

**Kingdom of Saudi Arabia
General Authority of Civil Aviation**

GACA REGULATION



Section 11 Air Traffic Services

Edition 3.0

FOREWORD

The following Regulations governing Air Traffic Services (ATS) are based on Articles 2, 3, 4, 5, 89, 90, 94, 175 and 177 of the Civil Aviation Act that has been approved by the Council of Ministers Resolution No. 185 dated 17/07/1426H and issued by the Royal Decree No. M/44 dated 18/07/1426H. (23/08/2005G), and are in accordance with ICAO Annex 11 Air Traffic Services and its related documents.

The promulgation of this regulation is based on the authority granted in Article 179 of the Civil Aviation Act, and is issued under the authority of the President, General Authority of Civil Aviation, as a duly delegated representative of the GACA Board of Directors, in accordance with Order No.T-41, dated 30/12/1429H (28/12/2008G).

The General Authority of Civil Aviation is responsible for the preparation and distribution of all regulations in sufficient quantities so that all service providers and aircraft operators based in the Kingdom of Saudi Arabia are able to obtain an authentic copy prior to the effective date of the Regulation.



APPROVED:

Original Signed by

Fahad Bin Abdullah Al-Saud
President, General Authority of Civil Aviation

Effective Date: 13 November 2014

CONTENT RULES

1) Organization Structure:

GACA has established an Air Navigation System Safety Division (ANS Safety) within the Safety Department (SD) of the Safety and Air Transport Sector (S&AT) to carry out the function of enforcing compliance with the applicable regulations and procedures of GACAR Section 11; and to provide safety oversight to include audits, inspections, investigations and data analysis; and to perform an on-site facilities inspection on an annual basis as a minimum; however, more frequent inspections may be directed by higher authority.

2) Safety Management:

- a) The GACA SD shall establish a safety program in order to achieve an acceptable level of safety in air navigation operations.
- b) The GACA SD shall establish the acceptable level(s) of safety to be achieved by utilizing the Guidance on safety program and on defining acceptable levels of safety that is contained in the ICAO Safety Management Manual (SMM) (Doc 9859).
- c) GACA SD shall require, as part of its safety program, that Air Navigation Services implements a safety management system acceptable to the GACA that, as a minimum:
 - a) Identifies safety hazards;
 - b) ensures that remedial action necessary to maintain an acceptable level of safety is implemented;
 - c) Provides for continuous monitoring and regular assessment of the safety level achieved; and
 - d) Aims to make continuous improvement to the overall level of safety.
- d) A safety management system shall clearly define lines of safety accountability throughout the staff of Air Navigation Services, including direct accountability for safety on the part of senior management.
- e) The intent of a safety management system is to have in place an organized and orderly approach in the management of Air Navigation Services safety. Guidance on an air navigation services safety management system is given in the ICAO Safety Management Manual (SMM) (Doc 9859).

3) Rules of Construction

- a) To avoid any misunderstanding within this regulation, certain words are to be interpreted as having specific meanings when they are used, unless the context requires otherwise:
- (1) words importing the singular include the plural;
 - (2) words importing the plural include the singular; and
 - (3) words importing the masculine gender include the feminine.
- b) In this regulation, the following protocol is used:
- (1) the words "**shall**" and "**must**" indicate that compliance is compulsory;
 - (2) The word "**should**" indicates a recommendation. It does not mean that compliance is optional but rather that, where insurmountable difficulties exist, the GACA- S&AT may accept an alternative means of compliance, provided that an acceptable safety assurance from the Air Navigation Services shows that the safety requirements will not be reduced below that intended by the requirement.
 - (3) The word "**Can**" or "**May**" is used in a permissive sense to state authority or permission to do the act prescribed, and the words "no person may * * *" or "a person may not * * *" mean that no person is required, authorized, or permitted to do the act prescribed;
 - (4) The word "**will**" is used to express the future; and
 - (5) The word "**includes**" means "**includes but is not limited to**".

AMENDMENT PROCEDURE

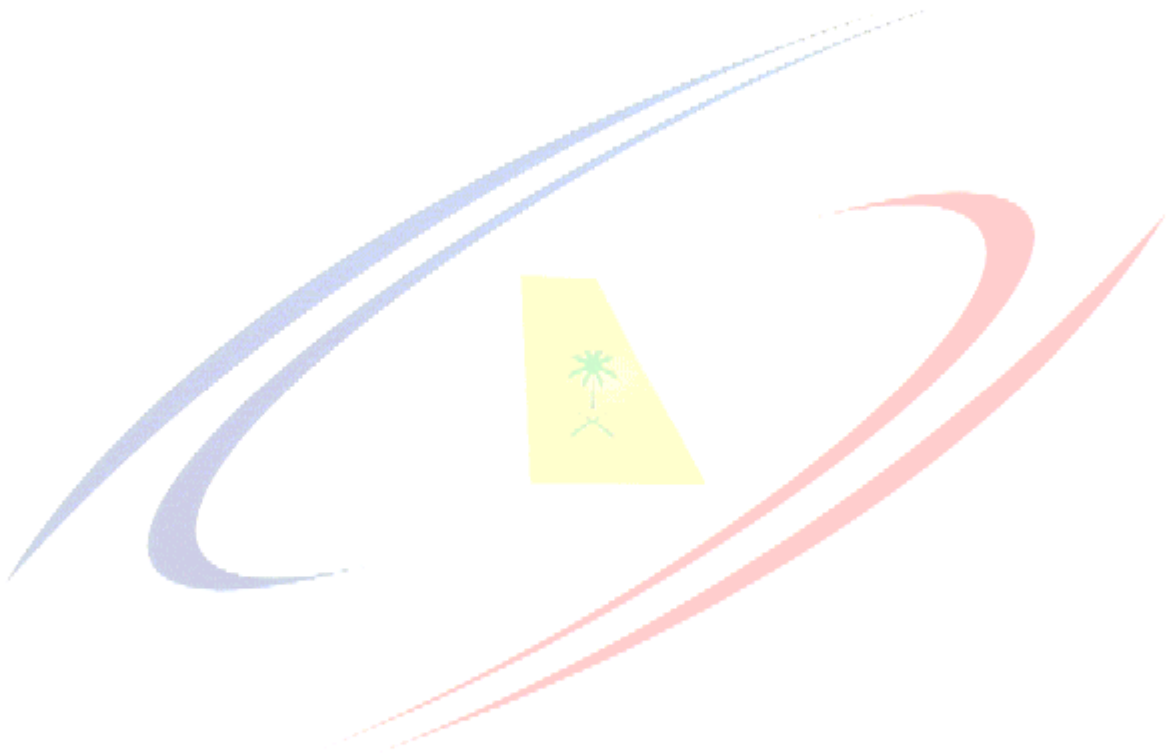
The existing General Authority of Civil Aviation Regulations (GACAR) will be periodically reviewed to reflect the latest updates of International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs); it will be also amended to reflect the latest aviation safety provisions issued by GACA and other regional and international Civil Aviation organizations. A complete revised edition incorporating all amendments will be published every three years from the original effective date of this regulation. The amendment procedure shall be as follows;

