

## **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:

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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](mailto:aacm@aacm.gov.mo)  
Homepage: [www.aacm.gov.mo](http://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](mailto:meteo@smg.gov.mo)  
Homepage: [www.smg.gov.mo](http://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  
Macao International Airport  
PAC ON, Taipa  
Macao, China  
AFTN Address: VMMCYMYX

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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](mailto:info@customs.gov.mo)

Homepage: [www.customs.gov.mo](http://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](mailto:sminfo@fsm.gov.mo)

Homepage: [www.fsm.gov.mo](http://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](mailto:info@ssm.gov.mo)

Homepage: [www.ssm.gov.mo](http://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 Inspeção 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 the Macao SAR or fly through the Macao Aerodrome Traffic Zone (ATZ) shall comply with the requirements of any law or instruction having the force of law, that are in force at that time, relating to air navigation and air transport.
- 1.2 Air operators and their handling agents should direct all applications for flight authorizations concerning the operation of scheduled and non-scheduled (including general aviation) flights to and from the Macao SAR, including additional flights and schedule changes, or flying through the Macao ATZ, 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** - Air operators or handling agents can submit flight authorization 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)

E-mail: [flightauthorization@aacm.gov.mo](mailto: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](mailto:mfmslot@macau-airport.com)

Tel number: 853-28861111 extension 2504 or

853-88982159

E-Application Platform

<https://eforms.macau-airport.com/eform/index.php/home/slotCommercial>

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

**2. Compulsory third party insurance**

- 2.1 In accordance with the Administrative Regulation no.11/2004 and Administrative Regulation 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 the Macao SAR, or fly through the Macao ATZ. However, this does not apply to an aircraft in emergency.
- 2.3 Air operators are reminded that documentary proof is required from the insurance company concerned. It is incumbent on the air operator/handling agent that material available to the Civil Aviation Authority is current. Further, air 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 are available online at the Civil Aviation Authority website.

### **3. Scheduled air services**

#### **3.1 General**

- 3.1.1 The Macao aviation laws and regulations require that scheduled air services to and from the Macao SAR by any aircraft shall be operated under and in accordance with the provisions of a flight authorization, which is granted by the President of the Civil Aviation Authority.

#### **3.2 Application**

- 3.2.1 An application for flight authorization must be submitted to the President of Civil Aviation Authority at least 13 working days before the anticipated commencement date of the scheduled air services.
- 3.2.2 The information and documents required for the application of a flight authorization are available online at:  
<https://www.aacm.gov.mo/en/industry-page/FlightApplication/ScheduledAirServices>
- 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 flight authorization being granted, the operators/handling agents shall 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 air operators to cover entry and departure of their aircraft to and from the Macao SAR. 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            | -                  | -         |
| <b>Total</b>           | <b>2</b>       | <b>3</b>     | <b>1</b>           | <b>1</b>  |

\* 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            | -                  | -         |
| <b>Total</b>           | <b>2</b>       | <b>3</b>     | <b>-</b>           | <b>1</b>  |

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

**Note 2:** In addition to the requirements listed in paragraphs 3.3.2 and 3.3.3, 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 aircraft utilizing the air space under the Macao SAR jurisdiction (Aerodrome Traffic Zone (ATZ)) or any aerodrome in the Macao SAR for the provision of non-scheduled air services must obtain a flight authorization from the President of the Civil Aviation Authority.

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

4.1.3 Air operators who propose to operate series of non-scheduled flights are advised to communicate with the Civil Aviation Authority well in advance of the flights taking place to secure authorization.

## 4.2 Application

4.2.1 An application for flight authorization 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 flight authorization for non-scheduled air services are available online at <https://www.aacm.gov.mo/en/industry-page/FlightApplication/Non-ScheduledAirServices>

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 For series of non-scheduled flights, the period of the flight authorization will normally not exceed one month.

4.2.6 After flight 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, 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 the 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. In the case of applications made by air operators based outside of Macao, this air operator will be granted treatment no less favourable than that afforded to Macao based airlines submitting similar applications in the state of the operator.

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

4.3.3 Authorizations 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.

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**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.

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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.

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**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)<br><br>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” <sup>(1)</sup>                                                                                                                                                                                                                               | 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” <sup>(2)</sup>                                                                                                                                                                                                                                                                                                                     | 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) <sup>(2)</sup> | 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 <sup>(2)</sup>                                                    | Until the expiry date of the extended Authorization to Stay (with multiple entries) |
| 18. | Holders of a “Special Stay Permit” <sup>(2)</sup>                                                                                                                                     | 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.

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**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.

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**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:

- a) general permission for carriage of dangerous goods in aircraft,
- b) 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.

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**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<br>(Except Article 12, Article 13, no.1<br>of Article 32, Article 34, and<br>Article 35) | Establishes the Civil Aviation Authority                                                                                                                                                                                                                                 |
| Decree Law n. 52/94/M-7<br>November                                                                                      | Establishes the legal system governing the<br>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-<br>scheduled flights in Macau International Airport                                                                                                                                                                      |
| Portaria n. 233/95/M-14 August                                                                                           | Defines the surrounding areas of the Macau<br>International Airport which are restricted by the<br>aeronautical restrictions                                                                                                                                             |
| Portaria n. 282/96/M-11 November                                                                                         | Updates the Macau International Airport charges                                                                                                                                                                                                                          |
| Decree Law n. 66/96/M-18<br>November                                                                                     | Rules the baggages and other objects abandoned in<br>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<br>31/2003                                                                                | Administrative regulation regarding administrative<br>infractions committed on board civil aircraft                                                                                                                                                                      |
| Regulamento Administrativo n.º<br>11/2004                                                                                | Rules the liability limits of the operators of aircraft <ul style="list-style-type: none"> <li>a) Registered in the Macao SAR,</li> <li>b) Using Macao's civil aviation infrastructures<br/>or</li> <li>c) Using the air space assigned to the Macao<br/>SAR.</li> </ul> |
| 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                                                                                                    |
| 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                                                                                                                      |
| Despacho of Secretary for Transport and Public Works no. 16/2026 | 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                                                   | Civil Aviation Activity Law                                                                                                                                          |
| Despacho of Chief Executive no. 157/2025                         | Defines the amount of guarantee referred to in Article 44 of the Civil aviation activity law                                                                         |
| Despacho of Chief Executive no. 158/2025                         | Defines the issuance and renewal fee of commercial air passenger transport activity licence as well as the annual activity fee                                       |
| Despacho of Chief Executive no. 159/2025                         | Defines the minimum company capital of commercial air transport operators                                                                                            |
| Despacho of Chief Executive no. 281/2025                         | Approves the format of AACM inspector identification card                                                                                                            |
| Despacho of Secretary for Transport and Public Works no. 56/2025 | Approves the format of licences and certificates                                                                                                                     |
| Despacho of Secretary for Transport and Public Works no. 57/2025 | Approves the format of licences and similar documents                                                                                                                |

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

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

**TABLE 1.6.1**  
**Air Navigation Order**

| <b>Provision for Notification</b> | <b>Notification</b>                                                                                                              |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                 |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                                                                           | watch are notified in the AD Section.                                                                        |
| 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 the Civil Aviation Authority – Macao, China, pursuant to number 1 of article 7 and in exercise of the competence conferred by item 1) of article 10, both of Law no. 4/2025 (Civil aviation activity law), 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 | R03     | 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 | R06     | 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/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 | R04     | Air Traffic Service Manual Requirements            |
| AC/ATS/005 | R05     | Air Traffic Control Approval Requirements          |
| AC/ATS/006 | R09     | 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/038 | R00 | Aircraft Maintenance Programme                                                                                                                                                                                                                                                    |

