John's, Antigua, 549

SIRACUSA, SICILY, ITALY
(37˚03'29"N., 15˚17'21"E.) to:

Junction Points*

Port Said, Egypt, 924
Strait of Gibraltar, 1,054

Ports

Alexandria, Egypt, 809
Algiers, Algeria, 626
Alicante, Spain, 792
Ancona, Italy, 557
Annaba, Algeria, 401
Banghazi, Libya, 381
Banzart, Tunisia, 296
Barcelona, Spain, 752
Bari, Italy, 350
Beirut, Lebanon, 1,013
Brindisi, Italy, 292
Cartagena, Spain, 817
Ceuta, Morocco, 1,035
Civitavecchia, Italy, 373
Genova, Italy, 557
Gibraltar, 1,037
Haifa, Israel, 1,013
Iraklion, Kriti, 495
Istanbul, Turkey (south of Greece), 798
Istanbul, Turkey (via Corinth Canal), 772
Izmir, Turkey (south of Greece), 644
Izmir, Turkey (via Corinth Canal), 618
Kavala, Greece (south of Greece), 682
Kavala, Greece (via Corinth Canal), 656
La Spezia, Italy, 521
Livorno, Italy, 486
Malaga, Spain, 985
Marseille, France, 649
Messina, Sicily, 75
Napoli, Italy, 247
Odessa, Ukraine (south of Greece), 1,146
Odessa, Ukraine (via Corinth Canal), 1,120
Oran, Algeria, 823
Palermo, Sicily, 192
Palma, Balearic Islands, 668
Piraievs, Greece (south of Greece), 484
Piraievs, Greece (via Corinth Canal), 418
Rijeka, Croatia, 624
Savona, Italy, 567
Sibenik, Croatia, 498
Split, Croatia, 483
Tarabulus, Libya, 276
Taranto, Italy, 245
Tarragona, Spain, 746
Thessaloniki, Greece (south of Greece), 692
Thessaloniki, Greece (via Corinth Canal), 667
Toulon, France, 617
Trieste, Italy, 658
Tunis, Tunisia, 283
Valencia, Spain, 790
Valletta, Malta, 88
Venezia, Italy, 668
Volos, Greece (south of Greece), 634
Volos, Greece (via Corinth Canal), 608

SIRRI ISLAND, IRAN
(25˚54'25"N., 54˚33'44"E.) See Jazireh-Ye Sirri.

SISIMIUT, GREENLAND
(66˚56'42"N., 53˚41'00"W.) to:

Junction Points*

Pentland Firth, Scotland, 1,802
Strait of Gibraltar, 2,649

Ports

Churchill, Canada, 1,384
Reykjavik, Iceland, 1,248
St. John's, Canada, 1,172

SITKA, ALASKA, U.S.A.
(57˚03'00"N., 135˚20'30"W.) to:

Junction Points*

Panama, Panama, 4,524
Punta Arenas, Chile, 7,455
Singapore, 6,433

Ports

Apra, Guam, 4,407
Auckland, New Zealand, 6,176
Callao, Peru, 5,255
Guayaquil, Ecuador, 4,817
Hakodate, Japan (south of Aleutian Islands), 3,338
Ho Chi Minh, Vietnam, 5,963
Hong Kong, China (alternate route north of Aleutian Islands), 5,095
Hong Kong, China (south of Aleutian Islands), 5,136
Honolulu, Hawaii, U.S.A., 2,386
Ketchikan, Alaska, U.S.A., 224
Los Angeles, California, U.S.A., 1,640
Manila, Philippines (alternate route north of Aleutian Islands), 5,302
Manila, Philippines (south of Aleutian Islands), 5,323
Midway Island, 2,473
Noumea, New Caledonia, 5,613
Pago Pago, American Samoa, 4,635
Papeete, French Polynesia, 4,537

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

Petropavlovsk-Kamchatskiy, Russia, 2,314
Port Darwin, Australia, 6,338
Prince Rupert, Canada, 285
Qingdao, China, 4,454
San Diego, California, U.S.A., 1,725
San Francisco, California, U.S.A., 1,302
Seattle, Washington, U.S.A., 806
Shanghai, China, 4,446
Skagway, Alaska, U.S.A., 181
Surabaya, Indonesia, 6,564
Suva, Fiji Islands, 5,112
Sydney, Australia, 6,595
Truk, Caroline Islands, 4,473
Valdez, Alaska, U.S.A., 478
Valparaiso, Chile, 6,407
Vancouver, Canada, 823
Vladivostok, Russia, 3,585
Wake Island, 3,405
Wrangell, Alaska, U.S.A., 170
Yakutat, Alaska, U.S.A., 231
Yokohama, Japan (alternate route north of Aleutian Islands), 3,620
Yokohama, Japan (south of Aleutian Islands), 3,640

SITRAH ANCHORAGE, BAHRAIN
(26˚10'00"N., 50˚41'00"E.) Use Al Manamah distances.

SITTWE HARBOR, BURMA
(20˚08'30"N., 92˚54'30"E.) to:

Junction Points*

Port Said, Egypt, 4,672
Singapore, 1,365

Ports

Calcutta, India, 402
Colombo, Sri Lanka, 1,225
Penang, Malaysia, 1,215

SKAGENS ODDE, DENMARK*
(57˚48'00"N., 10˚44'00"E.) to:

Junction Points*

Bishop Rock, England, 851
Ile d'Ouessant, France, 833
Nord-Ostsee-Kanal (East Entrance), Germany, 224
Pentland Firth, Scotland, 450

Ports

Aalborg, Denmark, 87
Aarhus, Denmark, 127
Abenra, Denmark, 229
Aberdeen, Scotland, 416
Alesund, Norway, 450
Amsterdam, Netherlands, 422
Antwerp, Belgium, 528
Assens, Denmark, 187
Bergen, Norway, 305
Bremerhaven, Germany, 320
Cherbourg, France, 671
Dover, England, 527
Dundee, Scotland, 455
Dunkerque, France, 511
Egersund, Norway, 165
Emden, Germany, 344
Esbjerg, Denmark, 234
Faborg, Denmark, 234
Farsund, Norway, 132
Flekkefjorden, Norway, 155
Flensburg, Germany, 260
Fredericia, Denmark, 169
Frederikshavn, Denmark, 24
Gavle, Sweden, 676
Gdansk, Poland (via Store Baelt), 556
Gdansk, Poland (via The Sound), 418
Gdynia, Poland (via Store Baelt), 552
Goteborg, Sweden, 42
Grena, Denmark, 115
Haderslev, Denmark, 216
Hakonsvern, Norway, 296
Halmstad, Sweden, 101
Hamburg, Germany, 360
Hamina, Finland, 797
Hango, Finland, 625
Harstad, Norway, 911
Hartlepool, England, 438
Harwich, England, 487
Helsingborg, Sweden, 128
Helsingor, Denmark, 127
Helsinki, Finland (via Store Baelt), 841
Helsinki, Finland (via The Sound), 687
Hirtshals, Denmark, 30
Horsens, Denmark, 170
Hull, England, 462
Inverness, England, 481
Kalmar, Sweden (via Store Baelt), 496
Kalmar, Sweden (via The Sound), 342
Kalundborg, Denmark, 141
Karlskrona, Sweden, 295
Klaipeda, Lithuania (via Store Baelt), 612
Klaipeda, Lithuania (via The Sound and north of Bornholm), 462
Kobenhavn, Denmark, 150
Koge, Denmark, 161
Kolding, Denmark, 289
Korsor, Denmark, 162
Kotka, Finland, 755
Kristiansand, Norway, 92
Kyndbyvaerkets, Denmark, 136
Landskrona, Sweden, 137
Le Havre, France, 639
Leith, Scotland, 472
Lillesand, Norway, 80
Limhamn, Sweden, 159
London, England, 556
Lubeck, Germany, 263
Lulea, Sweden (via Store Baelt), 1,101
Lulea, Sweden (via The Sound), 941
Malmo, Sweden, 155
Mandal, Norway, 110
Masnedsund, Denmark, 122
Middlefart, Denmark, 186
Molde, Norway, 492
Mosjoen, Norway, 732
Musko Island, Sweden, 524
Naestved, Denmark, 212
Nakskov, Denmark, 213
Namsos, Norway, 696
Newcastle, England, 445
Norrkoping, Sweden, 520
Odense, Denmark, 126
Oostende, Belgium, 489
Ornskolosvik, Sweden, 798
Oslo, Norway, 131
Oulu, Finland, 979
Oxelosund, Sweden, 481
Pechenga, 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 Piraievs 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 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