1. When the General Authority of Civil Aviation (GACA) receives an amendment to any of the current ICAO Annexes that can affect the provisions of this regulation, it will be forwarded by the Vice President of International Organization Affairs to the Assistant Vice President, Safety and Air Transport (S&AT) who in turn will forward it to Aviation Regulation Department to coordinate with the concerned department to study and comments, taking into account the ICAO deadline for the reply.
2. When any GACA department or stakeholder proposes an amendment to this regulation, it will send a letter with the proposed amendment including a clear justification and argument for such amendment. Following the receipt of an amendment proposal, the S&AT will analyze this proposal and forward its comments and any proposed decision action to the S&AT Vice President.
3. An accepted amendment proposal will be prepared as draft amendment to the GACAR-Section 11 and forwarded to the originator of the amendment proposal and concerned GACA department (s) for further review and comment within a specified timeline.
4. All accepted amendments will be drafted in the form of Notices of Proposed Amendments (NPA) and forwarded to all concerned parties including stakeholders for comment within a two-month reply period. The NPA shall indicate the proposed Amendment's effective date.
5. Following the receipt of NPA replies, the S&AT will analyze the comments received and produce a new draft in consultation with the concerned GACA department. The final draft will be submitted to President of the General Authority of Civil Aviation for formal approval prior to publication.
6. The Amendment's effective date will take into account the comments of all the concerned parties and stakeholders.
7. Any differences between the GACAR Section 11 new amendment and ICAO Annexes Standards and Recommended Practices will be forwarded to ICAO as a Difference and published as it is in the Aeronautical Information Publication (AIP).
8. All concerned parties and stakeholders will be provided a copy of the new amendment and will be requested to update their copy of the GACAR Section 11 accordingly.
9. It is the responsibility of all concerned parties to keep their copy of GACAR-Section 11 and other GACA regulation publication up to date.

SUPPLEMENTARY REGULATIONS

From time to time it will be necessary to issue regulations which supplement or augment the GACAR Regulations. The following procedures will apply:

1. Supplementary regulations will be issued in the form of a GACA Regulation Circular (RC).
2. The GACA Regulation Circular will be approved by the President.
3. The process for preparation and publishing of the GACA Regulation Circular will be addressed in the GACA Quality System Manual.



AMENDMENT RECORD

This edition incorporates all amendments to ICAO Annex 11 up to and including amendment 49

[illegible]

LIST OF CURRENT DIFFERENCES TO ICAO SARPS

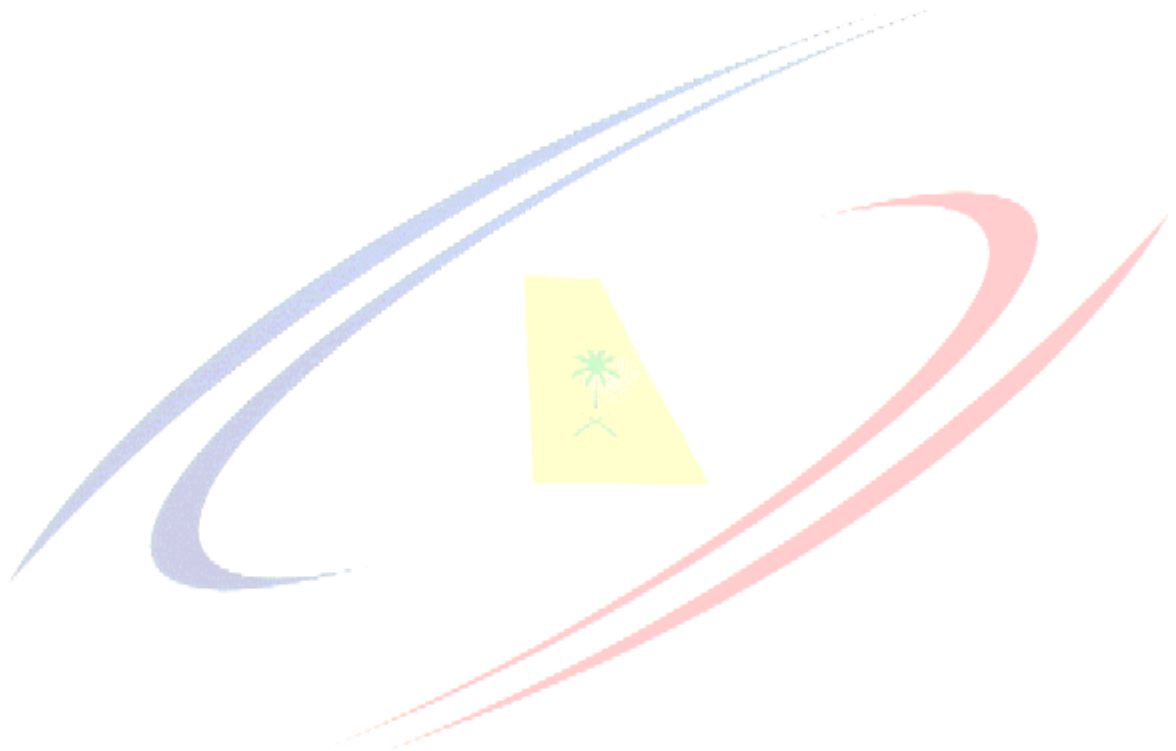
GACA Regulation Section 11 is based on ICAO Annex 11 and PANS-ATM (Doc 4444). The following is a list of differences between the GACA Regulation and the ICAO Standards and Recommended Practices (SARPS) or Procedures for Air Navigation Services (PANS). Where differences exist they have been notified to ICAO and are also published in the KSA Aeronautical Information Publication (AIP-GEN 1.7).

ICAO Annex 11 – AIR TRAFFIC SERVICES – 13 th Edition – Amendment 49		
SARP/PANS Identifier	Regulation Reference	Difference
		No substantive differences notified

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CHAPTER 1 - DEFINITIONS**1.1 Definitions**

When the following terms are used in this regulation, they shall have the following meanings:

Accepting unit/controller

Air traffic control unit/air traffic controller next to take control of an aircraft.

Accident

An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- a) a person is fatally or seriously injured as a result of:
 - being in the aircraft, or
 - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
 - direct exposure to jet blast;

except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

- b) the aircraft sustains damage or structural failure which:
 - adversely affects the structural strength, performance or flight characteristics of the aircraft, and
 - would normally require major repair or replacement of the affected components,

except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windcreens, the aircraft skin (such as small dents or puncture holes) or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or,

- c) the aircraft is missing or is completely inaccessible.

Accuracy

A degree of conformance between the estimated or measured value and the true value.

ADS-C agreement

A reporting plan which establishes the conditions of ADS-C data reporting (i.e. data required by the air traffic services unit and frequency of ADS-C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services).

ADS service

A service using aircraft information provided by means of automatic dependent surveillance.

Advisory airspace

An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

Advisory route

A designated route along which air traffic advisory service is available.

Aerodrome

A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome control service

Air traffic control service for aerodrome traffic.

Aerodrome control tower

A unit established to provide air traffic control service to aerodrome traffic.

Aerodrome elevation

The elevation of the highest point of the landing area.

Aerodrome reference point

The designated geographical location of an aerodrome

Aerodrome taxi circuit

The specified path of aircraft on the maneuvering area during specific wind conditions

Aeronautical fixed service (AFS)

A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

Aerodrome traffic

All traffic on the maneuvering area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

Aerodrome traffic circuit

The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

Aeronautical fixed station

A station in the aeronautical fixed service.

Aeronautical ground light

Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.

Aeronautical information publication (AIP)

A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

Aeronautical mobile service

A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

Aeronautical telecommunication service

A telecommunication service provided for any aeronautical purpose.

Aeronautical telecommunication station

A station in the aeronautical telecommunication service.

Aeroplane

A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surface which remain fixed under given conditions of flight.

Airborne collision avoidance system (ACAS)

An aircraft system based on secondary surveillance radar (SSR) transponder signals which operate independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

Aircraft

Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air

against the earth's surface.

Aircraft address

A unique combination of 24 bits available for assignment to an aircraft for the purpose of air-ground communications, navigation and surveillance.

Aircraft identification

A group of letters, figures or a combination thereof which is either identical to, or the coded equivalent of, the aircraft call sign to be used in air-ground communications, and which is used to identify the aircraft in ground-ground air traffic services communications.

