

European Aviation Safety Agency

**Acceptable Means
of Compliance
and
Guidance Material
to the rules of the air**

Initial Issue

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AMC/GM to Cover Regulation

GM1 Article 2(2) ADS-C agreement

The terms of the ADS-C agreement, which establishes the conditions of the ADS-C data reporting, will be exchanged between the ground system and the aircraft by means of a contract, or a series of contracts.

GM1 Article 2(25) Air-taxiing

The actual height during air-taxiing may vary, and some helicopters may require air-taxiing above 8 m (25 ft) AGL to reduce ground effect turbulence or provide clearance for cargo sling loads.

GM1 Article 2(28) Air traffic control clearance

- (a) For convenience, the term 'air traffic control clearance' is frequently abbreviated to 'clearance' when used in appropriate contexts.
- (b) The abbreviated term 'clearance' may be prefixed by the words 'taxi', 'take-off', 'departure', 'en route', 'approach' or 'landing' to indicate the particular portion of flight to which the air traffic control clearance relates.

GM1 Article 2(34) Air traffic services reporting office

An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

GM1 Article 2(38) Alternate aerodrome

The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

GM1 Article 2(39) Altitude

- (a) A pressure type altimeter calibrated in accordance with the Standard Atmosphere when set to a QNH altimeter setting will indicate altitude (above the mean sea level).
- (b) The term 'altitude' indicates altimetric rather than geometric altitude.

GM1 Article 2(41) Approach control unit

The purpose of the definition is to describe the specific services associated to approach control unit. This does not preclude the possibility for an approach control unit to provide air traffic control services to flights other than those arriving or departing.

GM1 Article 2(45) Area navigation (RNAV)

Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

GM1 Article 2(46) ATS route

- (a) The term 'ATS route' is used to mean variously airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.
- (b) An ATS route is defined by route specifications which include an ATS route designator, the track to or from significant points (waypoints), distance between

significant points, reporting requirements and, as determined by the competent authority, the lowest safe altitude.

GM1 Article 2(48) Automatic dependent surveillance – contract (ADS-C)

The abbreviated term 'ADS-C' is commonly used to refer to ADS event contract, ADS demand contract, ADS periodic contract, or an emergency mode.

GM1 Article 2(51) Change-over point

Change-over points are established to provide the optimum balance in respect of signal strength and quality between ground facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.

GM1 Article 2(58) Controlled airspace

Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E.

GM1 Article 2(78) Flight level

A pressure type altimeter calibrated in accordance with the Standard Atmosphere, when set to a pressure of 1 013.2 hPa, may be used to indicate flight levels.

GM1 Article 2(84) Height

- (a) A pressure type altimeter calibrated in accordance with the Standard Atmosphere, when set to a QFE altimeter setting, will indicate height (above the QFE reference datum).
- (b) The term 'height' indicates altimetric rather than geometric height.

GM1 Article 2(90) Instrument approach procedure

Lateral and vertical guidance utilized in an instrument approach procedure refers to the guidance provided either by:

- (a) a ground-based navigation aid; or
- (b) computer-generated navigation data.

GM1 Article 2(97) Night

To enable practical application of the definition of night, evening and morning civil twilight may be promulgated pertinent to the date and position.

GM1 Article 2(114) Runway-holding position

In radiotelephony phraseology, the term 'holding point' is used to designate the runway-holding position.

GM2 Article 2(114) Runway-holding position

Runway-holding positions also exist at aerodromes with no ATC. In such circumstances authorisation from an aerodrome control tower is not possible.

GM1 Article 2(121) Significant point

There are three categories of significant points: ground-based navigation aid, intersection, and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids.

GM1 Article 2(138) Unmanned free balloons

Unmanned free balloons are classified as heavy, medium or light in accordance with the specifications contained in Appendix 2 to this Regulation.

GM1 Article 2(141) Visibility

- (a) The two distances which may be defined by a given visibility have different values in the air of a given extinction coefficient. Visibility based on seeing and recognising an object is represented by the meteorological optical range (MOR) (Article 2(141)(a)). Visibility based on seeing and identifying lights varies with the background illumination (Article 2(141)(b)).
- (b) The definition of visibility applies to the observations of visibility in local routine and special reports, to the observations of prevailing and minimum visibility reported in METAR and SPECI, and to the observations of ground visibility.