SOUDHA, 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
Piraievs, 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
Piraievs, Greece (south of Greece), 672
Piraievs, 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
Hvalfjordhur, Iceland, 1,437
Ilulissat (Jakobshavn), Greenland, 1,341
Ivittuut, Greenland, 849
Kangerluarsoruseq, 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
Qasigiannguit, Greenland, 1,333
Qutdligssat, Greenland, 1,476
Recife, Brazil, 3,491
Reykjavik, Iceland, 1,416
Rio de Janeiro, Brazil, 4,563
Santa Cruz de Tenerife, Canary Islands, 2,053
Seydhisfjordhur, Iceland, 1,690
Shelburne, Canada, 621
Sisimiut, Greenland, 1,172
Upernavik, Greenland, 1,532

ST. JOHN'S, ANTIGUA
(17˚08'00"N., 61˚52'00"W.) to:

Ports

Belem, Brazil, 1,433
Colon, Panama, 1,158
Elizabeth Harbor, Bahamas, 900
Georgetown, Guyana, 689
Guantanamo, Cuba, 837
Kingston, Jamaica, 870
Miami, Florida, U.S.A., 1,180
New York, New York, U.S.A., 1,572
Pointe a Pitre, Guadeloupe (east of Guadeloupe), 107
Pointe a Pitre, Guadeloupe (west of Guadeloupe), 110
Port Castries, St. Lucia, 204
Port of Spain, Trinidad, 411
Puerto Cortes, Honduras, 1,511
San Juan, Puerto Rico, 265
Sint Nicolaashaven, Aruba, 549

ST. LOUIS DU RHONE, FRANCE
(43˚23'00"N., 4˚48'27"E.) to:

Junction Points*

Port Said, Egypt, 1,536
Strait of Gibraltar, 701

Ports

Ajaccio, Corsica, 197
Alexandria, Egypt, 413
Alicante, Spain, 395
Ayios Nikolaos, Greece, 1,131
Bari, Italy, 906
Ceuta, Morocco, 685
Es Sider, Libya, 994
Haifa, Israel, 1,601
Kerch, Ukraine, 1,831
Mersin, Turkey, 1,557
Oran, Algeria, 537
Sevastopol', Ukraine, 686
Trieste, Italy, 1,216
Zelinika, Montenegro, 943

ST. MALO, FRANCE
(48˚38'40"N., 2˚01'38"W.) to:

Junction Points*

Bishop Rock, England, 90
Ile d'Ouessant, France, 141

Ports

Brest, France, 152
Dover, England, 228
Le Havre, France, 156

ST. MARC, HAITI
(19˚07'00"N., 72˚42'10"W.) to:

Junction Points*

Panama, Panama, 796
Straits of Florida, 673

Ports

Kingston, Jamaica, 254
Nuevitas, Cuba, 306

ST. NAZAIRE, FRANCE
(47˚16'00"N., 2˚12'00"W.) to:

Junction Points*

Ile d'Ouessant, France, 184

Ports

Aviles, Spain, 274
Bordeaux, France, 184
Gijon, Spain, 274
La Pallice, France, 108

ST. NICHOLAS, GREECE
(35˚11'38"N., 25˚43'20"E.) See Ayios Nikolaos.

ST. PETERSBURG, FLORIDA, U.S.A.
(27˚46'00"N., 82˚37'00"W.)
Subtract 15 miles from Tampa distances.

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

ST. PIERRE, MARTINIQUE
(14˚44'30"N., 61˚11'15"W.) to:

Ports

La Habana, Cuba, 1,339
New York, New York, U.S.A. (via Anegada Channel), 1,705
Port Castries, St. Lucia, 46
San Juan, Puerto Rico, 374

ST. RAPHAEL, FRANCE
(43˚25'21"N., 6˚45'45"E.) to:

Junction Points*

Port Said, Egypt, 1,475
Strait of Gibraltar, 763

Ports

Barcelona, Spain, 251
Genova, Italy, 118
Palma, Balearic Islands, 347

STADERSAND, GERMANY
(53˚37'47"N., 9˚32'00"E.) to:

Junction Points*

Bishop Rock, England, 739
Ile d'Ouessant, France, 725
Nord-Ostsee-Kanal (East Entrance), Germany, 77
Pentland Firth, Scotland, 543
Skagens Odde, Denmark, 358

Ports

Aberdeen, Scotland, 464
Amsterdam, Netherlands, 253
Antwerp, Belgium, 388
Bergen, Norway, 470
Emden, Germany, 166
Inverness, Scotland, 547
London, England, 411
Rotterdam, Netherlands, 288
Stavanger, Norway, 391
Zeebrugge, Belgium, 330

STENUNGSUND, SWEDEN
(58˚04'43"N., 11˚48'14"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany (via Store Baelt), 258
Nord-Ostsee-Kanal (East Entrance), Germany (via The Sound), 330
Skagens Odde, Denmark, 42

Ports

Aarhus, Denmark, 163
Abenra, Denmark, 245
Kobenhavn, Denmark, 162
Kokkola, Finland (via The Sound), 898
Limhamn, Sweden (via The Sound), 169
Vassa, Finland (via The Sound), 810

STEPHENVILLE, CANADA
(48˚29'39"N., 58˚32'59"W.) to:

Junction Points*

Bishop Rock, England, 2,282
Cape of Good Hope, South Africa, 6,471
Grand Banks South, 608
Ile d'Ouessant, France, 2,339
Inishtrahull, Ireland, 2,198
Montreal, Canada, 790
Panama, Panama, 2,681
Pentland Firth, Scotland, 2,327
Punta Arenas, Chile, 7,101
Straits of Florida, 1,991

Ports

Boston, Massachusetts, U.S.A., 811
Buenos Aires, Argentina, 6,112
Cape Town, South Africa, 6,560
Colon, Panama, 2,667
Kingston, Jamaica, 2,168
Liverpool, Canada, 493
New York, New York, U.S.A., 958
Philadelphia, Pennsylvania, U.S.A., 1,111
Recife, Brazil, 3,712
St. John, Canada, 995
Yarmouth, Canada, 623

STOCKHOLM, SWEDEN
(59˚19'30"N., 18˚05'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 503
Skagens Odde, Denmark (via Sandhamnsleden and Store Baelt), 695
Skagens Odde, Denmark (via The Sound), 567

Ports

Gavle, Sweden, 153
Halmstad, Sweden, 481
Hamina, Finland, 325
Hango, Finland, 178
Helsingborg, Sweden, 436
Helsingor, Denmark (via Store Baelt), 629
Helsingor, Denmark (via The Sound), 445
Helsinki, Finland, 239
Hobro, Denmark, 610
Horsens, Denmark, 567
Kalundborg, Denmark, 531
Karlskrona, Sweden, 290
Kobenhavn, Denmark (via Store Baelt and Dalaro Kanal), 603
Kobenhavn, Denmark (via Store Baelt and Sandofjarden), 646
Korsor, Denmark, 524
Kotka, Finland, 311
Kyndbyvaerkets, Denmark, 493
Landskrona, Sweden, 424
Limhamn, Sweden, 427
London, England, 1,251
Lubeck, Germany, 491
Malmo, Sweden (via Drogden), 435
Malmo, Sweden (via Flintrannan), 422
Masnedsund, Denmark, 531
Narvik, Norway, 1,612
Norrkoping, Sweden, 143
Odense, Denmark, 609
Ornskolosvik, Sweden, 274
Oslo, Norway (via Store Baelt), 819
Oslo, Norway (via The Sound), 683
Oulu, Finland, 456
Peenemunde, Germany, 422
Pitea, Sweden, 402
Porkkala, Finland, 216
Randers, Denmark, 604
Rauma, Finland, 230
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
Argentia, 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
Durres, 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
Hvalfjordhur, Iceland, 1,944
Hyeres, France, 725
Ilulissat (Jakobshavn), Greenland, 2,819
Iraklion, Kriti, 1,516
Iskenderun, Turkey, 2,054
Istanbul, Turkey, 1,821
Ivittuut, Greenland (direct), 2,283
Ivittuut, Greenland (via 75 miles off Kap Farvel), 2,304
Izmir, Turkey, 1,667
Jacksonville, Florida, U.S.A., 3,740
Kalamai, Greece, 1,370
Kangerluarsoruseq, Greenland, 2,444
Kavala, Greece, 1,706
Keflavik, Iceland, 1,947