Aircraft observation

The evaluation of one or more meteorological elements made from an aircraft in flight.

Aircraft proximity

A situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised. Aircraft proximity is classified as follows:

- ***Risk of collision.*** The risk classification of an aircraft proximity in which serious risk of collision has existed.
- ***Safety not assured.*** The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised.
- ***No risk of collision.*** The risk classification of an aircraft proximity in which no risk of collision has existed.
- ***Risk not determined.*** The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

Air-ground communication

Two-way communication between aircraft and stations or locations on the surface of the earth.

Air-ground control radio station

An aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.

AIRMET information

Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of low-level aircraft operations and which was not already included in the forecast issued for low-level flights in the flight information region concerned or sub-area thereof.

AIRPROX

The code word used in an air traffic incident report to designate aircraft proximity.

Air-report

A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Air-taxiing

Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

Air-to-ground communication

One-way communication from aircraft to stations or locations on the surface of the earth.

Air traffic

All aircraft in flight or operating on the maneuvering area of an aerodrome.

Air traffic advisory service

A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.

Air traffic control clearance

Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Air traffic control instruction

Directives issued by air traffic control for the purpose of requiring a pilot to take a specific action.

Air traffic control service

A service provided for the purpose of:

- a) preventing collisions:
 - 1) between aircraft, and
 - 2) on the maneuvering area between aircraft and obstructions; and
- b) expediting and maintaining an orderly flow of air traffic.

Air traffic control unit

A generic term meaning variously, area control center, approach control unit or aerodrome control tower.

Air traffic flow management (ATFM)

A service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is used to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority.

Air traffic management (ATM)

The dynamic, integrated management of air traffic and airspace including air traffic services, airspace management and air traffic flow management — safely, economically and efficiently — through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

Air traffic service (ATS)

A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Air traffic services airspaces

Airspaces of defined dimensions alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

Air traffic services reporting office

A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Air traffic services unit

A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

Airway

A control area or portion thereof established in the form of a corridor.

ALERFA

The code word used to designate an alert phase.

Alerting service

A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

Alert phase

A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

Allocation, allocate

Distribution of frequencies, SSR Codes, etc. to a State, unit or service. Distribution of 24-bit aircraft addresses to a State or common mark registering authority.

Alphanumeric characters (alphanumerics)

A collective term for letters and figures (digits).

Alternate aerodrome.

An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternate aerodromes include the following:

- ***Take-off alternate.*** An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.
- ***En-route alternate.*** An aerodrome at which an aircraft would be able to land after experiencing and abnormal or an emergency condition while en-route.
- ***ETOPS En-route alternate.*** A suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing and engine appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing and engine shut-down or other abnormal or emergency condition while en-route in an ETOPS operation.
- ***Destination alternate.*** An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Altimetry system error (ASE)

The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

Altimetry system error stability

Altimetry system error for an individual aircraft is considered to be stable if the statistical distribution of altimetry system error is within agreed limits over an agreed period of time.

Altitude

The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

Altitude-keeping device

Any equipment which is designed to automatically control the aircraft to a referenced pressure altitude

Approach control service

Air traffic control service for arriving or departing controlled flights.

Approach control unit

A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

Approach funnel

A specified airspace around a nominal approach path within which an aircraft approaching to land is considered to be making a normal approach

Approach procedure with vertical guidance (APV)

An instrument procedure which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations

Approach sequence

The order in which two or more aircraft are cleared to approach to land at the aerodrome.

Appropriate ATS authority

The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned. In the Kingdom of Saudi Arabia this is the General Authority for Civil Aviation (GACA).

Appropriate authority

- a) Regarding flight over the high seas: General Authority for Civil Aviation (GACA).
- b) Regarding flight other than over the high seas: General Authority for Civil Aviation (GACA).

Apron

A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

Apron management service

A service provided to regulate the activities and the movement of aircraft and vehicles on an apron

Area control center (ACC)

A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

Area control service

Air traffic control service for controlled flights in control areas.

Area navigation (RNAV)

A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Area navigation route

An ATS route established for the use of aircraft capable of employing area navigation.

Arrival routes

Routes identified in an instrument approach procedure by which an aircraft may proceed from the en-route phase of flight to an initial approach fix

Assignment, assign

Distribution of frequencies to stations. Distribution of SSR Codes or 24-bit aircraft addresses to aircraft.

ATS route

A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

Automatic altitude-keeping device

Any equipment which is designed to automatically control the aircraft to a referenced pressure-altitude.

Automatic dependent surveillance – broadcast (ADS-B)

A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

Automatic dependent surveillance – contract (ADS-C)

A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, *via a data link*, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

Automatic terminal information service (ATIS)

The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof, at the present time this can be in the format of;

- ***Data link-automatic terminal information service (D-ATIS)***. The provision of ATIS via data link.
- ***Voice-automatic terminal information service (Voice-ATIS)***. The provision of ATIS by means of continuous and repetitive voice broadcasts.

Base turn

A turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal.

Blind transmission

A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.

Broadcast

A transmission of information relating to air navigation that is not addressed to a specific station or stations.

Calendar

Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO1918).

Ceiling

The height above the ground or water of the base of the lowest layer of cloud below 6 000 m (20 000 ft) covering more than half the sky.

Change-over point

The point at which an aircraft navigating on an ATS route segment defined by reference to VORs is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

Note. Change-over points are established to provide the optimum balance in respect of signal strength and quality between 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.

Circling approach

An extension of an instrument approach procedure which provides for visual circling of the aerodrome prior to landing.

Clearance limit

The point to which an aircraft is granted an air traffic control clearance.

Code (SSR)

The number assigned to a particular multiple pulse reply signal transmitted by a transponder in Mode A or Mode C.

Collision risk

The expected number of mid-air aircraft accidents in a prescribed volume of airspace for a specific number of flight hours due to loss of planned separation.

Control area

A controlled airspace extending upwards from a specified limit above the earth.

Controlled aerodrome

An aerodrome at which air traffic control service is provided to aerodrome traffic.

Controlled airspace

Airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Controlled flight

Any flight which is subject to an air traffic control clearance.

Controller-pilot data link communications (CPDLC)

A means of communication between controller and pilot, using data link for ATC communications.

Control zone

Controlled airspace extending upwards from the surface of the earth to a specified upper limit.

Cruise climb

An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases.

Current data authority

The designated ground system through which a CPDLC dialogue between a pilot and a controller currently responsible for the flight is permitted to take place.

Current flight plan (CPL)

The flight plan, including changes, if any, brought about by subsequent clearances.

Cyclic redundancy checks (CRC)

A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

Danger area

An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

Data convention

An agreed set of rules governing the manner or sequence in which a set of data may be combined into a meaningful communication.

Data link communications

A form of communication intended for the exchange of messages via data link.

Data link initiation capability (DLIC)

A data link application that provides the ability to exchange addresses, names and version numbers necessary to initiate data link applications.

Data processing

A systematic sequence of operations performed on data.

Data quality: A degree or level of confidence that the data provided meets the requirements of the data user in terms of accuracy, resolution and integrity.

Datum

Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO19104)

Decision altitude (DA) or decision height (DH)

A specified altitude or height in the precision approach or approach with vertical guidance at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Declared capacity

A measure of the ability of the ATC system or any of its subsystems or operating positions to provide service to aircraft during normal activities. It is expressed as the number of aircraft entering a specified portion of airspace in a given period of time, taking due account of weather, ATSU configuration, staff and equipment available, and any other factors which may affect the workload of the controller responsible for the airspace.

Dependent parallel approaches

Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway center lines are prescribed.

DETRESFA

The code word used to designate a distress phase.