GM1 Article 4 Exemptions for special operations

GENERAL

- (a) The exemptions covered by Article 4 are intended for cases where the operation is of sufficient public interest to warrant allowing non-compliance with this Regulation, including the acceptance of the additional safety risks involved in such operations. Possible exemptions for normal operations, which are outside the scope of this Article, are covered by the specific provisions in the Annex (e.g. in provisions containing formulations such as 'as permitted by the competent authority', 'unless otherwise specified by the competent authority', etc.).
- (b) Depending on the case, the competent authority may decide to grant the exemption to individual flights, groups of flights, or types of operations performed by specified operators.
- (c) The exemptions may be granted either permanently, or as a temporary measure. Where the exemption is granted permanently, particular attention should be paid to ensuring that the conditions of the exemptions continue to be complied with over time.
- (d) As referred to in Article 4(3), and depending on national rules, some of these operations may be performed under the Operational Air Traffic (OAT) rules in certain Member States and, thus, are entirely outside the scope of this Regulation.

AMC/GM to ANNEX – Rules of the air

SECTION 2

Applicability and compliance

GM1 SERA.2005(b) Compliance with the rules of the air

GENERAL

When determining whether to operate in accordance with the visual flight rules or the instrument flight rules, a pilot may elect to fly in accordance with instrument flight rules in visual meteorological conditions, or may be required to do so by the competent authority.

SECTION 3

General rules and collision avoidance

CHAPTER 1

Protection of persons and property

GM1 SERA.3105 Minimum heights

MINIMUM HEIGHTS ESTABLISHED BY THE COMPETENT AUTHORITY ABOVE THE REQUIRED MINIMUM HEIGHTS

In cases where it is considered that the minimum heights specified in SERA.5005 and SERA.5015 are not sufficient, the competent authority may establish appropriate structures, such as controlled, restricted or prohibited airspace, and define specific conditions through national arrangements. In all cases, the related Aeronautical Information Publication (AIP) and charts should be made easy to comprehend for airspace users.

GM2 SERA.3105 Minimum heights

MINIMUM HEIGHTS PERMITTED BY THE COMPETENT AUTHORITY BELOW THE REQUIRED MINIMUM HEIGHTS

The permission from the competent authority to fly at lower levels than those stipulated in SERA.5005(f) and SERA.5015(b) may be granted either as a general exception for unlimited number of cases or for a specific flight upon specific request. The competent authority is responsible for ensuring that the level of safety resulting from such permission is acceptable.

CHAPTER 2

Avoidance of collisions

GM1 SERA.3201 General

VIGILANCE ON BOARD AN AIRCRAFT

Regardless of the type of flight or the class of airspace in which the aircraft is operating, it is important that vigilance for the purpose of detecting potential collisions be exercised on board an aircraft. This vigilance is important at all times including while operating on the movement area of an aerodrome.

GM1 SERA.3210(d)(4)(ii)(B) Right-of-way

CONTROL OF PERSONS AND VEHICLES AT AERODROMES

In prescribing the minimum separation between vehicles and taxiing aircraft, the availability of lighting, markings, signals and signage should normally be taken into account.

GM1 SERA.3215(a);(b) Lights to be displayed by aircraft

GENERAL

Lights fitted for other purposes, such as landing lights and airframe floodlights, may be used in addition to the anti-collision lights to enhance aircraft conspicuity.

AMC1 SERA.3215(a)(1);(3) Lights to be displayed by aircraft

BALLOONS LIGHTS

The anti-collision light required for free manned balloons which are certified for VFR at night in accordance with *CS 31HB/GB.65 Night lighting* should be considered as acceptable means to comply with SERA.3215(a)(1) and SERA.3215(a)(3).

GM1 SERA.3215(a)(1);(3) Lights to be displayed by aircraft

BALLOONS LIGHTS

The technical specifications that such anti-collision lights specified in AMC1 SERA 3215(a)(1);(3) need to meet can be found in the special conditions 'SC D-01 31HB_GB External and Internal Lights for Free Balloon Night Flight Issue 2'².

GM1 SERA.3220(b) Simulated instrument flights

SAFETY PILOT

- (a) For the purposes of this rule a safety pilot is a pilot who holds a licence which entitles him/her to act as pilot-in-command of the aircraft and is able and prepared to take control of the aircraft at any time during the flight. The safety pilot will maintain lookout, or a competent observer in case the safety pilot does not have full vision of each side of the aircraft, and avoid collisions on behalf of the person flying under simulated instrument conditions.
- (b) A control seat is a seat which affords the person sitting in it sufficient access to the flying controls so as to enable him/her to fly the aircraft unimpeded.