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

Kerch, Ukraine, 2,256
Kerkira, Greece, 1,324
Key West, Florida, U.S.A., 3,949
Khalkis, Greece (south of Greece), 1,562
Khalkis, Greece (via Corinth Canal), 1,545
Kingston, Jamaica, 3,891
Kyrenia, Cyprus, 1,910
La Guaira, Venezuela, 3,634
La Habana, Cuba, 4,013
La Pallice, France, 950
La Spezia, Italy, 891
Lagos, Nigeria, 3,100
Larnaca, Cyprus, 1,953
Las Palmas, Canary Islands, 681
Latakia, Syria, 2,029
Licata, Sicily, 958
Limassol, Cyprus, 1,914
Lisboa, Portugal, 286
Livorno, Italy, 887
Mahon, Balearic Islands, 552
Malaga, Spain, 78
Manfredonia, Italy, 1,419
Maniitsoq, Greenland, 2,547
Marin, Spain, 517
Marsaxlokk, Malta, 1,017
Marseille, France, 711
Marshall, Liberia, 2,197
Matruh, Egypt, 1,695
Melilla, Morocco, 154
Menton, France, 791
Mers el Kebir, Algeria, 252
Mersin, Turkey, 1,996
Messina, Sicily, 1,049
Milazzo, Sicily, 1,025
Monaco, Monaco, 762
Monopoli, Italy, 1,346
Montevideo, Uruguay, 5,178
Mostaganem, Algeria, 283
Nanortalik, Greenland, 2,138
Narsarsuaq, Greenland, 2,257
Natal, Brazil, 3,003
Navplion, Greece, 1,484
New Haven, Connecticut, U.S.A., 3,161
New London, Connecticut, U.S.A., 3,087
New York, New York, U.S.A., 3,176
Nice, France, 788
Norfolk, Virginia, U.S.A., 3,335
Novorossiysk, Russia, 2,277
Nuuk (Godthab), Greenland, 2,477
Odessa, Ukraine, 2,169
Olbia, Sardinia, 828
Oporto, Portugal, 432
Oran, Algeria, 252
Palermo, Sicily, 940
Palma, Balearic Islands, 471
Paphos, Cyprus, 1,872
Paramaribo, Suriname, 3,275
Patrai, Greece, 1,350
Pescara, Italy, 1,515
Philadelphia, Pennsylvania, U.S.A., 3,319
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
Qasigiannguit, 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
Seydhisfjordhur, 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 Castello, Portugal, 472
Viareggio, Italy, 898
Vigo, Spain, 504
Vila Real de Santo Antonio, Portugal, 113
Villa do Porto, Azores, 963
Villa Cisneros, Western Sahara, 923
Villa San Giovanni, Italy, 1,045
Villa Sanjurjo, Morocco, 106
Villagarcia, Spain, 526
Villefranche, France, 789
Vlores, Albania, 1,311
Volos, Greece, 1,657
Washington, D.C., U.S.A., 3,471
Willemstad, Curacao, 3,685
Wilmington, North Carolina, U.S.A., 3,524
Yumurtalik, Turkey, 1,672

STRAITS OF FLORIDA*
(24˚25'00"N., 83˚00'00"W.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,784
Grand Banks South, 1,990
Montreal, Canada (via Cabot Strait), 2,563
Montreal, Canada (via Strait of Canso), 2,467
Punta Arenas, Chile (east of South America), 6,829
Strait of Gibraltar, 4,009
Yucatan Channel, 192

Ports

Abraham Bay, Bahamas, 593
Accra, Ghana (via Northwest Providence Channel), 5,016
Antilla, Cuba, 491
Argentia, Canada, 2,050
Arkhangel'sk, Russia, 5,208
Moa, Cuba, 510
Bahia de Samana, Dominican Republic, 864
Baltimore, Maryland, U.S.A., 1,115
Banes, Cuba, 483
Baracoa, Cuba, 540
Basse-Terre, Guadeloupe, 1,317
Belem, Brazil, 2,694
Boca de Tanamo, Cuba, 489
Bordeaux, France, 4,234
Boston, Massachusetts, U.S.A., 1,440
Brest, France, 3,933
Bridgetown, Barbados, 1,511
Brunswick, Georgia, U.S.A., 548
Buenos Aires, Argentina, 5,763
Cadiz, Spain, 3,992
Caibarien, Cuba, 252
Cap-Haitien, Haiti, 604
Cape Town, South Africa, 6,778
Cardenas, Cuba, 140
Charleston, South Carolina, U.S.A., 644
Charlotte Amalie, Virgin Islands, 1,087
Coatzacoalcos, Mexico, 757
Corpus Christi, Texas, U.S.A., 803
Dakar, Senegal (via Northwest Providence Channel), 3,768
Douala, Cameroon, 5,526
Elizabeth Harbor, Bahamas, 544
Fort de France, Martinique, 1,389
Fort Liberte, 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 8 l/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

Mariel, 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

SWEEPER COVE, ALASKA, U.S.A.
(51˚51'30"N., 176˚38'00"W.) to:

Junction Points*

Panama, Panama, 5,586

Ports

Dutch Harbor, Alaska, U.S.A., 407
Honolulu, Hawaii, U.S.A., 1,945
Port Hueneme, California, U.S.A., 2,686
Victoria, Canada, 2,044

SWINOUJSCIE, POLAND
(53˚55'00"N., 14˚17'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 186
Skagens Odde, Denmark (via Store Baelt), 379
Skagens Odde, Denmark (via The Sound), 275

Ports

Horsens, Denmark, 268
Kalundborg, Denmark, 175
Koge, Denmark, 156
Kolding, Denmark, 253
Korsor, Denmark, 239
Kyndbyvaerkets, Denmark, 195
Limhamn, Sweden, 128
Masnedsund, Denmark, 193
Nakskov, Denmark, 190
Odense, Denmark, 293
Oslo, Norway (via Store Baelt), 503
Oslo, Norway (via The Sound), 397
Randers, Denmark, 266
Sonderborg, Denmark, 215

SYDNEY, AUSTRALIA
(33˚51'30"S., 151˚l3'00"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
Wallaroo, 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

Port Louis, Mauritius, 474
Sabang, Indonesia, 3,076
Zanzibar, Tanzania, 1,116

TAMPA, FLORIDA, U.S.A.
(27˚56'30"N., 82˚26'40"W.) to:

Junction Points*

Straits of Florida, 232
Yucatan Channel, 404

Ports

Cartagena, Colombia, 1,295
Colon, Panama, 1,216
La Habana, Cuba, 307
Matanzas, Cuba (via Northwest Channel), 325
Tampico, Mexico, 921
Veracruz, Mexico, 925

TAMPICO, MEXICO
(22˚12'30"N., 97˚3'30"W.) to:

Junction Points*

Panama, Panama, 1,528
Straits of Florida, 832
Yucatan Channel, 716

Ports

Belize, Belize, 927
Brunswick, Georgia, U.S.A., 1,387
Campeche, Mexico, 430
Carmen, Mexico, 401
Cartagena, Colombia, 1,575
Cienfuegos, Cuba, 1,009
Coatzacoalcos, Mexico, 320
Colon, Panama, 1,485
Corpus Christi, Texas, U.S.A., 366
Galveston, Texas, U.S.A., 473
Guantanamo, Cuba, 1,293
Gulfport, Mississippi, U.S.A., 725
Jacksonville, Florida, U.S.A., 1,361
Key West, Florida, U.S.A., 907
Kingston, Jamaica, 1,252
La Habana, Cuba, 864
Matagorda Bay, Texas, U.S.A., 380
Matanzas, Cuba, 914
Mobile, Alabama, U.S.A., 750
New Orleans, Louisiana, U.S.A. (via Southwest Pass), 711
Pensacola, Florida, U.S.A., 759
Port Arthur, Texas, U.S.A., 522
Progreso, Mexico, 469
Puerto Cortes, Honduras, 993
San Juan del Norte, Nicaragua, 1,336
Savannah, Georgia, U.S.A., 1,432
Tampa, Florida, U.S.A., 921
Tela, Honduras, 974
Veracruz, Mexico, 218

TANDJUNG UBAN, INDONESIA
(1˚04'00"N., 104˚13'00"E.) to:

Junction Points*

Singapore, 27
Selat Sunda, Indonesia, 502

Ports

Ho Chi Minh, Vietnam, 633
Makassar, Sulawesi, 1,075
Manila, Philippines, 1,328

TANDJUNG PRIOK, INDONESIA
(6˚06'00"S., 106˚53'00"E.) See Jakarta.