**3.5 Flight Operations**

| <b>Number</b> | <b>Version</b> | <b>Subject</b>                                                                              |
|---------------|----------------|---------------------------------------------------------------------------------------------|
| 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    | R03            | 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    | R02            | Aircraft Loading Requirements                                                               |
| AC/OPS/031    | R01            | Low Visibility Operations                                                                   |
| AC/OPS/032    | R00            | Use of Portable Electronic Devices                                                          |
| AC/OPS/034    | R01            | Flight Data Analysis Programme                                                              |
| 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 | R03     | 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 | R01     | 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                                    |

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|            |     |                                                                                                         |
|------------|-----|---------------------------------------------------------------------------------------------------------|
| 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 (13<sup>th</sup> Edition, Amendment 176)

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1.1.1    | <p>Following Pilot Licenses are not issued in Macao:</p> <p>Private Pilot License (Airship, Powered-lift)<br/> Commercial Pilot License (Airship, Powered-lift)<br/> Airline Transport Pilot License (Powered-lift)<br/> Multi-crew Pilot License<br/> Glider Pilot License<br/> Free Balloon Pilot License</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2.3.1.1    | The applicant for a Private Pilot License – Aeroplane or Private Pilot License - Helicopter shall be not less than 18 years of age.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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> <p>i) he/she shall not, unless his/her license includes an instrument rating, fly such an aircraft on any scheduled journey;</p> <p>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</p> <p>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;</p> |
| 3.2.1.1    | The applicant for a Flight Navigator License shall be not less than 21 years of age.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3.3.1.1    | The applicant for a Flight Engineer License shall be not less than 21 years of age.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3.4        | There are specific regulations relating to the Flight Radiotelephone Operator License.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                      |                                                                                        |
|--------------------------------------|----------------------------------------------------------------------------------------|
| 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 (10<sup>th</sup> Edition, Amendment 48)**

|     |                                                                                                                                                                                                                                                                                |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.6 | <p>Within Macao ATZ:</p> <p>a) Minimum height over congested area is 1500ft.</p> <p>b) Aircraft must maintain a minimum distance of 500 ft from persons, vessels, vehicles and structures.</p> <p>The minimum heights apply to all flights whether under both VFR and IFR.</p> |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**DOC4444 - Procedures for Air Navigation Services – Air Traffic Management (16<sup>th</sup> Edition, Amendment 12)**

NIL.

**3. Annex 3 - Meteorological Service for International Air Navigation (20<sup>th</sup> Edition, Amendment 82)**

NIL.

**4. Annex 4 - Aeronautical Charts (11<sup>th</sup> Edition, Amendment 62)**

NIL.

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

NIL.

**6. Annex 6 - Operation of Aircraft**

**6.1 Part I - International Commercial Air Transport - Aeroplanes) (12<sup>th</sup> Edition, Amendment 50)**

|         |                                                                                             |
|---------|---------------------------------------------------------------------------------------------|
| 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 (11<sup>th</sup> Edition, Amendment 42)**  
NIL.

**6.3 Part III - International Operations - Helicopters (11<sup>th</sup> Edition, Amendment 26)**  
NIL.

**7. Annex 7 - Aircraft Nationality and Registration Marks (6<sup>th</sup> Edition, Amendment 7)**  
NIL.

**8. Annex 8 - Airworthiness of Aircraft (12<sup>th</sup> Edition, Amendment 107)**  
NIL.

**9. Annex 9 - Facilitation (15<sup>th</sup> 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". |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**10. Annex 10 - Aeronautical Telecommunications**

**10.1 Volume I - Radio Navigation Aids (7<sup>th</sup> Edition, Amendment 94)**

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 (7<sup>th</sup> Edition, Amendment 94)**

NIL.

**10.3 Volume III - Communications Systems (2<sup>nd</sup> Edition, Amendment 93)**

NIL.

**10.4 Volume IV - Surveillance Radar and Collision Avoidance Systems (5<sup>th</sup> Edition, Amendment 91)**

NIL.

**10.5 Volume V - Aeronautical Radio Frequency Spectrum Utilization (3<sup>rd</sup> Edition, Amendment 91)**

NIL.

**11. Annex 11 - Air Traffic Services (15<sup>th</sup> Edition, Amendment 52)**

NIL.

**12. Annex 12 - Search and Rescue (8<sup>th</sup> Edition, Amendment 18)**

NIL.

**13. Annex 13 - Aircraft Accident Investigation (12<sup>th</sup> 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. |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**14. Annex 14 – Aerodromes**

**14.1 Volume I - Aerodrome Design and Operations (7<sup>th</sup> 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 (5<sup>th</sup> 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 (16<sup>th</sup> Edition, Amendment 44)**

NIL.

**16. Annex 16 - Environmental Protection**

**16.1 Volume I - Aircraft Noise (8<sup>th</sup> 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 (5<sup>th</sup> Edition, Amendment 11)**

NIL.

**16.3 Volume III - Aeroplane CO<sub>2</sub> Emissions (1<sup>st</sup> Edition, Amendment 2)**

NIL.

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

|       |                                                                                                    |
|-------|----------------------------------------------------------------------------------------------------|
| 3.5.2 | Background check is not applied to persons with access to sensitive aviation security information. |
|-------|----------------------------------------------------------------------------------------------------|

**18. Annex 18 - The Safe Transport of Dangerous Goods by Air (4<sup>th</sup> Edition, Amendment 12)**

NIL.

**19. Annex 19 - Safety Management (2<sup>nd</sup> 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.

| <b>Quantity</b>                                                                                                 | <b>Unit of Measurement</b>                                                  |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 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:<br>1 nautical mile = 1852 metres. |                                                                             |

