

GLOSSARY

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Abbreviations

BELF	Breakeven load factor
GA	General Aviation
ICAO	International Civil Aviation Organization
LCC	Low cost carrier
MCTOM	Maximum certificated take-off mass
OFOD	On-flight origin and destination
PKP	Passenger-kilometre performed
SKA	Seat-kilometre available
TFS	Traffic by flight stage
TKA	Tonne-kilometre available
TKP	Tonne-kilometre performed

Conversion factors

I - From the foot/pound system to metric system

1 short ton (2 000 lb) = 0.9072 tonnes

1 long ton (2 240 lb) = 1.0160 tonnes

1 statute mile (5 280 feet) = 1.6093 kilometres

1 nautical mile (6 080 feet) = 1.8531 kilometres

1 ton-mile (short tons and statute miles) = 1.4600 tonne-kilometres

1 ton-mile (long tons and statute miles) = 1.6352 tonne-kilometres.

Note.— “Tonne” denotes metric and “ton” the pound system of measurement

II – Default mass / densities values

Air carriers are encouraged to use the values which best correspond to their operations, however if no other values are available, it is recommended the following factors be used instead:

Passenger mass including checked baggage:	100 kg
Freight density:	161 kg/cubic meter
Baggage density:	161 kg/cubic meter
Jet fuel density:	0.8 kg/litre

Main terms used in civil aviation statistics

I - Commercial air carriers

Air taxi revenue flights. On-demand, non-scheduled flights on short notice for the carriage by air of passengers, freight or mail, or any combination thereof for remuneration usually performed with smaller aircraft including helicopters (typically no more than 30 seats). Also includes any positioning flights required for the provision of the service.

Aircraft departures. The number of take-offs of aircraft. For statistical purposes, departures are equal to the number of landings made or flight stages flown.

Aircraft hours. Aircraft hours are based on “block-to-block” time (i.e. from the moment the aircraft is pushed back from the gate or starts taxiing from its parking stand for take-off to the moment it comes to a final stop at a gate or parking stand after landing); also known as block time.

Aircraft kilometres performed. The sum of the products obtained by multiplying the number of revenue flight stages flown by the corresponding stage distance.

Breakeven load factor. The weight load factor at which point operating revenues equal operating expenses. It is obtained by multiplying the weight load factor by the ratio of the operating expenses to the operating revenues.

City-pair (OFOD). Two cities between which travel is authorized by a passenger ticket or part of a ticket (a flight coupon) or between which shipments are made in accordance with a shipment document or a part of it (freight bill or mail delivery bill).

Code sharing. The use of the flight designator code of one air carrier on a service performed by a second air carrier, which service is usually also identified (and may be required to be identified) as a service of, and being performed by, the second air carrier.

Commercial air transport operator. An operator that, for remuneration, provides scheduled or non-scheduled air transport services to the public for the carriage of passengers, freight or mail. This category also includes small-scale operators, such as air taxis and commercial business operators, that provide commercial air transport services.

Distances. Aerodrome-to-aerodrome great circle distances should be used at least for international services, in all items involving distance computations. Distances can be calculated using the Great Circle Distance, defined as the shortest distance between any two points on the surface of the Earth, using the Vincenty distance formula associated with the World Geodesic System – 1984 (WGS 84) adopted by ICAO and referred to in Article 3.7.1.1 of Annex 15 to the Chicago Convention (WGS 84). The latitude and longitude of aerodromes can be taken either from aerodrome data published in the national Aeronautical Information

Publication (AIP) or from a source using such data (for example, the *Location Indicators – Doc 7910* website of ICAO).

Distance flown per passenger. The average distance flown per passenger is computed by dividing the passenger-kilometres by the related number of passengers carried.

Domestic flight. A flight having exclusively domestic stages. (See flight stage, domestic).

Flight (air carrier operations). The operation of an aircraft on a flight stage or number of flight stages with the same flight number.

Flight coupon. Each component part of a ticket containing separate travel authority for subdivisions of the total travel covered by the passenger ticket.

Flight stage. A flight stage is the operation of an aircraft from take-off to its next landing. A flight stage is classified as either international or domestic based on the following definitions:

International. A flight stage with one or both terminals in the territory of a State, other than the State in which the air carrier has its principal place of business.