TANGA, TANZANIA
(5˚04'00"S., 39˚07'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 2,425
Port Said, Egypt, 3,068
Singapore, 4,037

Ports

Aden, Yemen, 1,681
Belawan, Indonesia, 3,704
Fremantle, Australia, 4,283
Mombasa, Kenya, 69
Penang, Malaysia, 3,749
Port Darwin, Australia, 5,466
Zanzibar, Tanzania, 75

TANGIER, MOROCCO
(35˚47'00"N., 5˚48'00"W.) to:

Ports

Casablanca, Morocco, 166
Ceuta, Morocco, 29
Dakar, Senegal, 1,483
El Jadida, Morocco, 207
Fedala, Morocco, 158
Funchal, Madeira Island, 588
Kenitra, Morocco, 115
Larache, Morocco, 48
Porto Grande, Cape Verde Islands, 1,536
Vigo, Spain, 516

TANJONG PERAK, INDONESIA
(7˚11'28"S., 112˚44'32"E.) See Surabaya.

TARABULUS, LEBANON
(34˚29'37"N., 35˚51'55"E.) to:

Junction Points*

Port Said, Egypt, 268
Strait of Gibraltar, 2,047

Ports

Haifa, Israel, 118
Marseille, France, 1,613
Sete, France, 1,672
Venezia, Italy (south of Greece), 1,399
Venezia, Italy (via Corinth Canal), 1,369

TARABULUS, LIBYA
(32˚54'10"N., 13˚11'36"E.) to:

Junction Points*

Port Said, Egypt, 998
Strait of Gibraltar, 1,093

Ports

Alexandria, Egypt, 876
Algiers, Algeria, 665
Alicante, Spain, 832
Ancona, Italy, 820
Annaba, Algeria, 440
Banghazi, Libya, 354
Banzart, Libya, 335
Barcelona, Spain, 762
Bari, Italy, 613
Bat'umi, Georgia, 1,540
Beirut, Lebanon, 1,129
Brindisi, Italy, 555
Cartagena, Spain, 856
Ceuta, Morocco, 1,074
Genova, Italy, 719
Gibraltar, 1,076
Haifa, Israel, 1,109
Iraklion, Kriti, 630
Iskenderun, Turkey, 1,167
Istanbul, Turkey, 953
Izmir, Turkey, 799
La Spezia, Italy, 790
Larnaca, Cyprus, 1,050
Livorno, Italy, 754
Malaga, Spain, 1,024
Marsaxlokk, Malta, 191
Marseille, France, 745
Mersin, Turkey, 1,109
Messina, Sicily, 344
Napoli, Italy, 516
Odessa, Ukraine, 1,301
Oran, Algeria, 862
Palermo, Sicily, 460
Palma, Balearic Islands, 708
Piraievs, 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
Durres, 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
Piraievs, Greece (south of Greece), 493
Piraievs, Greece (via Corinth Canal), 363
Rijeka, Croatia, 482
Sarande, 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
Piraievs, 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

TIENTSIN, CHINA
(39˚07'30"N., 117˚11'45"E.) See Tianjin, China.

TIKSI, RUSSIA
(71˚39'30"N., 128˚59'00"E.) to:

Ports

Mys Chelyuskin, Russia, 579
Pevek, Russia, 854
Provideniya, Russia, 1,500

TJILATJAP, INDONESIA
(7˚44'00"S., 108˚59'24"E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,616
Selat Lombok, Indonesia, 413
Selat Sunda, Indonesia, 345

Ports

Fremantle, Australia, 1,519
Port Darwin, Australia, 1,321
Tarakan, Indonesia, 1,217

TJIREBON, INDONESIA
(6˚42'00"S., 108˚36'00"E.) to:

Junction Points*

Selat Lombok, Indonesia, 503
Singapore, 624
Selat Sunda, Indonesia, 211

Ports

Jakarta, Indonesia, 156
Makassar, Sulawesi, 681

TOCOPILLA, CHILE
(22˚05'20"S., 70˚14'00"W.) to:

Junction Points*

Panama, Panama, 2,068
Punta Arenas, Chile, 2,177

Ports

San Antonio, Chile, 692
San Francisco, California, U.S.A., 4,699
Valparaiso, Chile, 663

TOKUYAMA, JAPAN
(34˚00'00"N., 131˚46'00"E.) to:

Ports

Apra, Guam, 1,427
Kagoshima, Japan, 263
Kure, Japan, 76
Shimonoseki, Japan, 50
Yokohama, Japan, 510

TOKYO, JAPAN
(35˚38'00"N., 139˚46'00"E.) Add 10 miles to Yokohama distances.

TOMAKOMAI, JAPAN
(42˚36'50"N., 141˚37'22"E.) to:

Junction Points*

Honshu, Japan, 486
Panama, Panama, 7,383
Punta Arenas, Chile, 9,455
Tsugaru-Kaikyo, Japan, 90

Ports

Apra, Guam, 1,759
Auckland, New Zealand, 5,198
Honolulu, Hawaii, U.S.A., 3,353
Sydney, Australia, 4,801
Valparaiso, Chile, 9,910
Yokohama, Japan, 541

TOMARI, JAPAN
(43˚42'00"N., 145˚30'00"E.) to:

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 542
Aomori, Japan, 335
Attu Island, Alaska, U.S.A., 1,238
Dutch Harbor, Alaska, U.S.A., 1,978
Hakodate, Japan, 301
Kholmsk. Russia, 314
Kiska, Alaska, U.S.A., 1,406
Korsakov, Sakhalin, Russia, 239
Muroran, Japan, 295
Nikolayevsk-Na-Amure, Russia, 694
Otaru, Japan, 387
Petropavlovsk-Kamchatskiy, Russia, 822
Vladivostok, Russia, 724
Wakkanai, Japan, 246

TOMPKINSVILLE, NEW YORK, U.S.A.
(40˚38'00"N., 74˚04'00"W.) For ocean distances, subtract 4 1/2 miles from New York distances.