Discrete code

A four-digit SSR Code with the last two digits not being “00”.

Distress.

A condition of being threatened by grave and imminent danger or of requiring immediate assistance

Distress phase

A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

Downstream clearance

A clearance issued to an aircraft by an air traffic control unit that is not the current controlling authority.

Downstream data authority

A designated ground system, different from the current data authority through which the pilot can contact an appropriate ATSU for the purposes of receiving a downstream clearance.

Elevation

The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.

Emergency phase

A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

Essential local traffic

Any aircraft, vehicle or personnel on or near the maneuvering area or traffic operating in the vicinity of the aerodrome, which may constitute a hazard to the aircraft concerned

Essential traffic

That controlled traffic to which the provision of separation by air traffic control is applicable but which, in relation to a particular controlled flight, is not separated there from by the specified minimum

Estimated elapsed time

The estimated time required to proceed from one significant point to another.

Estimated off-block time

The estimated time at which the aircraft will commence movement associated with departure.

Estimated time of arrival

For IFR flights, the time at which it is estimated the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated the aircraft will arrive over the aerodrome.

Exact reporting point

A reporting point which is either:

- (a) overhead a VOR.
- (b) overhead a NDB.
- (c) the intersection of two OR radials or of a VOR radial and a DME arc when such intersection has been published as a reporting point in the AIP.
- (d) an ILS marker beacon when traversing the minor axis on a published course

Expected approach time

The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding point to complete its approach for a landing.

Filed flight plan (FPL)

The flight plan as filed with an ATSU by the pilot or a designated representative, without any subsequent changes.

Final approach

That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified,

- a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or
- b) at the point of interception of the last track specified in the approach procedure; and ends at a point in the vicinity of an aerodrome from which:
 - 1) a landing can be made; or
 - 2) a missed approach procedure is initiated.

Final approach segment

That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

Flight crew member

A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight information center (FIC)

A unit established to provide flight information service and alerting service.

Flight information region (FIR)

Airspace of defined dimensions within which flight information service and alerting service are provided.

Flight information service

A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

Flight level

A surface of constant atmospheric pressure which is related to a specific pressure datum, 1013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Flight plan

Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Flight status

An indication of whether a given aircraft requires special handling by air traffic services units or not

Flight technical error (FTE)

The difference between the altitude indicated by the altimeter display being used to control the aircraft and the assigned altitude/flight level

Flight visibility

The visibility forward from the cockpit of an aircraft in flight.

Flow control

Measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome, so as to ensure the most effective utilization of the airspace.

Forecast

A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

Geodetic datum

A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

Glide path

A descent profile determined for vertical guidance during a final approach.

Gregorian calendar

A calendar in general use, first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian Calendar (ISO1908).

Ground effect

A condition of improved performance (lift) due to the interference of the surface with the airflow pattern of the rotor system when a helicopter or other VTOL aircraft is operating near the ground.

Ground speed

The speed of an aircraft relative to the surface of the earth.

Ground-to-air communication

One-way communication from stations or locations on the surface of the earth to aircraft

Ground visibility

The visibility at an aerodrome, as reported by an accredited observer or by automatic systems.

Heading

The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid).

Height

The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

Height-keeping capability

The aircraft height-keeping performance that can be expected under nominal environmental operating conditions with proper aircraft operating practices and maintenance

Height-keeping performance

The observed performance of an aircraft with respect to adherence to cleared flight level.

Holding fix

A geographical location that serves as a reference for a holding procedure.

Holding point

A specified location, identified by visual or other means, in the vicinity of which the position of an aircraft in flight is, maintained in accordance with air traffic control clearances.

Holding procedure

A predetermined maneuver which keeps an aircraft within a specified airspace while awaiting further clearance.

Human factors principles

Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

Human performance

Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

IFR flight

A flight conducted in accordance with the instrument flight rules.

INCERFA

The code word used to designate an uncertainty phase.

Incident

An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Independent parallel approaches

Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway center lines are not prescribed.

Independent parallel departures

Simultaneous departures from parallel or near-parallel instrument runways.

Initial approach segment

That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point.

Instrument approach procedure (IAP)

A series of predetermined maneuvers by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply.

Instrument meteorological conditions (IMC)

Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Integrity (aeronautical data). A degree of assurance that data and its value has not been lost nor altered since the data origination or authorized amendment.

Integrity classification (aeronautical data)

Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data is classified as:

- a) routine data: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;
- b) essential data: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and
- c) critical data: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe

International NOTAM Office

An office designated for the exchange of NOTAM internationally.

Intermediate approach segment

That segment of an instrument approach procedure between either the initial fix and the final approach fix or final approach point, or between the end of a reversal, racetrack or dead reckoning track procedure and the final approach fix or final approach point, as appropriate

Landing area

That part of a movement area intended for the landing or take-off of aircraft.

Level

A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

Level change

In the application of longitudinal separation, level change is that portion of the climb or descent of one aircraft during which

no vertical separation exists with respect to another aircraft.

Licensing authority

The General Authority for Civil Aviation is responsible for the licensing of personnel.

Location indicator

A four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station.

Maneuvering area

That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Meteorological information

Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

Meteorological office

An office designated to provide meteorological service for international air navigation.

Meteorological report

A statement of observed meteorological conditions related to a specified time and location.

Minimum crossing altitude

The lowest altitude at certain fixes at which an aircraft must cross when proceeding in the direction of a higher minimum en route IFR altitude (MEA)

Minimum descent altitude

The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

Minimum en route IFR altitude (MEA)

The lowest published altitude between radio fixes which assures acceptable navigational signal coverage and meets obstacle clearance requirements between those fixes. The MEA prescribed for an Airway or segment thereof, area navigation low or high route, or other direct route applies to the entire width of the airway, segment, or route between the radio fixes defining the airway, segment, or route

Minimum fuel

The term used to describe a situation in which an aircraft's fuel supply has reached a state where little or no delay can be accepted.

Minimum holding altitude

The lowest altitude prescribed for a holding pattern which assures navigational signal coverage, communications, and meets obstacle clearance requirements

Minimum obstruction clearance altitude

The lowest published altitude in effect between radio fixes on VOR airways, off airway routes, or route segments which meets obstacle clearance requirements for the entire route segment and which assures acceptable navigational signal coverage only within 22 nautical miles of a VOR

Minimum safe altitude warning (MSAW)

A function of the ATC radar data processing system. The objective of the MSAW function is to assist in the prevention of controlled flight into terrain. The controller is provided, in a timely manner, a warning (acoustic or visual) when the level of an aircraft is below or is predicted by the computer to go below a predetermined safe altitude.

Minimum sector altitude

The lowest altitude which may be used which will provide a minimum clearance of 300 m (1 000 ft) above all objects

located in an area contained within a sector of a circle of 46 km (25 NM) radius centered on a radio aid to navigation.

Minimum vectoring Altitude

The lowest MSL altitude at which an IFR aircraft will be vectored by a radar controller, except as otherwise authorized for radar approaches, departures and missed approaches. The altitude meets IFR obstacle clearance criteria. It may be lower than the published MEA along an airway or route. It may be utilized for radar vectoring only upon the controller's determination that adequate radar return is being received from the aircraft being controlled

Missed approach point

That point in an instrument approach procedure at or before which the prescribed missed approach procedure must be initiated in order to ensure that the minimum obstacle height is not infringed.

Missed approach procedure

The procedure to be followed if the approach cannot be continued.

Mode (SSR)

The conventional identifier related to specific functions of the interrogation signals transmitted by an SSR interrogator. There are four modes specified in Annex 10: A, C, S and intermode.

