

PART 1 — GENERAL (GEN)

GEN 0.

GEN 0.1 PREFACE

1. Name of the publishing authority

The AIP Macao is published by the Civil Aviation Authority.

2. Applicable ICAO documents

The AIP Macao is prepared in accordance with the Standards and Recommended Practices (SARPs) of Annex 15 to the Convention on International Civil Aviation and the Aeronautical Information Services Manual (ICAO Doc 8126). Charts contained in the AIP are produced in accordance with Annex 4 to the Convention on International Civil Aviation and the Aeronautical Chart Manual (ICAO 8697). Differences from ICAO Standards, Recommended Practices and Procedures are given in subsection GEN 1.7.

3. The AIP structure and established regular amendment interval.

3.1. The AIP structure

The AIP forms part of the Integrated Aeronautical Information Package, details of which are given in subsection GEN 3.1.

The AIP is made up of three Parts, General (GEN), En-route (ENR) and Aerodromes (AD), each divided into sections and subsections as applicable, containing various types of information subjects.

3.1.1. Part 1 — General (GEN)

Part 1 consists of five sections containing information as briefly described hereafter.

GEN 0. — Preface; Record of AIP Amendments; Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 1.

GEN 1. Territorial regulations and requirements — Designated authorities; Entry, transit and departure of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; agreements / conventions; and Differences from ICAO Standards, Recommended Practices and Procedures.

GEN 2. Tables and codes — Measuring system, aircraft marking, holidays; Abbreviations used in AIS publications; Chart symbols; Location indicators; List of radio navigation aids; Conversion tables; and Sunrise/Sunset tables.

GEN 3. Services — Aeronautical Information Services; Aeronautical Charts; Air Traffic Services; Communication Services; Meteorological Services; and Search and Rescue.

GEN 4. Charges for aerodromes / heliport and air navigation services — Aerodrome / heliport charges; and Air Navigation services charges.

3.1.2. Part 2 — En-route (ENR)

Part 2 consists of seven sections containing information as briefly described hereafter.

ENR 0. — Table of Contents to Part 2.

ENR 1. General Rules and Procedures — General rules; Visual flight rules; Instrument flight rules; ATS airspace classification-, Holding, approach and departure procedures; Radar services and procedures; Altimeter setting procedures; Regional supplementary procedures; Air traffic flow management; Flight planning; Addressing of flight plan messages; Interception of civil aircraft; Unlawful interference; Air traffic incidents.

ENR 2. Air Traffic Services Airspace — Detailed description of Flight information regions (FIR), Terminal control areas (TMA); and other regulated airspace.

ENR 3. ATS Routes — Detailed description of ATS routes; Area navigation routes; Helicopter routes; Other routes; and En-route holding.

Note : other types of routes which are specified in connection with procedures for traffic to and from aerodromes/heliports are described in the relevant sections and subsections of Part 3 - Aerodromes.

ENR 4. Radio Navigation Aids/Systems — Radio navigation aids-en-route; Special navigation systems; Name-code designators for significant points; and Aeronautical ground lights - en-route.

ENR 5. Navigation Warnings — Prohibited, restricted and danger areas; Military exercise and training areas; Other activities of a dangerous nature; Air navigation obstacles - en-route; Aerial sporting and recreational activities; and Bird migration and areas with sensitive fauna.

ENR 6. En-route charts.

3.1.3. Part 3 — Aerodrome (AD)

Part 3 consists of four sections containing information as briefly described hereafter.

AD 0. — Table of Contents to Part 3.

AD 1. Aerodromes/Heliports — Introduction - Aerodrome/heliport availability; Rescue and fire fighting services and snow plan; Index to aerodromes and heliports; and Grouping of aerodromes/heliports.

AD 2. Aerodromes — Detailed information about aerodromes, listed under 24 subsections.

AD 3. Heliports — Detailed information about heliports (not located at aerodromes).

3.2. Regular amendment interval

Regular amendments to the AIP will be issued once every 28 days. The publication dates will be on each of the AIRAC publication dates.

4. Service to contact in case of detected AIP error or omissions

In the compilation of the AIP, care has been taken to ensure that the information contained therein is accurate and complete. Any errors and omissions which may nevertheless be detected, as well as any correspondence concerning the Integrated Aeronautical Package, should be referred to:

Director of Airport Infrastructure & Air Navigation
Civil Aviation Authority

Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China

AFTN Address: VMMCYAYI
Telephone Number: (853) 2851 1213
Fax Number: (853) 2833 8089

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GEN 0.2 RECORD OF AIP AMENDMENTS

AIP AMENDMENT			
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GEN 1. TERRITORIAL REGULATIONS AND REQUIREMENTS**GEN 1.1 DESIGNATED AUTHORITY****1. Civil Aviation**

Designated Authority: Civil Aviation Authority
Postal Address: Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China
AFTN Address: VMMCYAYX
Telephone Number: (853) 2851 1213
Fax Number: (853) 2833 8089
Emergency Phone Number: (853) 6232 2999
E-mail: aacm@aacm.gov.mo
Homepage: www.aacm.gov.mo

2. Meteorology

2.1. The Meteorological Authority in Macao is conferred to “Direcção dos Serviços Meteorológicos e Geofísicos (SMG)”.

Designated Authority: Direcção dos Serviços Meteorológicos e Geofísicos
Postal Address: Caixa Postal 93
Rampa de Observatório
Taipa Grande, Taipa
Macao, China
AFTN Address: VMMCYMYA
Telephone Number: (853) 8898 6214, 88986290
Fax Number: (853) 2885 0557
Email: meteo@smg.gov.mo
Homepage: www.smg.gov.mo

2.2. The Meteorological Service for civil aviation are provided by Airport Meteorological Office, a division of SMG, located at the Terminal Building of Macau International Airport.

Postal Address: Centro Meteorológico para a Aeronautica
Room 3016, Terminal Building
Macau International Airport
PAC ON, Taipa
Macao, China
AFTN Address: VMMCYMYX

Telephone Number: (853) 2886 1111 EXT 2508,
(853) 2886 2203 (duty forecaster)
Fax Number: (853) 2886 0017

3. **Customs**

Designated Authority: Serviços de Alfândega
Postal Address: Rua de S. Tiago da Barra Doca D. Carlos I. SW
Macao, China
Telephone Number: (853) 2855 9944
Fax Number: (853) 2837 1136
E-mail: info@customs.gov.mo
Homepage: www.customs.gov.mo

4. **Immigration**

Designated Authority: Serviço de Migração de Macao
Postal Address: Edf. do Serviço de Migração Travessa Um do Cais de Pac On,
Macao, China
Telephone Number: (853) 2872 5488
Fax Number: (853) 8897 0300
E-mail: sminfo@fsm.gov.mo
Homepage: www.fsm.gov.mo

5. **Health**

Designated Authority: Serviços de Saúde
Postal Address: Estrada do Visconde de S. Januário
Centro Hospitalar Conde São Januário
Macao, China
Telephone Number: (853) 2831 3731
Fax Number: (853) 2871 3105
E-mail: info@ssm.gov.mo
Homepage: www.ssm.gov.mo

6. Airport Charges

Designated Authority: Airport Director of the Macau International Airport
CAM - Macau International Airport Co. Ltd., Airport
Operations Department

Postal Address: Macau International Airport
Taipa
Macao, China

AFTN Address: VMMCYDYA

Telephone Number: (853) 2886 1111

Fax Number: (853) 2886 2222

Email: airportdirector@macau-airport.com

Homepage: |

7. Agricultural Quarantine

Designated Authority: Instituto para os Assuntos Cívicos e Municipais
Serviços de Inspecção e Sanidade

Postal address: Av. Almeida Ribeiro, No. 163
Macao, China

Telephone Number: (853) 2851 5952

Fax Number: (853) 2851 9303

Email: webmaster@iacm.gov.mo

Homepage: www.iacm.gov.mo

8. Aircraft Accidents Investigation

Designated Authority: President of Civil Aviation Authority
Civil Aviation Authority

Postal address: Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China

AFTN Address: VMMCYAYA

Telephone Number: (853) 2851 1213

Fax Number: (853) 2833 8089

Emergency Phone Number: (853) 6232 2999

E-mail: aacm@aacm.gov.mo

Homepage: www.aacm.gov.mo

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GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT**1. General**

- 1.1 All flights to or from Macao and through Macao Aerodrome Traffic Zone (ATZ) shall comply with the requirements of any law or instruction having the force of law, for the time being in force, relating to air navigation and air transport.
- 1.2 Operators and their handling agents should direct all applications for operating permit concerning the operation of scheduled and non-scheduled (including general aviation) flights to and from Macao, including additional flights and schedule changes, to the Civil Aviation Authority via the online Flight Application System. Paper application may be accepted if the applicant does not have internet access.

Online Application - Registered airlines, air operators or handling agents can submit flight applications and related supporting documents via the Flight Application System. New users can apply for a user account at:

<https://fltapp.aacm.gov.mo/login>

Paper Application (By letter, fax or email)

Tel: 853-8796 4104 / 8796 4122 / 8796 4135 (Direct line)

853-2851 1213 (General line)

Fax: 853-8796 4115 (Direct line)

853-2833 8089 (General line)

E-mail: flightauthorization@aacm.gov.mo

- 1.3 Please note that enquiries and applications will be processed during normal office hours.
- 1.4 For time slots application, please file separately for approval by the Macao Airport Slots Coordinator at:

CAM - Macau International Airport Co. Ltd.

Airport Operations Department

Email: mfmslot@macau-airport.com

Tel number: 853-28861111 extension 2504 /4029(office hour) or

853-88982501 (non-office hour)

E-Application Platform

<https://www.macau-airport.com/en/our-business/e-application-platform>

- 1.5 It is the sole responsibility of the air operator/handling agent to secure the operating permit and the slots clearance approval.

2. Compulsory third party insurance

- 2.1 In accordance with the Administrative Regulations No.11/2004 and No.19/2011, all civil aircraft, whether operating commercial or non-revenue flights, are required to have a Combined Single Limit (CSL) insurance meeting the following requirements:

	Group Classification Aircraft Maximum Take-off Weight as Stipulated in the Manufacturer's Airplane Flight Manual	Combined Single Limit for Third Party Liability for any one accident / incident / occurrence to be not less than MOP
1	2 000 kg or less	15 000 000
2	2 001 kg - 6 000 kg	45 000 000
3	6 001 kg - 25 000 kg	120 000 000
4	25 001 kg - 100 000 kg	500 000 000
5	100 001 kg and above	900 000 000

2.2 Any aircraft not complying with these insurance requirements will not be allowed to land or take off in Macao. However, this does not apply to an aircraft in emergency.

2.3 Operators are reminded that documentary proof is required from the insurance company concerned. It is incumbent on the operator/handling agent that material available to the Civil Aviation Authority is current. Further, operators/handling agents are to provide evidence of continued insurance cover prior to the expiry of the original policy.

2.4 The Administrative Regulations concerning liability insurance can be viewed online at:

http://bo.io.gov.mo/bo/i/2004/14/regadm11_cn.asp
http://bo.io.gov.mo/bo/i/2011/29/regadm19_cn.asp

3. Scheduled air services

3.1 General

3.1.1 The Macao aviation regulations require that scheduled air services to and from Macao by foreign registered aircraft shall be operated under and in accordance with the provisions of an operating permit which is granted by the President of the Civil Aviation Authority.

3.2 Application

3.2.1 An application for the operating permit must be submitted to the President of Civil Aviation Authority at least 15 working days before the anticipated commencement date of the scheduled air services.

3.2.2 The information and documents required for the application of an operating permit are available online at:

<http://www.aacm.gov.mo/verify.php?id=78&pageid=78>

3.2.3 The application, together with the required documents, should be submitted via the online Flight Application System at <https://fltapp.aacm.gov.mo/login>

3.2.4 After authorization being granted, operator should send the respective Flight Plans to Macao Tower, Guangzhou ACC, Zhuhai APP and Hong Kong ACC.

3.3 Summary of documents to be presented by aircraft captains or other authorised agents

3.3.1 It is necessary that the undermentioned main documents be submitted by Airline Operators to cover entry and departure of their aircraft to and from Macao. Responsibility for their correct presentation and submission is vested in the captain of the aircraft or handling agent.

3.3.2 Aircraft arrival documents

Required by	Cargo Manifest	Traffic Form	Passenger Manifest	Crew List
Customs Department	2	1	-	-
Immigration Department	-	1	1 *	1
Airport Management	-	1	-	-
Total	2	3	1	1

* Passengers manifest is only mandatory when exiting special bound passengers to surface whose destination is People's Republic of China or Hong Kong. These passengers will be controlled by Immigration and Customs only in the People's Republic of China or Hong Kong.

3.3.3 Aircraft departure documents

Required by	Cargo Manifest	Traffic Form	Passenger Manifest	Crew List
Customs Department	2	1	-	-
Immigration Department	-	1	-	1
Airport Management	-	1	-	-
Total	2	3	-	1

Note 1: Special bound passengers are those passengers arriving to Macao with destination to People's Republic of China and Hong Kong or departing originally from People's Republic of China or Hong Kong. Special bound passengers are exempt on arrival of Customs and Immigration control in Macao SAR, being this done on the boundary control of those destinations.

***Note 2:** In addition to the requirements listed in paragraphs 2.2.2 and 2.2.3, relevant documents covering freight and unaccompanied baggage (e.g. Consular Invoices, Licenses, Permits ...) must be submitted to the Customs Authorities for necessary checking and clearance.*

Remark: When this facilitation programme (Note 1 & 2) is available, an AIC will be issued.

4. Non - scheduled air services

4.1 General

4.1.1 Any person wishing to use an aircraft in Macao for the provision of non-scheduled air services must obtain a permit from the President of the Civil Aviation Authority.

4.1.2 Prior approval from the President of the Civil Aviation Authority shall also be sought for non-scheduled flights to or from Macao for reasons other than carriage of passengers, cargo or mail for hire or reward (General Aviation).

4.1.3 Operators who propose to operate series of non-scheduled flights are advised to discuss their proposals with the Civil Aviation Authority well in advance of the flights taking place to secure approval in principle.

4.2 **Application**

4.2.1 An application for the permit must be submitted to the President of Civil Aviation Authority at least 3 working days before the anticipated operation date of the non-scheduled air services.

4.2.2 The information and documents required for the application of a permit for non-scheduled air services are available online at

<http://www.aacm.gov.mo/verify.php?id=79&pageid=79>

4.2.3 The application, together with the required documents, should be submitted via the online Flight Application System at <https://fltapp.aacm.gov.mo/login>

4.2.4 Applications for non-scheduled air services for the carriage of both passengers and cargo will not normally be considered.

4.2.5 The period of non-scheduled air services permit will not exceed one month normally.

4.2.6 After authorisation being granted, the operators/handling agents shall send the respective Flight Plan to Macao Tower, Guangzhou ACC, Zhuhai APP and Hong Kong ACC.

4.3 **Conditions governing the operation of non-scheduled air services**

4.3.1 In conformity with Article 5 of the Chicago Convention and Portaria No. 232/95/M, applications for non-scheduled air services for the carriage of passengers or cargo will normally be approved if the President of Civil Aviation Authority is satisfied that corresponding scheduled services cannot satisfy a genuine demand by providing the service or capacity required, that such non-scheduled services do not affect the development of scheduled services and in the case of applications made by airlines based outside Macao, that the government of the country in which the airline is based would be granted no less favourable treatment to Macao based airline making a similar application.

4.3.2 Permits for non-scheduled services are granted on condition that the holder does not advertise such services for sale direct to general public.

4.3.3 Permits may contain such conditions as the President of Civil Aviation Authority thinks fit having regard to the nature and circumstances of the applications.

4.4 **Documentary requirements for clearance of aircraft**

The requirements are the same as for scheduled flights.

5. Use of leased aircraft

In cases where the applicant intends to use aircraft of another state of registry or of another operator, whether under wet or dry lease arrangements, the following additional requirements will apply:

- (a) The applicant shall produce a copy of the aircraft lease agreement, or evidence that:
 - 1) such leasing arrangements would not be equivalent to allowing the lessor airline access to traffic rights not otherwise available to that airline, and
 - 2) the financial benefit to be obtained by the lessor airline would not be related to the profit or loss of the operation of the proposed flight.
- (b) The President of Civil Aviation Authority must be satisfied with the arrangements made for the allocation between the aeronautical authorities concerned of the responsibilities under ICAO Annex 6 and the continuing airworthiness of the aircraft.

6. Production of documents for inspection

The captain or pilot in command of an aircraft shall, within a reasonable time after being requested to do so by an authorised person, produce to that person any of the following documents:

- (a) the certificates of registration and airworthiness in force in respect of the aircraft ;
- (b) the licenses of its flight crew ;
- (c) such other documents as the aircraft is required by Airport Authority, like journey log book, for instance.

7. Special procedures for general aviation aircraft

7.1 General aviation aircraft including private aircraft, regardless of weight category, must meet specific requirements for the carriage of radio/navigation aids and fuel. (See GEN 1.5-1).

7.2 All operators of private aircraft operating international flights to or from Macau International Airport, shall employ the services of a recognised ground handling agent and shall conform with the following procedures :

7.2.1 Departing flights

- (a) The pilots, any crew members and all passengers are required to pass through the normal Migration and Security Departure channels in the Passenger Terminal Building and be transported to the aircraft by the ground handling agent.
- (b) The pilot is required to be in possession of a valid aircrew license issued in accordance with the appropriate conventions and any other travel documents required by the Migration Department.

7.2.2 Arriving flights

- a) After landing, the aircraft shall be taxied to position as directed by Air Traffic Control, where it will be met by the Migration and Customs Services
- b) The Pilots, crew members and all passengers shall be transported by the ground handling agent to the Passenger Terminal Building for Customs, Migration and Quarantine clearance.
- c) Due to general Aviation stands configuration (compulsory push back) crews may be requested to carry the tow bar adapted to the type of their aircraft.

7.3 Besides Macau Tower, flight plan shall be sent to Guangzhou ACC, Zhuhai APP and Hong Kong ACC

8. Requests for use of Macau International Airport as alternate or diversion

- 8.1 Application to use Macao as an alternate or diversion airport shall be sent to Civil Aviation Authority via the online Flight Application System or by paper if the applicant does not have internet access.
- 8.2 After approved, the operator shall inform, Guangzhou ACC, Zhuhai APP and Hong Kong ACC.
- 8.3 For non-local air operator who is not operating to and from Macao SAR, when aircraft registered outside Macao SAR may under the law of its registration State be reasonably carried security weapons on board for the purpose of ensuring the safety of the aircraft or of persons on board, which needs to make an alternate landing at the airport due to weather, technical or other necessary reasons, the PIC or FO is required to complete a declaration form, provided by the airport supervisor.

9. Health requirements

- 9.1 Strict compliance with the provisions of the International Health Regulations of the World Health Organisation is maintained.
- 9.2 Disinsection of an aircraft, when required, should be carried out using methods approved by the World Health Organisation.

GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW**1. Customs requirements**

1.1. Customs formalities are conducted in conformity with standard international procedure, and as far as possible, in accordance with the Standards and Recommended Practices laid down by the International Civil Aviation Organisation (Annex 9). The Airport Customs Staff are under the jurisdiction of Macao Customs Services and they are responsible for the enforcement of various legislations of Macao affecting importation and exportation of goods.

1.2. Arrival / Departure Declaration

1.2.1. A passenger, who fails to declare or makes a false or incomplete declaration to a Customs officer; or imports without license commodities subject to prior authorization regime; or imports/exports commodities infringing intellectual property rights is liable to prosecution and related commodities will be confiscated.

1.2.2. Arrival Declaration

A person entering Macao shall declare to Customs any of the following situations:

- Any quantities of merchandise for commercial purpose with a value exceeding MOP5,000.00;
- Commodities subject to prior authorization regime (Table B of Chief Executive Order No. 255/2016);
- Commodities subject to sanitary quarantine;
- Dutiable commodities.
- Import/Export of goods subject to prior authorization regime. (Such as CFC or endangered species of wild fauna and flora)

1.2.3. Departure Declaration

A person leaving Macao shall declare to Customs any of the following situations:

- Any quantities of merchandise for commercial purpose with a value exceeding MOP5,000.00;
- Commodities subject to prior authorization regime (Table A of Chief Executive Order No. 255/2016).
- Import/Export of goods subject to prior authorization regime. (Such as CFC or endangered species of wild fauna and flora)

1.3. Commodities for Individual's Own Use or Consumption

1.3.1. An incoming passenger is allowed to bring in without declaration the following quantities of commodities for his own use or consumption as listed in Annex 1 of Chief Executive Order No. 255/2016:

1.3.2. Each day a person is allowed to bring in the following amount of commodities (Please refer to Annex 1 of Chief Executive Order No. 255/2016 for specific guidance):

- Dairy products; bird's eggs (fresh one excluded); natural honey; live plants; spawn; bulbs; edible tubers; edible fruits; seeds; sugar cane; ice-cream and edible ice; dog or cat food; animal or vegetable fertilizers; insecticides, herbicides, disinfectants and similar products; etc.
(0.5kg of insecticides, herbicides, disinfectants and similar products are allowed per day, others are 1kg each per day and total of not more than 5kg per day)
- 19 pieces of cigarettes or 1 piece of cigars (the weight of piece must not exceed 3 grams) or 25 grams of tobacco;
(total weight not exceeding 25 grams)
- 1 liter of beverages of alcoholic strength by volume exceeding 30% vol.

1.4. Residents benefit from the same allowances granted to tourists for articles of personal use or which have been declared when leaving Macao

2. Immigration requirements

2.1. Non-residents of the Macao Special Administrative Region are required to possess a valid passport and “entry permit” or “visa” for entry to Macao, except for people prescribed by certain law, administrative regulation or international law document.

2.2. The Immigration Department of the Macao Special Administrative Region keeps a record of the entry and departure of non-local residents on computer, as well as on their passport, travel document or other appropriate document, indicating the limit of stay granted in accordance with Administrative Regulation No.5/2003.