² This special condition can be found in http://easa.europa.eu/certification/docs/special-condition/SC%20D-01%2031HB_GB%20External%20and%20Internal%20Lights%20for%20Free%20Balloon%20Night%20Flight%20Issue%202.pdf

GM1 SERA.3230 Water operations

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA

In addition to the provisions of SERA.3230, rules set forth in the International Regulations for Preventing Collisions at Sea, developed by the International Conference on Revision of the International Regulations for Preventing Collisions at Sea (London, 1972), may be applicable in certain cases.

GM1 SERA.3230(b) Water operations

LIGHTS TO BE DISPLAYED BY AIRCRAFT ON THE WATER

The International Regulations for Preventing Collisions at Sea specify that the rules concerning lights shall be complied with from sunset to sunrise. Any lesser period between sunset and sunrise established in accordance with SERA.3230(b) cannot, therefore, be applied in areas where the International Regulations for Preventing Collisions at Sea apply, e.g. on the high seas.

CHAPTER 4

Time

GM1 SERA.3401(d) General

TIME IN AIR TRAFFIC SERVICES

In most cases the correct time is obtained through alternative arrangements. The existence of such arrangements should be indicated in the State Aeronautical Information Publication (AIP).

SECTION 4

Flight plans

GM1 SERA.4001 Submission of a flight plan

GENERAL

- (a) A flight plan may cover only part of a flight, as necessary, to describe that portion of the flight or those manoeuvres which are subject to air traffic control.
- (b) The term 'submit a flight plan' refers to the action by the pilot or the operator to provide ATS with flight plan information. The term 'filed flight plan' refers to the flight plan as received and accepted by ATS whereas 'transmit a flight plan' refers to the action by a pilot to submit the flight plan, or submit abbreviated flight plan by radiotelephony to the ATS unit concerned.

GM1 SERA.4005(a) Contents of a flight plan

ABBREVIATED FLIGHT PLAN

An abbreviated flight plan transmitted in the air by radiotelephony for the crossing of controlled airspace, or any other areas or routes designated by the competent authority, normally contains, as a minimum: call sign, type of aircraft, point of entry, point of exit and level. Additional elements may be required by the competent authority.

GM1 SERA.4020 Closing a flight plan

ARRIVAL REPORTS

Whenever an arrival report is required, failure to comply with the provisions of SERA.4020 may cause serious disruption in the air traffic services and incur great expenses in carrying out unnecessary search and rescue operations.

SECTION 5

Visual meteorological conditions, visual flight rules, special VFR and instrument flight rules**AMC1 SERA.5005(f) Visual flight rules**

VFR MINIMUM HEIGHTS — PERMISSION FROM THE COMPETENT AUTHORITY

The competent authority should specify the conditions under which the permission is or may be granted, including the minimum heights above the terrain, water or the highest obstacle within a radius of 150 m (500 ft) from an aircraft practising forced landings, a balloon or an aircraft executing ridge or hill soaring.

GM1 SERA.5005(f) Visual flight rules

VFR MINIMUM HEIGHTS — PERMISSION FROM THE COMPETENT AUTHORITY

Subject to an appropriate safety assessment, permission from the competent authority may also be granted for cases like:

- (a) aircraft operating in accordance with the procedure promulgated for the notified route being flown;
- (b) helicopters operating at a height that will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface;
- (c) aircraft picking up or dropping tow ropes, banners or similar articles at an aerodrome;
- (d) any other flights not specified above, where specific exemption is required to accomplish a specific task.

AMC1 SERA.5010(a)(3) Special VFR in control zones

SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS

The 140 kt speed should not be used by helicopters operating at a visibility below 1 500 m. In such case, a lower speed appropriate to the actual conditions should be applied by the pilot.

GM1 SERA.5010(a)(3) Special VFR in control zones

SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS

The 140 kt speed is to be considered as an absolute maximum acceptable speed in order to maintain an acceptable level of safety when the visibility is 1 500 m or more. Lower speeds should be applied according to elements such as local conditions, number and experience of pilots on board, using the guidance of the table below:

Visibility (m)	Advisory speed (kt)
800	50
1 500	100
2 000	120

GM1 SERA.5015(b) Instrument flight rules (IFR) — Rules applicable to all IFR flights

MINIMUM LEVELS

When determining which are the highest obstacles within 8 km of the estimated position of the aircraft, the estimate will take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

GM1 SERA.5025(a) IFR — Rules applicable to IFR flights outside controlled airspace

CRUISING LEVELS

Although an IFR flight operating in level cruising flight outside controlled airspace is to be flown at a cruising level appropriate to its track, as specified in the table of cruising levels, this does not preclude the use of cruise climb techniques.