**2. Temporal reference 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:

|          |                                                                                          |         |                                                                                                       |
|----------|------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------|
| <b>A</b> |                                                                                          | ALTN    | Alternate (aerodrome)                                                                                 |
| A        | Amber                                                                                    | AMA     | Area minimum altitude                                                                                 |
| AAA      | (or AAB, AAC etc., in sequence) Amended meteorological message (message type designator) | AMD     | Amend or amended ( <i>used to indicate amended meteorological message ; message type designator</i> ) |
| A/A      | Air-to-air                                                                               | AMS     | Aeronautical mobile service                                                                           |
| AAL      | Above aerodrome level                                                                    | AMSL    | Above mean sea level                                                                                  |
| ABM      | Abeam                                                                                    | ANS     | Answer                                                                                                |
| ABN      | Aerodrome beacon                                                                         | AOC     | Aerodrome obstacle chart                                                                              |
| ABT      | About                                                                                    | AP      | Airpot                                                                                                |
| AC       | Altocumulus                                                                              | APCH    | Approach                                                                                              |
| ACC ‡    | Area control centre or area control                                                      | APP     | Approach control office or approach control or approach control service                               |
| ACCID    | Notification of an aircraft accident                                                     | APR     | April                                                                                                 |
| ACFT     | Aircraft                                                                                 | APRX    | Approximate or approximately                                                                          |
| ACK      | Acknowledge                                                                              | APSG    | After passing                                                                                         |
| ACL      | Altimeter check location                                                                 | APV     | Approve or approved or approval                                                                       |
| ACN      | Aircraft classification number                                                           | ARFOR   | Area forecast ( <i>in aeronautical meteorological code</i> )                                          |
| ACP      | Acceptance (message type designator)                                                     | ARNG    | Arrange                                                                                               |
| ACPT     | Accept or accepted                                                                       | ARO     | Air traffic services reporting office                                                                 |
| ACT      | Active or activated or activity                                                          | ARP     | Aerodrome reference point                                                                             |
| AD       | Aerodrome                                                                                | ARP     | Air-report (message type designator)                                                                  |
| ADA      | Advisory area                                                                            | ARQ     | Automatic error correction                                                                            |
| ADDN     | Addition or additional                                                                   | ARR     | Arrive or arrival                                                                                     |
| ADF ‡    | Automatic direction-finding equipment                                                    | ARR     | Arrival (message type designator)                                                                     |
| ADIZ †   | (to be pronounced "AY-DIZ) Air defence identification zone                               | ARS     | Special air-report (message type designator)                                                          |
| ADJ      | Adjacent                                                                                 | ARST    | Arresting [ <i>specify (part of) aircraft arresting equipment</i> ]                                   |
| ADR      | Advisory route                                                                           | AS      | Altostratus                                                                                           |
| ADZ      | Advise                                                                                   | ASC     | Ascent to or ascending to                                                                             |
| AFIL     | Flight plan filed in the air                                                             | ASDA    | Accelerate - stop distance available                                                                  |
| AFIS     | Aerodrome flight information service                                                     | ASPH    | Asphalt                                                                                               |
| AFM      | Yes or affirm or affirmative or that is correct                                          | ATA ‡   | Actual time of arrival                                                                                |
| AFS      | Aeronautical fixed service                                                               | ATC ‡   | Air traffic control ( <i>in general</i> )                                                             |
| AFT      | After .... ( <i>time or place</i> )                                                      | ATD ‡   | Actual time of departure                                                                              |
| AFTN ‡   | Aeronautical fixed telecommunication network                                             | ATIS ‡  | Automatic terminal information service                                                                |
| A/G      | Air-to-ground                                                                            | ATP     | At .... ( <i>time or place</i> )                                                                      |
| AGA      | Aerodromes, air routes and ground aids                                                   | ATS     | Air traffic services                                                                                  |
| AGL      | Above ground level                                                                       | ATTN    | Attention                                                                                             |
| AGN      | Again                                                                                    | ATZ     | Aerodrome traffic zone                                                                                |
| AIC      | Aeronautical information circular                                                        | AUG     | August                                                                                                |
| AIP      | Aeronautical information publication                                                     | AUTH    | Authorized or authorization                                                                           |
| AIRAC    | Aeronautical information regulation and control                                          | AUW     | All up weight                                                                                         |
| AIREP †  | Air-report                                                                               | AUX     | Auxiliary                                                                                             |
| AIS      | Aeronautical information services                                                        | AVASIS  | Abbreviated visual approach slope indicator system                                                    |
| ALA      | Lighting area                                                                            | AVBL    | Available or availability                                                                             |
| ALERFA † | Alert phase                                                                              | AVG     | Average                                                                                               |
| ALR      | Alerting (message type designator)                                                       | AVGAS † | Aviation gasoline                                                                                     |
| ALS      | Approach lighting system                                                                 | AWY     | Airway                                                                                                |
| ALT      | Altitude                                                                                 | AZM     | Azimuth                                                                                               |
| ALTN     | Alternate or alternating ( <i>light alternates in colour</i> )                           |         |                                                                                                       |

† 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.

## B

|        |                                                                           |
|--------|---------------------------------------------------------------------------|
| B      | Blue                                                                      |
| BA     | Braking action                                                            |
| BASE † | Cloud base                                                                |
| BCFG   | Fog patches                                                               |
| BCN    | Beacon ( <i>aeronautical ground light</i> )                               |
| BCST   | Broadcast                                                                 |
| BDRY   | Boundary                                                                  |
| BFR    | Before                                                                    |
| BKN    | Broken                                                                    |
| BLDG   | Building                                                                  |
| BLO    | Below clouds                                                              |
| BLSN   | Blowing snow                                                              |
| BLW    | Below                                                                     |
| BOMB   | Bombing                                                                   |
| BR     | Mist                                                                      |
| BRF    | Shor ( <i>used to indicate the type of approach desired or required</i> ) |
| BRG    | Bearing                                                                   |
| BRKG   | Braking                                                                   |
| BS     | Commercial broadcasting station                                           |
| BTL    | Between layers                                                            |
| BTN    | Between                                                                   |

## C

|         |                                                                                                                            |
|---------|----------------------------------------------------------------------------------------------------------------------------|
| C       | Centre ( <i>runway identification</i> )                                                                                    |
| C       | Degrees Celsius ( <i>Centigrade</i> )                                                                                      |
| CAT     | Category                                                                                                                   |
| CAT     | Clear air turbulence                                                                                                       |
| CAVOK † | ( <i>to be pronounced "KAV-OH-KAY"</i> ) Visibility, cloud and present weather better than prescribed values or conditions |
| CB ‡    | ( <i>to be pronounced "CEE BEE"</i> ) Cumulonimbus                                                                         |
| CC      | Cirrocumulus                                                                                                               |
| CCA     | ( <i>or CCB, CCC.... etc., in sequence</i> ) Corrected meteorological message ( <i>message type designator</i> )           |
| CD      | Candela                                                                                                                    |
| CDN     | Co-ordination ( <i>message type designator</i> )                                                                           |
| CF      | Change frequency to...                                                                                                     |
| CGL     | Circling guidance light(s)                                                                                                 |
| CH      | Channel                                                                                                                    |
| CHG     | Modification ( <i>message type designator</i> )                                                                            |
| CI      | Cirrus                                                                                                                     |
| CIT     | Near or over large towns                                                                                                   |
| CIV     | Civil                                                                                                                      |
| CK      | Check                                                                                                                      |
| CL      | Centre line                                                                                                                |
| CLA     | Clear type of ice formation                                                                                                |
| CLBR    | Calibration                                                                                                                |
| CLD     | Cloud                                                                                                                      |
| CLG     | Calling                                                                                                                    |
| CLR     | Clear(s) or cleared to ... or clearance                                                                                    |
| CLSD    | Close or closed or closing                                                                                                 |
| CM      | Centimetre                                                                                                                 |
| CMB     | Climb                                                                                                                      |
| CMPL    | Completion or completed or complete                                                                                        |
| CNL     | Cancel or cancelled                                                                                                        |

|       |                                                                                                                           |
|-------|---------------------------------------------------------------------------------------------------------------------------|
| CNL   | Flight plan cancellation ( <i>message type designator</i> )                                                               |
| CNS   | Continuous                                                                                                                |
| COM   | Communications                                                                                                            |
| CONC  | Concrete                                                                                                                  |
| COND  | Condition                                                                                                                 |
| CONST | Construction or constructed                                                                                               |
| CONT  | Continue or continued                                                                                                     |
| COOR  | Co-ordinate or co-ordination                                                                                              |
| COP   | Change-over point                                                                                                         |
| COR   | Correct or correction or corrected ( <i>used to indicate corrected meteorological message ; message type designator</i> ) |
| COT   | At the coast                                                                                                              |
| COV   | Cover or covered or covering                                                                                              |
| CPL   | Current flight plan ( <i>message type designator</i> )                                                                    |
| CRZ   | Cruise                                                                                                                    |
| CS    | Cirrostratus                                                                                                              |
| CTA   | Control area                                                                                                              |
| CTAM  | Climb to and maintain                                                                                                     |
| CTC   | Contact                                                                                                                   |
| CTL   | Control                                                                                                                   |
| CTN   | Caution                                                                                                                   |
| CTR   | Control zone                                                                                                              |
| CU    | Cumulus                                                                                                                   |
| CUF   | Cumuliform                                                                                                                |
| CUST  | Customs                                                                                                                   |
| CW    | Continuous wave                                                                                                           |
| CWY   | Clearway                                                                                                                  |