Domestic. A flight stage not classifiable as international. Domestic flight stages include all flight stages flown between points within the domestic boundaries of a State by an air carrier whose principal place of business is in that State. Flight stages between a State and territories belonging to it, as well as any flight stages between two such territories, should be classified as domestic. This applies even though a stage may cross international waters or over the territory of another State.

Notes:

1. In the case of multinational air carriers owned by partner States, traffic within each partner State is shown separately as domestic and all other traffic as international.
2. “Foreign” cabotage traffic (i.e. traffic carried between city-pairs in a State other than the one where the reporting carrier has its principal place of business) is shown as international traffic.
3. A technical stop does not result in any flight stage being classified differently than would have been the case had the technical stop not been made.

Freedoms of the Air. A set of commercial aviation rights granting a country's airlines to overfly another country's airspace and to land for a technical stop as well as the privilege pick-up and discharge traffic in another country's territory. Figure 1 shows in graphical forms the current Nine Freedoms of the Air.

Freight mass. The factor to convert freight loads from volume into mass (or vice versa) is left to the discretion of the carrier. However, if no conversion factor is available, it is recommended that 161 kilograms per cubic meter be used. The same conversion factor can be used for passenger baggage.

Freight (or mail) tonnes carried. The number of tonnes of freight carried is obtained by counting each tonne of freight on a particular flight (with one flight number) once only and

not repeatedly on each individual stage of that flight. The only exception to this is for freight flown on both the international and domestic stages of the same flight, which is considered in computation both as a domestic and an international shipment or dispatch. The same principle should be used in calculating mail tonnes carried.