TONGYEONG, SOUTH KOREA
(34˚50'00"N., 128˚27'00"E.) to:

Ports

Busan, South Korea, 63
Mogpo, South Korea, 189
Nampo, North Korea, 446
Rajin, North Korea, 501
Weonsan, North Korea, 358

TONSBERG, NORWAY
(59˚15'42"N., 10˚24'50"E.) to:

Junction Points*

Pentland Firth, Scotland, 532

Ports

Bergen, Norway, 329
London, England, 624

TORNIO, FINLAND
(65˚45'30"N., 24˚08'30"E.) to:

Junction Points*

Skagens Odde, Denmark (via Store Baelt), 1,103
Skagens Odde, Denmark (via The Sound), 973

TORRES STRAIT, AUSTRALIA*
(10˚33'00"S., 142˚08'00"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,854
Cape Leeuwin, Australia, 2,717
Honshu, Japan, 3,265
Panama, Panama, 8,451
Port Said, Egypt (via Eight Degree Channel), 7,403
Port Said, Egypt (via One and One Half Degree Channel), 7,505
Punta Arenas, Chile (via Raine Island entrance and Lat. 49˚S.), 7,217
Selat Wetar, Indonesia, 881
Wilson Promontory, Australia (via Cape Capricorn and inner route), 2,183

Ports

Aden, Yemen (via Eight Degree Channel), 6,016
Ambon, Indonesia, 964
Apia, Samoa (via Raine Island entrance), 2,763
Auckland, New Zealand (via Raine Island entrance), 2,485
Bandjermasin, Kalimantan, Indonesia, 1,785
Belawan, Indonesia, 2,839
Bluff Harbor, New Zealand (via Raine Island entrance), 2,797
Bombay, India (south of Java and Timor), 4,849
Bowen, Australia, 760
Brisbane, Australia (via Cape Capricorn and inner route), 1,348
Cairns Harbor, Australia, 505
Callao, Peru (via Raine Island entrance), 8,152
Colombo, Sri Lanka (south of Java and Timor), 3,978
Davao, Philippines, 1,628
Dunedin, New Zealand, 2,872
Fremantle, Australia, 2,531
Gladstone Harbor, Australia, 1,085
Guayaquil, Ecuador (via Raine Island entrance), 8,270
Ho Chi Minh, Vietnam, 2,629
Hobart, Tasmania, 2,271
Hong Kong, China, 2,725
Honolulu, Hawaii, U.S.A. (via Raine Island entrance, China Strait and Bougainville Strait), 4,191
Jakarta, Indonesia (via Selat Wetar and north of Madura), 2,175
Karachi, Pakistan (south of Java and Timor), 5,298
Kota Kinabalu, Sabah, 2,041
Launceston, Tasmania, 2,278
Lautoka Harbor, Fiji Islands, 2,204
Levuka, Fiji Islands (via Raine Island entrance), 2,268
Lucinda, Australia, 634
Lyttelton, New Zealand, 2,849
Mackay, Australia, 864
Malacca, Malaysia, 2,588
Manila, Philippines (via Basilan Strait and Mindoro Strait), 2,193
Massawa, Ethiopia (via Eight Degree Channel), 6,403
Nelson, New Zealand, 2,646
Noumea, New Caledonia (via Raine Island entrance), 1,622
Pago Pago, American Samoa (via Raine Island entrance), 2,848
Papeete, French Polynesia (via Raine Island entrance), 4,043
Port Darwin, Australia (via Clarence Strait and Dundas Strait), 735
Port Kembla, Australia, 1,817
Port Lincoln, Australia, 2,811
Port Louis, Mauritius, 4,933
Portland, Australia, 2,429
Pulupandan, Philippines, 1,962
Rockhampton, Australia, 1,034
Sabang, Indonesia, 3,072
San Francisco, California, U.S.A. (via Raine Island entrance), 6,249
Sorido, Indonesia, 1,329
Sorong, New Guinea, 1,021
Surabaya, Indonesia (via Wetar Passage and north of Madura), 1,814
Surabaya, Indonesia (via Wetar Passage and south of Madura), 1,784
Suva, Fiji Islands (via Raine Island entrance, north of Cape Cumberland and Maewo to Kandavu Passage), 2,212
Sydney, Australia, 1,754
Townsville, Australia, 662
Urangan, Australia, 1,198
Valparaiso, Chile (via 49˚S.), 7,670
Victoria, Sabah, 2,192
Wellington, New Zealand (via Raine Island entrance), 2,652
Xiamen, China, 2,655

TORSHAVN, FAROE ISLANDS
(62˚00'20"N., 6˚45'30"W.) to:

Junction Points*

Pentland Firth, Scotland, 22
Skagens Odde, Denmark, 624

Ports

Aberdeen, Scotland, 365
Bergen, Norway, 372

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
Piraievs, Greece (south of Greece), 1,038
Piraievs, Greece (via Corinth Canal), 956
Rijeka, Croatia, 1,145
Savona, Italy, 156
Sibenik, Croatia, 1,018
Siracusa, Sicily, 617
Skikda, Algeria, 381
Split, Croatia, 1,003
Tarabulus, Libya, 722
Taranto, Italy, 765
Tarragona, Spain, 251
Thessaloniki, Greece, 1,246
Trieste, Italy, 1,178
Tunis, Tunisia, 453
Valencia, Spain, 363
Valletta, Malta, 605
Venezia, Italy, 1,188
Volos, Greece, 1,187

TOWNSVILLE, AUSTRALIA
(19˚15'00"S., 146˚50'00"E.) to:

Junction Points*

Cape Leeuwin, Australia, 3,023
Torres Strait, Australia, 662
Wilson Promontory, Australia, 1,499

Ports

Brisbane, Australia, 677
Noumea, New Caledonia, 1,155
Port Moresby, Papua New Guinea, 595

TRABZON, TURKEY
(41˚01'00"N., 39˚46'30"E.) Add 511 miles to Istanbul distances or ports outside the Black Sea.

TRAMANDAI, BRAZIL
(30˚00'40"S., 50˚05'12"W.) to:

Junction Points*

Bishop Rock, England, 5,418
Cape of Good Hope, South Africa, 3,420
Fastnet Rock, Ireland, 5,445
Grand Banks South, 5,074
Ile d'Ouessant, France, 5,391
Inishtrahull, Ireland, 5,718
Montreal, Canada, 5,963
Panama, Panama, 4,889
Pentland Firth, Scotland, 5,998
Punta Arenas, Chile, 1,676
Strait of Gibraltar, 4,733
Straits of Florida, 5,242
Yucatan Channel, 5,267

Ports

Buenos Aires, Argentina, 609
Guiria, Venezuela, 3,831
Montevideo, Uruguay, 450
Pointe Noire, Congo, 3,804
Rio de Janeiro, Brazil, 565
Santos, Brazil, 421
Takoradi, Ghana, 3,483

TRANGISVAAG, FAROE ISLANDS
(61˚31'58"N., 6˚44'30"W.) to:

Junction Points*

Bishop Rock, England, 798
Cape of Good Hope, South Africa, 6,492
Fastnet Rock, Ireland, 650
Grand Banks South, 1,938
Inishtrahull, Ireland, 370
Panama, Panama, 4,494
Pentland Firth, Scotland, 197
Punta Arenas, Chile, 7,644
Strait of Gibraltar, 1,747

Ports

Aberdeen, Scotland, 331
Alesund, Norway, 367
Amsterdam, Netherlands, 671
Bodo, Norway, 645
Bremerhaven, Germany, 686
Dover, England, 718
Fredrikstad, Norway, 629
Goteborg, Sweden, 632
Hirtshals, Denmark, 569
Leith, Scotland, 417
London, England, 753
Murmansk, Russia, 1,200
Portsmouth, England, 812
Reykjavik, Iceland, 492
Tromso, Norway, 792
Zeebrugge, Belgium, 705

TRAPANI, SICILY
(38˚00'15"N., 12˚30'00"E.) to:

Junction Points*

Port Said, Egypt, 1,100
Strait of Gibraltar, 896

Ports

Messina, Sicily, 177
Napoli, Italy, 198
Tunis, Tunisia, 138

TRAVEMUNDE, GERMANY
(53˚57'35"N., 10˚53'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 88
Skagens Odde, Denmark (via Store Baelt), 282

Ports

Gdynia, Poland, 307
Kobenhavn, Denmark (via Store Baelt), 234
Kobenhavn, Denmark (via The Sound), 139
Oslo, Norway (via Store Baelt), 389
Oslo, Norway (via The Sound), 410

TRELLEBORG, SWEDEN
(55˚22'00"N., 13˚09'25"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 141
Skagens Odde, Denmark (via Store Baelt), 333
Skagens Odde, Denmark (via The Sound), 192

Ports

Kristiansand, Norway, 425
Oslo, Norway (via Store Baelt), 467
Oslo, Norway (via The Sound), 314

TRENTON, NEW JERSEY, U.S.A.
(40˚11'24"N., 74˚45'24"W.) Add 28 miles to Philadelphia distances.