Movement area

That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

Navigation specification

A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

- *Required navigation performance (RNP) specification.* A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.
- *Area Navigation (RNAV) specification.* A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Near-parallel runways

Non-intersecting runways whose extended center lines have an angle of convergence/divergence of 15 degrees or less.

Next data authority

The ground system so designated by the current data authority through which an onward transfer of communications and control can take place.

Non-compliant aircraft

An aircraft configured to comply with the requirements of RVSM MASPS which, through height monitoring, is found to have a total vertical error (TVE) or an assigned altitude deviation (AAD) of 90 m (300 ft) or greater or an altimetry system error (ASE) of 75 m (245 ft) or more.

Non-precision approach (NPA) procedure

An instrument approach procedure which utilizes lateral guidance but does not utilize vertical guidance

Non-radar separation

The separation used when aircraft position information is derived from sources other than radar

Normal operating zone (NOZ)

Airspace of defined dimensions extending to either side of an ILS localizer course and/or MLS final approach track. Only the inner half of the normal operating zone is taken into account in independent parallel approaches.

NOTAM

A notice distributed by means of telecommunication 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.

No transgression zone (NTZ)

In the context of independent parallel approaches, a corridor of airspace of defined dimensions located centrally between the two extended runway center lines, where a penetration by an aircraft requires a controller intervention to maneuver any threatened aircraft on the adjacent approach.

Obstacle

All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft; that extend above a defined surface intended to protect aircraft in flight; or that stand outside those defined surfaces and that have been assessed as being a hazard to air navigation

Obstacle clearance altitude (OCA) or obstacle clearance height (OCH)

The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable used in establishing compliance with appropriate obstacle clearance criteria.

On track.

Aircraft are deemed to be on track when flying towards or away from a point over which they will pass or have already passed.

Operational control

The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

Operational error

Any occurrence attributable to an element of the air traffic system in which:

- 1) less than the applicable separation minima between 2 or more aircraft, or between an aircraft and terrain or obstacles (ex. operations below minimum vectoring altitude (MVA); equipment/personnel on runways) as required by the ATSP,
- 2) an aircraft lands or departs on a runway closed to aircraft operations after receiving air traffic authorization an aircraft lands or departs on a runway closed to aircraft operations at an uncontrolled airport, and it was determined that a NOTAM regarding the runway closure was not issued to the pilot as required.

Operator

A person or enterprise engaged in or offering to engage in an aircraft operation.

Performance-based navigation (PBN)

Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Pilot-in-command

The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Precision approach (PA) procedure

An instrument approach procedure using precision lateral and vertical guidance with minima as determined by the category of operation.

Precision approach radar (PAR)

Primary radar equipment used to determine the position of an aircraft during final approach, in terms of lateral and vertical deviations relative to a nominal approach path, and in range relative to touchdown.

Pressure-altitude

An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere as defined in GACAR Section 8

Primary radar

A radar system which uses reflected radio signals.

Primary surveillance radar (PSR)

A surveillance radar system which uses reflected radio signals.

Printed Communications

Communications which automatically provide a permanent printed record at each terminal of a circuit of all messages which pass over such circuit.

Procedural separation

The separation used when aircraft position information is derived from sources other than radar.

Procedure turn

A maneuver in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Prohibited area

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited

Profile

The orthogonal projection of a flight path or portion thereof on the vertical surface containing the nominal track.

PSR blip

The visual indication, in non-symbolic form, on a radar display of the position of an aircraft obtained by primary radar.

Racetrack procedure

A procedure designed to enable aircraft to reduce altitude during the initial approach segment and/or establish the aircraft inbound when entry into a reversal procedure is not practical

Radio navigation service

A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

Radar

A radio detection device which provides information on range, azimuth and/or elevation of objects.

Radar approach

An approach in which the final approach phase is executed under the direction of a radar controller.

Radar clutter

The visual indication on a radar display of unwanted signals.

Radar contact

The situation which exists when the radar position of a particular aircraft is seen and identified on a radar display.

Radar control

Term used to indicate that radar-derived information is employed directly in the provision of air traffic control service.

Radar controller

A qualified air traffic controller holding a radar rating appropriate to the functions to which he is assigned.

Radar display. An electronic display of radar-derived information depicting the position and movement of aircraft.

Radar identification

The situation which exists when the radar position of a particular aircraft is seen on a radar display and positively identified by the air traffic controller.

Radar map

Information superimposed on a radar display to provide ready indication of selected features.

Radar monitoring

The use of radar for the purpose of providing aircraft with information and advice relative to significant deviations from nominal flight path, including deviations from the terms of their air traffic control clearances.

Radar position indication (RPI)

The visual indication, in non-symbolic and/or symbolic form, on a radar display of the position of an aircraft obtained by primary and/or secondary surveillance radar.

Radar position symbol (RPS)

The visual indication, in symbolic form, on a radar display, of the position of an aircraft obtained after automatic processing of positional data derived from primary and/or secondary surveillance radar.

Radar separation

The separation used when aircraft position information is derived from radar sources.

Radar service

Term used to indicate a service provided directly by means of radar.

Radar track position

An extrapolation of aircraft position by the computer based upon radar information and used by the computer for tracking purposes.

Radar unit

That element of an air traffic services unit which uses radar equipment to provide one or more services.

Radar vectoring

Provision of navigational guidance to aircraft in the form of specific headings, based on the use of radar.

Radiotelephony

A form of radio-communication primarily intended for the exchange of information in the form of speech.

Rated air traffic controller

A controller holding a license and valid ratings appropriate to the privileges exercised by him.

Rating

An authorization entered on or associated with a license and forming part thereof, stating special conditions, privileges or limitations pertaining to such license.

RCP type

A label (e.g. RCP 240) that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

Receiving unit/controller

Air traffic services unit/air traffic controller to which a message is sent.

Reduced vertical separation minimum (RVSM)

A vertical separation minimum of 300 m (1 000 ft) which is applied between FL 290 and FL 410 inclusive, on the basis of regional air navigation agreements and in accordance with conditions specified therein.

Repetitive flight plan (RPL)

A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATSUs.

Reporting point

A specified geographical location in relation to which the position of an aircraft can be reported.

Required communication performance (RCP)

A statement of the performance requirements for operational communication in support of specific ATM functions.

Rescue coordination center

A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Rescue unit

A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue.

Restricted area

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

Reversal procedure

A procedure designed to enable aircraft to reverse direction during the initial approach segment of an instrument approach procedure. The sequence may include procedure or base turns.

Runway

A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway-holding position

A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control TWR.

Runway incursion

Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

Runway visual range (RVR)

The range over which the pilot of an aircraft on the center line of a runway can see the runway surface markings or the lights delineating the runway or identifying its center line.

RVSM approval

The term used to describe the successful completion of airworthiness approval and operational approval (if required).

RVSM compliant aircraft

Aircraft that have received State approval for RVSM operations within the MID RVSM airspace.

RVSM entry point

The first reporting point over which an aircraft passes or is expected to pass immediately before, upon, or immediately after initial entry into MID RVSM airspace, normally the first reference point for applying a 1,000 ft vertical separation minimum between RVSM Compliant aircraft.

RVSM exit point

The last reporting point over which an aircraft passes or is expected to pass immediately before, upon, or immediately after leaving MID RVSM airspace, normally the last reference point for applying a 1,000 ft vertical separation minimum between RVSM Compliant aircraft.

Safety management system (SMS)

A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Secondary radar

A radar system wherein a radio signal transmitted from the radar station initiates the transmission of a radio signal from another station.

Secondary surveillance radar (SSR)

A surveillance radar system which uses transmitters/receivers (interrogators) and transponders.

Segregated parallel operations

Simultaneous operations on parallel or near-parallel instrument runways in which one runway is used exclusively for approaches and the other runway is used exclusively for departures.