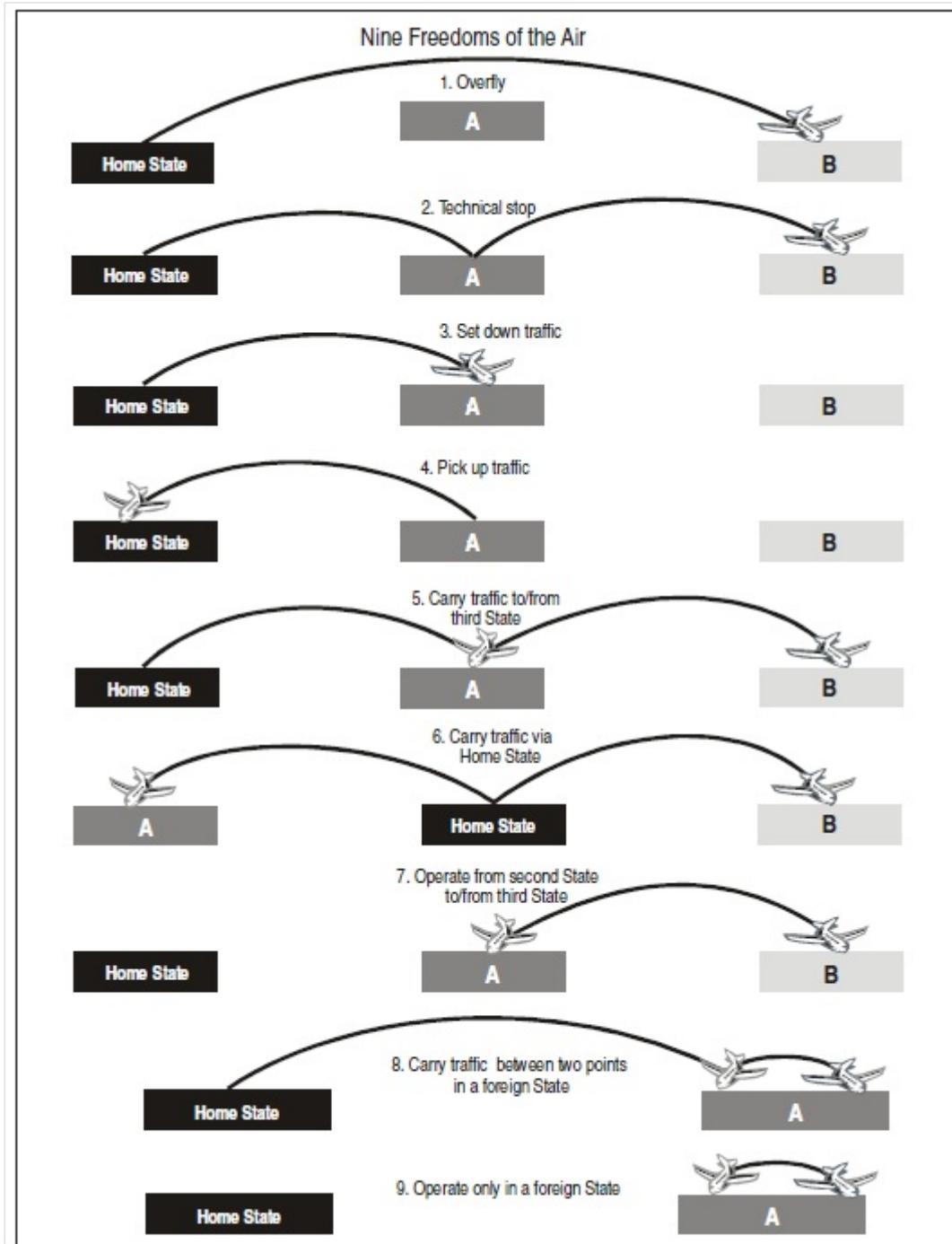


Fig 1 – Freedoms of the Air

Freight (or mail) tonne-kilometres performed. A metric tonne of freight or mail carried one kilometre. Freight tonne-kilometres equal the sum of the products obtained by multiplying the number of tonnes of freight, express, diplomatic bags carried on each flight stage by the stage

distance. For ICAO statistical purposes freight includes express and diplomatic bags but not passenger baggage. Mail tonne-kilometres are computed in the same way as freight tonne-kilometres.

International flight. A flight that contains one or more international flight stages. (See flight stage, international).

Joint service flight. A flight identified by the designator codes of two air carriers that, with the concurrence of their respective States, typically have agreed with each other to share revenues and/or costs.

Leased aircraft. An aircraft used under a contractual leasing arrangement to increase an air carrier fleet capacity.

Low cost carrier. An air carrier that has a relatively low-cost structure in comparison with other comparable carriers and offers low fares and rates. Such an airline may be independent, the division or subsidiary of a major network airline or, in some instances, the ex-charter arm of an airline group.

Mail. All correspondence and other objects tendered by and intended for delivery to postal administrations.

Maximum certificated take-off mass (MCTOM). The maximum permissible take-off mass of the aircraft according to the certificate of airworthiness, the flight manual or other official documents.

Non-revenue flights. Aircraft hours flown on non-commercial business aviation, test flights, training and all other flights for which no revenue is received.

Non-scheduled revenue flights (excluding on-demand flights). Charter flights and special flights performed for remuneration other than those reported under scheduled flights. They *include* any items related to blocked-off charters and *exclude* air taxi, commercial business aviation or other on demand revenue flights.

Operating carrier. That carrier whose flight number is being used for air traffic control purposes. For the purpose of reporting air carrier statistics to ICAO, all operational and traffic items should be reported by the operating carrier, including code-shared, franchised, pooled, blocked-off charter, blocked-space arrangements, joint services and leased aircraft services.

Operating expenses per traffic-unit (unit cost). This is a type of financial measurement which relates the traffic or capacity applicable to the operating expenses. It is computed by dividing the operating expenses by the tonne-kilometres performed or by the tonne-kilometres available.

Operating revenue per traffic-unit (operating yield). This is a type of financial measurement which relates the traffic or capacity applicable to the operating revenues. It is computed by dividing the operating revenues by the tonne-kilometres performed or by the tonne-kilometres available.

Passengers carried. The number of passengers carried is obtained by counting each passenger on a particular flight (with one flight number) once only and not repeatedly on each individual stage of that flight¹, with a single exception that a passenger flying on both the international and domestic stages of the same flight should be counted as both a domestic and an international passenger.

Passenger-kilometres performed. A passenger-kilometre is performed when a passenger is carried one kilometre. Calculation of passenger-kilometres equals the sum of the products obtained by multiplying the number of revenue passengers carried on each flight stage by the stage distance. The resultant figure is equal to the number of kilometres travelled by all passengers.