TRIESTE, ITALY
(45˚39'13"N., 13˚44'49"E.) to:

Junction Points*

Port Said, Egypt, 1,310
Strait of Gibraltar, 1,682

Ports

Al Latakia, Syria, 1,370
Alexandria, Egypt, 1,200
Algiers, Algeria, 1,254
Alicante, Spain, 1,409
Ancona, Italy, 130
Annaba, Algeria, 1,034
Banghazi, Libya, 901
Banzart, Tunisia, 943
Barcelona, Spain, 1,313
Bari, Italy, 321
Bat'umi, Georgia (south of Greece), 1,749
Bat'umi, Georgia (via Corinth Canal), 1,650
Beirut, Lebanon, 1,379
Brindisi, Italy, 376
Cartagena, Spain, 1,439
Ceuta, Morocco, 1,662
Genova, Italy, 1,118
Gibraltar, 1,664
Haifa, Israel, 1,375
Iraklion, Kriti, 865
Istanbul, Turkey (south of Greece), 1,162
Istanbul, Turkey (via Corinth Canal), 1,063
Izmir, Turkey (south of Greece), 1,007
Izmir, Turkey (via Corinth Canal), 908
La Spezia, Italy, 1,083
Livorno, Italy, 1,047
Malaga, Spain, 1,611
Marseille, France, 1,210
Messina, Sicily, 637
Napoli, Italy, 808
Odessa, Ukraine (south of Greece), 1,510
Odessa, Ukraine (via Corinth Canal), 1,411
Oran, Algeria, 1,450
Palermo, Sicily, 753
Palma, Balearic Islands, 1,271
Piraievs, Greece (south of Greece), 848
Piraievs, Greece (via Corinth Canal), 709
Rijeka, Croatia, 120
Savona, Italy, 1,128
Sibenik, Croatia, 192
Siracusa, Sicily, 658
Split, Croatia, 210
Tarabulus, Libya, 921
Taranto, Italy, 516
Thessaloniki, Greece (south of Greece), 1,056
Thessaloniki, Greece (via Corinth Canal), 957
Toulon, France, 1,178
Tunis, Tunisia, 930
Valencia, Spain, 1,396
Valletta, Malta, 735
Volos, Greece (south of Greece), 997
Volos, Greece (via Corinth Canal), 898
Zadar, Croatia, 142

TRINCOMALEE, SRI LANKA
(8˚33'30"N., 81˚12'45"E.) to:

Ports

Bombay, India, 1,218
Colombo, Sri Lanka, 347
Galle, Sri Lanka, 255
Karachi, Pakistan, 1,667
Pandang, Indonesia, 1,301

TROMSO, NORWAY
(69˚39'00"N., 18˚58'30"E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 1,597

Ports

Bergen, Norway, 705
Bjornoya, Svalbard, 306
Galway, Ireland, 1,352
Hammerfest, Norway, 124
Longyearbyen, Svalbard, 556
Oslo, Norway, 1,069
Stavanger, Norway, 810

TRONDHEIM, NORWAY
(63˚26'00"N., 10˚23'00"E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 1,202
Ile d'Ouessant, France (via Dover

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
Piraievs, Greece, 359
Tarabulus, Libya, 574
Venezia, Italy, 980

TULEAR, MADAGASCAR
(23˚21'42"S., 43˚39'42"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 1,509
Port Said, Egypt, 3,966

Ports

Beira, Mozambique, 539
Majunga, Madagascar, 625
Mocambique, Mozambique, 532

TUMACO, COLOMBIA
(1˚50'20"N., 78˚50'55"W.) to:

Junction Points*

Panama, Panama, 437
Punta Arenas, Chile, 3,575
Singapore (via San Bernardino Strait), 10,685
Singapore (via Surigao Strait), 10,633
Torres Strait, Australia, 8,375
Wilson Promontory, Australia, 7,638

Ports

Callao, Peru, 981
Esmeraldas, Ecuador, 78
Golfito, Costa Rica, 495
Guayaquil, Ecuador, 470
La Libertad, Ecuador, 309
Salina Cruz, Mexico, 1,302
Talara, Peru, 449
Valparaiso, Chile, 2,240
Yokohama, Japan, 7,802

TUNIS, TUNISIA
(36˚47'54"N., 10˚11'51"E.) to:

Junction Points*

Port Said, Egypt, 1,172
Strait of Gibraltar, 820

Ports

Al Khums, Libya, 357
Al Latakia, Syria, 1,258
Alexandria, Egypt, 1,051
Algiers, Algeria, 392
Alicante, Spain, 558
Ancona, Italy, 830
Annaba, Algeria, 167
As Sukhayrah, Tunisia, 301
Banghazi, Libya, 585
Baniyas, Syria, 1,275
Barcelona, Spain, 492
Bari, Italy, 622
Beirut, Lebanon, 1,263
Brindisi, Italy, 564
Cagliari, Sardinia, 169
Cartagena, Spain, 583
Ceuta, Morocco, 801
Gaeta, Italy, 315
Genova, Italy, 472
Gibraltar, 803
Haifa, Israel, 1,260
Iraklion, Kriti, 745
Istanbul, Turkey, 1,050
Izmir, Turkey, 896
Kalamai, Greece, 599
La Spezia, Italy, 448
Licata, Sicily, 187
Livorno, Italy, 417
Marsala, Sicily, 124
Marsaxlokk, Malta, 246
Marseille, France, 476
Messina, Sicily, 302
Napoli, Italy, 313
Odessa, Ukraine, 1,399
Oran, Algeria, 589
Palermo, Sicily, 193
Palma, Balearic Islands, 435
Piraievs, Greece (south of Greece), 737
Piraievs, Greece (via Corinth Canal), 680
Porto Empedocle, Sicily, 167
Pozzuoli, Italy, 308
Qabis, Tunisia, 302
Rijeka, Croatia, 897
Savona, Italy, 475
Sibenik, Croatia, 771
Siracusa, Sicily, 283
Split, Croatia, 756
Tarabulus, Libya, 322
Taranto, Italy, 518
Thessaloniki, Greece, 945
Toulon, France, 453
Trapani, Sicily, 138
Trieste, Italy, 930
Valencia, Spain, 560
Valletta, Malta, 234
Venezia, Italy, 940
Viareggio, Italy, 778
Volos, Greece (south of Greece), 886
Volos, Greece (via Corinth Canal), 869

TURIAMO, VENEZUELA
(10˚26'30"N., 67˚50'30"W.) to:

Junction Points*

Panama, Panama, 858
Yucatan Channel, 1,221

Ports

Barranquilla, Colombia, 504
Port of Spain, Trinidad, 384
Willemstad, Curacao, 124

TURKU, FINLAND
(60˚26'00"N., 22˚13'00"E.) to:

Junction Points*

Nord-Ostsee-Kanal (East Entrance), Germany, 576
Skagens Odde, Denmark (via Store Baelt), 768
Skagens Odde, Denmark (via The Sound), 642

Ports

Oslo, Norway (via Store Baelt), 892
Oslo, Norway (via The Sound), 764
Rauma, Finland, 98

TUTICORIN, INDIA
(8˚43'20"N., 78˚13'55"E.) to:

Junction Points*

Cape of Good Hope, South Africa, 6,593
Cape Leeuwin, Australia, 3,347
Port Said, Egypt, 3,400
Singapore, 1,715
Sundra 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˚l9'00"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

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
Piraievs Greece (south of Greece), 856
Piraievs 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 Somoa, 4,563
Petersburg, Alaska, U.S.A., 719
Port Angeles, Washington, U.S.A., 20
Prince Rupert, Canada, 531
San Francisco, California, U.S.A., 745
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

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

Horta, Azores, 938
Huelva, Spain, 453
Lisboa, Portugal, 247
New York, New York, U.S.A., 2,914
Norfolk, Virginia, U.S.A., 3,099
Oporto, Portugal, 74
Philadelphia, Pennsylvania, U.S.A., 3,092
Ponta Delgada, Azores, 828
Porto Grande, Cape Verde Islands, 1,737
Recife, Brazil, 3,346
Rio de Janeiro, Brazil, 4,418
San Juan, Puerto Rico, 3,228
Santa Cruz de Tenerife, Canary Islands, 909
Tangier, Morocco, 516

VILA REAL DE SANTO ANTONIO, PORTUGAL
(37˚12'00"N., 7˚24'30"W.) to:

Junction Points*

Ile d'Ouessant, France, 836
Strait of Gibraltar, 113

Ports

Casablanca, Morocco, 218
Horta, Azores, 1,046

VILLA CISNEROS, WESTERN SAHARA
(23˚37'00"N., 16˚00'00"W.) to:

Junction Points*

Strait of Gibraltar, 923

Ports

Casablanca, Morocco, 769
Dakar, Senegal, 578
Porto Grande, Cape Verde Islands, 650

VILLA CONSTITUCION, ARGENTINA
(33˚13'46"S., 60˚19'26"W.) Add 197 miles to Buenos Aires distances.