GM1 SERA.5025(c) IFR — Rules applicable to IFR flights outside controlled airspace

POSITION REPORTS

Aircraft electing to use the air traffic advisory service whilst operating under IFR within specified advisory airspace are expected to comply with the provisions of 'Chapter 8 — Air traffic Control Service', except that the flight plan and changes thereto are not subject to clearances and that two-way communication will be maintained with the unit providing the air traffic advisory service.

SECTION 6

Airspace classification

AMC1 SERA.6001 Classification of airspaces

GENERAL

Where ATS airspaces adjoin vertically, i.e. one above the other, flights at a common level should comply with the requirements of, and be given services applicable to, the less restrictive class of airspace.

GM1 SERA.6001 Classification of airspaces

GENERAL

- (a) Class B airspace is considered less restrictive than Class A airspace; Class C airspace less restrictive than Class B airspace, etc.
- (b) The speed limitation of 250 kt for VFR flights in airspace Classes C, D, E, F, G and for IFR flights in airspace Classes D, E, F, G is intended to facilitate visual acquisition of flights which are not separated.
- (c) Wherever there is a need to accommodate within a given airspace class operations compatible with a less restrictive class, the following may be used:
 - (1) reclassification of the airspace concerned;
 - (2) redesigning the volume of airspace concerned by defining airspace restrictions or reservations, or subvolumes of less restrictive classes of airspace (e.g. corridors).

AMC1 SERA.6001(d);(e);(f);(g) Classification of airspaces

SPEED LIMITATION — SAFETY ASSESSMENT AND APPROVAL BY THE COMPETENT AUTHORITY

Approval by the competent authority of an alleviation of the 250 kt speed limitation below 3 050 m (10 000 ft) should be based on a safety assessment. The conditions for granting such alleviation should be specified in the Member State Aeronautical Information Publication (AIP).

GM1 SERA.6001(d);(e);(f);(g) Classification of airspaces

SPEED LIMITATION — SAFETY ASSESSMENT AND APPROVAL BY THE COMPETENT AUTHORITY

- (a) The following should, as a minimum, be considered when developing the safety assessment:
 - (1) air traffic, airspace classes requirements, and airspace design, the procedures designed for the airspace, and the potential use of clearances to maintain own separation as described in GM1 to SERA.8005(b);
 - (2) the minimum safe speed stated in the approved Aircraft Flight Manual (AFM) of the relevant aircraft types.
- (b) The safety assessment should be developed in coordination with the relevant airspace users.
- (c) Coordination should be ensured with the affected airspace users who should provide the data necessary for the development of the safety assessment.
- (d) The competent authority should ensure that the aircraft types eligible for such alleviation are specified in the Member State Aeronautical Information Publication.

GM2 SERA.6001(d);(e);(f);(g) Classification of airspaces

SPEED LIMITATION — SAFETY ASSESSMENT AND APPROVAL BY THE COMPETENT AUTHORITY

- (a) For localised alleviations from the speed limitation, the safety assessment is normally conducted by the ATS provider and is subject to approval by the competent authority.
- (b) Where alleviation is applied universally across the airspace of the Member State, the competent authority should ensure that appropriate safety assessment has been conducted.

AMC1 SERA.6001(h) Classification of airspaces

GENERAL

Class F airspace should only be implemented where the air traffic services are inadequate for the provision of air traffic control, and the limited advice on collision hazards otherwise provided by flight information service will not be adequate. Where air traffic advisory service is implemented, this should be considered as a temporary measure only until such time as it can be replaced by air traffic control service or, in cases where the traffic situation changes such that advisory service is no longer required, replaced by flight information service.

GM1 SERA.6001(h) Classification of airspaces

DURATION OF TEMPORARY MEASURE

- (a) When establishing Class F airspace, its intended temporary duration after which it should be replaced by an alternative classification should be specified in the AIP of the Member State.
- (b) The intended temporary duration of Class F airspace should not be longer than 3 years.

EXAMPLE

- (c) Certain CTR airspace may change its classification on a daily basis (e.g. from 06:00 to 20:00 the airspace is classified as Class A, and from 20:00 until 23:59 and from 00:00 until 05:59 is classified as Class F). In this case, the duration of these arrangements should not exceed 3 years.