Passenger load factor. Passenger-kilometres performed expressed as a percentage of seat-kilometres available.

Passenger tonne-kilometres performed. Passenger tonne-kilometres performed are obtained by applying a standard mass per passenger to the passenger-kilometres performed. (See also *passenger mass*.)

Passenger mass. To convert into a mass the number of passengers carried, the latter is multiplied by a factor representing the average mass of the passenger plus both normal baggage allowance and excess baggage. This conversion factor is left to the discretion of the operator. However, if no conversion factor is available, it is recommended that 100 kilograms² be used. (See also *passenger-tonne-kilometres performed*.)

Payload capacity. Total payload capacity available (in metric tonnes), above and below deck, for the carriage of revenue load (passengers, baggage, freight and mail) taking into account any payload and operational restrictions on the supply of capacity. (See also *tonne-kilometres available*.)

Revenue passenger. A passenger for whose transportation an air carrier receives commercial remuneration. See also *passengers carried*. For additional background information see the sidebar.

1. This definition **includes**, for example, a) passengers travelling under publicly available promotional offers (for example, “two-for-one”) or loyalty programmes (for example, redemption of frequent-flyer points); b) passengers travelling as compensation for denied boarding; c) passengers travelling on corporate discounts; d) passengers travelling on preferential fares (government, seamen, military, youth, student, etc.).
2. This definition **excludes**, for example, a) persons travelling free; b) persons travelling at a fare or discount available only to employees of air carriers or their

¹ In pre e-ticket (electronic ticket) days one could equate a passenger as being equivalent to a flight coupon. Paper based tickets had one or more flight coupons identifying the number of flights a passenger had to take in order to complete his or her journey. Each new coupon identified a *transfer* of the passenger from one flight to another with a different flight number, whether performed by the same carrier or not.

² The mass of 100 kg was adopted for application in 2012. Prior to that the recommended passenger mass plus checked baggage stood at 90 kg.

agents or only for travel on business for the carriers; c) infants who do not occupy a seat.

Revenue traffic. Traffic (passenger, freight or mail) flown by an air carrier for which it receives commercial remuneration. Unless otherwise stated, traffic data shown for air carriers generally correspond to *revenue traffic*, which can then be readily compared with the revenues reported for that traffic.

Seat-kilometres available. A seat-kilometre is available when a seat is flown one kilometre. Seat-kilometres available are equal to the sum of the products obtained by multiplying the number of passenger seats available for sale on each flight stage by the stage distance. It excludes seats not available for the carriage of passengers because of the extra mass of fuel required or other payload restrictions (see also payload capacity).

Scheduled revenue flights. Flights scheduled and performed for remuneration according to a published timetable, or so regular or frequent as to constitute a recognizably systematic series, which are open to direct booking by members of the public; and extra section flights occasioned by overflow traffic from scheduled flights.

Speed flown. The average aircraft speed flown is obtained by dividing the aircraft kilometres flown by the related aircraft hours. Where the latter are block-hours flown, the result is known as the average block speed.

Stage distance flown per aircraft. The average stage distance flown per aircraft is obtained by dividing the aircraft kilometres flown by the related number of aircraft departures.

Technical stop. A stop most commonly used to refuel the aircraft, to make unexpected essential repairs or to respond to some emergency need to land the aircraft. No traffic is unloaded or loaded during a technical stop.

Territory. A territory is a land mass which is part of or is administered by a country. In ICAO when data are shown by Country they include data for any entity in a territory administered by that country. When data are shown by Region data for territories are assigned to their regions which are usually different from that of the administering country. For example, Guadalupe and Martinique are overseas territories of France. When data are shown by Country, France will include any data for entities based in Martinique and Guadalupe. However, when data are presented by Region the data of any entity based in Guadalupe and/or Martinique will be shown under Latin America/Caribbean, whereas those based in the mainland will appear under Europe.

Tonne-kilometres available. A tonne-kilometre is available when one tonne of payload capacity is flown one kilometre. Tonne-kilometres available equals the sum of the products obtained by multiplying the number of tonnes available for the carriage of revenue load (passengers, freight and mail) on each flight stage by the stage distance. (See also payload capacity.)