2.3. Transfer and Transit

The transfer or transit of visitors who has no record made at any border and is not issued any “entry permit” at the Macao International Airport, at any immigration checkpoint, or during escort from one immigration checkpoint to another by the authorities is not considered as entry to the Macao Special Administrative Region.

2.4. Documents for Entry to and Departure from Macao

The following non-residents are entitled to enter and depart from the Macao Special Administrative Region if they possess the documents listed below:

1. A valid passport;
2. A One-way or Two-way Exit Permit or other travel documents issued by the authorities of the People's Republic of China;
3. A Hong Kong Permanent Identity Card or Re-entry Permit;
4. A Seaman's Identity Book issued by countries having ratified in the International Labour Organization Convention 108 of 13 May 1958;
5. A License or Crew Certificate (subject to travelling on duty only) issued under Annex 1 and 9 of the Convention on International Civil Aviation of 7 December 1944;
6. A travel document issued in accordance with Article 28 of the “Convention Relating to the Status of Refugees” of 28 July 1951, which was amended in the protocol of 31 January 1967;

- 7. Other documents as prescribed by law or international treaties which are applicable to the Macao Special Administrative Region;
- 8. Other valid travel documents;
- 9. Nationals or citizens of countries or territories which have reached an agreement with the Macao SAR on passport-free entry to and departure from the Macao Special Administrative Region.

Note:

- (1) *Holders of a valid "Non-Resident Worker's Permit" or "Special Stay Permit" of Macao are required to present the Permit as well when entering or departing from Macao;*
- (2) *Except for the holders of documents listed in Point 6, all other document holders mentioned above in Paragraph 2.4 are admissible to the Macao Special Administrative Region only on the condition that their document allows them to enter or re-enter any country or region;*
- (3) *"One-way Exit Permit" holders and individuals who possess a travel document valid only for entering or returning to the Macao Special Administrative Region and preliminarily have their permanent residence status verified or declare possession of Residence Authorization are exempted from the requirement in (2);*
- (4) *Under exceptional circumstances where proper reasons are given, other individuals can also be exempted from the requirement in (2);*
- (5) *In cases specified in (3) and (4), individuals who intend to enter the Macao Special Administrative Region are required to possess prior permit or authorization granted for the purpose of entering the SAR, but One-way Exit Permit holders are not included.*

2.5. Entry Requirements

- 2.5.1. The validity of the passport or travel document and entry or re-entry permit of other countries (or regions) upon the arrival of the visitor should meet the requirement stated in Term 1, Article 9 of Law No.5/2003 (i.e. The maximum limit of stay in the Macao Special Administrative Region granted to all individuals is restricted to 30 days before the expiry date of their passport or travel document and their entry or re-entry permit);

Note: The above requirement is not applicable to mainland residents who possess permits issued by the authorities of the People's Republic of China, and exceptionally not applicable to individuals who intend to stay temporarily in Macao for proceeding to another destination and guarantee to have the authorization to enter or re-enter any country or region.

- 2.5.2. "Two-way Exit Permit" holders are required to possess a valid "exit endorsement";
- 2.5.3. Visitors are required to possess a valid onward or return ticket unless they can prove that they reside on the Mainland of China or in the Hong Kong Special Administrative Region. The exemption is not applicable to Chinese passport or Hong Kong Special Administrative Region passport holders who transit Macao to a third country or region;
- 2.5.4. Visitors are required to prove that they possess the vital resources of a minimum of MOP5000 for their expected period of stay in Macao;
- 2.5.5. Visitors who are not exempted from a visa and entry permit are required to:

- i. Apply for an “Entry Permit” (aka “Visa-upon-arrival”) at any of the border checkpoints of the Immigration Department of the Public Security Police upon arrival at Macao, *Note: Not applicable to Bangladeshi, Nepalese, Nigerian, Pakistani, Sri Lankan and Vietnamese starting from 1 July 2010*; or
- ii. Apply, by a representative, to the Immigration Department in advance for “Authorization to Enter and Stay”, *Note: Refer to the “Authorization to Enter and Stay” Section for details*; or
- iii. Apply for a “visa” of the Macao Special Administrative Region in advance through a Chinese embassy or consulate (visa sample).

2.5.6. Application for an “Entry Permit” (aka “Visa-upon-arrival”)

- 1) Individuals who intend to enter the Macao Special Administrative Region but have not applied in advance to any Chinese embassy, consulate or diplomatic mission for a “visa” or the Macao Immigration Department for “Authorization to Enter and Stay” can apply for an “Entry Permit” (aka “Visa-upon-arrival”) at the “Visa Room” of the border checkpoint when arriving at Macao. They will be granted “Authorization to Stay” for a maximum of 30 days once the application is approved.

2) Fees

Type	Fee
Individual	MOP100
Family Passport	MOP200
Children under the age of 12	MOP50
Groups comprised of at least 10 people organized by a single travel manager and presenting a collective travel document	MOP50 per head

- 3) Individuals who have paid the fee for an “Entry Permit” can enjoy multiple entries within the limit of stay granted (a maximum of 30 days) without making further payments.

2.6. “Visa” and “Entry Permit” Exemption

2.6.1. Nationals of the following countries are exempted in accordance with the written instruction of the Chief Executive:

Albania	India	Norway
Andorra	Indonesia	Philippines
Australia	Ireland	Poland
Austria	Israel	Portugal
Belgium	Italy	Romania
Bosnia and Herzegovina	Japan	Russia

Brazil	Kingdom of Morocco	Samoa
Brunei	Kiribati	San Marino
Bulgaria	Latvia	Serbia
Canada	Lebanon	Seychelles
Cape Verde	Liechtenstein	Singapore
Chile	Lithuania	Slovakia
Croatia	Luxembourg	Slovenia
Cyprus	Macedonia	South Africa
Czech	Malaysia	South Korea
Denmark	Mali	Spain
Dominica	Malta	Sweden
Egypt	Mauritius	Switzerland
Estonia	Mexico	Tanzania
Finland	Moldova	Thailand
France	Monaco	Turkey
Germany	Mongolia	U.S.A.
Greece	Montenegro	United Kingdom
Grenada	Namibia	Uruguay
Hungary	Netherlands	
Iceland	New Zealand	

- 2.6.2. Individuals specified in international treaties;
- 2.6.3. Holders of a “One-way Exit Permit”, “Two-way Exit Permit”, passport or other travel document issued by the authorities of the People’s Republic of China;
- 2.6.4. Holders of a Hong Kong Identity Card, Hong Kong Permanent Identity Card or Re-entry Permit;
- 2.6.5. Chinese in possession of a valid document for entering and departing from Macao;
- 2.6.6. Individuals in possession of a travel document valid only for entering or returning to the Macao Special Administrative Region and preliminarily have their permanent residence status verified or declare possession of Residence Authorization;
- 2.6.7. Holders of a Seaman’s Identity Book issued by countries having ratified in the International Labour Organization Convention 108 of 13 May 1958;
- 2.6.8. Holders of a License or Crew Certificate (subject to travelling on duty only) issued under Annex 1 and 9 of the Convention on International Civil Aviation of 7 December 1944;
- 2.6.9. Nationals and residents of the countries and regions which have reached an agreement with the Macao Special Administrative Region on passport-free entry to and departure from Macao;

- 2.6.10. Holders of a diplomatic or consular identity card issued by the Macao or Hong Kong Special Administrative Region Government;
- 2.6.11. Transit visitors who intend to enter the Macao Special Administrative Region for less than 48 hours for the purpose of travelling onward to another destination via the Macao International Airport;
- 2.6.12. Holders of a diplomatic passport;
- 2.6.13. Holders of a “Laissez-Passer” issued by the United Nations, provided they are travelling on duty;
- 2.6.14. Non-Portuguese in possession of a travel document issued by the Portuguese authorities;
- 2.6.15. Holders of a valid “Non-resident Worker’s Permit” or “Special Stay Permit”;
- 2.6.16. Individuals entering Macao before the expiry date of the “Authorization to Stay (red stamp)” which is granted while pending the “Non-Resident Worker’s Permit”;
- 2.6.17. Individuals entering Macao before the expiry date of the “Special Authorization to Stay” which is granted for study purpose or to the reuniting family of a non-resident worker;
- 2.6.18. Individuals entering Macao not later than the designated reporting date indicated on the “receipt” of the “Special Authorization to Stay” application or extension which is made for study purpose;
- 2.6.19. Individuals entering Macao before the expiry date of the “Extension of Stay” which is granted in accordance with Articles 11 and 12 of Administrative Regulation No.5/2003;
- 2.6.20. Individuals who have proof of having been granted Residence Authorization of the Macao Special Administrative Region;
- 2.6.21. Individuals entering Macao before the expiry date of the “Extended Authorization to Stay (black stamp)” which is granted for the purpose of residence application;
- 2.6.22. Individuals granted “Visa” and “Entry Permit” exemption by the Chief Executive;
- 2.6.23. Under exceptional circumstances where proper reasons are given, individuals not meeting the legal requirements for entry or stay but granted Authorization to Enter and Stay in the Macao Special Administrative Region through the written instruction of the Chief Executive.

2.7. Limit of Stay Granted upon Arrival

2.7.1. General Regulation

- 2.7.1.1. The maximum limit of stay in the Macao Special Administrative Region is restricted to 30 days before the expiry date of the passport or travel document and the entry or re-entry permit.
- 2.7.1.2. The above regulation is not applicable to mainland residents who possess permits issued by the authorities of the People’s Republic of China, and exceptionally not applicable to individuals who intend to stay temporarily in Macao for proceeding to another destination and guarantee to have be admissible or re-admissible to any country or region.

2.7.2. Limit of Stay

- 2.7.2.1. Individuals who are not exempted from a “Visa” or “Entry Permit” will be granted Authorization to Stay for a maximum of 30 days upon arrival with a “Visa”, “Entry Permit” or “Authorization to Enter and Stay”. They can enjoy multiple entries within the 30 days without applying for another “Visa”, “Entry Permit” or “Authorization to Enter and Stay”.
- 2.7.2.2. Individuals exempted from a “Visa” or “Entry Permit”:

Types of People	Limit of Stay
1. Holders of a valid passport or travel document	A maximum of 30 days
2. Holders of a passport issued by a European Union or Schengen Agreement member state (Austria, Belgium, Bulgaria, Czech, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg,	A maximum of 90 days

Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland)	
Holders of a passport issued by Albania, Andorra, Bosnia and Herzegovina, Brazil, Cape Verde, Croatia, Dominica, Egypt, Grenada, Japan, Macedonia, Mali, Mauritius, Mexico, Moldova, Mongolia, Montenegro, Serbia, South Korea, Tanzania, Kingdom of Morocco, Uruguay.	
3. Holders of a passport issued by Brunei.	A maximum of 14 days
4. Holders of a passport issued by Cyprus, Israel, Lebanon, New Zealand.	A maximum of 3 months or 90 days
5. British citizens holding a British passport	A maximum of 6 months
6. Holders of a Hong Kong Permanent Identity Card or a Re-entry Permit	A maximum of 1 year
7. Holders of a diplomatic passport, "Laissez Passer" issued by the United Nations, "diplomatic or consular identity card" issued by the Macao Special Administrative Region	No limit
8. Holders of a Seaman's Identity Book issued by countries having ratified in the International Labour Organization Convention 108 of 13 May 1958	The period the ship is berthed at a harbour in Macao
9. Holders of a License or Crew Certificate issued under Annex 1 and 9 of the Convention on International Civil Aviation of 7 December 1944	During the interval of service of the flight
10. Nationals and residents holding a passport issued by countries and regions which have reached a mutual visa-free agreement with the Macao Special Administrative Region	Not longer than the period stated in the agreement
11. Holders of a "Two-way Exit Permit" issued by the authorities of the People's Republic of China with a valid "Exit Endorsement to Macao" ⁽¹⁾	The period indicated in the endorsement, but not more than 90 days
12. Mainlanders holding a "Permit for Travelling to and from Taiwan" with an "Exit Endorsement to Taiwan"	A maximum of 7 days (no matter traveling to Taiwan via Macao or returning to the mainland via Macao)
13. Holders of a passport or travel document issued by the authorities of the People's Republic of China (with a flight ticket to and entry visa of a third country or region)	A maximum of 7 days (for transit)
14. Holders of a Hong Kong Special Administrative Region passport (with a flight ticket to and entry visa of a third country or region)	A maximum of 7 days (for transit)
15. Holders of a Macao "Non-resident Worker's Permit" ⁽²⁾	Until the expiry date of the Permit (with multiple entries)

16.	Individuals granted “Special Authorization to Stay” for study purpose or as reuniting family of a non-resident worker (in accordance with Article 8 of Law No. 4/2003) ⁽²⁾	Until the expiry date of the Authorization (with multiple entries)
17.	Individuals granted Extension of Stay in accordance with Articles 11 and 12 of Administrative Regulation No. 5/2003 ⁽²⁾	Until the expiry date of the extended Authorization to Stay (with multiple entries)
18.	Holders of a “Special Stay Permit” ⁽²⁾	Until the expiry date of the Permit (with multiple entries)
19.	Individuals granted "Special Authorization to Stay" in accordance with Term 6, Article 8 of Law No. 4/2003 for the purpose of residence application.	Until the expiry date of the extended Authorization to Stay (with multiple entries)

Note:

1. *Holders of an endorsement with a comparatively longer limit of stay in Macao for work or study purpose should go to the Immigration Department in person and apply for an extension of stay before their endorsement expires if they intend to stay for more than 90 days. They will be regarded as overstayers if they do not apply for an extension while the “Authorization to Stay” granted upon arrival expires. In addition, if they renew their endorsement and are granted a new endorsement during their legal stay in Macao and before the expiry date of their current endorsement, they are required to go to the Immigration Department to extend their “Authorization to Stay” accordingly. Otherwise, they will also be regarded as overstayers.*
2. *In cases where the limit of stay granted upon re-entry extends beyond the expiry date of the “Non-Resident Worker’s Permit”, “Special Stay Permit”, “Special Authorization to Stay” or “Extension of Stay”, the Immigration Department will make the following arrangements:*
 - (1) *For individuals who do not enjoy the exemption specified in VII and choose to apply for an “Entry Permit”, they are required to pay the fee for the “Entry Permit”. When their relevant document/Authorization to Stay expires, they can then remain in Macao until the expiry date of the “Authorization to Stay” which is granted to visitors upon their arrival;*
 - (2) *For individuals who choose not to apply for an “Entry Permit”, they can remain in Macao until the expiry date of their “Non-Resident Worker’s Permit”, “Special Stay Permit”, “Special Authorization to Stay” or “Extension of Stay”.*
- 2.7.3. *Individuals making use of the Macao International Airport for transit to other destinations within 48 hours can enter and stay in Macao without a “Visa” or “Entry Permit” within this period.*

2.8. Entry Refusal

2.8.1. Legal Reason

2.8.1.1. Non-residents are refused entry to the Macao Special Administrative Region for the following reasons:

- (1) Having been deported;
- (2) Interdicted from entering, staying at or transiting the Macao Special Administrative Region in accordance with the international law documents applicable to Macao;
- (3) Interdicted from entering the Macao Special Administrative Region in accordance with the law.

2.8.1.2. Non-residents will be refused entry to the Macao Special Administrative Region for the following reasons:

- (1) Attempting to evade the regulation on stay and residence and having frequent entries to the Macao Special Administrative Region within short intervals without appropriate justification;
- (2) Having been sentenced to a penalty of freedom deprivation in or outside the Macao Special Administrative Region;
- (3) Existence of strong indication of having committed or preparing to commit a crime;
- (4) No guarantee of return to last port of embarkation, existence of sufficient reason to suspect the authenticity of the travel document, no possession of the vital resources for the expected period of stay, no possession of transportation document necessary for return to last port of embarkation.

2.8.1.3. The power of entry refusal remains the competence of the Chief Executive; this power can be authorized to another person.

2.8.2. Transporter's Responsibility

2.8.2.1. If a sea or air transporter carries a passenger, seaman or crew member to the Macao Special Administrative Region who is refused entry, the transporter should immediately carry the person back to the first location where he or she boards a means of transport of the transport corporation. If it is not possible to carry the person back to the location, the transporter should carry him or her to the country or region where his or her travel document was issued.

2.8.2.2. If the transporter fails to remove the passenger, seaman or crew member who is refused entry in accordance with the above stipulation, it will be liable for all costs incurred by the person during his or her stay in the Macao Special Administrative Region, particularly accommodation expenses, costs of meals and health care expenses.

2.8.2.3. Airlines which carry inadmissible passengers and crew members to the Macao Special Administrative Region will be fined MOP10,000.00 per head, no matter whether the passengers and crew members are admissible afterwards, except if there is an indication under concrete circumstances that it is impossible to reasonably require the airlines to know the status of the passengers and crew members.

2.8.2.4. Payment for the above fine should be made within 10 days from the date of notification.

2.8.2.5. If the violator fails to voluntarily pay the fine in accordance with the above stipulation, the Immigration Department will send the notes of executory effect to the jurisdictional court for mandatory collection of the fine.

3. Public health requirements

3.1. Strict compliance with the provisions of the International Health Regulations of the World Health Organisation is maintained.

Facilities are available for vaccination and the issuance of an international certificate of vaccination.

Disinfection of an aircraft, when required, should be carried out using methods approved by the World Health Organisation.

3.2. Illness or death on board

The Captain of an incoming aircraft, who has a seriously ill or dead person on board, must give as much notice as possible by radio to the Airport Authorities of such occurrence. Relevant information concerning the necessity for having a doctor or ambulance standing-by would facilitate attention or removal as the case may be.

GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO**1. Customs requirements**

1.1. Customs formalities are conducted in conformity with standard international procedures, and as far as possible, in accordance with the Standards and Recommended Practices laid down by the International Civil Aviation Organisation (Annex 9). The airport Customs Staff are under the jurisdiction of Macao Customs Services and they are responsible for the enforcement of various legislations of Macao, affecting importation and exportation of goods.

1.2. For reasons of health, safety, security and trade control, goods of the following categories are forbidden for travellers to carry without prior authorization:

- Pharmaceutical products (exempted if the pharmaceutical drugs or products did not belong to narcotic or psychotropic substances which are carried by travellers entering the territory through accompanied luggage, intended for personal use, with a reasonable amount.);
- Chemicals;
- Narcotics and psychotropic substances;
- Products subject to excise duty (alcoholic beverages, tobacco and motor vehicles);
- Equipment and raw materials for the production of compact discs;
- Wireless Radio Receiver;
- Fluoride;
- Prohibited weapons and Medicines;
- Animals and endangered plants;
- Items listed in Table A (including textile products and garments, equipment for production of compact discs, weapons and ammunition, explosives, etc.) and Table B (including animals and plants, food, pharmaceuticals, chemicals, products subject to excise duty, raw materials and equipment for the production of compact discs, receivers and transmitters for radio, weapons and ammunition etc.) of Despacho do Chefe do Executivo n.º 487/2016.

1.3. Competent Authorities for issuing Licenses

Export Licenses:

Macao Economic Services - Group C (textile products, garments, other materials and products subject to the quota system, and equipment for the production of the compact disc.)

Public Security Police Force - Group E (Arms and Ammunition)

Import Licenses:

Civic and Municipal Affairs Bureau - Group A (Animal and plant food.)

Health Bureau - Group B (Pharmaceutical products, chemical products)

Macao Economic Services - Group C (cigarette and wine, equipment and raw materials for the production of compact discs)

Bureau of Telecommunications Regulation - Group D (wireless radio receiver, radar and navigation equipment)

Public Security Police Force - Group E (Weapons and ammunition, firecrackers and fireworks)

Transport Bureau - Group F (Vehicles)

Remark: The above-mentioned groups and its contents are published in the export list (Table A) and import list (Table B) stipulated by Despacho do Chefe do Executivo n.º 487/2016.

2. Agricultural quarantine and Health requirement

2.1. The Civic and Municipal Affairs Bureau has jurisdiction of hygiene inspection and phytosanitary control for the goods, published in the table of Annex III of Despacho do Chefe do Executivo n.º 487/2016, for import and transit purpose. No such goods including live animals, meat, animal products, fish, crustaceans or molluscs, and vegetal products, etc. can be brought into Macao on board of any aircraft without permit granted by the Civic and Municipal Affairs Bureau.

2.2. The Department of Food and Animal Inspection and Control (SIS) of the Municipal Affairs Bureau (IAM) is responsible for animal and food quality inspection and control. Located at 1/F, Fortune Tower, Avenida do Ouvidor Arriaga (Tel: 2833 7676, Fax 2888 0087). The details guideline of the permit application for different goods can also be found at <http://www.iam.gov.mo/>

3. Transport of Dangerous Goods by Air

3.1. Operators who wish to obtain:

- general permission for carriage of dangerous goods in aircraft,
- permission for carriage of particular consignment of dangerous goods on a flight or series of flights,

should submit their application by post or fax to AACM. Any application for the permission must reach AACM at least 10 working days prior to the first flight for which it is required.

3.2. Detail requirements and application procedure are laid down in the **Aeronautical Circular AC/OPS/005 - Transport of Dangerous Goods by Air**. The said Aeronautical Circular is available from the AACM upon request.

GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS**1. General**

Commercial air transport aircraft operating in Macao must adhere to the provisions of Annex 6 - Operation of Aircraft, Part I, Chapter 6 (Aeroplane Instruments, Equipment, and Flight Documents) and Chapter 7 (Aeroplane Communication, Navigation and Surveillance Equipment)

2. Special equipment to be carried**2.1. Rules for General Aviation Aircraft**

2.1.1. All general aviation aircraft, including private aircraft, regardless of weight category, operating through Macao are required to have full navigational capability:

- (1) Two-way VHF radio with appropriate frequencies;
- (2) VOR;
- (3) DME.