## D

|            |                                                                              |
|------------|------------------------------------------------------------------------------|
| D          | Danger area ( <i>followed by identification</i> )                            |
| DA         | Decision altitude                                                            |
| DCD        | Double channel duplex                                                        |
| DCKG       | Docking                                                                      |
| DCS        | Double channel simplex                                                       |
| DCT        | Direct ( <i>in relation to flight plan clearances and type of approach</i> ) |
| DEC        | December                                                                     |
| DEG        | Degrees                                                                      |
| DENEB      | Fog dispersal operations                                                     |
| DEP        | Depart or departure                                                          |
| DEP        | Departure ( <i>message type designator</i> )                                 |
| DES        | Descend to or descending to                                                  |
| DEST       | Destination                                                                  |
| DETRESFA † | Distress phase                                                               |
| DEV        | Deviation or deviating                                                       |
| DFTI       | Distance from touchdown indicator                                            |
| DH         | Decision height                                                              |
| DIF        | Diffuse                                                                      |
| DIST       | Distance                                                                     |
| DIV        | Divert or diverting                                                          |
| DLA        | Delay ( <i>message type designator</i> )                                     |
| DLA        | Delay or delayed                                                             |
| DME ‡      | Distance measuring equipment                                                 |
| DNG        | Danger or dangerous                                                          |
| DOM        | Domestic                                                                     |

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|      |                              |
|------|------------------------------|
| DP   | Dew point temperature        |
| DPT  | Depth                        |
| DR   | Dead reckoning               |
| DRG  | During                       |
| DRSN | Low drifting snow            |
| DSB  | Double sideband              |
| DTAM | Descend to and maintain      |
| DTG  | Date-time group              |
| DTRT | Deteriorate or deteriorating |
| DTW  | Dual tandem wheels           |
| DUC  | Dense upper cloud            |
| DUR  | Duration                     |
| DVOR | Doppler VOR                  |
| DW   | Dual wheels                  |
| DZ   | Drizzle                      |

**E**

|        |                                                                                                                 |
|--------|-----------------------------------------------------------------------------------------------------------------|
| E      | East or eastern longitude                                                                                       |
| EAT    | Excepted approach time                                                                                          |
| EB     | Eastbound                                                                                                       |
| EET    | Estimated elapsed time                                                                                          |
| eFPL   | Filed flight plan exchanged via flight and flow – information for a collaborative environment (FF-ICE) services |
| 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 exercises 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 exchanged via aeronautical<br>Fixed service (AFS)       |
| 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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\* Abbreviation is also available for use in communicating with stations of the maritime mobile service.

GRVL Gravel  
GS Ground speed

## H

H24 Continuous day and night service  
HBN Hazard beacon  
HDF High frequency direction-finding station  
HDG Heading  
HEL Helicopter  
HF ‡ High frequency [ 3 000 to 30 000 kHz]  
HGT Height *or* height above  
HJ Sunrise to sunset  
HLDG Holding  
HN Sunset to sunrise  
HO Service available to meet operational requirements  
HOL Holiday  
HOSP Hospital aircraft  
HPA Hectopascal  
HR Hours  
HS Service available during hours of scheduled operations  
HURCN Hurricane  
HVDF High and very high frequency direction-finding stations (*at the same location*)  
HVY Heavy  
HX No specific working hours  
HYR Higher  
HZ Dust haze  
HZ Hertz (*cycle per second*)

## 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 † Incertainty phase  
INFO † Information

INOP Inoperative  
INP If not possible  
INPR In progress  
INS Inches (*dimensional unit*)  
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 (*Runway identification*)  
L Locator (*see* LM, LO)  
LAM Logical acknowledgement (*message type designator*)  
LAN Inland  
LAT Latitude  
LB Pounds (*weight*)  
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 quality icing, turbulence, interference or static reports)</i>                                                                                                                                                    |
| LOC      | Local or locally or location or 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 or moving or movement                                                                                                                                                                                                             |
| LSQ      | Line squall                                                                                   | MPH      | Statute miles per hour                                                                                                                                                                                                                 |
| LTD      | Limited                                                                                       | MPS      | Metres per second                                                                                                                                                                                                                      |
| LTT      | Landline teletypewriter                                                                       | MRA      | Minimum reception altitude                                                                                                                                                                                                             |
| LV       | Light and variable <i>(relating to wind)</i>                                                  | MRG      | Medium range                                                                                                                                                                                                                           |
| LVE      | Leave or leaving                                                                              | MRP      | ATS/MET reporting point                                                                                                                                                                                                                |
| LVL      | Level                                                                                         | MS       | Minus                                                                                                                                                                                                                                  |
| LYR      | Layer or layered                                                                              | MSA      | Minimum sector altitude                                                                                                                                                                                                                |
| <b>M</b> |                                                                                               | MSG      | Message                                                                                                                                                                                                                                |
| M        | Mach number <i>(followed by figures)</i>                                                      | MSL      | Mean sea level                                                                                                                                                                                                                         |
| M        | Metres <i>(preceded by figures)</i>                                                           | MT       | Mountain                                                                                                                                                                                                                               |
| MAA      | Maximum authorized altitude                                                                   | MTU      | Metric units                                                                                                                                                                                                                           |
| MAG      | Magnetic                                                                                      | MTW      | Mountain waves                                                                                                                                                                                                                         |
| MAINT    | Maintenance                                                                                   | MVDF     | Medium and very high frequency direction-finding stations <i>(at the same location)</i>                                                                                                                                                |
| MAP      | Aeronautical maps and charts                                                                  | MWO      | Meteorological watch office                                                                                                                                                                                                            |
| MATP     | Missed approach point                                                                         | MX       | Mixed type of ice formation <i>(white and clear)</i>                                                                                                                                                                                   |
| MAR      | At sea                                                                                        | <b>N</b> |                                                                                                                                                                                                                                        |
| MAR      | March                                                                                         | N        | North or northern latitude                                                                                                                                                                                                             |
| MAS      | Manual A1 simplex                                                                             | NAT      | North Atlantic                                                                                                                                                                                                                         |
| MAX      | Maximum                                                                                       | NAV      | Navigation                                                                                                                                                                                                                             |
| MAY      | May                                                                                           | NB       | Northbound                                                                                                                                                                                                                             |
| MCA      | Minimum crossing altitude                                                                     | NBFR     | Not before                                                                                                                                                                                                                             |
| MCW      | Modulated continuous wave                                                                     | NC       | No change                                                                                                                                                                                                                              |
| MDA      | Minimum descent altitude                                                                      | NDB ‡    | Non-directional radio beacon                                                                                                                                                                                                           |
| MDF      | Medium frequency direction-finding station                                                    | NE       | North-east                                                                                                                                                                                                                             |
| MDH      | Minimum descent height                                                                        | NEB      | North-eastbound                                                                                                                                                                                                                        |
| MEA      | Minimum en-route altitude                                                                     | NEG      | No or negative or permission not granted or that is not correct                                                                                                                                                                        |
| MEHT     | Minimum eye height over threshold <i>for visual approach slope indicator systems)</i>         | NGT      | Night                                                                                                                                                                                                                                  |
| MET †    | Meteorological or meteorology                                                                 | NIL* †   | None or I have nothing to send to you                                                                                                                                                                                                  |
| METAR †  | Aviation routine weather report <i>(in aeronautical meteorological code)</i>                  | NM       | Nautical miles                                                                                                                                                                                                                         |
| MF       | Medium frequency [300 to 3 000 kHz]                                                           | NML      | Normal                                                                                                                                                                                                                                 |
| MHDF     | Medium and high frequency direction-finding stations <i>(at the same location)</i>            | NNE      | North north east                                                                                                                                                                                                                       |
| MHVDF    | Medium, high and very high frequency direction-finding stations <i>(at the same location)</i> | NNW      | North north west                                                                                                                                                                                                                       |
| MHZ      | Megahertz                                                                                     | NOF      | International NOTAM office                                                                                                                                                                                                             |
| MID      | Mid-point <i>(related to RVR)</i>                                                             | NOSIG †  | No significant change <i>(used in trend-type landing forecasts)</i>                                                                                                                                                                    |
| MIFG     | Shallow fog                                                                                   | 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 |
| MIL      | Military                                                                                      | NOV      | November                                                                                                                                                                                                                               |
| MIN*     | Minutes                                                                                       | NR       | Number                                                                                                                                                                                                                                 |
| MKR      | Marker radio beacon                                                                           | NRH      | No reply heard                                                                                                                                                                                                                         |
| MLS ‡    | Microwave landing system                                                                      | NS       | Nimbostratus                                                                                                                                                                                                                           |
| MM       | Middle marker                                                                                 | NSC      | Nil significant cloud                                                                                                                                                                                                                  |
| MNM      | Minimum                                                                                       | NW       | North-west                                                                                                                                                                                                                             |
| MNPS     | Minimum navigation performance specifications                                                 |          |                                                                                                                                                                                                                                        |
| MNT      | Monitor or monitoring or monitored                                                            |          |                                                                                                                                                                                                                                        |
| MNTN     | Maintain                                                                                      |          |                                                                                                                                                                                                                                        |