SECTION 7

Air traffic services

GM1 SERA.7001 General – Objectives of the air traffic services

GENERAL

These provisions are general statements which represent high-level safety objectives to be met when providing ATS and which are the basis of all the provisions of this Part.

GM1 SERA.7005(a) Coordination between the aircraft operator and air traffic services

GENERAL

The expression 'due regard' is meant to indicate that the air traffic services units, in their coordination with the aircraft operators, should take into account the obligations of the operators in accordance with the European Union rules on air operations, and provide them with the information they require to operate in accordance with those rules.

SECTION 8

Air traffic control service

GM1 SERA.8005(b) Operation of air traffic control service

CLEARANCES TO MAINTAIN OWN SEPARATION

Clearances for a pilot to maintain own separation in respect of a specific portion of the flight in airspace Classes D and E below 3 050 m (10 000 ft) during climb or descent, during day in visual meteorological conditions are based on the fact that in those airspace classes a speed restriction of 250 kt is applied to all flights, allowing pilots of both aircraft to observe other flights in time to avoid collision.

GM1 SERA.8010(b) Separation minima

GENERAL

The purpose of this provision is to ensure, in the first case, compatibility on both sides of the line of transfer of traffic and, in the other case, adequate separation between aircraft operating on both sides of the common boundary.

GM1 SERA.8015(b)(4) Air traffic control clearances

OPERATION SUBJECT TO CLEARANCE — POTENTIAL RECLEARANCE IN FLIGHT

The intent of the provision relating to potential reclearance is to facilitate reclearance to a revised destination, normally beyond the filed destination aerodrome.

GM1 SERA.8015(d)(5) Air traffic control clearances

CONTENT OF THE CLEARANCES — TIME OF EXPIRY

The time of expiry of the clearance indicates the time after which the clearance will be automatically cancelled if the flight has not been commenced.

GM1 SERA.8015(e)(4) Air traffic control clearances

READ-BACK OF CPDLC MESSAGES

When so indicated by local safety assessments, ANSP may require that the receipt of some of the CPDLC message types (in particular those addressing trajectory changes) be acknowledged by voice.

GM1 SERA.8015(f)(4) Air traffic control clearances

COORDINATION OF CLEARANCES — DOWNSTREAM CLEARANCE

- (a) In such cases it is assumed that contact of a downstream ATC unit is initiated by the pilot. Therefore, the rules require that the aircraft maintain the necessary two-way communication with the current ATC unit.
- (b) In cases where an aircraft cannot maintain two-way communication whilst obtaining a downstream clearance, the pilot needs to seek the acceptance to leave momentarily the communication channel of the current ATC unit prior to contacting a downstream ATC unit.

GM1 SERA.8035(a) Communications

GENERAL

- (a) In a HF environment, SELCAL or similar automatic signalling devices satisfy the requirement to maintain an air-ground voice communication watch.
- (b) An aircraft may be permitted to communicate temporarily with a control unit other than the unit controlling the aircraft.

SECTION 9

Flight information service

GM1 SERA.9005(b)(1) Scope of flight information service

INFORMATION RELATED TO WEATHER CONDITIONS AT DEPARTURE, DESTINATION, AND ALTERNATE AERODROMES

Pilots normally obtain information on the weather conditions from the appropriate office before the flight. Outstanding or safety-relevant information is normally provided by radio communication when available.

GM1 SERA.9005(b)(2) Scope of flight information service

INFORMATION RELATED TO COLLISION HAZARDS

Information relating to collision hazards includes only known activities that constitute risks to the aircraft concerned. The availability of such information to air traffic services may sometimes be incomplete (e.g. limitations in radar or radio coverage, optional radio contact by pilots, limitations in the accuracy of reported information by pilots, or unconfirmed level of information) and, therefore, air traffic services cannot assume responsibility for its issuance at all times or for its accuracy.

SECTION 11

Interference, emergency contingencies and interception

GM1 SERA.11010 In-flight contingencies

STRAYED OR UNIDENTIFIED AIRCRAFT — GENERAL

- (a) An aircraft may be considered, at the same time, as a 'strayed aircraft' by one unit and as an 'unidentified aircraft' by another unit. This possibility should be taken into account when complying with the provisions of SERA.11010(a)(1)(iii) and SERA.11010(b)(2) and (b)(3).
- (b) Navigational assistance by an air traffic services unit is particularly important if the unit becomes aware of an aircraft straying, or about to stray, into an area where there is a risk of interception or other hazard to its safety.