2.1.2. Applications for flight into Macau by private aircraft must include confirmation that the requirements of paragraph 2.1.1 will be met.

2.2. Carriage of radio equipment

2.2.1. The requirements for the carriage of radio equipment are contained in the Air Navigation Regulation of Macau.

2.3. Carriage of Secondary Surveillance Radar Transponders

2.3.1. All aircraft flying within the Macau ATZ are required to carry Mode A (4096 code) and Mode C transponders which comply with the specifications of ICAO Annex 10, Volume IV.

2.4. Carriage and Operation of Airborne Collision Avoidance System (ACAS II)

2.4.1. All turbine-engined aeroplanes flying within the Macau ATZ having a maximum certificated take-off mass in excess of 5700kg or authorized to carry more than 19 passengers shall be equipped with an airborne collision avoidance system (ACAS II) and the ACAS shall comply with Traffic Alert and Collision Avoidance System (TCAS) Version 7.1 and operate in accordance with the relevant provisions of ICAO Annex 10, Volume IV.

3. Flight documents

As mentioned in GEN 1.2.

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GEN 1.6 SUMMARY OF MACAO SPECIAL ADMINISTRATIVE REGION LAWS, REGULATIONS AND INTERNATIONAL AGREEMENTS / CONVENTIONS

1 List of Laws and Regulations applicable to Civil Aviation in Macao Special Administrative Region:

Reference	Laws and Regulations
Decree Law n.10/91/M-4 February	Establishes the Civil Aviation Authority
Decree Law n. 52/94/M-7 November	Establishes the legal system governing the aeronautical restrictions in the territory of Macao
Decree Law n. 9/95/M-6 February	Amends the statute of the Civil Aviation Authority
Portaria n. 232/95/M-14 August	Rules the authorization process to operate non-scheduled flights in Macau International Airport
Portaria n. 233/95/M-14 August	Defines the surrounding areas of the Macau International Airport which are restricted by the aeronautical restrictions
Portaria n. 282/96/M-11 November	Updates the Macau International Airport charges
Decree Law n. 66/96/M-18 November	Rules the baggages and other objects abandoned in the Macau International Airport
Decree Law n. 10/98/M-30 March	Approves the system for aircraft registry
Portaria n. 152/98/M-15 June	Updates the Macau International Airport charges
Regulamento Administrativo n.º 31/2003	Administrative regulation regarding administrative infractions committed on board civil aircraft
Regulamento Administrativo n.º 10/2004	Defines the basic principles ruling the civil aviation activities in the Macao SAR.
Regulamento Administrativo n.º 11/2004	Rules the liability limits of the operators of aircraft <ul style="list-style-type: none"> a) Registered in the Macao SAR, b) Using Macao's civil aviation infrastructures or c) Using the air space assigned to the Macao SAR.

Ordem Executiva n. 36/2004	Updates the Macau International Airport charges
Executive Order no. 26/2006	Amends Articles 10 and 14 of Portaria no. 282/96/M of 11 November
Administrative Regulation no. 18/2008	Amends Administrative Regulation no. 10/2004 that defines the basic principles ruling the civil aviation activities in the Macao SAR
Despacho of Chief Executive no. 295/2010	Amends the Portaria no. 233/95/M of 14 August that defines the surrounding areas of Macau International Airport that are restricted by the aeronautical restrictions
Administrative Regulation no. 19/2011	Amends Administrative Regulation no. 11/2004 that rules the liability limits of the operators of aircraft
Administrative Regulation no. 18/2012	Aerodrome Certification
Executive Order no. 45/2012	Establishes the charging scheme of the Civil Aviation Authority for the scope of services it provides within its responsibilities
Law no. 2/2013	Civil Aviation Accident and Incident Investigation and Aviation Safety Information Protection Law
Executive Order no. 13/2013	Updates the Macau International Airport charges
Executive Order no. 43/2021	Approves the Air Navigation Regulation of Macao
Administrative Regulation no. 16/2022	Air Transport Facilitation and Civil Aviation Security Systems
Despacho of Chief Executive no. 68/2023	Approves the Macao SAR Civil Aviation Security Programme
Law no. 4/2025 (Article 16, parts of Article 30 related to AOC, and number 1 of Article 69 only)	Civil Aviation Activity Law

2. List of International Conventions on Civil Aviation matters applicable to Macao Special Administrative Region:

International Conventions
Convention on International Civil Aviation <i>Chicago, December 7th 1944</i>
Convention for the Unification of Certain Rules relating to International Carriage by Air <i>Warsaw, October 12th 1929</i>
Hague Protocol amending the Convention for the Unification of Certain Rules relating to International Carriage by Air <i>Hague, September 28th 1955</i>
Convention on the International Recognition of Rights in Aircraft <i>Geneva, June 19th 1948</i>
Convention on Offences and Certain Other Acts Committed on Board Aircraft <i>Tokyo, September 14th 1963</i>
Convention for the Suppression of Unlawful Seizure of Aircraft <i>Hague, December 16th 1970</i>
Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation <i>Montreal, September 23rd 1971</i>
Convention for the Unification of Certain Rules for International Carriage by Air <i>Montreal, May 28th 1999</i>
Protocol for the Suppression of Unlawful Acts of Violence at Airports serving International Civil Aviation <i>Montreal, February 24th 1988</i>
International Air Services Transit Agreement <i>Chicago, 7 December 1944</i>

TABLE 1.6.1
Air Navigation Order

Provision for Notification	Notification
Instrument Landing System	Notified in ENR Section.
Radio Frequencies	The radio frequencies in use by aeronautical radio stations are notified in the AD Section.
Mechanical radio watch	Frequencies fitted with suitable equipment to permit the maintenance of a mechanical radio watch are notified in the AD Section.

Provision for Notification	Notification
Definitions of an Aerodrome Traffic Zone	Controlled airspace is notified in the ENR Section.
Carriage of Radio Equipment	A requirement ensure two way communications with Air Traffic Control Unit.
Carriage of Transponder	A requirement for the carriage of a secondary surveillance radar transponder is notified in the GEN Section.
Holding and Instrument Approach Procedures	Holding and Instrument Approach Procedures are notified in the ENR Section.
Position Reports	Position Reporting Procedures are notified in the ENR Section.
Radio Frequencies for the Air Traffic Control communications at aerodrome	Notified in the AD Section.

3. Aeronautical Circular

The President of Civil Aviation Authority, in exercise of his power under Paragraph 89 of the Air Navigation Regulation of Macao (ANRM) and Article 35 of the Statutes of Civil Aviation Authority, approved by the Decree-Law 10/91/M, established this Aeronautical Circular (AC) system.

3.1 General (GEN)

Number	Version	Subject
AC/GEN/001	R03	New System of Issuance of Aeronautical Circulars
AC/GEN/002	R05	Rules Concerning Aeronautical Accidents and Incidents
AC/GEN/003	R02	Mandatory Occurrence Reporting Scheme
AC/GEN/004	R00	Units Of Measurement To Be Used In Air And Ground Operations
AC/GEN/005	R06	Safety Management System Requirements
AC/GEN/006	R01	Macao Runway Safety Programme
AC/GEN/007	R00	Exemption Procedure
AC/GEN/008	R05	Cancellation of several Aeronautical Circulars
AC/GEN/009	R01	Macao Confidential Aviation Reporting System
AC/GEN/010	R01	Safety Information Protection
AC/GEN/012	R00	Monitoring, reporting and verification (MRV) of aeroplane operator annual CO2 emissions
AC/GEN/013	R00	Operator Permit for Unmanned Aircraft Operations in Macao
AC/GEN/014	R00	Dangerous Goods Training Programme

3.2 Airport (AGA)

Number	Version	Subject
AC/AGA/003	R01	Aviation Fuel at Aerodromes - Storage, Handling and Quality Control
AC/AGA/004	R00	Bird Strike Reporting
AC/AGA/007	R00	Aerodrome Director Responsibilities, Authority and Qualifications
AC/AGA/008	R00	Aerodrome Manual Requirements
AC/AGA/010	R01	Manual of Standards - Aerodromes
AC/AGA/011	R01	Manual of Standards - Heliports
AC/AGA/012	R00	Restrictions on carriage of Liquids, Aerosols and Gels (LAGs) and Prohibited Articles
AC/AGA/013	R02	Restrictions on Dangerous Goods
AC/AGA/014	R00	Global Reporting Format for Runway Surface Condition

3.3 Air Traffic Services

Number	Version	Subject
AC/ATS/001	R01	Scheme of Working Hours of Air Traffic Controllers
AC/ATS/003	R05	ATS Requirements
AC/ATS/004	R02	Air Traffic Service Manual Requirements
AC/ATS/005	R04	Air Traffic Control Approval Requirements
AC/ATS/006	R08	Manual of Standards - Air Traffic Management
AC/ATS/008	R01	Instrument Flight Procedures Approval Requirements

3.4 Airworthiness

Number	Version	Subject
AC/AW/001	R03	Process for Acceptance of Used Engines, Engine Modules, Auxiliary Power Units (APUs) and Propellers for Use on Aircraft Requiring a Macao Certificate of Airworthiness
AC/AW/002	R06	Acceptance of Aircraft Components
AC/AW/004	R21	Macao Aviation Requirements MAR-1 Airworthiness Procedures
AC/AW/005	R02	Coding and Registration of Macao 406 MHz Emergency Locator Transmitter (ELT) for Search and Rescue
AC/AW/011	R02	Macao Aviation Requirements MAR-145 Approved Maintenance Organisations
AC/AW/012	R00	Extension/Variation of Aircraft Maintenance Programme Inspection Schedules
AC/AW/013	R00	Mandatory Modifications, Inspections and Changes to Approved Documentation
AC/AW/015	R00	Disposition of Scrap Aircraft Parts & Materials

AC/AW/016	R00	Detecting and Reporting of Unapproved Parts
AC/AW/017	R00	Return to Service of Aircraft Items Recovered from Aircraft Involved in Accidents/Incidents
AC/AW/021	R04	Cooperation Arrangement on Mutual Acceptance of Certificates of Airworthiness Between Civil Aviation Administration of China, Civil Aviation Department, Hong Kong, China and Civil Aviation Authority-Macao, China
AC/AW/022	R02	Acceptable Means of Compliance and Interpretative / Explanatory Material (AMC & IEM) to the Nineteenth Schedule of Air Navigation Regulations of Macau (ANRM)
AC/AW/023	R09	Flight Recorders
AC/AW/026	R02	Cooperation Arrangement on Mutual Acceptance of Approvals of Design Change and Repair Design Among Civil Aviation Administration of China, Civil Aviation Department, Hong Kong, China and Civil Aviation Authority - Macao, China
AC/AW/028	R00	Weight and Balance of Aircraft
AC/AW/029	R02	Certificate of Maintenance Review
AC/AW/030	R00	Airborne Collision Avoidance System Requirement
AC/AW/034	R02	Markings and placards
AC/AW/035	R00	Cooperation Arrangement on Joint Maintenance Management between Civil Aviation Administration of China, Civil Aviation Department of the Hong Kong Special Administrative Region Government, China and Civil Aviation Authority of the Macao Special Administrative Region, China
AC/AW/036	R00	Runway Overrun Awareness and Alerting System
AC/AW/037	R00	Location of an Aeroplane in Distress
AC/AW/038	R00	Aircraft Maintenance Programme

3.5 Flight Operations

Number	Version	Subject
AC/OPS/002	R11	Operations Manual Requirements
AC/OPS/003	R00	Flight Safety Documents System
AC/OPS/004	R08	Application Procedures for the Issuance of an Air Operator Certificate (AOC)
AC/OPS/005	R06	Transport of Dangerous Goods by Air
AC/OPS/013	R00	Avoidance of Fatigue in Aircrew
AC/OPS/014	R02	Documents to be Carried by Aircraft Registered in Macao
AC/OPS/015	R01	Aircraft Leasing
AC/OPS/016	R03	Qualifications and Training Requirements for Cabin Crew
AC/OPS/018	R00	Operational Approval of Extended Range Operations (ETOPS)
AC/OPS/019	R00	Air Operator Quality System Requirements
AC/OPS/020	R01	Operation in Reduced Vertical Separation Minimum (RVSM) Airspace
AC/OPS/021	R01	Airborne Collision Avoidance System (ACAS) Operational Procedures and Training Requirements
AC/OPS/022	R03	Operation in Performance-based Navigation (PBN) Prescribed Airspace
AC/OPS/023	R01	Operations in Automatic Dependent Surveillance-broadcast (ADS-B) Prescribed Airspace
AC/OPS/024	R01	Minimum Equipment List (MEL) Requirements
AC/OPS/025	R05	Training and Testing Requirements for Flight Crew Member and Flight Operations Officer
AC/OPS/026	R01	Organization and Post-holders Requirements
AC/OPS/027	R02	Operational Control Requirements
AC/OPS/029	R01	Electronic Flight Bag
AC/OPS/030	R01	Aircraft Loading Requirements
AC/OPS/031	R01	Low Visibility Operations
AC/OPS/032	R00	Use of Portable Electronic Devices
AC/OPS/034	R00	Flight Data Analysis Programme
AC/OPS/035	R00	Global Reporting Format of Runway Surface Conditions
AC/OPS/036	R00	Dangerous Goods Handling Permit
AC/OPS/037	R00	Use of Representative Training Devices

3.6 Personnel Licensing

Number	Version	Subject
AC/PEL/002	R01	Language Proficiency Requirements
		Attachment – ICAO Language Proficiency Rating Scale
AC/PEL/003	R01	New Format of the Medical Certificate
AC/PEL/004	R02	Update of Medical Provisions
AC/PEL/006	R01	Approved Training Organization
AC/PEL/011	R00	Recurrent Competence Requirements of Air Traffic Controller Licence
AC/PEL/012	R00	Approved Training Organization for Air Traffic Controller
AC/PEL/013	R02	MAR-66 Licensing of Aircraft Maintenance Engineer
AC/PEL/014	R01	MAR-147 Approved Maintenance Training/Examinations

3.7 Communication, Navigation and Surveillance

Number	Version	Subject
AC/CNS/001	R00	Aeronautical Telecommunication and Radio Navigation Service

3.8 Aeronautical Information Services

Number	Version	Subject
AC/AIS/001	R00	Manual of Standards -Aeronautical Information Services

3.9 Aviation Security

Number	Version	Subject
AC/SEC/004	R03	Macao SAR Air Transport Facilitation Programme
AC/SEC/005	R00	Requirements on Operators' Security Programme
AC/SEC/006	R00	Integration of Civil Aviation Security Measures in the Design and Construction of Aerodrome Facilities
AC/SEC/007	R00	Requirements on Protection and Management of Civil Aviation Security Information
AC/SEC/008	R00	Approval Requirements of Aerodrome Security Services Providers
AC/SEC/009	R00	Requirements on Aerodrome Access Control
AC/SEC/010	R00	Background Check within the scope of Civil Aviation Security
AC/SEC/011	R00	Security Control on Persons, Baggage, Vehicles, Supplies, Cargo and Mail
AC/SEC/012	R00	Civil Aviation Security Measures for Air Operators
AC/SEC/013	R00	Civil Aviation Security Measures for Air Traffic Services Providers

AC/SEC/014	R00	Requirements on the Implementation of Security Tests
AC/SEC/015	R00	Guidelines on Civil Aviation Security Quality Control Activities and Civil Aviation Security Assessment
AC/SEC/016	R00	Civil Aviation Security Incident Reporting Requirements
AC/SEC/017	R00	Cyber Security Measures
AC/SEC/018	R00	Enhanced Civil Aviation Security Measures
AC/SEC/019	R00	Requirements for Personnel Recruitment, Selection, Training and Certification

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GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

1. Annex 1 - Personnel Licensing (13th Edition, Amendment 176)

2.1.1.1	<p>Following Pilot Licenses are not issued in Macao:</p> <p>Private Pilot License (Airship, Powered-lift) Commercial Pilot License (Airship, Powered-lift) Airline Transport Pilot License (Powered-lift) Multi-crew Pilot License Glider Pilot License Free Balloon Pilot License</p>
2.3.1.1	<p>The applicant for a Private Pilot License – Aeroplane or Private Pilot License - Helicopter shall be not less than 18 years of age.</p>
2.4.2.1 c)	<p>Privileges of Commercial Pilot License – Aeroplane or Helicopter holders when acting as pilot-in-command in commercial air transportation are subject to the following conditions:</p> <p>to act as pilot-in-command in commercial air transportation in any aeroplane or helicopter, whichever is the applicable case of his/her license, certified for single-pilot operation; but which maximum certificated take-off mass does not exceed 5,700 kg and which is of a type specified in the aircraft rating section included in the license, when the aircraft is engaged in a flight for the purpose of commercial air transportation; and</p> <p>Provided that:</p> <ul style="list-style-type: none"> i) he/she shall not, unless his/her license includes an instrument rating, fly such an aircraft on any scheduled journey; ii) he/she shall not fly such an aircraft on a flight carrying passengers at night unless an instrument rating is included in his/her license; and iii) he/she shall not, unless his/her license includes an instrument rating, fly any such aircraft of which the maximum certificated take-off mass exceeds 2,300 kg on any flight for the purpose of commercial air transport except a flight beginning and ending at Macao and not extending beyond 25 nautical miles from Macao;
3.2.1.1	<p>The applicant for a Flight Navigator License shall be not less than 21 years of age.</p>
3.3.1.1	<p>The applicant for a Flight Engineer License shall be not less than 21 years of age.</p>
3.4	<p>There are specific regulations relating to the Flight Radiotelephone Operator License.</p>

6.3.1.2.1*	No routine examination items related to assessment of physical fitness can be omitted.
* Denotes ICAO Recommended practices	

2. Annex 2 - Rules of the Air (10th Edition, Amendment 45)

4.6	Within Macao ATZ: a) Minimum height over congested area is 1500ft. b) Aircraft must maintain a minimum distance of 500 ft from persons, vessels, vehicles and structures. The minimum heights apply to all flights whether under both VFR and IFR.
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DOC4444 - Procedures for Air Navigation Services – Air Traffic Management (16th Edition, Amendment 11)

NIL.

3. Annex 3 - Meteorological Service for International Air Navigation (20th Edition, Amendment 81)

NIL.

4. Annex 4 - Aeronautical Charts (11th Edition, Amendment 62)

NIL.

5. Annex 5 - Units of Measurement to be used in Air and Ground Operations (4th Edition, Amendment 17)

NIL.

6. Annex 6 - Operation of Aircraft

6.1 Part I - International Commercial Air Transport - Aeroplanes) (12th Edition, Amendment 49)

4.9.1	Single pilot operations under IFR or at night not permitted.
4.9.2	Single pilot operations under IFR or at night not permitted.
5.4.1	Operations of single-engine turbine-powered aeroplanes at night and/or in IMC not permitted
5.4.2	Operations of single-engine turbine-powered aeroplanes at night and/or in IMC not permitted
6.23	Single pilot operations under IFR or at night not permitted.
9.4.5.1	Single pilot operations under IFR or at night not permitted.

9.4.5.2*	Single pilot operations under IFR or at night not permitted.
9.4.5.3	Single pilot operations under IFR or at night not permitted.

* Denotes ICAO Recommended practices

6.2 Part II - International General Aviation - Aeroplanes (11th Edition, Amendment 41)
NIL.

6.3 Part III - International Operations - Helicopters (11th Edition, Amendment 25)
NIL.

7. Annex 7 - Aircraft Nationality and Registration Marks (6th Edition, Amendment 6)
NIL.

8. Annex 8 - Airworthiness of Aircraft (12th Edition, Amendment 107)
NIL.

9. Annex 9 - Facilitation (15th Edition, Amendment 26)

3.24	The visitor's visa conditions are in accordance with Macao, SAR China Administrative Regulation 5/2003 "Approval of regulation on entry, stay and residence permit".
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10. Annex 10 - Aeronautical Telecommunications

10.1 Volume I - Radio Navigation Aids (7th Edition, Amendment 93)
LLZ RWY 16 (MCS) offset not in compliance with ICAO ANNEX 10 classification.
Note: Some deviations (bends) between 6.5 NM and 4.5 NM

10.2 Volume II - Communication Procedures including those with PANS Status (7th Edition, Amendment 93)
NIL.

10.3 Volume III - Communications Systems (2nd Edition, Amendment 92)
NIL.

10.4 Volume IV - Surveillance Radar and Collision Avoidance Systems (5th Edition, Amendment 91)
NIL.

10.5 Volume V - Aeronautical Radio Frequency Spectrum Utilization (3rd Edition, Amendment 89)
NIL.

11. Annex 11 - Air Traffic Services (15th Edition, Amendment 52)
NIL.

12. Annex 12 - Search and Rescue (8th Edition, Amendment 18)
NIL.

13. Annex 13 - Aircraft Accident Investigation (12th Edition, Amendment 18)

3.2	AACM had set up a permanent Accident Prevention and Investigation Group within the AACM. The group consists of 2 safety officers. In order to ensure independency, it functions independently from the regulatory Directorates and report directly to president of AACM. When accident investigation needs to be activated, the IIC has to be appointed by the president of AACM.
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14. Annex 14 – Aerodromes

14.1 Volume I - Aerodrome Design and Operations (7th Edition, Amendment 13-B)

3.4.3	Macau International Airport provides a runway strip that measures 150 meters from the runway centerline except for the northwestern half which is 106 meters. The area beyond the 106 meter mark falls within the water basin contained between the runway and the two taxiway bridges.
3.5.3	The length of runway end safety area of Macau International Airport is 90 m.
5.3.4.22	The approach lighting system for MIA consists of a row of lights on the extended centre line of the runway, extending over a distance of 420m from the runway threshold instead of the desirable distance of 900m.

14.2 Volume II - Heliports (5th Edition, Amendment 9)

3.1.39	The width of taxi route for the taxiway in the Macau Heliport is 15.6 meters.
3.1.41	The width of taxi route for the taxiway in the Macau Heliport is 15.6 meters.