Tonne-kilometres performed. A metric tonne of revenue load carried one kilometre. Tonne-kilometres performed equals the sum of the product obtained by multiplying the number of

total tonnes of revenue load (passengers, freight and mail) carried on each flight stage by the stage distance.

Traffic. For air transport purposes, traffic means the carriage of passengers, freight and mail.

Weight load factor. Tonne-kilometres performed expressed as a percentage of tonne-kilometres available.

II - Airports

Air taxi operations. On-demand, non-scheduled flights on short notice for the carriage by air of passengers, freight or mail, or any combination thereof for remuneration usually performed with smaller aircraft including helicopters (typically no more than 30 seats). Also includes any positioning flights required for the provision of the service.

Aircraft movement. An aircraft take-off or landing at an airport. For airport traffic purposes one arrival and one departure is counted as two movements.

International. All flights of national or foreign aircraft whose origin or destination is located in the territory of a State other than that in which the airport being reported on is located.

Domestic. All flights of national or foreign aircraft in which all the airports are located in the territory of the same State.

In both cases a flight shall be considered as the operation of an aircraft on a stage or number of stages with an unchanging flight number. Technical stops are not considered.

Commercial air transport. Air transport services available to the general public for the transportation of passengers, mail and/or freight for remuneration. Includes air taxis and commercial business flights.

Commercial business flights. The commercial operation or use of aircraft by companies for the carriage of passenger or goods as an aid to the conduct of their business and the availability of the aircraft for whole aircraft charter, flown by a professional pilot(s) employed to fly the aircraft.

Direct transit traffic. Traffic which both arrives and departs the point (transits the point) as part of a continuous movement under a single air ticket or waybill, without a stopover, on the same or different aircraft identified by the *same* airline designator and flight number. Direct transit traffic is counted only once.

Freight. Includes express and diplomatic bags but not passenger baggage.

Freight (or mail) loaded/unloaded. These terms as applied to freight and mail have meanings similar to embarked and disembarked for passengers.

General aviation (GA) activities. All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire (Annex 6, Part II). For ICAO statistical purposes the general aviation activities are classified into non-commercial business flights, aerial work, instructional and pleasure flying, and other flying.

International airport. Any airport designated by an ICAO Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities such as customs, immigration, public health, agricultural quarantine and similar procedures are carried out.

Mail. All correspondence and other objects tendered by and intended for delivery to postal administrations.

Non-commercial business flights. These operations cover corporate and owner operated business flights.

- a) ***Corporate business flights.*** The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot(s) employed to fly the aircraft.
- b) ***Owner operated business flights.*** The non-commercial operation or use of aircraft by an individual for the carriage of passengers or goods as an aid to the conduct of his/her business.

Non-scheduled services (revenue). These are charter flights and, special and inclusive tour flights, other than those reported under scheduled flights, performed for remuneration on an irregular basis including empty flights related thereto, air taxi operations, commercial business flights, and blocked-off charters.

Passengers, embarked/disembarked.

Embarked passengers. Number of air carrier revenue and non-revenue passengers whose air journey begins at the reporting airport, including the number of disembarked passengers, other than direct transit passengers, who are continuing their air journey.

Disembarked passengers. Number of air carrier revenue and non-revenue passengers whose air journey terminates at the reporting airport, including the number of passengers, other than direct transit passengers, who will continue their air journey.

Passenger, freight and mail.

International. Applies to passengers, freight and mail disembarked at an airport located in a State other than that of the airport of embarkation, or vice versa.

Domestic. Applies to passengers, freight and mail disembarked at an airport located in the State of the airport of embarkation or vice versa.

Scheduled services (revenue). Flights scheduled and performed for remuneration according to a published timetable, or so regular or frequent as to constitute a recognizably systematic series, which are open to direct booking by members of the public; and extra section flights occasioned by overflow traffic from scheduled flights.

Stopover traffic: Traffic which has taken a stopover, an intentional interruption of movement through a point under a single air ticket or waybill for a period of time beyond that required for direct transit through or, when changing flights, for a period normally extending to the departure time of the next connecting flight and (exceptionally) including an overnight stay.