AMC1 SERA.11015(a) Interception

REGULATIONS AND ADMINISTRATIVE DIRECTIVES ISSUED BY MEMBER STATES GOVERNING INTERCEPTION OF CIVIL AIRCRAFT

- (a) In accordance with the provisions on interception of civil aircraft in Annex 2 to the Convention on the International Civil Aviation, the national provisions put in place under SERA.11015(a) should ensure that:
 - (1) interception of civil aircraft is undertaken only as a last resort;
 - (2) an interception is limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or congested areas, or instruct it to effect a landing at a designated aerodrome;
 - (3) practice interception of civil aircraft is not undertaken, unless it has been previously agreed with the pilot-in-command of the aircraft to be intercepted and ATC has been informed accordingly that the interception is to take place;
 - (4) navigational guidance and related information is given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and
 - (5) in the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is suitable for the safe landing of the aircraft type concerned.

- (b) Member States should publish a standard method that has been established for the manoeuvring of aircraft intercepting a civil aircraft. Such method should be designed to avoid any hazard for the intercepted aircraft.
- (c) Member States should ensure that provision is made for the use of secondary surveillance radar or ADS-B, where available, to identify civil aircraft in areas where they may be subject to interception.

GM1 SERA.11015(a) Interception

REGULATIONS AND ADMINISTRATIVE DIRECTIVES ISSUED BY MEMBER STATES GOVERNING INTERCEPTION OF CIVIL AIRCRAFT

Member States that comply with an alternative means of compliance different from *AMC1 SERA.11015(a) Interception* over the territory and territorial waters of the State are required to notify ICAO of a difference to ICAO Annex 2. Over the high seas ICAO Annex 2 is to be applied without exception in accordance with the Chicago Convention and SERA.1001(a).

SECTION 12

Services related to meteorology – Aircraft observations and reports by voice communications

GM1 SERA.12020(a)(3) Exchange of air-reports

OTHER ATS UNITS CONCERNED

Other ATS units concerned are those that have flights under their jurisdiction which are expected to enter the airspace concerned at a later stage of flight. Those flights could, for instance, require rerouting before entering the airspace concerned. As an example, a special air-report concerning volcanic ash or volcanic eruption could be necessary to transmit to aircraft by ATS units in the FIR adjacent to that affected by the air-report.

AMC/GM to appendices

GM1 to Appendix 1(4.1) MARSHALLING SIGNALS

FROM A SIGNALMAN/MARSHALLER TO AN AIRCRAFT — GENERAL

- (a) The meaning of the relevant signals remains the same if bats, illuminated wands or torch lights are held rather than the signalman's hands being illuminated.
- (b) The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No 1 engine being the port outer engine).
- (c) References to wands may also be read to refer to daylight-fluorescent table-tennis bats or gloves (daytime only).
- (d) References to the signalman may also be read to refer to marshaller.
- (e) The design of many aircraft is such that the path of the wing tips, engines and other extremities cannot always be monitored visually from the flight deck while the aircraft is being manoeuvred on the ground.

GM1 to Appendix 1(4.2.1.1.) MARSHALLING SIGNALS

FROM THE PILOT OF AN AIRCRAFT TO A SIGNALMAN/MARSHALLER — BRAKES

When providing the signal for 'brakes engaged' the moment the fist is clenched indicates the moment of brake engagement. When providing the signal for 'brakes released' the moment the fingers are extended indicates the moment of brake release.

GM1 to Appendix 1(5.1) STANDARD EMERGENCY HAND SIGNALS

GENERAL

In order to communicate more effectively with the cabin crew, emergency hand signals may be given by ARFF firefighters from positions other than those that would be used by a signalman to provide marshalling signals.

GM1 to Appendix 2(3.3b)) OPERATING LIMITATIONS AND EQUIPMENT REQUIREMENTS

SUPER-PRESSURE BALLOONS

Super-pressure balloons do not require flight termination devices as they quickly rise after payload discharge and burst without the need for a device or system designed to puncture the balloon envelope. In this context a super-pressure balloon is a simple non-extensible envelope capable of withstanding a differential of pressure, higher inside than out. It is inflated so that the smaller night-time pressure of the gas still fully extends the envelope. Such a super-pressure balloon will keep essentially constant level until too much gas diffuses out of it.

GM1 to Appendix 4 ATS AIRSPACE CLASSES — SERVICES PROVIDED AND FLIGHT REQUIREMENTS

GENERAL

The purpose of this Appendix is to show the requirements related to each specific airspace class in a concise manner. Therefore, it does not provide any specifications additional to those already expressed in the implementing rule.