15. Annex 15 - Aeronautical Information Services (16th Edition, Amendment 43)

NIL.

16. Annex 16 - Environmental Protection

16.1 Volume I - Aircraft Noise (8th Edition, Amendment 14)

Part II	
1.6	Noise Certificate (AW/AIR/011) issued by the AACM has its own numbering system

16.2 Volume II - Aircraft Engine Emissions (5th Edition, Amendment 11)

NIL.

16.3 Volume III - Aeroplane CO₂ Emissions (1st Edition, Amendment 2)

NIL.

17. Annex 17 - Security - Safeguarding International Civil Aviation Against Acts of Unlawful Interference (12th Edition, Amendment 18)

3.5.2	Background check is not applied to persons with access to sensitive aviation security information.
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18 Annex 18 - The Safe Transport of Dangerous Goods by Air (4th Edition, Amendment 12)

NIL.

19 Annex 19 - Safety Management (2nd Edition, Amendment 1)

NIL.

GEN 2. TABLES AND CODES**GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS****1. Units of measurement**

The following list gives units of measurement used both for the dissemination of information and in messages transmitted to aircraft.

Quantity	Unit of Measurement
Distance used in navigation	Nautical Miles (NM)*
Relatively short distances (e.g. runway length)	Metres (m)
Altitude, elevations and heights	Metres (m)/Feet (ft)
Horizontal speed including wind	Knots (kt)
Vertical speed	Feet per minute (ft/min)
Wind direction for take-off and landing	Degrees Magnetic (°MAG)
Wind direction except for take-off and landing	Degrees True (°T)
Visibility	Meters (m) and Kilometres (km)
Barometric pressure	Hectopascals (hPa)
Temperature	Degree Celsius (°C)
Weight	Tons (t) or Kilograms (kg)
Time	Hours (h) and minutes (min), the day of 24 hours beginning at midnight UTC.

* International nautical miles, for which conversion into metres is given by:
1 nautical mile = 1852 metres.

2. Time system

- 2.1 Co-ordinated Universal Time (UTC) is used in the air traffic and communication services and in documents published for international distribution by the Aeronautical Information Service.
- 2.2 Macao Local Time is UTC plus 8 hours.
- 2.3 Where the all-numeric date/time form is used in NOTAM, messages and aeronautical documents, this is presented in the sequence of year-month-day-time. As an example, 20 minutes past 6 o'clock on the afternoon of 2nd January 1997 will be written as 9701021820. It should be noted, however, that normally the year digits may be omitted where no possible confusion could arise from such an omission.

3. Geodetic reference datum

3.1 Name/designation of datum

All published geographical coordinates indicating latitude and longitude are expressed in terms of the World Geodetic System - 1984 (WGS84) geodetic reference datum.

3.2 Area of application

Area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire Macau Aerodrome Traffic Zone in accordance with the Local Agreement.

4. Aircraft nationality and registration marks

- 4.1 The nationality mark for aircraft registered in Macao is the letter “B”.
- 4.2 The nationality mark is followed by a hyphen and a registration mark consisting of a three letter group.
- 4.3 The first letter of the registration mark being the letter “M”, representing Macao. Registration marks are issued within the combination “MAA” to “MZZ”.

5. Official Public Holidays of Macao

The official public holidays are published every year by means of an AIC.

GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

Abbreviations used in this AIP are contained in ICAO Doc 8400 and other abbreviation as listed in the following:

A

A	Amber
AAA	(or AAB, AAC etc., in sequence) Amended meteorological message (<i>message type designator</i>)
A/A	Air-to-air
AAL	Above aerodrome level
ABM	Abeam
ABN	Aerodrome beacon
ABT	About
AC	Altocumulus
ACC ‡	Area control centre <i>or</i> area control
ACCID	Notification of an aircraft accident
ACFT	Aircraft
ACK	Acknowledge
ACL	Altimeter check location
ACN	Aircraft classification number
ACP	Acceptance (<i>message type designator</i>)
ACPT	Accept <i>or</i> accepted
ACT	Active <i>or</i> activated <i>or</i> activity
AD	Aerodrome
ADA	Advisory area
ADDN	Addition <i>or</i> additional
ADF ‡	Automatic direction-finding equipment
ADIZ †	(<i>to be pronounced "AY-DIZ"</i>) Air defence identification zone
ADJ	Adjacent
ADR	Advisory route
ADZ	Advise
AFIL	Flight plan filed in the air
AFIS	Aerodrome flight information service
AFM	Yes <i>or</i> affirm <i>or</i> affirmative <i>or</i> that is correct
AFS	Aeronautical fixed service
AFT	After (<i>time or place</i>)
AFTN ‡	Aeronautical fixed telecommunication network
A/G	Air-to-ground
AGA	Aerodromes, air routes and ground aids
AGL	Above ground level
AGN	Again
AIC	Aeronautical information circular
AIP	Aeronautical information publication
AIRAC	Aeronautical information regulation and control
AIREP †	Air-report
AIS	Aeronautical information services
ALA	Alighting area
ALERFA †	Alert phase
ALR	Alerting (<i>message type designator</i>)
ALS	Approach lighting system
ALT	Altitude
ALTN	Alternate <i>or</i> alternating (<i>light alternates in colour</i>)

ALTN	Alternate (aerodrome)
AMA	Area minimum altitude
AMD	Amend <i>or</i> amended (<i>used to indicate amended meteorological message ; message type designator</i>)
AMS	Aeronautical mobile service
AMSL	Above mean sea level
ANS	Answer
AOC	Aerodrome obstacle chart
AP	Airpot
APCH	Approach
APP	Approach control office <i>or</i> approach control <i>or</i> approach control service
APR	April
APRX	Approximate <i>or</i> approximately
APSG	After passing
APV	Approve <i>or</i> approved <i>or</i> approval
ARFOR	Area forecast (<i>in aeronautical meteorological code</i>)
ARNG	Arrange
ARO	Air traffic services reporting office
ARP	Aerodrome reference point
ARP	Air-report (<i>message type designator</i>)
ARQ	Automatic error corection
ARR	Arrive <i>or</i> arrival
ARR	Arrival (<i>message type designator</i>)
ARS	Special air-report (<i>message type designator</i>)
ARST	Arresting [<i>specify (part of) aircraft arresting equipment</i>]
AS	Altostatus
ASC	Ascent to <i>or</i> ascending to
ASDA	Accelerate - stop distance available
ASPH	Asphalt
ATA ‡	Actual time of arrival
ATC ‡	Air traffic control (<i>in general</i>)
ATD ‡	Actual time of departure
ATIS ‡	Automatic terminal information service
ATP	At (<i>time or place</i>)
ATS	Air traffic services
ATTN	Attention
ATZ	Aerodrome traffic zone
AUG	August
AUTH	Authorized <i>or</i> authorization
AUW	All up weight
AUX	Auxiliary
AVASIS	Abbreviated visual approach slope indicator system
AVBL	Available <i>or</i> availability
AVG	Average
AVGAS †	Aviation gasoline
AWY	Airway
AZM	Azimuth

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B			
B	Blue	CNL	Flight plan cancellation (<i>message type designator</i>)
BA	Braking action	CNS	Continuous
BASE †	Cloud base	COM	Communications
BCFG	Fog patches	CONC	Concrete
BCN	Beacon (<i>aeronautical ground light</i>)	COND	Condition
BCST	Broadcast	CONST	Construction or constructed
BDRY	Boundary	CONT	Continue or continued
BFR	Before	COOR	Co-ordinate or co-ordination
BKN	Broken	COP	Change-over point
BLDG	Building	COR	Correct or correction or corrected (<i>used to indicate corrected meteorological message ; message type designator</i>)
BLO	Below clouds	COT	At the coast
BLSN	Blowing snow	COV	Cover or covered or covering
BLW	Below	CPL	Current flight plan (<i>message type designator</i>)
BOMB	Bombing	CRZ	Cruise
BR	Mist	CS	Cirrostratus
BRF	Shor (<i>used to indicate the type of approach desired or required</i>)	CTA	Control area
BRG	Bearing	CTAM	Climb to and maintain
BRKG	Braking	CTC	Contact
BS	Commercial broadcasting station	CTL	Control
BTL	Between layers	CTN	Caution
BTN	Between	CTR	Control zone
C		CU	Cumulus
C	Centre (<i>runway identification</i>)	CUF	Cumuliform
C	Degrees Celsius (<i>Centigrade</i>)	CUST	Customs
CAT	Category	CW	Continuous wave
CAT	Clear air turbulence	CWY	Clearway
CAVOK †	(<i>to be pronounced "KAV-OH-KAY"</i>) Visibility, cloud and present weather better than prescribed values or conditions	D	
CB ‡	(<i>to be pronounced "CEE BEE"</i>) Cumulonimbus	D	Danger area (<i>followed by identification</i>)
CC	Cirrocumulus	DA	Decision altitude
CCA	(<i>or CCB, CCC.... etc., in sequence</i>) Corrected meteorological message (<i>message type designator</i>)	DCD	Double channel duplex
CD	Candela	DCKG	Docking
CDN	Co-ordination (<i>message type designator</i>)	DCS	Double channel simplex
CF	Change frequency to...	DCT	Direct (<i>in relation to flight plan clearances and type of approach</i>)
CGL	Circling guidance light(s)	DEC	December
CH	Channel	DEG	Degrees
CHG	Modification (<i>message type designator</i>)	DENE	Fog dispersal operations
CI	Cirrus	DEP	Depart or departure
CIT	Near or over large towns	DEP	Departure (<i>message type designator</i>)
CIV	Civil	DES	Descend to or descending to
CK	Check	DEST	Destination
CL	Centre line	DETRESFA †	Distress phase
CLA	Clear type of ice formation	DEV	Deviation or deviating
CLBR	Calibration	DFTI	Distance from touchdown indicator
CLD	Cloud	DH	Decision height
CLG	Calling	DIF	Diffuse
CLR	Clear(s) or cleared to ... or clearance	DIST	Distance
CLSD	Close or closed or closing	DIV	Divert or diverting
CM	Centimetre	DLA	Delay (<i>message type designator</i>)
CMB	Climb	DLA	Delay or delayed
CMPL	Completion or completed or complete	DME ‡	Distance measuring equipment
CNL	Cancel or cancelled	DNG	Danger or dangerous
		DOM	Domestic

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DP	Dew point temperature	FAX	Facsimile transmission
DPT	Depth	FBL	Light (used to qualify icing, turbulence, interference or static reports)
DR	Dead reckoning	FC	Funnel cloud
DRG	During	FCST	Forecast
DRSN	Low drifting snow	FEB	February
DSB	Double sideband	FG	Fog
DTAM	Descend to and maintain	FIC	Flight information centre
DTG	Date-time group	FIR †	Flight information region
DTRT	Deteriorate or deteriorating	FIS	Flight information service
DTW	Dual tandem wheels	FISA	Automated flight information service
DUC	Dense upper cloud	FL	Flight level
DUR	Duration	FLD	Field
DVOR	Doppler VOR	FLG	Flashing
DW	Dual wheels	FLR	Flares
DZ	Drizzle	FLT	Flight
		FLTCK	Flight check
		FLUC	Fluctuating or fluctuation or fluctuated
		FLW	Follow(s) or following
		FLY	Fly or flying
		FM	From
		FNA	Final approach
		FPL	Filed flight plan (message type designator)
		FPM	Feet per minute
		FPR	Flight plan route
		FR	Fuel remaining
		FREQ	Frequency
		FRI	Friday
		FRNG	Firing
		FRONT †	Front (relating to weather)
		FRQ	Frequent
		FSL	Full stop landing
		FSS	Flight service station
		FST	First
		FT	Feet (dimensional unit)
		FZ	Freezing
		FZDZ	Freezing drizzle
		FZFG	Freezing fog
		FZRA	Freezing rain

E

E	East or aestival longitude
EAT	Excepted approach time
EB	Eastbound
EET	Estimated elapsed time
EHF	Extremely high frequency [30 000 to 300 000 MHz]
ELBA †	Emergency location beacon – aircraft
ELEV	Elevation
ELR	Extra long range
EM	Emission
EMBD	Embedded in a layer.(to indicate cumulonimbus embedded in layers of other clouds)
EMERG	Emergency
END	Stop-end (related to RVR)
ENE	East north east
ENG	Engine
ENRT	En route
EOBT	Estimated off-block time
EQPT	Equipment
ER*	Here . . . or herewith
ESE	East south east
EST	Estimate or estimated or estimate (as message type designator)
ETA*†	Estimated time of arrival or estimating arrival
ETD †	Estimated time of departure or estimating departure
ETO	Estimated time over significant point
EV	Every
EXC	Except
EXER	Exercises or exercices or exercise
EXP	Expect or expected or expecting
EXTD	Extend or extending

F

F	Degree Fahrenheit
F	Fixed
FAC	Facilities
FAF	Final approach fix
FAL	Facilitation of international air transport
FAP	Final approach point

FAX	Facsimile transmission
FBL	Light (used to qualify icing, turbulence, interference or static reports)
FC	Funnel cloud
FCST	Forecast
FEB	February
FG	Fog
FIC	Flight information centre
FIR †	Flight information region
FIS	Flight information service
FISA	Automated flight information service
FL	Flight level
FLD	Field
FLG	Flashing
FLR	Flares
FLT	Flight
FLTCK	Flight check
FLUC	Fluctuating or fluctuation or fluctuated
FLW	Follow(s) or following
FLY	Fly or flying
FM	From
FNA	Final approach
FPL	Filed flight plan (message type designator)
FPM	Feet per minute
FPR	Flight plan route
FR	Fuel remaining
FREQ	Frequency
FRI	Friday
FRNG	Firing
FRONT †	Front (relating to weather)
FRQ	Frequent
FSL	Full stop landing
FSS	Flight service station
FST	First
FT	Feet (dimensional unit)
FZ	Freezing
FZDZ	Freezing drizzle
FZFG	Freezing fog
FZRA	Freezing rain

G

G	Green
G/A	Ground-to-air
G/A/G	Ground-to-air and air-to-ground
GCA †	Ground controlled approach system or ground controlled approach
GEN	General
GEO	Geographic or true
GLD	Glider
GND	Ground
GNDCK	Ground check
GP	Glide path
GR	Hail or soft hail
GRADU †	Gradual or gradually
GRASS	Grass landing area
GRID	Processed meteorological data in the form of grid point values (in aeronautical meteorological code)

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GRVL Gravel
GS Ground speed

H

H24	Continuous day and night service	INOP	Inoperative
HBN	Hazard beacon	INP	If not possible
HDF	High frequency direction-finding station	INPR	In progress
HDG	Heading	INS	Inches (<i>dimensional unit</i>)
HEL	Helicopter	INS	Inertial navigation system
HF ‡	High frequency [3 000 to 30 000 kHz]	INSTL	Install or installed or installation
HGT	Height or height above	INSTR	Instrument
HJ	Sunrise to sunset	INT	Intersection
HLDG	Holding	INTER †	Intermittent
HN	Sunset to sunrise	INTL	International
HO	Service available to meet operational requirements	INTRG	Interrogator
HOL	Holiday	INTRP	Interrupt or interruption or interrupted
HOSP	Hospital aircraft	INTSF	Intensify or intensifying
HPA	Hectopascal	INTST	Intensity
HR	Hours	IR	Ice on runway
HS	Service available during hours of scheduled operations	ISA	International standard atmosphere
HURCN	Hurricane	ISB	Independent sideband
HVDF	High and very high frequency direction-finding stations (<i>at the same location</i>)	ISOL	Isolated
HVY	Heavy		
HX	No specific working hours		
HYR	Higher		
HZ	Dust haze		
HZ	Hertz (<i>cycle per second</i>)		

I

IAC	Instrument approach chart
IAF	Initial approach fix
IAO	In and out of clouds
IAR	Intersection of air routes
IAS	Indicated air speed
IBN	Identification beacon
ICE	Icing
ID	Identifier or identify
IDENT †	Identification
IF	Intermediate approach fix
IFF	Identification friend/foe
IFR ‡	Instrument flight rules
IGA	International general aviation
ILS ‡	Instrument landing system
IM	Inner marker
IMC ‡	Instrument meteorological conditions
IMG	Immigration
IMPR	Improve or improving
IMT	Immediate or immediately
INA	Initial approach
INBD	Inbound
INC	In cloud
INCERFA †	Uncertainty phase
INFO †	Information

INOP	Inoperative
INP	If not possible
INPR	In progress
INS	Inches (<i>dimensional unit</i>)
INS	Inertial navigation system
INSTL	Install or installed or installation
INSTR	Instrument
INT	Intersection
INTER †	Intermittent
INTL	International
INTRG	Interrogator
INTRP	Interrupt or interruption or interrupted
INTSF	Intensify or intensifying
INTST	Intensity
IR	Ice on runway
ISA	International standard atmosphere
ISB	Independent sideband
ISOL	Isolated

J

JAN	January
JTST	Jet stream
JUL	July
JUN	June

K

KG	Kilograms
KHZ	Kilohertz
KM	Kilometres
KMH	Kilometres per hour
KPA	Kilopascal
KT	Knots
KW	Kilowatts

L

L	Left (<i>Runway identification</i>)
L	Locator (<i>see LM, LO</i>)
LAM	Logical acknowledgement (<i>message type designator</i>)
LAN	Inland
LAT	Latitude
LB	Pounds (<i>weight</i>)
LDA	Landing distance available
LDG	Landing
LDI	Landing direction indicator
LEN	Length
LF	Low frequency [30 to 300 kHz]
LGT	Light or lighting
LGTD	Lighted
LIH	Light intensity high
LIL	Light intensity low
LIM	Light intensity medium
LLZ	Localizer
LM	Locator, middle
LMT	Local mean time

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LNG	Long (<i>used to indicate the type of approach desired or required</i>)	MOC	Minimum obstacle clearance (<i>required</i>)
LO	Locator, outer	MOD	Moderate (<i>used to qualify icing, turbulence, interference or static reports</i>)
LOC	Local <i>or</i> locally <i>or</i> location <i>or</i> located	MON	Above mountains
LONG	Longitude	MON	Monday
LORAN †	LORAN (long range air navigation system)	MOTNE	Meteorological Operational Telecommunications Network Europe
LRG	Long range	MOV	Move <i>or</i> moving <i>or</i> movement
LSQ	Line squall	MPH	Statute miles per hour
LTD	Limited	MPS	Metres per second
LTU	Landline teletypewriter	MRA	Minimum reception altitude
LV	Light and variable (<i>relating to wind</i>)	MRG	Medium range
LVE	Leave <i>or</i> leaving	MRP	ATS/MET reporting point
LVL	Level	MS	Minus
LYR	Layer <i>or</i> layered	MSA	Minimum sector altitude

M

M	Mach number (<i>followed by figures</i>)	MOC	Minimum obstacle clearance (<i>required</i>)
M	Metres (<i>preceded by figures</i>)	MOD	Moderate (<i>used to qualify icing, turbulence, interference or static reports</i>)
MAA	Maximum authorized altitude	MON	Above mountains
MAG	Magnetic	MON	Monday
MAINT	Maintenance	MOTNE	Meteorological Operational Telecommunications Network Europe
MAP	Aeronautical maps and charts	MOV	Move <i>or</i> moving <i>or</i> movement
MATP	Missed approach point	MPH	Statute miles per hour
MAR	At sea	MPS	Metres per second
MAR	March	MRA	Minimum reception altitude
MAS	Manual A1 simplex	MRG	Medium range
MAX	Maximum	MRP	ATS/MET reporting point
MAY	May	MS	Minus
MCA	Minimum crossing altitude	MSA	Minimum sector altitude
MCW	Modulated continuous wave	MSG	Message
MDA	Minimum descent altitude	MSL	Mean sea level
MDF	Medium frequency direction-finding station	MT	Mountain
MDH	Minimum descent height	MTU	Metric units
MEA	Minimum en-route altitude	MTW	Mountain waves
MEHT	Minimum eye height over threshold <i>for visual approach slope indicator systems</i>)	MVDF	Medium and very high frequency direction-finding stations (<i>at the same location</i>)
MET †	Meteorological <i>or</i> meteorology	MWO	Meteorological watch office
METAR †	Aviation routine weather report (<i>in aeronautical meteorological code</i>)	MX	Mixed type of ice formation (<i>white and clear</i>)
MF	Medium frequency [300 to 3 000 kHz]		
MHDF	Medium and high frequency direction-finding stations (<i>at the same location</i>)		
MHVDF	Medium, high and very high frequency direction-finding stations (<i>at the same location</i>)		
MHZ	Megahertz		
MID	Mid-point (<i>related to RVR</i>)		
MIFG	Shallow fog		
MIL	Military		
MIN*	Minutes		
MKR	Marker radio beacon		
MLS ‡	Microwave landing system		
MM	Middle marker		
MNM	Minimum		
MNPS	Minimum navigation performance specifications		
MNT	Monitor <i>or</i> monitoring <i>or</i> monitored		
MNTN	Maintain		

N

N	North <i>or</i> northern latitude	NAT	North Atlantic
NAT	North Atlantic	NAV	Navigation
NAV		NB	Northbound
NB		NBFR	Not before
NBFR		NC	No change
NC		NDB ‡	Non-directional radio beacon
NDB ‡		NE	North-east
NE		NEB	North-eastbound
NEB		NEG	No <i>or</i> negative <i>or</i> permission not granted <i>or</i> that is not correct
NEG		NGT	Night
NGT		NIL* †	None <i>or</i> I have nothing to send to you
NIL* †		NM	Nautical miles
NM		NML	Normal
NML		NNE	North north east
NNE		NNW	North north west
NNW		NOF	International NOTAM office
NOF		NOSIG ‡	No significant change (<i>used in trend-type landing forecasts</i>)
NOSIG ‡		NOTAM †	A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations
NOTAM †		NOV	November
NOV		NR	Number
NR		NRH	No rempy heard
NRH		NS	Nimbostratus
NS		NSC	Nil significant cloud
NSC		NW	North-west