Traffic units. A traffic unit is equivalent to 1 000 passengers or 100 tonnes of freight or mail; direct traffic shall not be taken into account.

Transfer traffic. Traffic connecting between aircraft identified by *different* airline designators and flight numbers. Transfer traffic is counted twice: once upon arrival and once on departure.

ICAO Statistical Regions

List of countries and territories classified by region of geographical location

Africa

Algeria	Gabon	Nigeria
Angola	Gambia	Rwanda
Benin	Ghana	Sao Tome and Principe
Botswana	Guinea	Senegal
Burkina Faso	Guinea-Bissau	Seychelles
Burundi	Kenya	Sierra Leone
Cameroon	Lesotho	Somalia
Cape Verde	Liberia	South Africa
Central African Republic	Libya	South Sudan
Chad	Madagascar	Sudan
Comoros	Malawi	Swaziland
Congo	Mali	Togo
Côte d'Ivoire	Mauritania	Tunisia
Democratic Republic of the Congo	Mauritius	Uganda
Djibouti	Morocco	United Republic of Tanzania
Egypt	Mozambique	Western Sahara
Equatorial Guinea	Namibia	Zambia
Eritrea	Niger	Zimbabwe
Ethiopia		

Territories

France	Mayotte, Reunion Island
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Asia / Pacific

Afghanistan	Kiribati	Philippines
Australia	Kyrgyzstan	Republic of Korea
Bangladesh	Lao People's Democratic Republic	Samoa
Bhutan	Malaysia	Singapore
Brunei Darussalam	Maldives	Solomon Islands
Cambodia	Marshall Islands	Sri Lanka
China	Micronesia (Federated States of)	Tajikistan
Cook Islands	Mongolia	Thailand
Democratic People's Republic of Korea	Myanmar	Timor-Leste
Fiji	Nauru	Tonga
India	Nepal	Turkmenistan
Indonesia	New Zealand	Tuvalu
Japan	Pakistan	Uzbekistan

Kazakhstan
Japan

Palau
Papua New Guinea

Vanuatu

Territories

Australia
France
New Zealand

United States

Coco Islands, Norfolk Island
French Polynesia, New Caledonia, Wallis and Futuna Islands
Niue Islands
American Samoa, Guam, Johnston Island , Kingman's Reef, Midway,
Palmyra,
Saipan (Mariana Islands), Wake Island

Europe

Albania
Andorra
Armenia
Austria
Azerbaijan
Belarus
Belgium
Bosnia and Herzegovina
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France

Georgia
Germany
Greece
Holy See (The)
Hungary
Iceland
Ireland
Italy
Latvia
Liechtenstein
Lithuania
Luxembourg
Malta
Monaco
Montenegro
Netherlands

Norway
Poland
Portugal
Republic of Moldova
Romania
Russian Federation
San Marino
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
The former Yugoslav Republic of
Macedonia
Turkey
Ukraine

Territories

Denmark
United Kingdom

Faroe Islands, Greenland
Gibraltar, Isle of Man

Latin America and Caribbean

Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize
Bolivia (Plurinational State of)
Brazil
Chile
Colombia
Costa Rica
Cuba

Dominica
Dominican Republic
Ecuador
El Salvador
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico

Nicaragua
Panama
Paraguay
Peru
St. Kitts and Nevis
St. Lucia
St. Vincent and the Grenadines
Suriname
Trinidad and Tobago
Uruguay
Venezuela (Bolivarian Republic of)

Territories

Chile
France

Easter Island
French Guiana, Guadeloupe, Martinique

Netherlands	Aruba, Netherlands Antilles
United Kingdom	Anguilla, British Virgin Islands, Cayman Islands, Falkland Islands (Malvinas), Montserrat, St. Helena and Ascension, Turks and Caicos Islands
United States	Puerto Rico, Virgin Islands

Middle East

Bahrain	Kuwait	Syrian Arab Republic
Iran (Islamic Republic of)	Lebanon	Under Palestinian Authority
Iraq	Oman	United Arab Emirates
Israel	Qatar	Yemen
Jordan	Saudi Arabia	

North America

Canada	United States (all 50 States)
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Territories

France	St. Pierre and Miquelon
United Kingdom	Bermuda