Sending unit/controller

Air traffic services unit/air traffic controller transmitting a message.

Shoreline

A line following the general contour of the shore, except that in cases of inlets or bays less than 30 nautical miles in width, the line shall pass directly across the inlet or bay to intersect the general contour on the opposite side.

SIGMET information

Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

Significant point

A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Slush

Water-saturated snow which with a heel-and-toe slap down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

SNOW (on the ground)

- a) ***Dry snow.*** Snow which can be blown if loose or, if compacted by hand, will fall apart upon release; specific gravity: up to but not including 0.35.
- b) ***Wet snow.*** Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) ***Compacted snow.*** Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

Special VFR flight

A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

SSR response

The visual indication, in non-symbolic form, on a radar display, of a response from an SSR transponder in reply to an interrogation.

Standard instrument arrival (STAR)

A designated instrument flight rule (IFR) arrival route linking a significant point, normally on an ATS route, with a point from which a published instrument approach procedure can be commenced.

Standard instrument departure (SID)

A designated instrument flight rule (IFR) departure route linking the aerodrome or a specified runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the en-route phase of a flight commences.

State safety programme (SSP)

An integrated set of regulations and activities aimed at improving safety.

Station declination

An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

Stopway

A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off.

Strayed aircraft

An aircraft which has deviated significantly from its intended track or which reports that it is lost.

State aircraft

For the purposes of MID RVSM, only aircraft used in military, customs, humanitarian or police services shall qualify as State aircraft.

Surveillance radar. Radar equipment used to determine the position of an aircraft in range and azimuth.

Target level of safety (TLS)

A generic term representing the level of risk which is considered acceptable in particular circumstances.

Taxiing

Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

Taxiway

A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- a) Aircraft stand taxilane.** A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.
- b) Apron taxiway.** A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.
- c) Rapid exit taxiway.** A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

Terminal control area (TMA)

A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.

Threshold

The beginning of that portion of the runway usable for landing.

Total estimated elapsed time

For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

Touchdown

The point where the nominal glide path intercepts the runway.

Track

The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

Traffic avoidance advice

Advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision.

Traffic information

Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

Transfer of control point

A defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next.

Transferring unit/controller

Air traffic control unit/air traffic controller in the process of transferring the responsibility for providing air traffic control service to an aircraft to the next air traffic control unit/air traffic controller along the route of flight.

Transition altitude

The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

Transition layer

The airspace between the transition altitude and the transition level.

Transition level

The lowest flight level available for use above the transition altitude.

Uncertainty phase

A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

Unidentified aircraft

An aircraft has been observed or reported to be operating in a given area but whose identity has not been established.

Urgency

A condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, which does not require immediate assistance.

Unmanned free balloon

A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

VFR flight

A flight conducted in accordance with the visual flight rules.

Vicinity of the aerodrome

An aircraft is in the vicinity of the aerodrome when it is within the published aerodrome traffic zone or within 5 NM of the

center of the aerodrome.

Visibility

Visibility for aeronautical purposes is the greater of:

- a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;
- b) the greatest distance at which lights in the vicinity of 1,000 candelas can be seen and identified against an unlit background.

Visual approach

An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain.

Visual maneuvering area

The area in which obstacle clearance should be taken into consideration for aircraft carrying out a circling approach.

Visual meteorological conditions (VMC)

Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

Volcanic ash advisory center (VAAC)

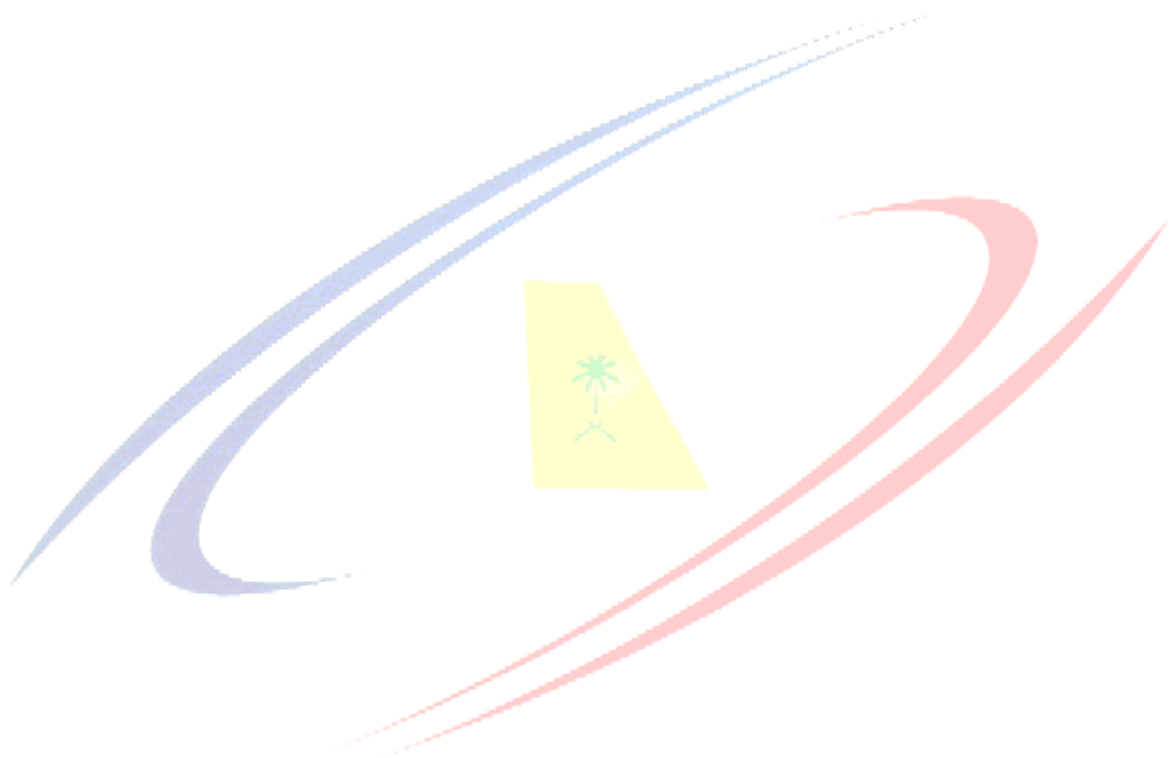
A meteorological center designated by regional air navigation agreement to provide advisory information to meteorological watch offices, area control centers, flight information centers, world area forecast centers, relevant regional area forecast centers and international OPMET data banks regarding the lateral and vertical extent and forecast movement of volcanic ash in the atmosphere following volcanic eruptions.