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NWB North-westbound
NXT Next

O

OAC	Oceanic area control centre
OAS	Obstacle assessment surface
OBS	Observe <i>or</i> observed <i>or</i> observation
OBSC	Obscure <i>or</i> obscured <i>or</i> obscuring
OBST	Obstacle
OCA	Obstacle clearance altitude
OCA	Oceanic control area
OCC	Occulting (<i>light</i>)
OCH	Obstacle clearance height
OCL	Obstacle clearance limit
OCNL	Occasional <i>or</i> occasionally
OCS	Obstacle clearance surface
OCT	October
OHD	Overhead
OM	Outer marker
OPA	Opaque, white type of ice formation
OPC	The control indicated is operational control
OPMET †	Operational meteorological (<i>information</i>)
OPN	Open <i>or</i> opening <i>or</i> opened
OPR	Operator <i>or</i> operate <i>or</i> operative <i>or</i> operating <i>or</i> operational
OPS †	Operations
O/R	On request
ORD	Indication of an order
OSV	Ocean station vessel
OTP	On top
OTS	Organized track system
OUBD	Outbound
OVC	Overcast

P

P...	Prohibited area (<i>followed by identification</i>)
PALS	Precision approach lighting system (<i>specify category</i>)
PANS	Procedures for air navigation services
PAPI †	Precision approach path indicator
PAR ‡	Precision approach radar
PARL	Parallel
PAX	Passenger (s)
PCD	Proceed <i>or</i> proceeding
PCN	Pavement classification number
PE	Ice pellets
PER	Performance
PERM	Permanent
PJE	Parachute jumping exercise
PLA	Practice low approach
PLN	Flight plan
PLVL	Present level
PN	Prior notice required
PNR	Point of no return
PO	Dust devils
POB	Persons on board

PPI	Plan position indicator
PPR	Prior permission required
PPSN	Present position
PRI	Primary
PRKG	Parking
PROB †	Probability
PROC	Procedure
PROV	Provisional
PS	Plus
PSG	Passing
PSN	Position
PSP	Pierced steel plank
PTN	Procedure turn
PTS	Polar track structure
PWR	Power

Q

QBI	Compulsory IFR flight
QDM ‡	Magnetic heading (<i>zero wind</i>)
QDR	Magnetic bearing
QFE ‡	Atmospheric pressure at aerodrome elevation (<i>or at runway threshold</i>)
QFU	Magnetic orientation of runway
QNH ‡	Altimeter sub-scale setting to obtain elevation when on the ground
QTE	True bearing
QUAD	Quadrant

R

R	Red
R...	Restricted area (<i>followed by identification</i>)
R	Right (<i>runway identification</i>)
RA	Rain
RAC	Rules of the air and air traffic services
RAFC	Regional area forecast centre
RAG	Ragged
RAG	Runway arresting gear
RAI	Runway alignment indicator
RAPID †	Rapid <i>or</i> rapidly
RASH	Rain showers
RASN	Rain and snow <i>or</i> showers of rain and snow
RB	Rescue boat
RCA	Reach cruising altitude
RCC	Rescue co-ordination centre
RCF	Radiocommunication failure (<i>message type designator</i>)
RCH	Reach <i>or</i> reaching
RCL	Runway centre line
RCLL	Runway centre line light(s)
RDH	Reference datum height (<i>for ILS</i>)
RDL	Radial
RDO	Radio
RE	Recent (<i>used to qualify weather phenomena such as rain, e.g. recent rain = RERA</i>)
REC	Receive <i>or</i> receiver
REDL	Runway edge light(s)

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REF	Reference to or refer to ...	SAR	Search and rescue
REG	Registration	SARPS	Standards and Recommended Practices (ICAO)
RENL	Runway end light(s)	SAT	Saturday
REP	Report or reporting or reporting point	SB	Southbound
REQ	Request or requested	SC	Stratocumulus
RERTE	Reroute	SCT	Scattered
RESA	Runway end safety area	SDBY	Stand by
RG	Range (<i>lights</i>)	SE	South-east
RIF	Reclearance in flight	SEB	South-eastbound
RITE	Right (<i>direction of turn</i>)	SEC	Seconds
RL	Report leaving	SECT	Sector
RLA	Relay to	SELCAL †	Selective calling system
RLLS	Runway lead-in lighting system	SEP	September
RMK	Remark	SER	Service or servicing or served
RNAV †	(<i>to be pronounced "AR-NAV"</i>) Area navigation	SEV	Severe (<i>used e.g. to qualify icing and turbulence reports</i>)
RNG	Radio range	SFC	Surface
ROBEX †	Regional OPMET bulletin exchange (scheme)	SG	Snow grains
ROC	Rate of climb	SGL	Signal
ROD	Rate of descent	SH	Showers
ROFOR	Route forecast (<i>in aeronautical meteorological code</i>)	SHF	Super high frequency [3 000 to 30 000 MHz]
RON	Receiving only	SID †	Standard instrument departure
RPL	Repetitive flight plan	SIF	Selective identification feature
RPLC	Replace or replaced	SIGMET †	Information concerning en-route weather phenomena which may affect the safety of aircraft operations
RPS	Radar position symbol	SIGWX	Significant weather
RQMNTS	Requirements	SIMUL	Simultaneous or simultaneously
RQP	Request flight plan (<i>message type indicator</i>)	SIWL	Single isolated wheel load
RQS	Request supplementary flight plan (<i>message type indicator</i>)	SKC	Sky clear
RR	Report reaching	SKED	Schedule or scheduled
RRA	(<i>or RRB, RRC ... etc., in sequence</i>) Delayed meteorological message (<i>message type designator</i>)	SLP	Speed limiting point
RSC	Rescue sub-centre	SLW	Slow
RSCD	Runway surface condition	SMC	Surface movement control
RSP	Responder beacon	SMR	Surface movement radar
RSR	En-route surveillance radar	SN	Snow
RTD	Delayed (<i>used to indicate delayed meteorological message ; message type designator</i>)	SNOWTAM†	A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous condition due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice or frost on the movement area
RTE	Route	SNSH	Snow showers
RTF	Radiotelephone	SPECI †	Aviation selected special weather report (<i>in aeronautical meteorological code</i>)
RTG	Radiotelegraph	SPECIAL †	Special meteorological report (<i>in abbreviated plain language</i>)
RTHL	Runway threshold light(s)	SPL	Supplementary flight plan (<i>message type designator</i>)
RTN	Return or returned or returning	SPOT †	Spot wind
RTS	Return to service	SQ	Squall
RTT	Radioteletypewriter	SR	Sunrise
RTZL	Runway touchdown zone light(s)	SRA	Surveillance radar approach
RUT	Standard regional route transmitting frequencies	SRE	Surveillance radar element of precision approach radar system
RV	Rescue vessel	SRG	Short range
RVR ‡	Runway visual range	SRR	Search and rescue region
RWY	Runway	SRY	Secondary

S

S	South or southern latitude
SA	Duststorm, sandstorm, rising dust or rising sand
SALS	Simple approach lighting system
SAN	Sanitary
SAP	As soon as possible

SS	Sunset
SSB	Single sideband
SSE	South south east
SSR ‡	Secondary surveillance radar

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

‡ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.

* Abbreviation is also available for use in communicating with stations of the maritime mobile service.

SST	Supersonic transport	TR	Track
SSW	South south west	TRA	Temporary reserved airspace
ST	Stratus	TRANS	Transmits <i>or</i> transmitter`
STA	Straight in approach	TRLVL	Transition level
STAR †	Standard instrument arrival	TROP	Tropopause
STD	Standard	TS	Thunderstorm
STF	Stratiform	TSGR	Thunderstorm with hail
STN	Station	TSSA	Thunderstorm with duststorm <i>or</i> sandstorm
STNR	Stationary	TT	Teletypewriter
STOL	Short take-off and landing	TUE	Tuesday
STS	Status	TURB	Turbulence
STWL	Stopway light(s)	TVOR	Terminal OVR
SUBJ	Subject to	TWR	Aerodrome control tower <i>or</i> aerodrome control
SUN	Sunday	TWY	Taxiway
SUPPS	Regional supplementary procedures	TWYL	Taxiway-link
SVC	Service message	TYP	Type of aircraft
SVCBL	Serviceable	TYPH	Typhoon
SW	South-west		
SWB	South-westbound		
SWY	Stopway		

T

T	Temperature
TA	Transition altitude
TACAN †	UHF tactical air navigation aid
TAF †	Aerodrome forecast
TAIL †	Tail wind
TAR	Terminal area surveillance radar
TAS	True airspeed
TAX	Taxiing <i>or</i> taxi
TC	Tropical cyclone
TCU	Towering cumulus
TDO	Tornado
TDZ	Touchdown zone
TECR	Technical reason
TEL	Telephone
TEMPO †	Temporary <i>or</i> temporarily
TEND †	Trend <i>or</i> tending to
TFC	Traffic
TGL	Touch-and-go landing
TGS	Taxiing guidance system
THR	Threshold
THRU	Through
THU	Thursday
TIL †	Until
TIP	Until past. . . . (place)
TKOF	Take off
TMA ‡	Terminal control area
TNA	Turn altitude
TNH	Turn height
TO	To . . . (place)
TOC	Top of climb
TODA	Take-off distance available
TOP †	Cloud top
TORA	Take-off run available
TP	Turning point

U

UAB	Until advised by ...
UAC	Upper area control centre
UAR	Upper air route
UDF	Ultra high frequency direction-finding station
UFN	Until further notice
UHDT	Unable higher due traffic
UHF ‡	Ultra high frequency [300 to 3 000 MHz]
UIC	Upper information region
UIR ‡	Upper flight information region
ULR	Ultra long range
UNA	Unable
UNAP	Unable to approve
UNL	Unlimited
UNREL	Unreliable
U/S	Unserviceable
UTA	Upper control area
UTC ‡	Co-ordinated universal time

V

VAC	Visual approach chart
VAL	In valleys
VAN	Runway control van
VAR	Magnetic variation
VAR	Visual-aural radio range
VASIS †	Visual approach slope indicator system
VCY	Vicinity
VDF	Very high frequency direction-finding station
VER	Vertical
VFR ‡	Visual flight rules
VHF ‡	Very high frequency [30 to 300 MHz]
VIP ‡	Very important person
VIS	Visibility
VLF	Very low frequency [3 to 30 kHz]
VLR	Very long range
VMC ‡	Visual meteorological conditions
VOLMET †	Meteorological information for aircraft in flight

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

‡ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.

* Abbreviation is also available for use in communicating with stations of the maritime mobile service.

VOR ‡	VHF omnidirectional radio range
VORTAC †	VOR and TACAN combination
VOT	VOR airborne equipment test facility
VRB	Variable
VSA	By visual reference to the ground
VSP	Vertical speed
VTOL	Vertical take-off and landing

WPT	Way-point
WRNG	Warning
WS	Wind shear
WSW	West south west
WT	Weight
WTSP	Waterspout
WX	Weather

W

W	West or western longitude
W	Withe
WAC	World Aeronautical Chart - IACO 1:1 000 000
WAFC	World area forecast centre
WB	Westbound
WBAR	Wing bar lights
WDI	Wind direction indicator
WDSPR	Widespread
WED	Wednesday
WEF	With effect from or effective from
WI	Within
WID	Width
WIE	With immediate effect or effective immediately
WILCO †	Will comply
WINTEM	Forescast upper wind and temperature for aviation
WIP	Work in progress
WKN	Weaken or weakening
WNW	West north west
WO	Without

X

X	Cross
XBAR	Crossbar (<i>of approach lighting system</i>)
XNG	Crossing
XS	Atmospherics
XX	Heavdy (<i>used to qualify weather phenomena such as rain, e.g. heavy rain = XXRA</i>)

Y

Y	Yellow
YCZ	Yellow caution zone (<i>runway lighting</i>)
YD	Yards
YR	Your

Non ICAO abbreviations used in the Integrated Aeronautical Information Package elements Published By Macau**A**

AACM	Civil Aviation Authority Macau, China
AM	Air Macau Company Ltd.
AOCC	Airport Operation Coordination Center

CAM	Macau International Airport Company
CO ₂	Carbon Dioxide

L

LDD/d	Landline data circuit, digital
LVO	Low visibility operations
LVP	Low visibility procedures

F

FBU	Flight briefing unit (AIS Aerodrome Unit)
FIU	Flight Information Unit (AIC, METEO and Dispatch Office Service)

M

MOP	Macau Pataca(s) (local currency)
-----	----------------------------------

B

BPS	Bit Per Second
-----	----------------

H

HKD	Hong Kong dollar(s)
HP	Hourse Power

P

PARA	Paragraph
PIB	Pre-flight Information Bulletin

C

CAAC	The General Administration of Civil Aviation of China
CAD	Civil Aviation Department of Hong Kong

K

KN	Kilo Newton
KVA	Kilo Volt Amp

U

US\$	American dollar(s)
------	--------------------

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

‡ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.

* Abbreviation is also available for use in communicating with stations of the maritime mobile service.

INTENTIONALLY

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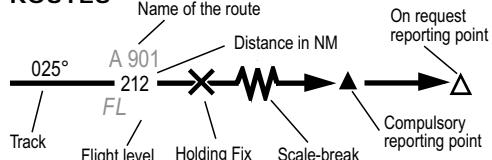
GEN 2.3 CHART SYMBOLS

GENERAL SYMBOLS

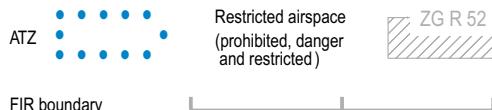
RADIO NAVIGATION FACILITIES



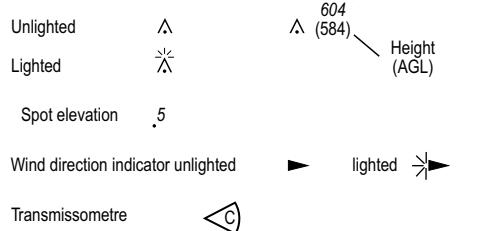
ROUTES



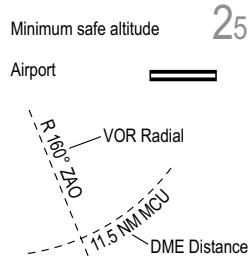
AREAS



OBSTRUCTIONS

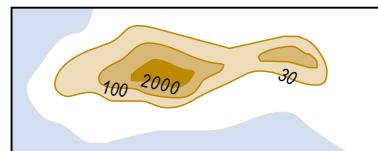


AREA, STAR AND SID CHARTS



INSTRUMENT APPROACH CHART

Relief

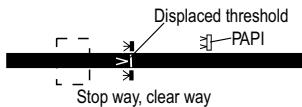


Missed approach

Airport

VISUAL APPROACH AND LANDING CHART

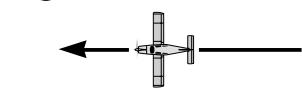
Runway



Taxiway



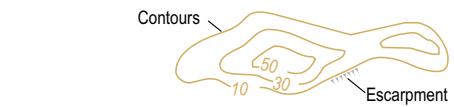
Aircraft circuit



Helicopter circuit



TOPOGRAPHY



Large road

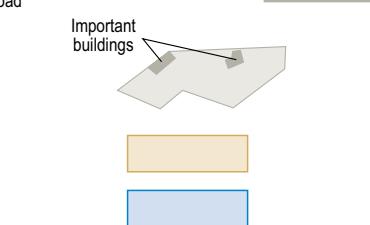
Other important road

Built-up area

Tree/Grass zone

Water area

Marine light or beacon



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GEN 2.4 LOCATION INDICATORS

1. ENCODE		2. DECODE	
Location	Indicator	Indicator	Location
MACAO/ INTL AIRPORT	VMMC	VMMC	MACAO / INTL AIRPORT
MACAO/ HELIPORT	VMMH	VMMH	MACAO / HELIPORT
HONK KONG FIR	VHHK	VHHK	HONG KONG FIR
ZHUHAI APP	ZGJD	ZGJD	ZHUHAI APP
GUANGZHOU ACC	ZGGG	ZGGG	GUANGZHOU ACC

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GEN 2.5 LIST OF RADIO NAVIGATION AIDS

ID	Station Name	Facility	Purpose
MCU	MACAU	DVOR / DME	A
MCS	MACAU	LLZ / DME	A
MCN	MACAU	LLZ / DME	A
ZAO	JIUZHOU	DVOR / DME	A

Note: A = Aerodrome

E = Enroute

AE = dual purpose

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GEN 2.6 CONVERSION TABLES

NM to km NM = 1.852 km		km to NM 1 km = 0.54 NM		ft to m 1 ft = 0.3048 m		m to ft 1 m = 3.281 ft	
NM	km	km	NM	ft	m	m	ft
0.1	0.185	0.1	0.05	1	0.305	1	3.28
0.2	0.370	0.2	0.11	2	0.610	2	6.56
0.3	0.556	0.3	0.16	3	0.914	3	9.84
0.4	0.741	0.4	0.22	4	1.219	4	13.12
0.5	0.926	0.5	0.27	5	1.524	5	16.40
0.6	1.111	0.6	0.32	6	1.829	6	19.69
0.7	1.296	0.7	0.38	7	2.134	7	22.97
0.8	1.482	0.8	0.43	8	2.438	8	26.25
0.9	1.667	0.9	0.49	9	2.743	9	29.53
1	1.852	1	0.54	10	3.048	10	32.81
2	3.704	2	1.08	20	6.096	20	65.62
3	5.556	3	1.62	30	9.144	30	98.43
4	7.408	4	2.16	40	12.192	40	131.23
5	9.260	5	2.70	50	15.240	50	164.04
6	11.112	6	3.24	60	18.288	60	196.85
7	12.964	7	3.78	70	21.336	70	229.66
8	14.816	8	4.32	80	24.384	80	262.47
9	16.668	9	4.86	90	27.432	90	295.28
10	18.520	10	5.40	100	30.480	100	328.08
20	37.040	20	10.80	200	60.960	200	656.17
30	55.560	30	16.20	300	91.440	300	984.25
40	74.080	40	21.60	400	121.920	400	1312.34
50	92.600	50	27.00	500	152.400	500	1640.42
60	111.120	60	32.40	600	182.880	600	1968.50
70	129.640	70	37.80	700	213.360	700	2296.59
80	148.160	80	43.20	800	243.840	800	2624.67
90	166.680	90	48.60	900	274.320	900	2952.76
100	185.200	100	54.00	1000	304.800	1000	3280.84
200	370.400	200	107.99	2000	609.600	2000	6561.68
300	555.600	300	161.99	3000	914.400	3000	9842.52
400	740.800	400	215.98	4000	1219.200	4000	13123.36
500	926.000	500	269.98	5000	1524.000	5000	16404.20
				6000	1828.800		
				7000	2133.600		
				8000	2438.400		
				9000	2743.200		
				10000	3048.000		

From decimal minutes of an arc to seconds of an arc

min	sec	min	sec	min	sec	min	sec
0.01	0.6	0.26	15.6	0.51	30.6	0.76	45.6
0.02	1.2	0.27	16.2	0.52	31.2	0.77	46.2
0.03	1.8	0.28	16.8	0.53	31.8	0.78	46.8
0.04	2.4	0.29	17.4	0.54	32.4	0.79	47.4
0.05	3.0	0.30	18.0	0.55	33.0	0.80	48.0
0.06	3.6	0.31	18.6	0.56	33.6	0.81	48.6
0.07	4.2	0.32	19.2	0.57	34.2	0.82	49.2
0.08	4.8	0.33	19.8	0.58	34.8	0.83	49.8
0.09	5.4	0.34	20.4	0.59	35.4	0.84	50.4
0.10	6.0	0.35	21.0	0.60	36.0	0.85	51.0
0.11	6.6	0.36	21.6	0.61	36.6	0.86	51.6
0.12	7.2	0.37	22.2	0.62	37.2	0.87	52.2
0.13	7.8	0.38	22.8	0.63	37.8	0.88	52.8
0.14	8.4	0.39	23.4	0.64	38.4	0.89	53.4
0.15	9.0	0.40	24.0	0.65	39.0	0.90	54.0
0.16	9.6	0.41	24.6	0.66	39.6	0.91	54.6
0.17	10.2	0.42	25.2	0.67	40.2	0.92	55.2
0.18	10.8	0.43	25.8	0.68	40.8	0.93	55.8
0.19	11.4	0.44	26.4	0.69	41.4	0.94	56.4
0.20	12.0	0.45	27.0	0.70	42.0	0.95	57.0
0.21	12.6	0.46	27.6	0.71	42.6	0.96	57.6
0.22	13.2	0.47	28.2	0.72	43.2	0.97	58.2
0.23	13.8	0.48	28.8	0.73	43.8	0.98	58.8
0.24	14.4	0.49	29.4	0.74	44.4	0.99	59.4
0.25	15.0	0.50	30.0	0.75	45.0		

From seconds of an arc to decimal minutes of an arc

sec	min	sec	min	sec	min	sec	min
1	0.02	16	0.27	31	0.52	46	0.77
2	0.03	17	0.28	32	0.53	47	0.78
3	0.05	18	0.30	33	0.55	48	0.80
4	0.07	19	0.32	34	0.57	49	0.82
5	0.08	20	0.33	35	0.58	50	0.83
6	0.10	21	0.35	36	0.60	51	0.85
7	0.12	22	0.37	37	0.62	52	0.87
8	0.13	23	0.38	38	0.63	53	0.88
9	0.15	24	0.40	39	0.65	54	0.90
10	0.17	25	0.42	40	0.67	55	0.92
11	0.18	26	0.43	41	0.68	56	0.93
12	0.20	27	0.45	42	0.70	57	0.95
13	0.22	28	0.47	43	0.72	58	0.97
14	0.23	29	0.48	44	0.73	59	0.98
15	0.25	30	0.50	45	0.75		

GEN 2.7 SUNRISE/SUNSET TABLES

1 The times in the sunrise and sunset tables are in Macau Standard Time (UTC + 8). Although these times vary a little from year to year, the times of sunrise and sunset are within one or two minutes for any year.