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NWB North-westbound  
NXT Next

## O

OAC Oceanic area control centre  
OAS Obstacle assessment surface  
OBS Observe *or* observed *or* observation  
OBSC Obscure *or* obscured *or* obscuring  
OBST Obstacle  
OCA Obstacle clearance altitude  
OCA Oceanic control area  
OCC Occulting (*light*)  
OCH Obstacle clearance height  
OCL Obstacle clearance limit  
OCNL Occasional *or* 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 (*information*)  
OPN Open *or* opening *or* opened  
OPR Operator *or* operate *or* operative *or* operating *or* 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 (*followed by identification*)  
PALS Precision approach lighting system (*specify category*)  
PANS Procedures for air navigation services  
PAPI † Precision approach path indicator  
PAR ‡ Precision approach radar  
PARL Parallel  
PAX Passenger (s)  
PCD Proceed *or* proceeding  
PCN Pavement classification number  
PE Ice pellets  
PER Performance  
PERM Permanent  
PFP Preliminary flight plan  
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 (*zero wind*)  
QDR Magnetic bearing  
QFE ‡ Atmospheric pressure at aerodrome elevation (*or* at runway threshold)  
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 (*followed by identification*)  
R Right (*runway identification*)  
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 *or* rapidly  
RASH Rain showers  
RASN Rain and snow *or* showers of rain and snow  
RB Rescue boat  
RCA Reach cruising altitude  
RCC Rescue co-ordination centre  
RCF Radiocommunication failure (*message type designator*)  
RCH Reach *or* reaching  
RCL Runway centre line  
RCLL Runway centre line light(s) RDH  
Reference datum height (*for ILS*)  
RDL Radial  
RDO Radio  
RE Recent (*used to qualify weather phenomena such as rain, e.g. recent rain = RERA*)  
REC Receive *or* 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 †  | (to be pronounced “AR-NAV”) 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     | (or RRB, RRC ... etc., in sequence) 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                                                                                                 |           |                                                                                                                                                                                                                                                                          |
| RTF     | Radiotelephone                                                                                        | SNSH      | Snow showers                                                                                                                                                                                                                                                             |
| RTG     | Radiotelegraph                                                                                        | SPECI †   | Aviation selected special weather report ( <i>in aeronautical meteorological code</i> )                                                                                                                                                                                  |
| RTHL    | Runway threshold light(s)                                                                             | SPECIAL † | Special meteorological report ( <i>in abbreviated plain language</i> )                                                                                                                                                                                                   |
| RTN     | Return or returned or returning                                                                       | SPL       | Supplementary flight plan ( <i>message type designator</i> )                                                                                                                                                                                                             |
| RTS     | Return to service                                                                                     | SPOT †    | Spot wind                                                                                                                                                                                                                                                                |
| RTT     | Radioteletypewriter                                                                                   | SQ        | Squall                                                                                                                                                                                                                                                                   |
| RTZL    | Runway touchdown zone light(s)                                                                        | SR        | Sunrise                                                                                                                                                                                                                                                                  |
| RUT     | Standard regional route transmitting frequencies                                                      | SRA       | Surveillance radar approach                                                                                                                                                                                                                                              |
| RV      | Rescue vessel                                                                                         | SRE       | Surveillance radar element of precision approach radar system                                                                                                                                                                                                            |
| RVR ‡   | Runway visual range                                                                                   | SRG       | Short range                                                                                                                                                                                                                                                              |
| RWY     | Runway                                                                                                | SRR       | Search and rescue region                                                                                                                                                                                                                                                 |
|         |                                                                                                       | SRY       | Secondary                                                                                                                                                                                                                                                                |
|         |                                                                                                       | SS        | Sunset                                                                                                                                                                                                                                                                   |
|         |                                                                                                       | SSB       | Single sideband                                                                                                                                                                                                                                                          |
|         |                                                                                                       | SSE       | South south east                                                                                                                                                                                                                                                         |
|         |                                                                                                       | SSR ‡     | Secondary surveillance radar                                                                                                                                                                                                                                             |
| 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                                                                                   |           |                                                                                                                                                                                                                                                                          |

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|        |                                   |
|--------|-----------------------------------|
| SST    | Supersonic transport              |
| SSW    | South south west                  |
| ST     | Stratus                           |
| STA    | Straight in approach              |
| STAR † | Standard instrument arrival       |
| STD    | Standard                          |
| STF    | Stratiform                        |
| STN    | Station                           |
| STNR   | Stationary                        |
| STOL   | Short take-off and landing        |
| STS    | Status                            |
| STWL   | Stopway light(s)                  |
| SUBJ   | Subject to                        |
| SUN    | Sunday                            |
| SUPPS  | Regional supplementary procedures |
| SVC    | Service message                   |
| SVCBL  | Serviceable                       |
| 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. . . . ( <i>place</i> ) |
| TKOF    | Take off                           |
| TMA ‡   | Terminal control area              |
| TNA     | Turn altitude                      |
| TNH     | Turn height                        |
| TO      | To . . . . ( <i>place</i> )        |
| TOC     | Top of climb                       |
| TODA    | Take-off distance available        |
| TOP †   | Cloud top                          |
| TORA    | Take-off run available             |
| TP      | Turning point                      |

|       |                                                     |
|-------|-----------------------------------------------------|
| TR    | Track                                               |
| TRA   | Temporary reserved airspace                         |
| TRANS | Transmits <i>or</i> transmitter                     |
| TRLVL | Transition level                                    |
| TROP  | Tropopause                                          |
| TS    | Thunderstorm                                        |
| TSGR  | Thunderstorm with hail                              |
| TSSA  | Thunderstorm with duststorm <i>or</i> sandstorm     |
| TT    | Teletypewriter                                      |
| TUE   | Tuesday                                             |
| TURB  | Turbulence                                          |
| TVOR  | Terminal OVR                                        |
| TWR   | Aerodrome control tower <i>or</i> aerodrome control |
| TWY   | Taxiway                                             |
| TWYL  | Taxiway-link                                        |
| TYP   | Type of aircraft                                    |
| TYPH  | Typhoon                                             |

## 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   | Unservicable                                   |
| 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          |
| WTSPT | Waterspout      |
| WX    | Weather         |

**W**

|         |                                                  |
|---------|--------------------------------------------------|
| W       | West or western longitude                        |
| W       | Withe                                            |
| WAC     | World Aeronautical Chart - IACO 1:1 000 000      |
| W AFC   | 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                                      |
| WINTEN  | Forecast 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<br>Macau, China |
| AM    | Air Macau Company Ltd.                   |
| AOCC  | Airport Operation Coordination<br>Center |
| ATIRF | Air Traffic Incident Report Form         |

|     |                                        |
|-----|----------------------------------------|
| CAM | Macau International Airport<br>Company |
|-----|----------------------------------------|

|                 |                |
|-----------------|----------------|
| CO <sub>2</sub> | Carbon Dioxide |
|-----------------|----------------|