VILLA DO PORTO, AZORES
(36˚56'00"N., 25˚09'00"W.) to:

Junction Points*

Bishop Rock, England, 1,128
Strait of Gibraltar, 963

Ports

Lisboa, Portugal, 771
New York, New York, U.S.A., 2,279

VILLA SAN GIOVANNI, ITALY
(38˚13'00"N., 15˚37'55"E.) to:

Junction Points*

Port Said, Egypt, 944
Strait of Gibraltar, 1,047

Ports

Napoli, Italy, 173
Palermo, Sicily, 118
Taranto, Italy, 287

VILLAGARCIA, SPAIN
(42˚36'00"N., 8˚47'45"W.) to:

Junction Points*

Ile d'Ouessant, France, 433
Strait of Gibraltar, 526

Ports

Bilbao, Spain, 357
Horta, Azores, 946
Lisboa, Portugal, 264

VILLEFRANCHE, FRANCE
(43˚42'00"N., 7˚18'45"E.) to:

Junction Points*

Port Said, Egypt, 1,455
Strait of Gibraltar, 789

Ports

Ajaccio, Corsica, 138
Barcelona, Spain, 277
Genova, Italy, 88
Livorno, Italy, 133
Napoli, Italy, 369

VINH CAM RANH, VIETNAM
(11˚53'00"N., 109˚09'00"E.) to:

Junction Points*

Singapore, 786
Selat Wetar, Indonesia (via Selat Karimata and Selat Sapudi), 2,106

Ports

Apra, Guam, 2,112
Bangkok, Thailand, 817
Haiphong, Vietnam, 597
Hong Kong, China, 707
Jakarta, Indonesia, 1,103
Kao-hsiung Kang, Taiwan, 915
Kobe, Japan, 2,013
Manila, Philippines, 710
Port Darwin, Australia, 2,169
Shanghai, China, 1,520
Surabaya, Indonesia, 1,251

VISHAKHAPATNAM, INDIA
(17˚41'00"N., 83˚17'00"E.) to:

Ports

Calcutta, India, 458
Colombo, Sri Lanka, 880
Madras, India, 332

VITA, CUBA
(21˚04'45"N., 75˚57'08"W.) See Puerto Vita.

VITORIA, BRAZIL
(20˚19'20"S., 40˚20'30"W.) to:

Ports

Baltimore, Maryland, U.S.A., 4,581
New York, New York, U.S.A., 4,507
Philadelphia, Pennsylvania, U.S.A., 4,554
Salvador, Brazil, 477

VLAARDINGEN, NETHERLANDS
(51˚53'46"N., 4˚20'29"E.) See Rotterdam.

VLADIVOSTOK, RUSSIA
(43˚06'30"N., 131˚53'00"E.) to:

Junction Points*

Panama, Panama (via La Perouse Strait and north of Aleutian Islands), 7,757
Panama, Panama (via La Perouse Strait and south of the Aleutian Islands), 7,741
Panama, Panama (via Tsugaru-Kaikyo), 7,833
Singapore, 3,004
Selat Sunda, Indonesia, 3,357
Selat Wetar, Indonesia (via Selat Manipa), 3,133

Ports

Aleksandrovsk-Sakhalinskiy, Russia, 713
Apra, Guam (via Shimonoseki Kaikyo), 2,019
Apra, Guam (via Tsugaru-Kaikyo), 2,155
Auckland, New Zealand, 5,516
Bangkok, Thailand (outer bar), 3,035
Bukhta Shelikhova, Kuril Islands, Russia, 1,121
Busan, South Korea, 514
Cebu, Philippines, 2,026
Changjon, North Korea, 319
Chongjin, North Korea, 135
Dagu, China, 1,212
Dalian, China, 1,057
Dutch Harbor, Alaska, U.S.A., 2,518
Guayaquil, Ecuador, 8,044
Hakodate, Japan, 437
Higashi-Iwase, Japan, 471
Ho Chi Minh, Vietnam, 2,501
Hong Kong, China, 1,646
Honolulu, Hawaii, U.S.A. (via Tsugaru-Kaikyo), 3,725
Iloilo, Philippines, 2,048
Incheon, South Korea (via Maemut Sudo), 911
Jakarta, Indonesia, 3,338
Kimchaek, North Korea, 206
Kobe, Japan, 805
Kodiak, Alaska, U.S.A., 3,105
Kushiro, Japan, 624
Lo hsing-ta Mao-ti, China, 1,264
Los Angeles, California, U.S.A., 4,981
Maizuru, Japan, 485
Manila, Philippines, 1,912
Masan, South Korea, 542
Matsuga-hana, Japan (via Tsugaru Kaikyo), 730
Midway Island, Pacific, 2,612
Mogpo, South Korea, 726
Nagasaki, Japan, 657
Nampo, North Korea (via Changjuk Sudo), 997
Nanao, Japan, 460
Niigata, Japan, 453
Noumea, New Caledonia, 4,590
Osaka, Japan, 815
Pago Pago, American Samoa, 4,739
Papeete, French Polynesia, 5,663
Petropavlovsk-Kamchatskiy, Russia, 1,348
Port Darwin, Australia, 3,426
Portland, Oregon, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 4,278
Qingdao, China, 998
Qinhuangdao, China (via Maenggol Sudo), 1,151
Rumoi, Japan, 452
Sakata, Japan, 442
San Diego, California, U.S.A., 5,062
San Francisco, California, U.S.A. (via La Perouse Strait and Proliv Kruzenshterna), 4,563
San Francisco, California, U.S.A. (via La Perouse Strait and Unimak Pass), 4,570
San Francisco, California, U.S.A. (via Tsugaru-Kaikyo), 4,664
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,210
Seattle, Washington, U.S.A. (via Tsugaru-Kaikyo and south of Aleutian Islands), 4,396
Shanghai, China (north of Cheju Do), 998
Shanghai, China (south of Cheju Do), 997
Shimonoseki, Japan, 565
Sitka, Alaska, U.S.A., 3,585
Sovetskaya Gavan', Russia, 593
Surabaya, Indonesia, 3,357
Suva, Fiji Islands, 4,626
Sydney, Australia, 5,105
Tomari, Japan, 724
Truk, Caroline Islands, 2,593
Tsuruga, Japan, 490
Ulsan, South Korea, 486
Valparaiso, Chile, 9,606
Wake Island, Pacific, 2,305
Weihai, China (via Maenggol Sudo), 975
Weonsan, North Korea, 324
Wotje Island, Marshall Islands, 2,928
Xiamen, China, 1,393
Yantai, China (via Maenggol Sudo), 1,009
Yokohama, Japan, 952

VLISSINGEN, NETHERLANDS
(51˚26'30"N., 3˚36'00"E.) Subtract 47 miles from Antwerp, Belgium distances.