2 Station Name : Macau International Airport
 ICAO Location Indicator : VMMC
 Geographical Coordinates : 22°08'58" N 113°35'29" E

2.1 Sunrise Table

DAY /Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	07 05	07 05	06 48	06 18	05 54	05 42	05 46	05 58	06 09	06 18	06 29	06 48
2	07 05	07 05	06 48	06 18	05 54	05 42	05 46	05 59	06 09	06 18	06 29	06 48
3	07 05	07 04	06 48	06 18	05 54	05 42	05 47	05 59	06 09	06 18	06 32	06 50
4	07 06	07 04	06 46	06 16	05 52	05 42	05 47	05 59	06 10	06 19	06 32	06 50
5	07 06	07 04	06 43	06 16	05 52	05 42	05 47	06 00	06 10	06 19	06 32	06 50
6	07 06	07 03	06 43	06 16	05 52	05 42	05 48	06 00	06 10	06 19	06 33	06 52
7	07 07	07 03	06 43	06 13	05 50	05 42	05 48	06 00	06 11	06 20	06 33	06 52
8	07 07	07 03	06 41	06 13	05 50	05 42	05 48	06 01	06 11	06 20	06 33	06 52
9	07 07	07 01	06 41	06 13	05 50	05 42	05 49	06 01	06 11	06 20	06 35	06 54
10	07 07	07 01	06 41	06 10	05 49	05 42	05 49	06 01	06 11	06 20	06 35	06 54
11	07 07	07 01	06 38	06 10	05 49	05 42	05 49	06 02	06 11	06 20	06 35	06 54
12	07 07	06 59	06 38	06 10	05 49	05 42	05 50	06 02	06 11	06 20	06 36	06 56
13	07 08	06 59	06 38	06 07	05 48	05 42	05 50	06 02	06 12	06 21	06 36	06 56
14	07 08	06 59	06 36	06 07	05 48	05 42	05 50	06 03	06 12	06 21	06 36	06 56
15	07 08	06 57	06 36	06 07	05 48	05 42	05 51	06 04	06 12	06 21	06 38	06 57
16	07 08	06 57	06 36	06 05	05 46	05 42	05 51	06 04	06 13	06 23	06 38	06 57
17	07 08	06 57	06 33	06 05	05 46	05 42	05 51	06 05	06 13	06 23	06 38	06 57
18	07 08	06 55	06 33	06 05	05 46	05 43	05 52	06 05	06 13	06 23	06 40	06 59
19	07 08	06 55	06 33	06 03	05 44	05 43	05 52	06 05	06 15	06 24	06 40	06 59
20	07 08	06 55	06 29	06 03	05 44	05 43	05 52	06 05	06 15	06 24	06 40	06 59
21	07 08	06 53	06 29	06 03	05 44	05 43	05 54	06 05	06 15	06 24	06 42	07 01
22	07 07	06 53	06 29	06 00	05 44	05 43	05 54	06 05	06 16	06 25	06 42	07 01
23	07 07	06 53	06 26	06 00	05 44	05 43	05 54	06 06	06 16	06 25	06 42	07 01
24	07 07	06 51	06 26	06 00	05 44	05 44	05 55	06 06	06 16	06 25	06 45	07 02
25	07 06	06 51	06 26	05 58	05 43	05 44	05 55	06 06	06 17	06 27	06 45	07 02
26	07 06	06 51	06 24	05 58	05 43	05 44	05 55	06 07	06 17	06 27	06 45	07 02
27	07 06	06 48	06 24	05 58	05 43	05 45	05 56	06 07	06 17	06 27	06 46	07 03
28	07 06	06 48	06 24	05 56	05 42	05 45	05 56	06 07	06 17	06 28	06 46	07 03
29	07 06	(06 49)	06 21	05 56	05 42	05 45	05 56	06 08	06 17	06 28	06 46	07 03
30	07 06		06 21	05 56	05 42	05 46	05 58	06 08	06 17	06 28	06 48	07 05
31	07 05		06 21		05 42		05 58	06 08		06 29		07 05
NOTE : () sunrise time on 29th February in Leap year.												

2.2 Sunset Table

DAY /Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17 54	18 15	18 30	18 41	18 53	19 06	19 13	19 07	18 42	18 13	17 49	17 41
2	17 54	18 15	18 31	18 41	18 53	19 06	19 13	19 05	18 42	18 13	17 49	17 41
3	17 54	18 15	18 31	18 41	18 53	19 07	19 14	19 05	18 42	18 13	17 47	17 42
4	17 56	18 16	18 31	18 42	18 54	19 07	19 14	19 05	18 39	18 10	17 47	17 42
5	17 56	18 16	18 32	18 42	18 54	19 07	19 14	19 04	18 39	18 10	17 47	17 42
6	17 56	18 18	18 32	18 42	18 54	19 08	19 14	19 04	18 39	18 10	17 46	17 42
7	17 58	18 18	18 32	18 43	18 55	19 08	19 14	19 04	18 37	18 08	17 46	17 42
8	17 58	18 18	18 33	18 43	18 55	19 08	19 14	19 02	18 37	18 08	17 46	17 42
9	17 58	18 20	18 33	18 43	18 55	19 09	19 13	19 02	18 37	18 08	17 45	17 43
10	17 50	18 20	18 33	16 44	18 56	19 09	19 13	19 02	18 34	18 05	17 45	17 43
11	18 00	18 20	18 34	18 44	18 56	19 09	19 13	19 00	18 34	18 05	17 45	17 43
12	18 00	18 22	18 34	18 44	18 56	19 10	19 13	19 00	18 34	18 05	17 44	17 44
13	18 02	18 22	18 34	18 46	18 57	19 10	19 13	19 00	18 31	18 03	17 44	17 44
14	18 02	18 22	18 34	18 46	18 57	19 10	19 13	18 58	18 31	18 03	17 44	17 44
15	18 02	18 24	18 34	18 46	18 57	19 11	19 13	18 58	18 31	18 03	17 43	17 45
16	18 04	18 24	18 34	18 47	18 59	19 11	19 13	18 58	18 28	18 00	17 43	17 45
17	18 04	18 24	18 37	18 47	18 59	19 11	19 13	18 55	18 28	18 00	17 43	17 45
18	18 04	18 25	18 37	18 47	18 59	19 12	19 12	18 55	18:28	18 00	17 42	17 47
19	18 06	18 25	18 37	18 48	19 01	19 12	19 12	18 55	18 26	17 57	17 42	17 47
20	18 06	18 25	18 36	18 48	19 01	19 12	19 12	18 53	18 26	17 57	17 42	17 47
21	18 06	18 26	18 38	18 48	19 01	19 12	19 11	18 53	18 26	17 57	17 41	17 48
22	18 09	18 26	18 38	18 49	19 02	19 12	19 11	18 53	18 23	17 55	17 41	17 48
23	18 09	18 26	18 39	18 49	19 02	19 12	19 11	18 50	18 23	17 55	17 41	17 48
24	18 09	18 28	18 39	18 49	19 02	19 13	19 10	18 50	18 23	17 55	17 41	17 50
25	18 11	18 28	16 39	18 50	19 03	19 13	19 10	18 50	18 18	17 53	17 41	17 50
26	18 11	18 28	18 40	18 50	19 03	19 13	19 10	18 48	18 18	17 53	17 41	17 50
27	18 11	18 29	18 40	18 50	19 03	19 13	19 08	18 48	18 18	17 53	17 41	17 51
28	18 13	18 29	18 40	18 52	19 04	19 13	19 08	18 48	18 15	17 51	17 41	17 51
29	18 13	(18 30)	18 41	18 52	19 04	19 13	19 08	18 45	18 15	17 51	17 41	17 51
30	18 13		18 41	18 52	19 04	19 13	19 07	18 45	18 15	17 51	17 41	17 53
31	18 15		18 41		19 06		19 07	18 45		17 49		17 53

NOTE : () sunset time on 29th February in Leap year.

GEN 3. SERVICES

GEN 3.1 AERONAUTICAL INFORMATION SERVICES

1 Responsible service

1.1 Aeronautical Authority

The Authority responsible for AIS in Macao, China is the Civil Aviation Authority.

Postal Address : Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China

AFTN Address : VMMCYAYI

Telephone Number : (853) 2851 1213

Fax Number : (853) 2833 8089

1.2 Organisation of Aeronautical Information Service

1.2.1 The Aeronautical Information Service is a section of the Airport Infrastructure and Air Navigation Department of the Civil Aviation Authority.

1.2.2 The International NOTAM Office is a delegated responsibility of the Macao International Airport management and is located at the following address :

Postal Address : CAM - Macau International Airport Co. Ltd., Airport Operations Department, AIC Service
Macau International Airport
PAC ON Taipa
Macao, China

AFTN Address : VMMCYNYX

Telephone Number : (853) 2886 1111 Ext. 2203

Fax Number : (853) 2886 1145

1.3 The services are provided in accordance with the provisions contained in ICAO Annex 15 Aeronautical Information Services.

2 Area of responsibility of AIS

The Aeronautical Information Service is responsible for the collection and dissemination of information relating to the Macao Aerodrome Traffic Zone (Macao ATZ).

3 Aeronautical publications

Aeronautical information is published as an Integrated Aeronautical Information Package by the Civil Aviation Authority.

The Integrated Aeronautical Information Package consists of the following elements :

- a) AIP, including amendment service ;
- b) Supplements to the AIP ;
- c) NOTAMs and PIB ,
- d) AIC ;
- e) Checklists and Summaries.

3.2 AIP Macao

The AIP is the basic source for permanent information and long duration temporary changes, which are essential for the safety of air navigation. The AIP is published in one volume and contains all relevant information for international civil aviation. It is published in English and updated by means of AIP amendments and/or supplemented by means of AIP Supplements.

3.3 Amendment service

The AIP amendments consist of new and/or reprinted pages and, in case of minor changes, of a list with manuscript corrections called hand corrections. In order to facilitate their use, the reprinted pages will contain a vertical line preceding the changes which have been incorporated.

There are two types of amendments :

- Regular amendments containing permanent information which is not of operational significance for the safe conduct of a flight and does not require an advanced notification to the users. These amendments are published in a regular interval of 4 weeks the AIRAC publication dates will be used for the issuing of regular amendments.

The numbering of these amendments is consecutive.

- AIRAC amendments, containing permanent information which is of operational significance for the safe conduct of a flight and requires an advanced notification to the users. AIRAC amendments are published 42 days in advance of the effective date. Therefore, the pages of these amendments shall not be introduced within the AIP upon their receipt; correct procedure will be the insertion of such pages only on the effective date.
- The numbering of these amendments is consecutive and based on the calendar year i.e. AIP AIRAC AMDT NR 2/95, meaning that it is the 2nd AIRAC AMDT issued in the year of 1995. When no AIRAC information will be issued, "AIRAC NIL" information will be distributed together with the monthly NOTAM checklist, at least 28 days in advance of the AIRAC effective date.

Cover page on this type of amendments will be coloured (pink).

3.4 AIP supplements

AIP Supplements are used to publish temporary information of long duration (3 months or longer) and/or information of operational significance containing comprehensive texts, charts or diagrams, even if this information is of short duration (less than 3 months). The information is to be inserted within the AIP, at the beginning of the appropriate subsection, following the indications given on the cover sheet of each supplement.

AIP Supplements may have a defined period validity or an estimate date of terminus. In each case of supplement must be kept within the AIP during the complete period of validity. The supplements may be cancelled (or replaced) by other supplements, by AIP amendment or by NOTAM.

There are two types of supplements :

- Regular supplements, containing information which is not of operational significance for the safe conduct of a flight and does not require an advanced notification to the users. These supplements are published whenever necessary.
- AIRAC supplements, containing information which is of operational significance for the safe conduct of a flight and requires an advanced notification to the users. AIRAC procedures will be followed as for the amendments (see 3.3 above).

The numbering of the supplements will be consecutive and based on the calendar year.

The cover page of each supplement will give indications on the subject (s), validity, correct place for the introduction of the supplement pages, and NOTAM cancellation or replacement by the supplement. All Supplements are coloured (yellow) in order to be conspicuous, no differentiation is made between regular and AIRAC supplements (the acronym AIRAC will appear in bold on the front page of the AIRAC type supplements). A checklist of supplements in force will be published each month by means of the monthly printed plain language summary of NOTAM in force.

3.5 NOTAM and Pre-flight Information Bulletins (PIB)

NOTAM is used to disseminate information concerning the establishment, condition or changes in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel engaged in flight operations. NOTAMs are distributed by Macao International NOTAM office as follows:

- One single series A containing information about Macau International Airport and Macao Heliport.
- A checklist of NOTAM in force is issued every month.
- NOTAM are distributed to all states which interchange NOTAM information with Macao International NOTAM office.

SNOWTAM is issued for Macau International Airport when the runway is wholly or partially contaminated by standing water.

Macao International NOTAM Office - NOTAM interchange

ICAO location indicator	NOTAM office	Rec. Series	Country	Received	Send
AGGHYNYX	Honiara		Solomon Is.	X	
ANAUYNYX	Nauru		Nauru	X	
AYPMYNYX	Port Moresby	A	Papua N. G.	X	
CYHQYNYX	Ottawa	C/D/E/F/G/H/S	Canada	X	X
EBBRYNYX	Bruxelles	A	Belgium	X	X
EDDZYNYX	Frankfurt	A	Germany	X	
EETNYNYX	Tallinn	A	Estonia	X	
EFHKYNYX	Helsinki	A	Finland	X	
EGGNYNYX	UK	A/B/P/V	United Kingdom	X	X
EHAMYNYX	Amsterdam	A	Netherlands	X	X
EHMCYNYX	Amsterdam	M	Netherlands	X	X
EINNYNYX	Shannon	A/B/D/H/J/N/V	Ireland	X	X
EKCHYNYX	Kobenhavn	A	Denmark	X	
ENGMYNYX	Oslo	A	Norway	X	
EPWWYNYX	Warszawa	A/B/C/D/E/F/G/H/L	Poland	X	
ESSAYNYX	Stockholm	A/B	Sweden	X	X
FAJNYNYX	Johannesburg		South Africa	X	
FSIAYNYX	Mahe		Seychelles	X	
HECAYNYX	Cairo		Egypt	X	
HKJKYNYX	Nairobi		Kenya	X	
KDCAYNYX	Washington	A + (1)	United States	X	X
LBSFYNYX	Sofia	A	Bulgaria	X	
LCNCYNYX	Nicosia	A	Cyprus	X	X
LDZAYNYX	Zagreb	A/M	Croatia	X	X
LEANYNYX	Madrid	A/B/D/E/F/G/R	Spain	X	X
LFFAYNYX	Paris	A/F/R/W	France	X	
LGGGYNYX	Athinai	A/B	Greece	X	X
LHBPYNYX	Budapest	A	Hungary	X	X
LIIAYNYX	Rome	A/W	Italy	X	X
LJLAYNYX	Wien Ljubljana	A	Slovenia	X	X
LKPRYNYX	Praha	A	Czech Rep.	X	
LLADYNYX	Tel Aviv	A	Israel	X	X
LMMMYNYX	Malta	A	Malta	X	X
LOWWYNYX	Wien	A	Austria	X	X
LPPPYNYX	Lisboa	A	Portugal	X	
LRBBYNYX	Bucuresti	A/B/C/D/F/M	Romania	X	X
LSSNYNYX	Zurich	A	Switzerland	X	X
LTAAYNYX	Ankara	A/B/C	Turkey	X	X
LYBBYNYX	Beograd	A	Srbija/Crna Gora/Serbia and Montenegro	X	
LZIBYNYX	Bratislava	A	Slovakia	X	
NFOFYNYX	Nadi	A	Fiji	X	X
NZCHYNYX	Christchurch	B/P	New Zealand	X	X
OAKBYNYX	Kabul	D/G/P	Afghanistan	X	
OBBBYNYX	Bahrain	A	Bahrain	X	X
OEJDYNYX	Jeddah	A/W	Saudi Arabia	X	X
OIIIYNYX	Tehran	A	Iran	X	X
OJAIYNYX	Amman	A	Jordan	X	X
OKNOYNYX	Kuwait	A	Kuwait	X	X
OMAEYNYX	Abu-Dhabi	A	Un. Arab Em.	X	X
OOMSYNYX	Muscat	A	Oman	X	X
OPKCYNYX	Karachi	A	Pakistan	X	X
OSDIYNYX	Damascus	A	Syrian	X	
OTBDYNYX	Doha		Qatar		X
RJAAYNYX	Tokyo	A/B/C/D/E/F/G/H/J/K/L/M/N/O/P/Q/R/U/V/W/X/Y/Z	Japan	X	X
RKRRYNYX	Seoul	A/C/D/E/G/Z	Korea	X	X
RPLLYNYX	Manila	B	Phillipines	X	X
UAAKYNYX	Almaty	A/K	Kazakhstan	X	X
UBBUYNYX	Baku	A	Azerbaijan	X	
UCFMYNYX	Bishkek	A	Kyrgyzstan	X	X
UDDDYNYX	Armenia	A	Armenia	X	X
UGTBYNYX	Tbilisi	G/N	Georgia	X	
UKKRYNYX	Ukraine	A	Ukraine	X	X
UTDAYNYX	Tajikistan	A	Tajikistan	X	X
UTTYYOYX	Tashkent	D	Uzbekistan	X	X
UUUUYNYX	Moskva	A/E/G/H/J/K/L/N/O/P/Q/U/V/W/X/Y/Z	Russia	X	X

Macao International NOTAM Office - NOTAM interchange (continue)

ICAO Location Indicator	NOTAM Office	Rec. Series	Country	Received	Send
VABBVNYX	Bombay	A	India	X	X
VCBIYNYX	Colombo	A	Sri Lanka	X	X
VDPPVNYX	Phnom-Penh	A/B	Cambodia	X	X
VECCVNYX	Calcutta	A	India	X	X
VGHSVNYX	Dhaka	A	Bangladesh	X	X
VHHHYNYX	Hong Kong	A	Hong Kong	X	X
VIDPYNYX	New Delhi	A/G	India	X	X
VLVTYNYX	Vientiane	A	Laos	X	X
VNKTYNYX	Kathmandu	A	Nepal	X	X
VOMMYNYX	Madras	A	India	X	X
VRMMVNYX	Male	A	Maldives	X	X
VTBDVNYX	Bangkok	A/G/H/J	Thailand	X	X
VVVVYNYX	Ho-Chi-Minh	A/J	Vietnam	X	X
VYYYYVNYX	Yangon	A/B	Myanmar	X	X
WBSBYNYX	Brunei	A	Brunei	X	X
WMKKVNYX	Kuala Lumpur	A/D	Malaysia	X	X
WRRRYNYX	Jakarta	A/B	Indonesia	X	X
WSSSYNYX	Singapore	A	Singapore	X	X
YBBBYNYX	Brisbane	D/E/F/G/H/I/J/K/L/M/N	Australia	X	X
ZBBBYNYX	Beijing	A/E/F/G/L/U/W/Y	China	X	X
ZKKKYNYX	Pyong Yang	A	North Korea	X	X
ZMUBVNYX	Ulaanbaatar	A/C/S	Mongolia	X	X

(1) Following location ind.- KDCA, KDZZ, KFDC, KICZ, KLAS, KLAX, KOAK KSEA, KSFO, KZAK, KZLA, KZOA.,KZSE, PAFA, PANC, PANN, PAZA, PGRO, PGSN, PGWT, PGZU, PHJR, PHNL, PMDY.

Pre-flight Information Bulletins (PIB) such as route bulletins, aerodrome bulletins and list of valid NOTAM are available on request at AIC service in Macau International Airport.

3.6 Aeronautical Information Circular (AIC)

AIC contains information of general technical interest and information relative to administrative matters which is not appropriate to the AIP or NOTAM. AICs are distributed in two series:

Series A - containing information for international distribution

Series B - containing information for local distribution

AIC concerning matters for both international and local interest are available in English. The serial number of each series starts with number 1 on the 1st of January each year. A Checklist of AIC currently in force is issued at the end of each calendar year.

3.7 Checklists and summaries

Checklists and summaries are administrative material without operational significance. Their purpose is to help recipients of the elements of the integrated package verifying the continuity and validity of the information they handle. A Printed Plain Language Summary of NOTAM in force is issued on the 1st day of every month. It also contains a checklist of the AIP Supplements currently in force and an indication of the latest publications issued. Distribution is made to all recipients of the integrated package elements.

3.8 Sale of publications

Application for purchase of the AIP MACAO and subscription to amendment service should be sent to :

Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China

4 AIRAC system

In order to control and regulate the flow of information implying amendments to charts, route manuals, Flight Management Systems, etc., whenever possible such information will be issued on predetermined dates according to the AIRAC system. This type of information will be published as AIRAC AIP amendments or AIRAC AIP supplements.

Whenever major changes are being planned, and where additional notice is desirable (and practicable), the publication date will be 56 days in advance of the AIRAC effective date. At the AIRAC publication date a NOTAM giving a short description of the contents of the AIRAC amendment or supplement, will be issued. When no AIRAC information will be issued, "AIRAC NIL" information will be distributed together with the monthly NOTAM checklist, at least 28 days in advance of the AIRAC effective date.

The predetermined dates of the AIRAC system are published every year by means of an AIC.

5 Pre-flight Information Service

- 5.1 A pre-flight information service unit is available at Macau International Airport.
- 5.2 Pre-flight information is provided by means of up-dated Pre-Flight Information Bulletins or by display of aeronautical documents for self-briefing. Verbal briefing might be provided on request.
- 5.2.1 PIB will contain both aerodrome and en-route information (including navigation warning), related to the Macao Pre-Flight Coverage Zone.