**F**

|     |                                                                        |
|-----|------------------------------------------------------------------------|
| FBU | Flight briefing unit (AIS<br>Aerodrome Unit)                           |
| FIU | Flight Information Unit (AIC,<br>METEO and Dispatch Office<br>Service) |

**L**

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

**M**

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

**B**

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

**H**

|     |                     |
|-----|---------------------|
| HKD | Hong Kong dollar(s) |
| HP  | Horse Power         |

**C**

|      |                                                          |
|------|----------------------------------------------------------|
| CAAC | The General Administration of<br>Civil Aviation of China |
| CAD  | Civil Aviation Department of<br>Hong Kong                |

**K**

|     |               |
|-----|---------------|
| KN  | Kilo Newton   |
| KVA | Kilo Volt Amp |

**P**

|      |                                 |
|------|---------------------------------|
| PARA | Paragraph                       |
| PIB  | Pre-flight Information Bulletin |

**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**

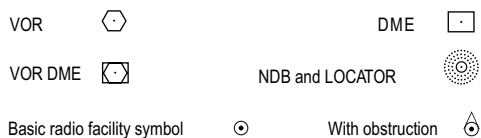
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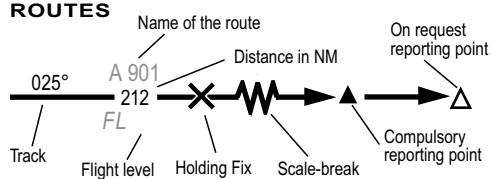
## GEN 2.3 CHART SYMBOLS

## GENERAL SYMBOLS

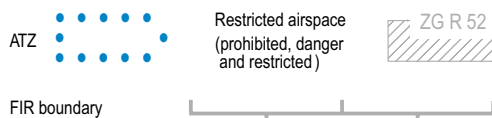
## RADIO NAVIGATION FACILITIES



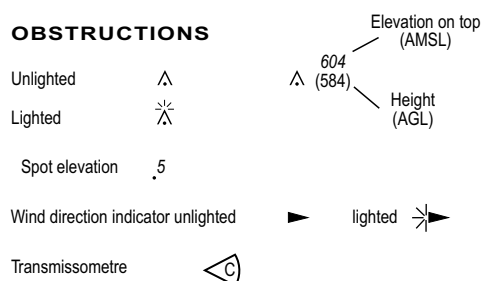
## ROUTES



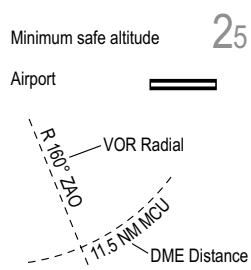
## AREAS



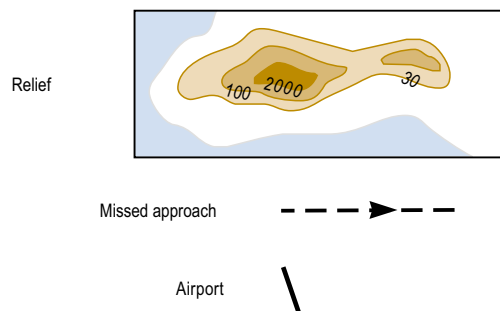
## OBSTRUCTIONS



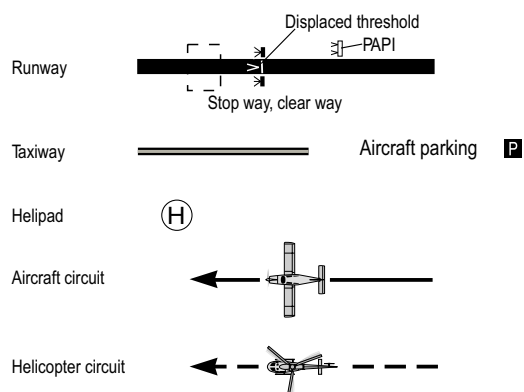
## AREA, STAR AND SID CHARTS



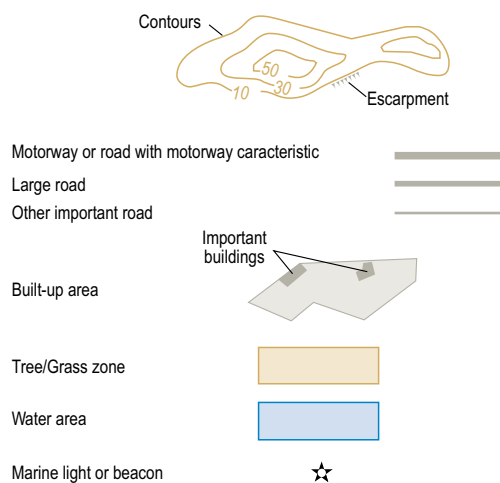
## INSTRUMENT APPROACH CHART



## VISUAL APPROACH AND LANDING CHART



## TOPOGRAPHY



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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<br>NM = 1.852 km |         | km to NM<br>1 km = 0.54 NM |        | ft to m<br>1 ft = 0.3048 m |          | m to ft<br>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<br>/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<br>/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  
Macao 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    |
| ANAUYNXX                | 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/D/E/G                                       | Belgium                                | X        | X    |
| EDDZYNYX                | Frankfurt      | A                                             | Germany                                | X        |      |
| EETNYNYX                | Tallinn        | A                                             | Estonia                                | X        |      |
| EFHKYNYX                | Helsinki       | A                                             | Finland                                | X        |      |
| EGGNYNYX                | UK             | A/B/I/L/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/P/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    |
| LIAYNYX                 | Rome           | A/E/W                                         | Italy                                  | X        | X    |
| LJLAYNYX                | Wien Ljubljana | A                                             | Slovenia                               | X        | X    |
| LKPRYNYX                | Praha          | A                                             | Czech Rep.                             | X        |      |
| LLADYNYX                | Tel Aviv       | A                                             | Israel                                 | X        | X    |
| LMMMNYNYX               | Malta          | A                                             | Malta                                  | X        | X    |
| LOWWYNYX                | Wien           | A                                             | Austria                                | X        | X    |
| LPPPYNYX                | Lisboa         | A                                             | Portugal                               | X        |      |
| LRBBYNYX                | Bucuresti      | A/B/C/D/F/M/P/R                               | Romania                                | X        | X    |
| LSSNYNYX                | Zurich         | A                                             | Switzerland                            | X        | X    |
| LTAAYNYX                | Ankara         | A/B/C/J                                       | 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/F/P                                         | New Zealand                            | X        | X    |
| OAKBYNYX                | Kabul          | D/G/P                                         | Afghanistan                            | X        |      |
| OBBDYNYX                | Bahrain        | A                                             | Bahrain                                | X        | X    |
| OEJDYNYX                | Jeddah         | A/W                                           | Saudi Arabia                           | X        | X    |
| OIIYNYX                 | 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    |
| OOMSINYX                | Muscat         | A                                             | Oman                                   | X        | X    |
| OPKCYNYX                | Karachi        | A                                             | Pakistan                               | X        | X    |
| OSDIYNYX                | Damascus       | A                                             | Syrian                                 | X        |      |
| OTNOYNYX                | Doha           | A                                             | Qatar                                  | X        | X    |
| RJAAINYX                | 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    |
| RPLLNYX                 | Manila         | B                                             | Phillipines                            | X        | X    |
| UAAKYNYX                | Almaty         | A/C/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    |
| URASYNYX                | Sukhum         | O                                             | Abkhazia                               | X        |      |
| UTDAYNYX                | Tajikistan     | A                                             | Tajikistan                             | X        | X    |
| UZTTYOYX                | Tashkent       | D                                             | Uzbekistan                             | X        | X    |