Waypoint

A specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation. Waypoints are identified as either:

- **Fly-by waypoint.** A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure, or
- **Flyover waypoint.** A waypoint at which a turn is initiated in order to join the next segment of a route or procedure

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1.2 Abbreviations

When the following abbreviations are used in this regulation, they shall have the following meanings:

A	Amber	AOR	Area of Responsibility
A/G	Air-to-ground	AP	Airport
AAD	Assigned altitude deviation	APCH	Approach
AAL	Above aerodrome level	APP	Approach control office or approach control
ABI	Advance Boundary Information	APR	April
ABM	Abeam	APREQ	Approval Request Message
ABN	Aerodrome beacon	APV	Approach procedure with vertical guidance
AC	Altocumulus	ARO	Air traffic services reporting office
ACAS	Airborne collision avoidance system	ARP	Aerodrome reference point or air-report message
ACC	Area Control Center or Area Control	ARR	Arrive, arrival or arrival message
ACCID	Notification of an aircraft accident	ARS	Special air-report message
ACFT	Aircraft	AS	Altostratus
ACI*	Area of Common Interest	ASC	Ascent to or ascending to
ACID*	Aircraft Identification	ASDA	Accelerate-stop distance available
ACL	Altimeter check location	ASE	Altimetry system error
ACN	Aircraft classification number	ATA	Actual time or arrival
ACP	Acceptance message	ATC	Air traffic control
ACPT	Accept or accepted	ATD	Actual time of departure
ACT	Activation Message	ATFM	Air Traffic Flow Management
AD	Aerodrome	ATIS	Automatic terminal information service
ADA	Advisory area	ATM	Air traffic management
ADF	Automatic direction finding equipment	ATS	Air traffic services
ADIZ	Air defense identification zone	ATSP*	Air traffic services procedures
ADR	Advisory route	ATSU*	Air traffic services unit
ADS	Automatic dependent surveillance	ATZ	Aerodrome traffic zone
ADS-B	Automatic dependent surveillance - Broadcast	AUG	August
ADS-C	Automatic dependent surveillance - Contract	AUW	All up weight
AEMC*	Airways Engineering Maintenance Control	AVASIS	Abbreviated visual approach slope indicator system
AFIL	Flight plan filed in the air	AWY	Airway
AFIS	Aerodrome flight information service	AZM	Azimuth
AFS	Aeronautical Fixed Service		
AFTN	Aeronautical fixed telecommunication network	B	Blue
AGA	Aerodromes, air routes and ground aids	BA	Braking action
AGL	Above ground level	BASE	Cloud base
AIC	Aeronautical information circular	BCN	Beacon (aeronautical ground light)
AIP	Aeronautical information publication	BCST	Broadcast
AIRAC	Aeronautical information regulation and control	BDRY	Boundary
AIREP	Air-report	BKN	Broken
AIS	Aeronautical information services	BLDG	Building
ALARP	As low as reasonably possible	BLW	Below
ALERFA	Alert phase	BRG	Bearing
ALR	Alerting message	BTN	Between
ALT	Altitude	C	Degrees Celsius
ALTN	Alternate (aerodrome)	C/L	Center line
AMS	Aeronautical mobile service	CAS	Calibrated air speed
AMSL	Above mean sea level	CAT	Clear air turbulence
ANS	Air Navigation Services	CAT I-II-III*	Associated with an approach type.
AOC	Aerodrome obstruction chart	CAVOK	Visibility, cloud and present weather

	better than prescribed values or conditions	DLA	Delay, delayed or delay message
CB	Cumulonimbus	DLIC	Data link initiation capability
CBA*	Cross Border Area	DME	Distance measuring equipment
CC	Cirrocumulus	DP	Dew point temperature
CCB	Common Control Boundary	DPS*	Data processing system
CDN	Coordination message	DR	Dead reckoning
CDR*	Conditional Route	DTG	Date-time group
CE*	Clearance expiry	DVL	Digital Voice Logger Recording System
CFM	Confirm or I confirm	DVOR	Doppler VOR
CH	Channel	E	East or eastern longitude
CHG	Modification message	EAT	Expected approach time
CI	Cirrus	EET	Estimated elapsed time
CIDIN	Common ICAO Data Interchange Network	ELEV	Elevation
CIV	Civil	EMERG	Emergency
CLD	Cloud	ENRT	En route
CLR	Clear	EST	Estimated time over significant point, estimate message
CM	Centimetre	ETA	Estimated time of arrival
CMS	Configuration Management Staff	ETD	Estimated time of departure
CNL	Cancel or FPL cancellation message	ETO	Estimated time over significant point
CNS	Communications, Navigation, Surveillance	ETOPS	Extended range operations by turbine-engined aeroplanes
COM	Communications	F	Facilities
CONS	Continues	FAC	Facilities
CONT	Continue or continued	FAF	Final approach fix
COP	Change-over point	FAL	Facilitation of international air transport
COR	Correct, corrected or correction	FAP	Final approach point
COSPAS	Space System for Search of Vessels in Distress	FAX	Facsimile transmission
CPA	Circular Protected Area	FCO*	Flight clearance office
CPDLC	Controller-Pilot Data Link Communications	FCST	Forecast
CPL	Current flight plan message	FD*	Flight data
CRAM*	Conditional Route Availability Message	FDA*	Flight data assistant
CRC	Cyclic redundancy check	FDPS*	Flight Data Processing System
CS	Cirrostratus	FDS	Flight Data Specialist
CTA	Control area	FEB	February
CTL	Control	FIC	Flight information center
CTP	Control Transfer Point	FIR	Flight information region
CTR	Control zone	FIS	Flight information service
CU	Cumulus	FL	Flight level
CWY	Clearway	FLT	Flight
D	Danger area	FLTCK	Flight Check
DA	Decision altitude	FMP*	Flow Management Position
D-ATIS	Digital automatic terminal information service	FPB*	Flight Progress Board
DCT	Direct	FPL	Filed Flight Plan message
DEC	December	FPM	Feet per minute
DEG	Degrees	FREQ	Frequency
DEP	Depart, departure or departure message	FT	Feet
DEST	Destination	FTE	Flight technical error
DETRESFA	Distress phase	FUA	Flexible use of Airspace
DFL*	Division Flight Level	G	Green
DH	Decision height	GACA	General Authority of Civil Aviation
DIST	Distance	GACAR	GACA Regulation
		GAT	General air traffic
		GEN	General
		GES	Ground earth station

GND	Ground	KT	Knots
GNSS	Global navigation satellite system		
GP	Glide path	L	Left
GS	Ground speed	LAM	Logical Acknowledge Message
		LAT	Latitude
H		LCN	Load classification number
H24	Continuous day and night service	LDA	Landing distance available
HDG	Heading	LDG	Landing
HEL	Helicopter	LDI	Landing direction indicator
HF	High frequency (3 to 30 MHz)	LLZ	Localizer
HGT	Height or height above	LM	Locator, middle
HJ	Sunrise to sunset	LO	Locator outer
HN	Sunset to sunrise	LOA*	Letter of Agreement
HO	Service available to meet operational requirements	LONG	Longitude
HPA	HECTOPASCAL	LORAN	LORAN (long range air navigation system)
HS	Service available during hours of scheduled operations	LTT	Landline teletypewriter
HX	No specific working hours	LVL	Level
HZ	Hertz (cycle per second)	M	Meters
I		MAG	Magnetic
IAC	Instrument approach chart	MAPT	Missed approach point
IAF	Initial approach fix	MAR	March
IAP	Instrument approach procedure	MASPS	Minimum aircraft system performance specification
IAS	Indicated air speed	MAX	Maximum
ICAO	International Civil Aviation Organization	MDA	Minimum descent altitude
ID	Identifier or identify	MDH	Minimum descent height
IDENT	Identification	MEA	Minimum en-route altitude
IF	Intermediate fix	MET	Meteorological or meteorology
IFR	Instrument flight rules	METAR	Aviation routine weather report
ILS	Instrument landing system	MHZ	Megahertz
IM	Inner Marker	MID	ICAO Middle East Region
IMC	Instrument meteorological conditions	MIL	Military
INA	Initial approach	MIN	Minutes
INCERFA	Uncertainty phase	MKR	Marker radio beacon
INFO	Information	MLS	Microwave landing system
INS	Inertial navigational system	MM	Middle Marker
INT	Intersection	MNM	Minimum
INTL	International	MNPS	Minimum navigation performance specification
IPU	Independent Power Unit	MOA	Military operating area
ISA	International standard atmosphere	MOC	Minimum obstacle clearance
ISO	International Standards Organization	MOR	Meteorological optical range
ITU	International Telecommunications Union	MRP	ATS/MET reporting point
		MS	Minus
J		MSA	Minimum sector altitude
JAN	January	MSAW	Minimum Safe Altitude Warning
JUL	July	MSL	Mean sea level
JUN	June	MVA	Minimum Vectoring Altitude
		MWO	Meteorological watch office
K		N	North or Northern latitude
KG	Kilograms	NAT	North Atlantic
KHZ	Kilohertz	NAV	Navigation
KM	Kilometers	NDB	Non-directionnel radio beacon
KSA*	Kingdom of Saudi Arabia	NE	North-east