5.3 Macao Flight Briefing Unit coverage zone :

ASIA	EUROPE	PACIFIC	N. AMERICA	AUSTRALASIA	MID ASIA
Azerbaijan	Austria	Guam	Canada	Australia	Bahrain
Bangladesh	Armenia	Hawaii	(west coast)	New Zealand	Kuwait
Brunei	Belgium		USA	Papua-New Guinea	Saudi Arabia
Cambodia	Bulgaria		(west coast)		United Arab Emirates
China	Croatia				
Hong Kong	Czech Rep				
India	Denmark				
Indonesia	France				
Iran	Georgia				
Israel	Germany				
Japan	Greenland				
Lao DPR	Greece				
Macao	Hungary				
Malaysia	Ireland				
Maldives	Italy				
Mongolia	Kazakhstan				
Myanmar	Kyrgyzstan				
Nepal	Luxembourg				
North Korea	North Macedonia				
Pakistan	Neitherlands				
Philippines	Norway				
Russia	Poland				
(Asian Part)	Portugal				
Singapore	Romania				
Sri Lanka	Russia				
South Korea	(European part)				
	Slovak Republic				
Thailand	Slovene				
Vietnam	Spain				
	Sweden				
	Switzerland				
	Tajikistan				
	Turkey				
	UK				
	Ukraine				
	Uzbekistan				
	Srbija/Crna Gora/Serbia and Montenegro				

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GEN 3.2 AERONAUTICAL CHARTS

1. Responsible Service

1.1. The Aeronautical Information Service of Civil Aviation Authority produces the charts which are part of the AIP Macao, the charts are produced in accordance with the provisions contained in ICAO Annex 4 - Aeronautical Charts, and the guidance material in the ICAO Aeronautical Charts Manual (Doc 8697 - AN/889/2).

2. Maintenance of charts

2.1. The aeronautical charts included in the AIP are kept to date by amendments or supplements to the AIP

3. Purchase arrangements

3.1. The charts are not sold separately from the AIP. The AIP may be obtained from:

Civil Aviation Authority
Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China

4. Aeronautical chart series available

4.1. The following series of aeronautical charts are produced :-

- a) Aerodrome Charts - ICAO
- b) Aircraft Parking / Docking Chart - ICAO
- c) Aerodrome Obstacle Chart - ICAO - Type A (for each runway)
- d) Precision Approach Terrain Chart - ICAO (precision approach Cat II runway)
- e) Area Chart - ICAO (Arrival)
- f) Standard Arrival Chart - Instrument (STAR) - ICAO
- g) Standard Departure Chart - Instrument (SID) - ICAO
- h) Instrument Approach Chart - ICAO (for each runway and procedure)
- i) Visual Approach Chart - ICAO

4.2. General description of each series

- a) Aerodrome Chart - ICAO

This chart contains detailed aerodrome data to provide flight crews with information that will facilitate the ground movement of aircraft:

- from the aircraft stand to the runway; and
- from the runway to the aircraft stand

b) Aircraft Parking / Docking Chart - ICAO

This chart provides information to facilitate the ground movement of aircraft between the taxiways and the aircraft stands and the parking / docking of aircraft cannot be shown with sufficient clarity on Aerodrome Chart.

c) Aerodrome Obstacle Chart - ICAO - Type A

This chart contains detailed information on obstacles in the take-off flight path areas of the aerodrome. It is shown in plan and profile view.

d) Precision Approach Terrain Chart - ICAO

This chart provides detailed terrain profile information within a defined portion of the final approach so as to enable aircraft operating agencies to assess the effect of the terrain on decision height determination by the use of radio altimeter.

e) Area Chart - ICAO

This chart shows in detail the terminal routings and air traffic services system for arriving flights.

f) Standard Arrival Chart - Instrument (STAR) - ICAO

This chart provides the flight crew with information that will enable them to comply with the designated standard arrival route - instrument from the en-route phase to the approach phase.

g) Standard Departure Chart - Instrument (SID) - ICAO

This chart provides the flight crew with information that will enable them to comply with the designated standard departure route - instrument from the take-off phase to the en-route phase.

h) Instrument Approach Chart - ICAO

This chart provides the flight crew with information that will enable them to perform an approved instrument approach procedure to the runway of intended landing including the missed approach procedure and where applicable, associated holding patterns.

i) Visual Approach Chart - ICAO

This chart provides information on aerodrome, obstacles, designated airspace, visual approach information, radio navigation aids and communication facilities.

5. List of aeronautical charts available

Title of Series	Scale	Name / Number	Date
Aerodrome Chart - ICAO	1:12500	VMMC	Current edition as per AIP
Aircraft Parking/Docking Chart - ICAO	1:6000	VMMC	
Aerodrome Obstacle Chart - ICAO - Type A	1:1500	VMMC RWY 16	
	1:1500	VMMC RWY 34	
Precision Approach Terrain Chart- ICAO	Horizontal 1:2500 Vertical 1:500	VMMC RWY 34	
Area Chart - ICAO		VMMC	
Standard Arrival Chart - Instrument (STAR) - ICAO		VMMC – various arrival procedures	
Standard Departure Chart - Instrument (SID) - ICAO		VMMC – various departure procedures	
Instrument Approach Chart - ICAO		VMMC - various approach procedures	
Visual Approach Chart - ICAO	1:50000	Visual Approach Visual Landing	

6. Index to the world aeronautical chart

NIL.

7. Topographical charts

NIL.

8. Corrections to charts not contained in the AIP

NIL.

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GEN 3.3 AIR TRAFFIC SERVICES

1. Responsible Authority

The Authority responsible for the overall administration of air traffic services for international civil aviation is the Civil Aviation Authority.

Postal Address: Civil Aviation Authority
Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macao, China

AFTN Address: VMMCYAYX

Telephone Number: (853) 2851 1213

Fax Number: (853) 2833 8089

The services are provided in accordance with the provisions contained in the following ICAO documents:

Annex 2 - Rules of the Air

Annex 11 - Air Traffic Services

Doc 4444 - Procedures for Air Navigation Services - Rules of the Air and Air Traffic Services (PANS-ATM)

Doc 8168 - Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS)

Doc 7030 - Regional Supplementary Procedures

Differences to these provisions are detailed in subsection GEN 1.7.

2. Area of Responsibility

The Macao ATZ lies at the southeast edge of the Guangzhou Flight Information Region abutting the Hong Kong Flight Information Region. Air Traffic Control is exercised in all controlled airspace. All flight information, air traffic control and alerting services are provided by Guangzhou and Hong Kong Area Control Centres respectively.

3. Type of Services

- 3.1. An Aerodrome Traffic Zone is established at Macao aerodrome. Flight information, air traffic control and alerting services within ATZ are provided by Zhuhai, Hong Kong approach and Macao aerodrome control.
- 3.2. ENR 1.4 describes the airspace designated for air traffic service purposes.
- 3.3. In general, the air traffic rules and procedures in force and the organisation of air traffic services in Macao are in conformity with ICAO Standards, Recommended Practices and Procedures.

4. Co-ordination between the operator and ATS

Co-ordination between the operator and air traffic services is effected in accordance with 2.15 of ICAO ANNEX 11 and 2.1.1.4 and 2.1.1.5 of Part VIII of the Procedure for Air navigation Services — Rules of the Air and Air Traffic Services (Doc 4444, PANS-ATM).

5. Minimum flight altitude

The minimum flight altitude on the ATS routes, as presented in Hong Kong AIP and China AIP.

6. Air Traffic Services

Civil Aviation Authority delegated the provision of air traffic services in Macau ATZ to Macau International Airport Management:

Postal Address: CAM - Macau International Airport Co. Ltd., Airport Operations Department, ATS Division
Macau International Airport
PAN ON, Taipa
MACAO

AFTN Address: VMMCYGYX

Telephone Number: (853) 88982826

Fax Number: (853) 2886 1294

PABX Number: (853) 2886 1111

GEN 3.4 COMMUNICATION SERVICES

1. Responsible service

1.1. The organisation responsible for the operation of aeronautical communication and navigational facilities at Macao is CAM - Macau International Airport Co. Ltd., Airport Operations Department

Postal Address : CAM - Macau International Airport Co. Ltd., Airport Operations Department
Macau International Airport
PAC ON Taipa
Macao, China

AFTN Address : VMMCNYX

Telephone Number : (853) 2886 1111

Fax Number : (853) 2886 2222

The service is provided in accordance with the provisions contained in the following ICAO documents:

Annex 10 Aeronautical Telecommunications
DOC 7030 Regional Supplementary Procedures
DOC 7910 Location Indicators
DOC 8400 Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC)
DOC 8585 Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services

Note: LLZ RWY 16 (MCS) offset not in compliance of ICAO ANNEX 10 classification, as mentioned in GEN 1.7 - 3

2. Area of responsibility

2.1. Arrangements for aeronautical radio communication and navigation services on a continuing basis within the Macao ATZ should be made with the Civil Aviation Authority, who is also responsible for the application of the regulations concerning the design, type and installation of radio station on Macao registered aircraft.

3. Type of services

3.1. Radio and Radar Navigation Service

3.1.1. The following types of radio aids to navigation are available:

- Instrument Landing System	(ILS)
- Doppler VHF Omnidirectional Radio Range	(D-VOR)
- Distance Measuring Equipment	(DME)
- Instrument Guidance System (IGS)	(LLZ/DME)

3.1.2. Radar:

Secondary radars existing not to be used for radar control. Radar is used for traffic observation and on emergency situations.

3.2. Mobile service

The aeronautical stations maintain a continuous watch on their stated frequencies during the published hours of service unless otherwise notified. In all air-ground radio communications English language is in use.

3.3. Broadcasting services

Meteorological broadcasts are available for the use of aircraft in flight. Full details are given in subsection GEN 3.5.

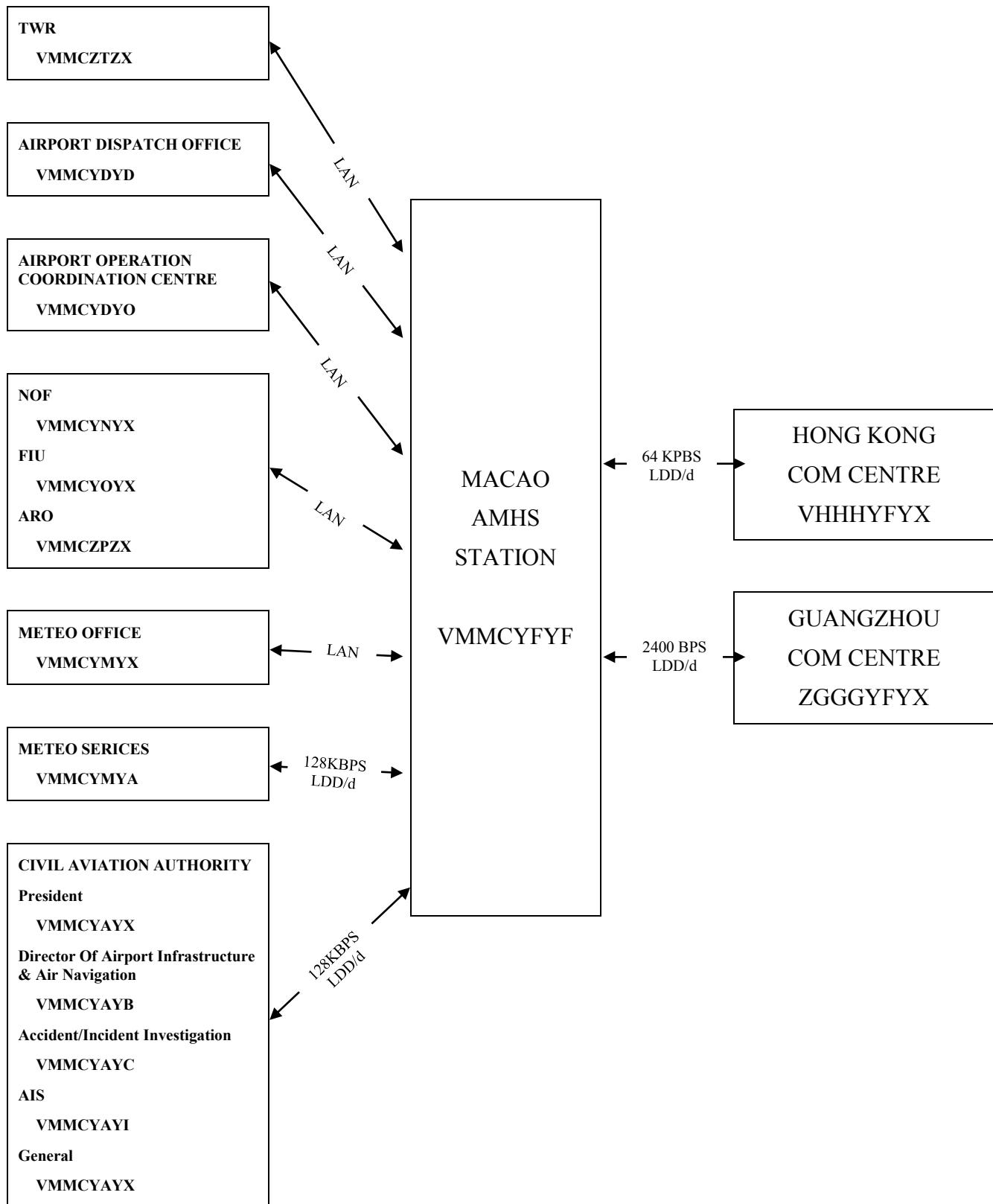
3.4. **Language used:** English.

AERONAUTICAL FIXED SERVICES - INTERNATIONAL AND NATIONAL CIRCUITS*

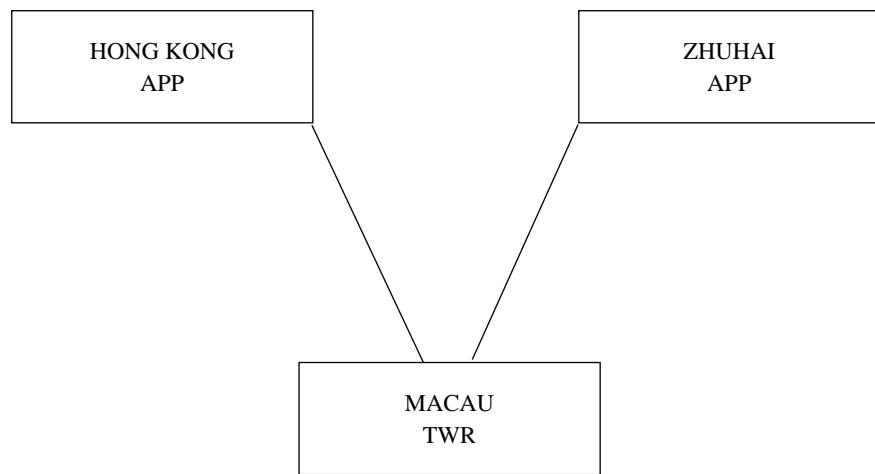
AERONAUTICAL FIXED SERVICES – INTERNATIONAL AND NATIONAL CIRCUITS *											
STATION			CORRESPONDENT		NUMBER AND TYPE OF CHANNELS		RADIO FREQUENCIES		TYPE OF TRAFFIC	HOURS (UTC)	REMARKS
Name	Location Indicator	Call Sign	Name	Call sign	Trans kHz	Rec kHz					
1	2	3	4	5	6	7	8	9	10	11	
MACAO	VMMC	HONG KONG			1 x LDD/d			AMHS	H24		
		GUANGZHOU			1 x LDD/d			AFTN	H24		
	MACAO TWR	HONG KONG APP CONTROL	HK APP	2 x LTF				ATS	H24	Direct controller to controller voice links.	
	MACAO TWR	ZHUHAI APP CONTROL	ZHUHAI APP	2 x LTF				ATS	H24	Direct controller to controller voice links.	

* For local circuits connecting different to a COM Centre, see diagrams GEN 3.4-4 and 3.4-5

AERONAUTICAL FIXED SERVICE – TELEGRAPH



AERONAUTICAL FIXED SERVICE - TELEPHONE



VHF (FM) BROADCAST STATION

STATION or CHAIN	SERVICE	IDENTIFICATION	EM	FREQUENCY KHz/MHz	HOURS (UTC)	COORDINATES	OPERATING AUTHORITY AND REMARKS
1	2	3	4	5	6	7	8
MACAU	B S	Radio Villa verde	A 3 E	738 KHz	2200-1600	22° 12' 21" N 113° 33' 25" E	Language: Chinese U/S Location: 346° / 3.2 NM ARP
MACAU	B S	Teledifusao de MACAU (TDM)	A 3 E	900 KHz	0000-2400	22° 12' 21" N 113° 32' 43" E	Language: Chinese U/S Location: 336° / 3.5 NM ARP
MACAU	B S	Teledifusao de MACAU (TDM)	F 8 E	98 MHz	0000-2400	22° 11' 49" N 113° 32' 46" E	Language: Portuguese Coverage: 5.4 NM Location: 333° / 2.93 NM ARP
MACAU	B S	Teledifusao de MACAU (TDM)	F 8 E	100.7 MHz	0000-2400	22° 11' 49" N 113° 32' 46" E	Language: Chinese Coverage: 5.4 NM Location: 333° / 2.93 NM ARP

GEN 3.5 METEOROLOGICAL SERVICES**1. Responsible service**

1.1. The Meteorological Authority in Macao is conferred to “Direcção dos Serviços Meteorológicos e Geofísicos (SMG)”.

Postal Address: Direcção dos Serviços Meteorológicos e Geofísicos
Caixa Postal 93
Rampa de Observatório
Taipa Grande, Taipa
MACAU

AFTN Address: VMMCYMYA

Telephone: (853) 88986214, 88986290

Fax Number: (853) 2885 0557

Email: meteo@smg.gov.mo

Homepage: www.smg.gov.mo

1.2. The Meteorological Service for civil aviation are provided by Airport Meteorological Office, a division of SMG²², located at the Terminal Building of Macau International Airport.

Postal Address: Centro Meteorológico para a Aeronautica
Room 11011, Terminal Building
Macau International Airport
PAC ON, Taipa
MACAU

AFTN Address: VMMCYMYX

Telephone: (853) 2886 1111 EXT 2508,
(853) 2886 2203 (duty forecaster)

Fax Number: (853) 2886 0017

1.3. The service is provided in accordance with the provisions contained in the following ICAO documents:

Annex 3 — Meteorological Service for International Air Navigation

Doc 7030 — Regional Supplementary Procedures

Difference to these provisions are detailed in subsection GEN 1.7.

2. Area of responsibility

The Airport Meteorological Office provides meteorological services for Macau ATZ.

3. Meteorological observations and reports

3.1. Table GEN 3.5.3 Meteorological observations and reports

Name of station/ Location indicator	Type & frequency of observation/ automatic observing equipment	Type of MET Reports & Supplementar y information included	Observation System & Sites	Hours of Operation	Climatological information
1	2	3	4	5	6
MACAO/Macao VMMC	Half-hourly plus special Observation	METAR, SPECI TREND	Ultrasonic anemometer RWY 16 Ultrasonic anemometer RWY 34 Ultrasonic anemometer middle pt Transmissometer RWY 16 Transmissometer RWY 34 Transmissometer middle pt Ceilometer RWY 16 Ceilometer RWY 34 AWS RWY 16 and RWY 34 Forward-Scatter Meter RWY16 and RWY 34	H24	NIL.

Explanatory Note: METAR Routine weather report
SPECI Selected special weather report
TREND Landing forecast
H24 24 hours

3.2. Observing system and operating procedures

3.2.1. Surface wind is measured by three Ultrasonic anemometers mounted on the masts of 10 meters high. The actual height of the anemometers is approximately 7 meters above the runway. Two of the anemometers are set abeam the 16 and 34 touchdown zone and the other one is set abeam the middle point. All three anemometers are positioned at a distance of 130 meters on the East side of the runway centre line. Wind indicators are installed in the meteorological office and the air traffic services units. Observations made at the middle point anemometer constitutes the official wind report.

3.2.2. RVR is measured by three transmissometers set abeam of both the touchdown zone and the middle point of the runway. They are positioned at a distance of 120 meters on the East side of the runway centre line and are 2.5 meters above the runway. RVR values derived from the transmissometers located near the touchdown zone are included in the MET report whenever the horizontal visibility is observed to be less than 1500 meters. Forward-Scatter Meters located at RWY 16 and RWY 34 is used as backup sensors when the transmissometers under maintenance or out of services.

3.2.3. The height of cloud base is measured by two ceilometers located at either end of the runway at distance of 105 meters on the East side of the runway centre line.

3.2.4. Two Automatic Weather Stations located near RWY 16 and RWY 34 anemometers are used to measure the air temperature, dew point temperature, atmospheric pressure and precipitation. All the readings of the sensors and the calculated QNH and humidity are displayed in the weather terminal in Meteorological office and ATC.

4. Types of services

4.1. Flight documentation is provided at the Airport Meteorological Office for all flights leaving Macau.

The flight documentation comprises:

- significant weather chart ;
- upper wind and upper air temperature charts ;
- latest available aerodrome forecasts (in TAF code form) for the departure, destination and alternate aerodromes ;
- relevant SIGMET messages ;
- for short haul flight (flying time of two hours or less) the latest METAR for the departure, destination and alternate aerodromes are also supplied.

4.2. Briefing and Consultation

A meteorologist is available from 00 to 24 UTC to provide briefing and consultation for flight crew members. In order to obtain the latest information including the meteorological satellite and weather radar information, flight crew are advised to attend the briefing and consultation before departure. For the planning of VFR flight, plain language summary forecast of enroute weather conditions may be requested.

4.3. Aerodrome Warnings

The Meteorological Office of the Macau International Airport issues Aerodrome Thunderstorm Warning and Aerodrome Strong Warning to affect the aerodrome. Tropical Cyclone Warning Signal and Strong Monsoon Warning Signal which is issued by SMG, are relayed to other Airport entity and users.