## Macao International NOTAM Office - NOTAM interchange (continue)

| ICAO Location Indicator | NOTAM Office | Rec. Series                           | Country     | Received | Send |
|-------------------------|--------------|---------------------------------------|-------------|----------|------|
| UUUUYNXX                | Moskva       | A/E/G/H/J/K/L/N/<br>O/P/Q/U/V/W/X/Y/Z | Russia      | X        | X    |
| VABBYNXX                | Bombay       | A                                     | India       | X        | X    |
| VCBIYNXX                | Colombo      | A                                     | Sri Lanka   | X        | X    |
| VDPPYNXX                | Phnom-Penh   | A/B                                   | Cambodia    | X        | X    |
| VECCYNXX                | Calcutta     | A                                     | India       | X        | X    |
| VGHSYNXX                | Dhaka        | A                                     | Bangladesh  | X        | X    |
| VHHHYNXX                | Hong Kong    | A                                     | Hong Kong   | X        | X    |
| VIDPYNXX                | New Delhi    | A/G                                   | India       | X        | X    |
| VLVTYNXX                | Vientiane    | A                                     | Laos        | X        | X    |
| VNKTYNXX                | Kathmandu    | A                                     | Nepal       | X        | X    |
| VOMMYNXX                | Madras       | A                                     | India       | X        | X    |
| VRMMYNXX                | Male         | A                                     | Maldives    | X        | X    |
| VTBDYNXX                | Bangkok      | A/G/H/J                               | Thailand    | X        | X    |
| VVVVYNXX                | Ho-Chi-Minh  | A/J                                   | Vietnam     | X        | X    |
| VYYYYNXX                | Yangon       | A/B                                   | Myanmar     | X        | X    |
| WBSBYNXX                | Brunei       | A                                     | Brunei      | X        | X    |
| WMKKYNXX                | Kuala Lumpur | A/D                                   | Malaysia    | X        | X    |
| WRRRYNXX                | Jakarta      | A/B                                   | Indonesia   | X        | X    |
| WSSSYNXX                | Singapore    | A                                     | Singapore   | X        | X    |
| YBBBYNXX                | Brisbane     | D/E/F/G/H/I/J/K/L/M/N                 | Australia   | X        | X    |
| ZBBBYNXX                | Beijing      | A/E/F/G/L/M/U/W/Y                     | China       | X        | X    |
| ZKKKYNXX                | Pyong Yang   | A                                     | North Korea | X        | X    |
| ZMUBYNXX                | 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)                        |         |              |                  |                      |
| Thailand     | Slovak Republic                        |         |              |                  |                      |
| Vietnam      | Slovene                                |         |              |                  |                      |
|              | 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**

| <b>Title of Series</b>                             | <b>Scale</b>                        | <b>Name / Number</b>                | <b>Date</b>                |
|----------------------------------------------------|-------------------------------------|-------------------------------------|----------------------------|
| 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<br>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<br>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

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**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  
Macao International Airport  
PAC ON Taipa  
Macao, China

AFTN Address : VMMCYNYX

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.

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**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.

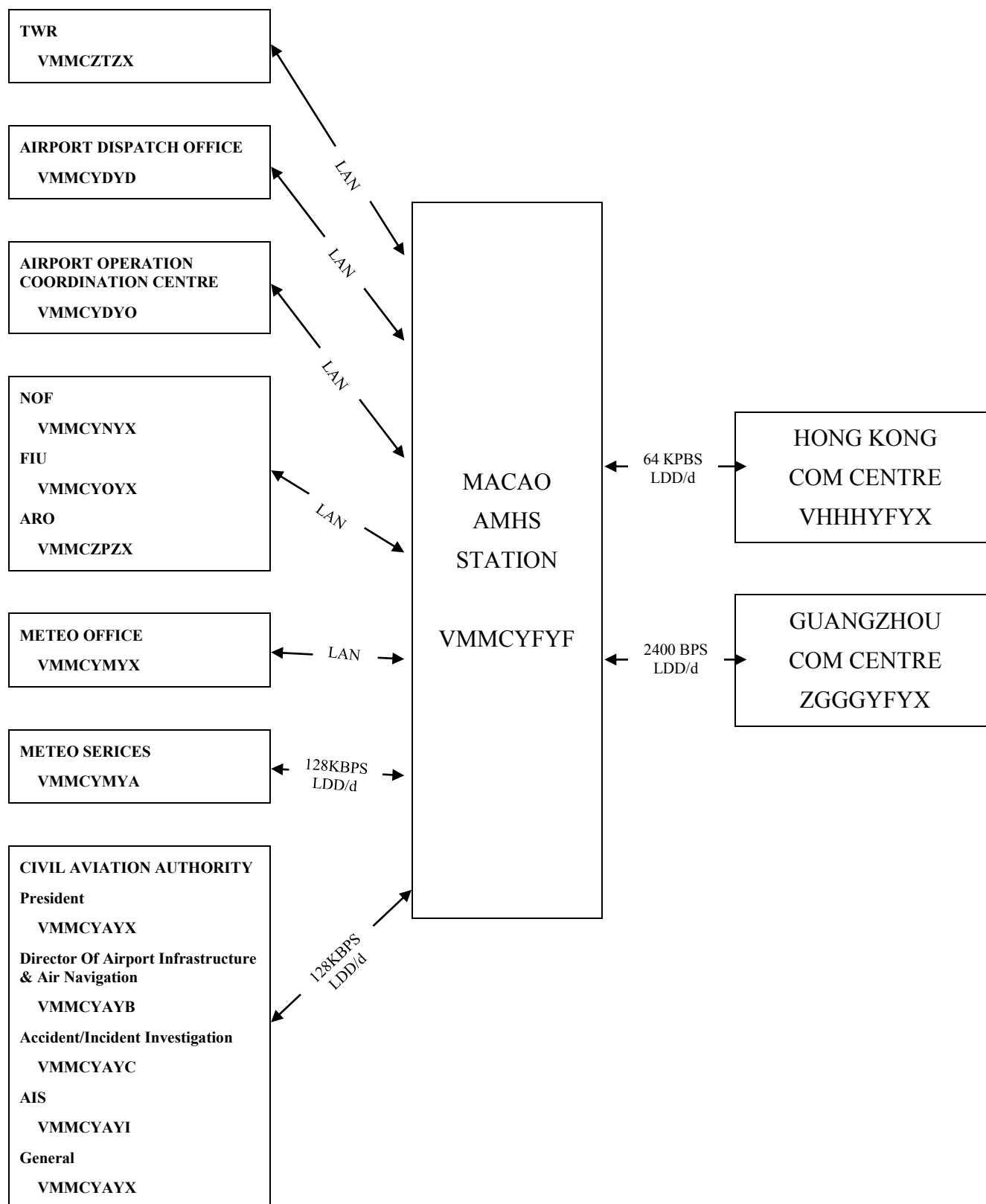
**3.3. Broadcasting services**

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.