VLORES, ALBANIA
(40˚26'30"N., 19˚28'30"E.) to:

Junction Points*

Port Said, Egypt, 973
Strait of Gibraltar, 1,311

Ports

Piraievs, 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
Piraievs, 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, Austrailia, 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
Aukland, 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 Somoa, 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, Papau 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, Chetvertyy Kuril'skiy Proliv 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
Yokoshima, 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
Iloilo, Philippines, 1,735
Incheon, South Korea, 273
Jakarta, Indonesia, 2,894
Kobe, Japan, 840
Lo hsing-ta Mao-ti, China (via Steep Island Pass), 835
Manila, Philippines (via Formosa Strait), 1,542
Manila, Philippines (east of Taiwan), 1,532
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. (via Pollock Rip Channel), 440
Norfolk, Virginia, U.S.A., 656
Philadelphia, Pennsylvania, U.S.A., 616
Portland, Maine, U.S.A., 185
San Juan, Puerto Rico, 1,527
Sydney, Canada, 416

YARMOUTH, ENGLAND
(50˚42'30"N., 1˚29'56"W.) to:

Junction Points*

Bishop Rock, England, 211
Ile d'Ouessant, France, 197
Nord-Ostsee-Kanal (East Entrance), Germany, 442
Pentland Firth, Scotland, 678
Skagens Odde, Denmark, 682

Ports

Aberdeen, Scotland, 311
Amsterdam, Netherlands, 120
Emden, Germany, 218
Esbjerg, Denmark, 297
Hull, England, 108
Leith, Scotland, 293
Wilhelmshaven, Germany, 263
Zeebrugge, Belgium, 101

YEN-TAI, CHINA
(37˚33'15"N., 121˚23'30"E.) See Yantai, China.

YEOSU, SOUTH KOREA
(34˚45'00"N., 127˚45'30"E.) to:

Ports

Busan, South Korea, 97
Gunsan, South Korea, 245
Kimchaek, North Korea, 439
Mogpo, South Korea, 151

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
Coatzacoalcos, Mexico, 625
Colon, Panama, 812
Corpus Christi, Texas, U.S.A., 764
Covenas, Colombia, 924
Freetown, Sierra Leone, 4,229
Galveston, Texas, U.S.A., 696
Georgetown, Grand Cayman, 257
Georgetown, Guyana, 1,846
Guantanamo, Cuba, 582
Gulfport, Mississippi, U.S.A., 534
Halifax, Canada, 1,817
Hamilton, Bermuda, 1,335
Isabel de Sagua, Cuba, 329
Key West, Florida, U.S.A., 251
Kingston, Jamaica, 550
La Guaira, Venezuela, 1,242
La Habana, Cuba, 186
Lake Charles, Louisiana, U.S.A., 689
Limon, Costa Rica, 732
Manzanillo, Cuba, 482
Maracaibo, Venezuela, 1,096
Mariel, Cuba, 164
Matagorda Bay, Texas, U.S.A., 729
Matanzas, Cuba, 241
Miami, Florida, U.S.A., 398
Mobile, Alabama, U.S.A., 558
Montego Bay, Jamaica, 450
Montevideo, Uruguay, 5,689
Nassau, Bahamas, 562
New Amsterdam, Guyana, 1,907
New Orleans, Louisiana, U.S.A., 577
New York, New York, U.S.A., 1,369
Norfolk, Virginia, U.S.A., 1,168
Nuevitas, Cuba, 528
Oranjestad, Aruba, 1,024
Pensacola, Florida, U.S.A., 531
Philadelphia, Pennsylvania, U.S.A., 1,339
Pointe a Pitre, Guadeloupe, 1,410
Porlamar, Venezuela, 1,407
Port au Prince, Haiti, 741
Port Antonio, Jamaica, 536
Port Arthur, Texas, U.S.A., 681
Port Castries, St. Lucia, 1,452
Port of Spain, Trinidad, 1,517
Portsmouth, New Hampshire, U.S.A. (via outside Nantucket Light Buoy), 1,632
Puerto la Cruz, Venezuela, 1,381
Puerto Barrios, Guatemala, 439
Puerto Cabello, Venezuela, 1,203
Puerto Cortes, Honduras, 399
Puerto Sucre, Venezuela, 1,399
Punta Cardon, Venezuela, 1,055
Rio de Janeiro, Brazil (south of Hispaniola), 4,702
Salvador, Brazil, 4,128
San Felix, Venezuela, 1,861
San Juan del Norte, Nicaragua, 681
San Juan, Puerto Rico, 1,111
Santa Cruz del Sur, Cuba, 416
Santa Lucia, Cuba, 99
Santa Maria, Cuba, 381
Santa Marta, Colombia, 892
Santiago de Cuba, Cuba, 548
Santo Domingo, Dominican Republic, 929
Sint Nicolaashaven, Aruba, 1,036
St. John's, Canada, 2,305
Swan Island, Honduras, 273
Tampa, Florida, U.S.A., 404
Tampico, Mexico, 716
Turiamo, Venezuela, 1,221
Tuxpan, Mexico, 689
Veracruz, Mexico, 654
Willemstad, Curacao, 1,094

YUMURTALIK, TURKEY
(36˚45'00"N., 35˚45'00"E.) to:

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

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

ZELINIKA, MONTENEGRO
(42˚26'58"N., 18˚34'05"E.) to:

Junction Points*

Port Said, Egypt, 1,023
Strait of Gibraltar (via Strait of Messina), 1,398
Strait of Gibraltar (via Strait of Sicily), 1,433

Ports

Ajaccio, Corsica, 764
Alicante, Spain, 1,232
Arzew, Algeria, 1,143
Bar, Montenegro, 34
Cartagena, Spain, 1,154
Constanta, Romania, 1,064
Haifa, Israel, 1,077
Istanbul, Turkey, 868
Marseille, France, 931
Moni Anchorage, Cyprus, 328
Piraievs, 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	0-5	0-4	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3
90	0-11	0-10	0-9	0-8	0-8	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-3
100	0-13	0-11	0-10	0-9	0-8	0-8	0-7	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-5	0-4	0-4	0-4	0-3
200	1-1	0-22	0-20	0-18	0-17	0-15	0-14	0-13	0-13	0-12	0-11	0-11	0-10	0-10	0-9	0-9	0-8	0-8	0-7
300	1-14	1-9	1-6	1-3	1-1	0-23	0-21	0-20	0-19	0-18	0-17	0-16	0-15	0-14	0-14	0-13	0-13	0-12	0-10
400	2-2	1-20	1-16	1-12	1-9	1-7	1-5	1-3	1-1	1-0	0-22	0-21	0-20	0-19	0-18	0-17	0-17	0-16	0-13
500	2-15	2-8	2-2	1-21	1-18	1-14	1-12	1-9	1-7	1-5	1-4	1-2	1-1	1-0	0-23	0-22	0-21	0-20	0-17
600	3-3	2-19	2-12	2-7	2-2	1-22	1-19	1-16	1-14	1-11	1-9	1-8	1-6	1-5	1-3	1-2	1-1	1-0	0-20
700	3-16	3-6	2-22	2-16	2-10	2-6	2-2	1-23	1-20	1-17	1-15	1-13	1-11	1-9	1-8	1-6	1-5	1-4	0-23
800	4-4	3-17	3-8	3-1	2-19	2-14	2-9	2-5	2-2	1-23	1-20	1-18	1-16	1-14	1-12	1-11	1-9	1-8	1-3
900	4-17	4-4	3-18	3-10	3-3	2-21	2-16	2-12	2-8	2-5	2-2	1-23	1-21	1-19	1-17	1-15	1-14	1-12	1-6
1,000	5-5	4-15	4-4	3-19	3-11	3-5	2-23	2-19	2-15	2-11	2-8	2-5	2-2	2-0	1-21	1-19	1-18	1-16	1-9
2,000	10-10	9-6	8-8	7-14	6-23	6-10	5-23	5-13	5-5	4-22	4-15	4-9	4-4	3-23	3-19	3-15	3-11	3-8	2-19
3,000	15-15	13-21	12-12	11-9	10-10	9-15	8-22	8-8	7-20	7-8	6-23	6-14	6-6	5-23	5-16	5-10	5-5	5-0	4-4
4,000	20-20	18-12	16-16	15-4	13-21	12-20	11-22	11-3	10-10	9-19	9-6	8-19	8-8	7-22	7-14	7-6	6-23	6-16	5-13
5,000	26-1	23-4	20-20	18-23	17-9	16-1	14-21	13-21	13-1	12-6	11-14	10-23	10-10	9-22	9-11	9-1	8-16	8-8	6-23
6,000	31-6	27-19	25-0	22-17	20-20	19-6	17-21	16-16	15-15	14-17	13-21	13-4	12-12	11-22	11-9	10-21	10-10	10-0	8-8