5. Notification required from operators

- 5.1. An operator requiring meteorological service or changes in existing meteorological service shall notify, sufficiently in advance, the Airport Meteorological Office.
- 5.2. The Airport Meteorological Office shall be notified by the operator requiring service when:
 - a) new route or new types of operations are planned;
 - b) changes of a lasting character are to be made in scheduled operations
 - c) other changes, affecting the provision of meteorological service, are planned
- 5.3. The Airport Meteorological Office shall be notified by the operator or a flight crew member:
 - a) of flight schedules
 - b) when non-scheduled are to be operated
 - c) when flights are delayed, advanced or cancelled

6. Aircraft reports

Not required.

7. VOLMET services

Nil.

8. SIGMET services

Nil.

9. Other automated MET services

9.1. Meteorological broadcasts

NAME	CALL SIGN/ID	EM	FREQ	TIME (UTC)	HOURS (UTC)	STATIONS	CONTENTS
1	2	3	4	5	6	7	8
MACAU	MACAU ATIS		126.4	CNS	H24	MACAU	MET Report Special Report TREND Forecast

Note: ATIS Automatic Terminal Information Service
CNS Continuous
H24 24 Hours

10. Tropical cyclone and strong monsoon winds and local winds effects on the approaches to Macau International Airport

10.1. Tropical cyclone

10.1.1. Introduction

Tropical cyclone may occur over the South China Sea at any time of the year, but have only produced persistent winds of gale force or over (mean winds speed exceeding 33 kt) in the local Airport area during the months May to November. On one occasion (during the passage of C.T.S. Becky, 1993), the mean hourly wind speed reached 67 kt (124 km/h) in Macau and gusts exceeding 89 kt (166 km/h) were recorded.

10.1.2. Warning issued by the SMG

10.1.2.1. Whenever a typhoon, severe tropical storm, tropical storm or tropical depression centred within about 430 nautical miles (800 km) of Macao, warnings are issued by the SMG to a number of addresses including the Meteorological Office, the Air Traffic Services Units, the Rescue Coordination Centre and to the Airport Terminal Building Information Office. These warnings are also issued for dissemination beyond the aerodrome and broadcast to aircraft in flight (see PARA 9 above). In addition, the SMG also passes the information to the Civil Protection Operation Centre and other Government departments by fax or other means.

10.1.2.2. Tropical Cyclone Warning Signals

There are eight signals in use in Macao. They are Number 1, 3, 8NW, 8SW, 8NE, 8SE, 9 and 10:

No 1 Signal It is an Alert By Signal and calls attention to the fact that there is a tropical cyclone centred within about 430 NM (800 km) from Macao which may later affect Macau.

No 3 Signal It warns of strong winds. The centre of a tropical cyclone follows a pattern of movement that sustained wind speed to be experienced in Macao may possibly range from 22 to 33 kt (41 to 62 km/h) with gusts up to 60 kt (111 km/h).

No 8NW Signal - No 8SW Signal - No 8NE Signal - No 8SE Signal

It warns of gale or storm force winds. The centre of a tropical cyclone is nearing and sustained wind speed to be experienced in Macao, from the quarter indicated, may possibly range from 34 to 63 kt (63 to 117 km/h) with gusts reaching up to 100 kt (185 km/h).

No 9 Signal The centre of the tropical cyclone is approaching Macao and it is expected that Macao might be severely affected.

No 10 Signal The centre of the on-coming typhoon should strike at the immediate approaches of Macao. The sustained wind speed should exceed 64 kt (118 km/h) with gusts of great intensity.

Tropical Cyclone Warning Bulletins issued by the SMG are disseminated to the various places and broadcast by all radio, television stations and internet (www.smg.gov.mo). In addition, visual signals are displayed day and night at Guia Lighthouse and Monte in Macao Peninsula.

Details of the symbols and lights used for the signals are shown in Macao's Tropical Cyclone Warning Card (http://www.smg.gov.mo/www/cvm/typhoon/download/tcode_a4.pdf) issued by the SMG.

Aircraft Operators are advised to take early action to safeguard their aircraft by carrying out the below precautions, and other actions which may appear necessary, prior to Signal No. 8NW, 8SW, 8NE or 8SE is hoisted. Aircraft Owners/Operators may be held responsible for any damage caused by their aircraft.

- a) Aircraft Operators should coordinate with Airport Operator to tow and park the aircraft into the hangar if parking space allows;
- b) All serviceable aircraft should be flown away from the airport;
- c) Aircraft which cannot be flown away should be securely tie down in most appropriate means by Aircraft Operator and/or Handling Agent;
- d) Aircraft Operators should detail duty personnel to stand by in the event of a wind shift necessitating re-orientation of aircraft.

10.2. Strong Monsoon Signal (Black Ball)

When strong to gale force winds which are associated with winter monsoon (from the Northeast quadrant) or summer monsoon (from the Southwest quadrant) are occurring or expected to occur in the local area, the Strong Monsoon Signal (black ball) will be issued by the SMG. The Strong Monsoon Signal indicates that the sustained wind speed in Macao due to the monsoon wind exceeds, or is forecast to exceed 22 kt (41 km/h).

Note: this signal is not applied during tropical cyclone situation.

10.3. Local wind effects on the approaches to Macau International Airport

- the area of Macau International Airport is possibly subject to the wind shear event caused by microbursts and gust fronts of thunderstorms.
- there are no significant topographic features near the airport which cause an inordinate amount of turbulence. The source of turbulence in the area is instability due to convection.

The above conclusion is based on the historical wind observations in the meteorological stations in Macao, Taipa and Coloane. The details of these wind effects will be concluded once the three anemometers located along the runway are installed and sufficient data is obtained.

11. Thunderstorm Warnings

The Airport Meteorological Office issues two classes of thunderstorm warnings which are designated and differentiated using colors amber and red. The colors have different meanings and demands in terms of weather conditions and actions to be implemented that are explained below.

AMBER

Thunderstorm warning when the thunderstorm is observed within 48 km to 5 km from the Airport and is forecasted that the thunderstorm activities can possibly affect the Airport;

Cancellation of AMBER warning will be issued whenever thunderstorm activities have ceased affecting the Airport.

RED

Thunderstorm warning is a severely hazardous weather signal that indicates the thunderstorm activities are increasing or moving closer to the 5 km area of the Airport and will directly affect the Airport.

Downgrading from RED to AMBER will be issued when thunderstorm activities are weakening or moving away from the Airport.

Notes:

- 1 - The RED warning can be issued without first issuing the AMBER warning;
- 2 - When the Amber warning is issued, prediction and possibility of upgrade to RED warning may be included.
- 3 - Downgrading the RED warning to AMBER will normally mean that the RED warning will not be issued again at least in the next 30 minutes. However if the weather conditions suddenly deteriorate or thunderstorm activities develop stronger, the RED can be re-issued at any moment
- 4 - The warnings can be cancelled without first downgrading from RED to AMBER.

12. Strong Wind Warning

When the 10 minutes average wind speed recorded in the runway is over 33 kt (62 km/h), and there is not any Tropical Cyclone Signal or Strong monsoon Signal, the Aerodrome Strong Wind Signal should be issued immediately.

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GEN 3.6 SEARCH AND RESCUE

1. Responsible service

The Civil Aviation Authority is the Authority for Search and Rescue in the Macao ATZ.

Macao Tower will be responsible for the activities of all measures and plans for immediate Rescue (or Search, if being the case).

Within the limits of Macao ATZ, local helicopters and or light aircraft may be deployed in cooperation with craft and personnel from other departments of the Macao Special Administrative Regional Government (namely ships from Marine and Water Bureau) or may be requested to private owned enterprises, according to a prefixed plan.

For medium and long range SAR activities over the high seas, aircraft whose destination is Macao or has origin in Macao, will be assisted under the authority and coordination of the Rescue Coordination Centre of Guangzhou in the People's Republic of China or of the Rescue Coordination Centre of the Civil Aviation Department of Hong Kong.

The search and rescue service is provided in accordance with the ICAO Standards, recommended Practices and Procedures contained in the following documents:

Annex 12 Search and Rescue

Annex 13 Aircraft Accident Investigation

DOC 7030 Regional Supplementary Procedures

2. Area of responsibility

Search and rescue service is provided within Macao ATZ.

3. Type of services

3.1. Details of Rescue Units are given in Table 3.6.3. In addition, various elements of the Marine and Water Bureau, the Security Forces and Security Service departments, Merchant Marine and Public Telecommunications, are available to the Search and Rescue Organisation.

Table 3.6.3 Search and rescue units

Name	Location	Facilities	Remarks
Macau International Airport	22°08'58"N 113°35'29"E	5 boats for rescue and fire fighting in the vicinity of airport	Speed 31 kt Capacity *
Marine and Water Bureau	22°11'45.89"N 113°33'36.19"E	1 search and rescue vessel at Outer Harbour	Speed 30 kt MAX Capacity **
	22°12'33.12"N 113°32'24.66"E	1 search and rescue vessel at Doca da Ilha Verde	Speed 30 kt MAX Capacity **

* 2 life rafts with a capacity of 38 persons each, on each rescue boat.

** Max rescue capacity: 43 persons and 4 life rafts (50 person each raft)

3.2. Rescue co-ordination service

Macao Rescue Unit (Macao TWR)

Coordination of SAR operations – Emergency Operation Centre

Postal Address : Macau International Airport (SAR)
PAC ON
Taipa
Macao, China

AFTN Address : Macao TWR – VMMCZTZX
Airport Emergency Centre - VMMCYVYX

Fax number : (853) 2886 0024

Telephone : (853) 2886 0019, 2886 0020, 2886 0021

3.3. Maritime Search & Rescue Service

3.3.1. The Maritime Search and Rescue Coordination Centre (CC) formed under the Vessel Traffic Control Centre of Macao (Macao VTS) is responsible for maritime search and rescue operations within Macao waters, and its operation is activated once the need arises.

The Vessel Traffic Control Centre of Macao is abbreviated as the "Macao VTS".

The Macao VTS offers round-the-clock services to vessels sailing in Macao waters, and any vessels that need its help may contact the centre via the following means:

VHF radio channel 16 (156.800 MHz) and channel 10 (156.500 MHz)

Telephone: (853) 28726766

Fax: (853) 28726769

Upon picking up a distress signal, the Macao VTS will immediately alert all the relevant search and rescue authorities and coordinators. Meanwhile the centre will stay in touch with all relevant parties until rescuers arrive at the scene of the incident. Should the need arise, the Macao VTS will activate the Search and Rescue Coordination Centre (CC).

Search and Rescue Coordination Centre (CC)

Once activated, the Coordination Centre will take charge of the search and rescue efforts, and communicate with other parties via the following means:

VHF radio channel 10 (156.500 MHz) (or the other radio channels mentioned above)

Telephone: (853) 28726743

Fax: (853) 28726769

3.3.2. Details of coordination and “on scene command” for Rescue in Macao ATZ waters, are as follows:

	UNIT	AREA OF RESPONSIBILITY
1	Airport overall responsibility, control and coordination: - Macao Airport Emergency Operations Centre	The Airport and 1000 meters around the runway in water area
2	Joint responsibility of Macao Airport Emergency Operations Centre and Marine and Water Bureau (on scene commander of maritime operating means)	Between 1000 meters and 3000 meters around the runway in water area.
3	Marine and Water Bureau (on scene commander of maritime operating means)	Between 3000 meters around runway and the limits of Macao ATZ in water area.
4	Fire Fighting Department (Corpo de Bombeiros) with coordination of Civil Protection Operation Office (the Centro Operações da Proteção Civil (COPC))	Ground Area outside airport fence

4. SAR agreements

Macao is within the responsibility of Guangzhou SAR center for the Pearl River Delta Area. Cooperation links are established between Guangzhou RCC and Hong Kong RCC for possible mutual assistance in the area.

5. Conditions of availability

Although specific SAR aircraft and surface vessels are not immediately available in Macao, other organisations will, on request, provide assistance and specialised SAR aircraft, equipment and personnel for conduct of air and sea searches.

6. Procedures and signals used

6.1. Procedures

Procedures for pilot-in-command observing an accident or intercepting a distress call and/or message are outlined in Annex 12, Chapter 5.

6.2. Communications

6.2.1. Transmission and reception of distress and urgency message within the Macao ATZ are handled in accordance with Annex 10, Vol. II, Chapter 5, Para 5.3.

6.2.2. For communications during SAR operations, the codes and abbreviations published in ICAO Doc 8400 (Codes and Abbreviations) are used.

6.2.3. Information concerning positions, call signs, frequencies and hours of operation on Macao aeronautical stations is published in the AD2 section.

6.2.4. The frequency 121.5 MHz is guarded continuously at Macao Tower. The Macao Maritime Post of Search and Rescue guards the international distress frequency.

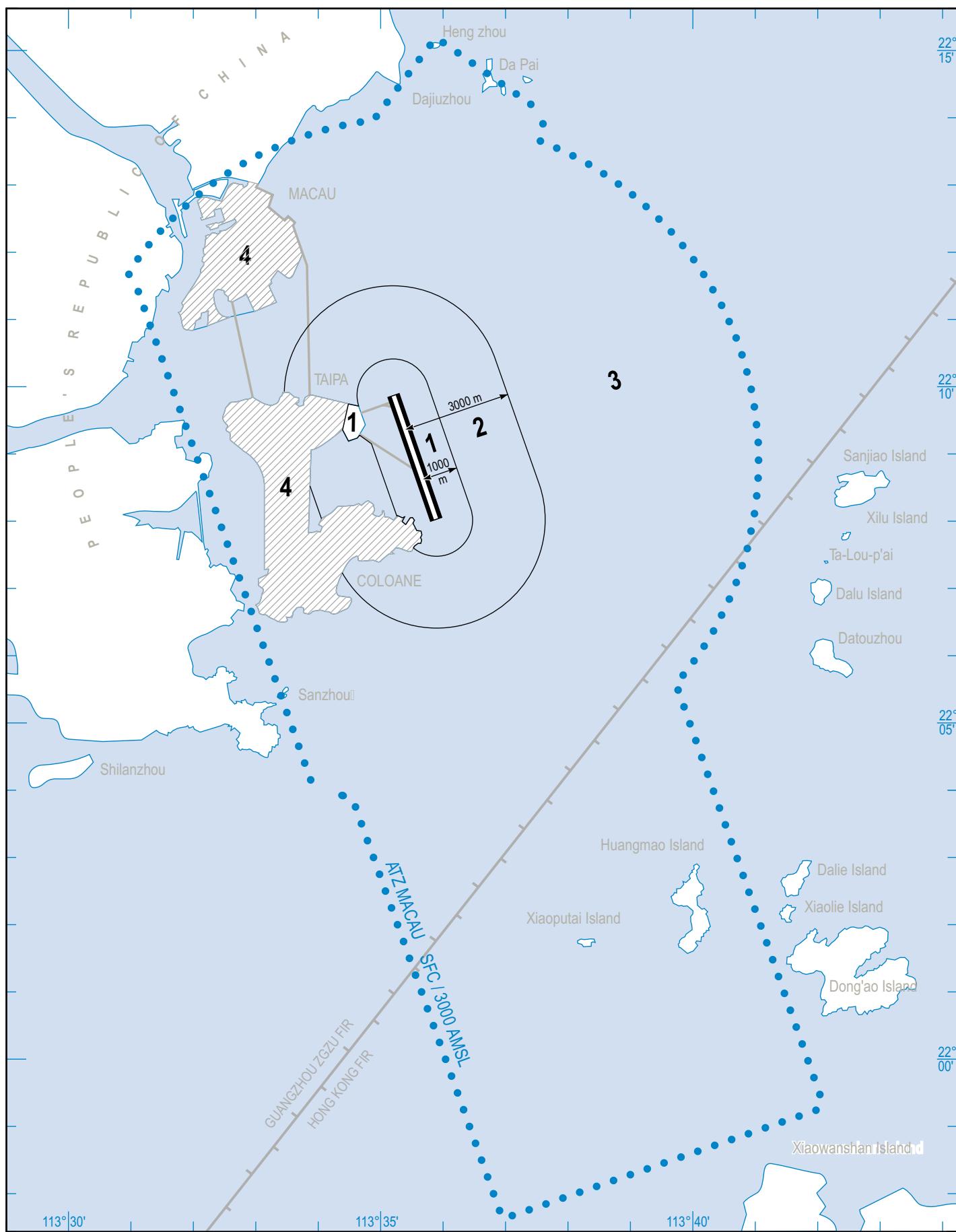
6.3. Search and rescue signals

The search and rescue signals to be used are those prescribed in Annex 12, Appendix A, paragraphs 2 and 3.

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GEN 4. CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES

GEN 4.1 AERODROME CHARGES

General conditions

Unless a prior arrangement has been made with the Director of the Macau International Airport, all landing, parking and refueling charges due and payable in respect of an aircraft shall be payable before the aircraft leaves the airport, and the Director may refuse to give clearance for that aircraft to depart or for any other aircraft that is operated by the operator of that aircraft to depart until such charges have been paid.

For as long as an aircraft is upon the Airport, the Director shall have a lien, both particular and general, over the aircraft, its parts and accessories, for all charges that shall be or become due and payable to the Director, in respect of the aircraft or in respect of any other aircraft that is operated by the operator of that aircraft. The lien referred to in paragraph 1.2 a) above, shall not lapse or be lost by reason of the aircraft departing from the Airport, but shall continue and be exercisable at any time when the aircraft shall return to and be upon the Airport, for as long as the said charges shall remain unpaid.

1 Landing fees (in MOP):

The Landing fee includes the following:

- Terminal air traffic control;
- Use of radio and visual navigation;
- Parking for the first 60 minutes after landing and for the last 60 minutes prior to taking off.

Aircraft MTOW in tons	Landings in one month/Airline			
	1st tier		2nd tier	
	up to 60 landings		over 60 landings	
	Basic	Per ton	Basic	Per ton
up to 9	810	-	785	-
10 to 50	810	85	785	69
51 to 100	4 295	65	3 614	58
101 to 200	7 545	57	6 514	55
more than 200	13 245	38	12 014	35

Note : Whenever the number of landings leads to a change of tier, the fee applicable to total operations performed during that month is that applicable to the last operation according to the index.

1.1 Landing fees exemptions

- a) aircraft in the exclusive services for the Portuguese Republic or the People's Republic of China;
- b) aircraft in official missions or under special agreements or on a reciprocity basis;
- c) aircraft in humanitarian or search and rescue operations;
- d) aircraft that due to technical, meteorological or similar contingency cases and forced to return to the airport;
- e) aircraft whose finality of the operation may justify the exemption.

1.2 Landing fees reduction:

- a) Aircraft engaged in local training and equipment testing flights, may be entitled to a reduction up to 75%.
- b) Aircraft landing between 23:00 to 07:00 local time are entitled to a 50% reduction.

2 Aircraft parking fees (in MOP):

Aircraft MTOW in tons	Landings in one month/Airline	
	1st tier	2nd tier
	up to 60 landings	over 60 landings
	Per hour	Per hour
up to 9	51	41
10 to 50	129	103
51 to 150	180	144
151 to 250	232	185
more than 250	283	227

Note : Whenever the number of landings leads to a change of tier, the fee applicable to total parking hours during the month in question is that applicable to the last operation according to the index.

2.1 Parking fees exemptions

- a) aircraft in the exclusive services for the Portuguese Republic or the People's Republic of China;
- b) aircraft in official missions or under special agreements or on a reciprocity basis;
- c) aircraft in humanitarian or search and rescue operations;
- d) aircraft that due to technical, meteorological or similar contingency cases and forced to return to the airport, the reason for returning to the airport may justify the exemption of parking time;
- e) aircraft whose finality of the operation may justify the exemption of the parking time.

3 Passenger fee:

For each passenger, older than 2 years of age, boarded to any destination	MOP 110
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3.1 Passenger fee exemptions

- a) Infants under 2 years of age;
- b) Passengers in direct transit, i.e. those who will proceed on the same aircraft or in another aircraft under the same flight number, with or without going through customs and immigration control;
- c) Passengers of aircraft landing in cases of forced return to the airport due to technical deficiencies, weather conditions or other force majeure reasons, duly proved;
- d) Passengers holding diplomatic passport;
- e) Passengers holding a travel document issued by the People's Republic of China to:
 - Government officials at the level of vice-minister or above;
 - Director and sub-directors of the Liaison Office of the People's Central Government at the Macao Special Administrative Region;
 - Commissioner and adjunct-commissioner of the Foreign Affairs Ministry of the People's Republic of China at the Macao Special Administrative Region;
 - Commander, political commissioner and vice-commander of the People's Liberation Army Macau Garrison;
- f) Aircraft using the airport for purposes that might justify the exemption, when approved by the concessionaire on a case-by-case basis.
- g) Transfer passengers, including:
 - i. Passengers arriving at the airport by aircraft with a particular flight number and depart on the same aircraft or another, but with a different flight number and without completion of border formalities;
 - ii. Passengers continue their journey by air with less than 48 hours after its landing on Macau International Airport, with or without completion of border formalities;
 - iii. Passengers arriving at the airport using the "Express Link" service provided by Macau International Airport and leave on aircraft without completion of border formalities.

4 Maximum refueling fee (in MOP): 0.10 per gallon

5 Security fee (in MOP):

For each passenger, older than 2 years of age, boarded to any destination	MOP 30
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5.1 Security fee exemptions

- a) Infants under 2 years of age;
- b) Passengers in direct transit, i.e. those who will proceed on the same aircraft or in another aircraft under the same flight number, with or without going through customs and immigration control;
- c) Passengers of aircraft landing in cases of forced return to the airport due to technical deficiencies, weather conditions or other force majeure reasons, duly proved;

6 Currencies exchange rates:

- a) Hong Kong and Macau

1 HKD = 1.03 MOP

- b) United States of America and Macau

1 USD = 8.01 MOP*

*With along the year oscillations which do not go beyond $\pm 1\%$

GEN 4.2 AIR NAVIGATION SERVICES CHARGES

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