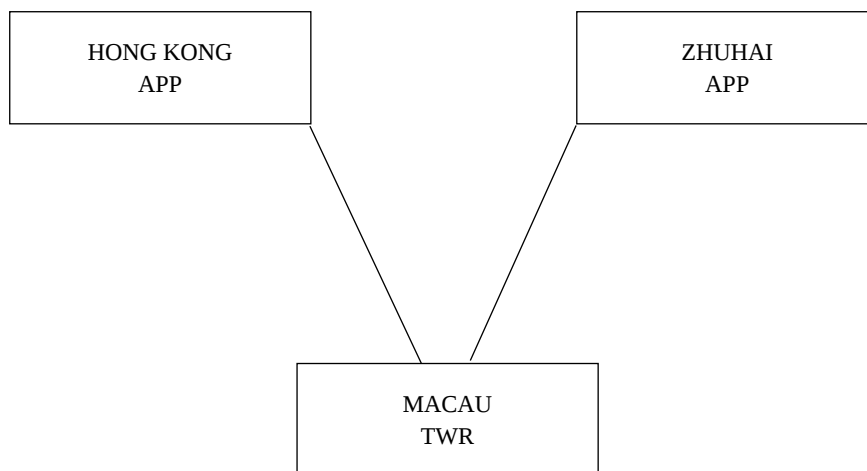
| AERONAUTICAL FIXED SERVICES – INTERNATIONAL AND NATIONAL CIRCUITS *                         |                    |           |                       |            |                             |                   |         |                 |             |                                              |
|---------------------------------------------------------------------------------------------|--------------------|-----------|-----------------------|------------|-----------------------------|-------------------|---------|-----------------|-------------|----------------------------------------------|
| 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



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**AERONAUTICAL FIXED SERVICE - TELEPHONE**



**VHF (FM) BROADCAST STATION**

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

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**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](mailto:meteo@smg.gov.mo)

Homepage: [www.smg.gov.mo](http://www.smg.gov.mo)

- 1.2. The Meteorological Service for civil aviation are provided by Airport Meteorological Office, a division of SMG<sup>2</sup>, 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/<br>Location<br>indicator | Type &<br>frequency of<br>observation/<br>automatic<br>observing<br>equipment | Type of MET<br>Reports &<br>Supplementar<br>y information<br>included | Observation System & Sites                                                                                                                                                                                                                                                                       | Hours of<br>Operation | Climatological<br>information |
|-------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------|
| 1                                         | 2                                                                             | 3                                                                     | 4                                                                                                                                                                                                                                                                                                | 5                     | 6                             |
| MACAO/Macao<br>VMMC                       | Half-hourly<br>plus special<br>Observation                                    | METAR,<br>SPECI<br>TREND                                              | Ultrasonic anemometer RWY 16<br>Ultrasonic anemometer RWY 34<br>Ultrasonic anemometer middle pt<br>Transmissometer RWY 16<br>Transmissometer RWY 34<br>Transmissometer middle pt<br>Ceilometer RWY 16<br>Ceilometer RWY 34<br>AWS RWY 16 and RWY 34<br>Forward-Scatter Meter RWY16<br>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 include 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 ceilrometers 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 anomemeters 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.

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**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<br>SIGN/ID | EM | FREQ  | TIME<br>(UTC) | HOURS<br>(UTC) | STATIONS | CONTENTS                                          |
|-------|-----------------|----|-------|---------------|----------------|----------|---------------------------------------------------|
| 1     | 2               | 3  | 4     | 5             | 6              | 7        | 8                                                 |
| MACAU | MACAU<br>ATIS   |    | 126.4 | CNS           | H24            | MACAU    | MET Report<br>Special Report<br>TREND<br>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](http://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](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 provide 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                        |
|-----------------------------|---------------------------------|-----------------------------------------------------------------|--------------------------------|
| Macao International Airport | 22°08'58"N<br>113°35'29"E       | 5 boats for rescue and fire fighting in the vicinity of airport | Speed 31 kt<br>Capacity *      |
| Marine and Water Bureau     | 22°11'45.89"N<br>113°33'36.19"E | 1 search and rescue vessel at Outer Harbour                     | Speed 30 kt MAX<br>Capacity ** |
|                             | 22°12'33.12"N<br>113°32'24.66"E | 1 search and rescue vessel at Doca da Ilha Verde                | Speed 30 kt MAX<br>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 :     Macao 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 Protecção 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.

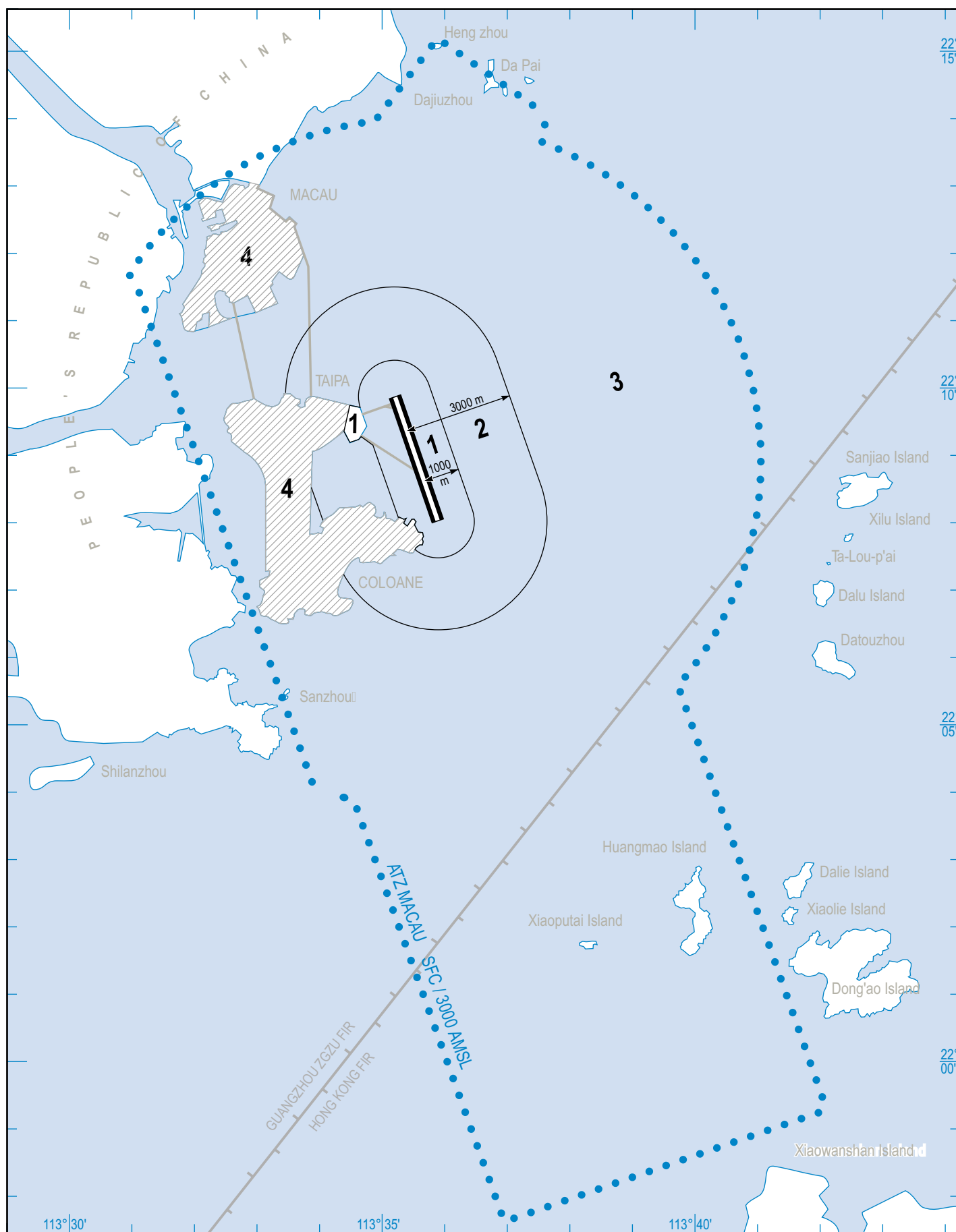
##### 6.3. Search and rescue signals

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<br>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<br>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 |
|---------------------------------------------------------------------------|---------|

**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 |
|---------------------------------------------------------------------------|--------|

**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 that do not go beyond  $\pm 1\%$

**GEN 4.2 AIR NAVIGATION SERVICES CHARGES**

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