NGT	Night	RA	Resolution Advisory
NIL	None	RAC	Rules of the air and air traffic services
NM	Nautical miles	RAFC	Regional Area Forecast Center
NOF	International NOTAM office	RCC	Rescue Coordination Center
NOSIG	No significant change	RCF	Radio communication failure
NOTAM*	Notice to airmen	RCL	Runway center line
NOV	November	RCP	Required communications performance
NOZ	Normal operating zone	RDL	Radial
NPA	Non precision approach	REP	Reporting point
NR	Number	REQ	Request or requested
NS	Nimbostratus	REV	Revision Message
NTZ	No transgression zone	RNAV	Area Navigation
NW	North-west	RNP	Required Navigation Performance
O/R	On request	ROC	Rate of climb
OAT*	Operational Air Traffic	RPI	Radar position indication
OB	Operational Bulletin	RPL	Repetitive flight plan
OCA	Obstacle clearance altitude	RPM*	Revolutions per minute
OCH	Obstacle clearance height	RPS	Radar position symbol
OCT	October	RQS	Request supplementary flight plan message
OJT	On-the-Job Training	RSC	Rescue sub-centre
OJTI	On-the-Job Training Instructor	RSR	En-route surveillance radar
OK	We agree or it is correct	RTF	Radiotelephony or radiotelephone
OL	Operational Letter	RTT	Radio teletypewriter
OLDI*	On-line Data Interchange	RVR	Runway visual range
OM	Outer marker	RVSM	Reduced Vertical Separation Minimum
OPMET	Operational meteorological (information)	RWY	Runway
OPR	Operator, operate, operative, operating or operational	S	South or southern latitude
OPS	Operations	SAR	Search and rescue
OVC	Overcast	SARPS	Standards and recommended practices
P	Prohibited	SARSAT	Search And Rescue Satellite aided Tracking
PA	Precision approach	SC	Stratocumulus
PAC*	Pre-activation Message (OLDI)	SCCG	Systems Configuration Control Group
PANS	Procedures for air navigation services	SCR	System Change Request
PAPI	Precision Approach Path Indicator	SCT	Scattered
PAR	Precision approach radar	SD	S&AT Safety Department
PCN	Pavement classification number	SDBY	Standby
PLN	Flight Plan	SE	South-east
PN	Prior notice required	SELCAL	Selective calling system
POB	Persons on board	SEP	September
PPI	Plan position indicator	S&AT	Safety & Air Transport
PPR	Prior permission required	SFC	Surface
PS	Plus	SID	Standard instrument departure
PSN	Position	SIF	Selective identification feature
PSR	Primary Surveillance Radar	SIGMET	Significant meteorological information
PTN	Procedure turn	SKC	Sky clear
QFE	Atmospheric pressure at aerodrome elevation (or at runway threshold)	SM	Staff Memo
QNH	Altimeter sub-scale setting to obtain elevation when on the ground	SMC	Surface movement control
R	Red, right, restricted area, radar, or RNP certified	SPL	Supplementary flight plan message
		SR	Sunrise
		SRA	Surveillance radar approach
		SRR	Search and rescue region
		SS	Sunset
		SSB	Single sideband
		SSR	Secondary Surveillance Radar

SST	Supersonic transport		
ST	Stratus	U/S	Unserviceable
STAR	Standard (instrument) arrival	UFN	Until further notice
STCOM	Satellite communications	UHF	Ultra high frequency (300 to 3000 MHz)
STF	Stratiform		
STN	Station	UNL	Unlimited
STR	System Trouble Report	UNREL	Unreliable
SUPPS	Regional Supplementary Procedures	UPS	Uninterruptible Power Supply
SUPU	Supplementary Uninterruptible Power Unit	UTC	Coordinated Universal Time
SVFR*	Special visual flight rules	V	
SW	South-west	VAAC	Volcanic ash advisory center
SWY	Stop-way	VAC	Visual approach chart
		VAR	Magnetic Variation
T	Temperature	VASIS	Visual approach slope indicator system
TA	Transition altitude	V-ATIS	Voice-automatic terminal information service
TACAN	Tactical air navigation aid		
TAF	Aerodrome forecast	VER	Vertical
TAR	Terminal area surveillance radar	VFR	Visual flight rules
TAS	True airspeed	VHF	Very high frequency (30 to 300 MHz)
TCU	Terminal Control Unit or Towering cumulus	VIA	By way of
TDZ	Touchdown zone	VIP	Very important person
TEL	Telephone	VIS	Visibility
TFC	Traffic	VMC	Visual meteorological conditions
TFR*	Transfer of control	VOLMET	Meteorological information for aircraft in flight
TGL	Touch-and-go landing	VOR	VHF omni-directional radio range
TGS	Taxiing guidance system	VORTAC	VOR and TACAN
THR	Threshold	VRB	Variable
TIL	Until	VSM	Vertical separation minimum
TIBA	Traffic Information Broadcasts by Aircraft	VTOL	Vertical take-off and landing
TKOF	Take off	W	West, western longitude or white
TLS	Target level of safety	WAC	World aeronautical chart ICAO 1:1,000,000
TMA	Terminal control area		
TNR	Non-radar transfer of control message	WAFC	World Area Forecast Center
TOC	Top of climb	WBAR	Wing bar lights
TODA	Take off distance available	WDI	Wind direction indicator
TORA	Take off run available	WEF	With effect from
TOS	Traffic Orientation Scheme	WIE	With immediate effect
TR	Track	WIP	Work in progress
TRA	Radar transfer of control message	WPT	Way-point
TSA*	Temporary Segregated Airspace	WX	Weather
TT	Teletypewriter		
TURB	Turbulence	X	
TVE	Total vertical error	XBAR	Crossbar
TWR	Aerodrome control TWR or aerodrome control	Y	Yellow
TWY	Taxiway	Y CZ	Yellow caution zone
TYP	Type of aircraft		

CHAPTER 2 - GENERAL

2.1 Establishment of authority

2.1.1 The General Authority of Civil Aviation (GACA) is responsible for the provision of Air Traffic Services (ATS) within the airspace of the Kingdom of Saudi Arabia (KSA) in accordance with the obligations imposed by the ICAO Convention and Regional Air Navigation Agreements.

2.1.2 GACA is designated as the appropriate ATS authority.

2.2 Objectives of air traffic services

2.2.1 The objectives of ATS shall be to:

- a) prevent collisions between aircraft;
- b) prevent collisions between aircraft on the maneuvering area and obstruction on that area;
- c) maintain a safe, orderly and expeditious flow of air traffic;
- d) provide advice and information useful for the safe and efficient conduct of flights; and
- e) notify appropriate organizations regarding aircraft in need of search and rescue aid and assist such organizations as required.

2.2.2 The objectives of the Air Traffic Control (ATC) Services exclude prevention of collision with terrain except when controlled flights are being vectored by radar.

2.3 Division of air traffic services

2.3.1 The ANS Division of GACA (ANS) shall have the primary responsibility for the provision of ATS within KSA.

2.3.2 The Air Traffic Services shall be comprised of the following:

- a) area control service for aircraft in control areas;
- b) approach control service for arriving and departing aircraft;
- c) aerodrome control service for aerodrome traffic;
- d) alerting service to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required; and
- e) flight information service to provide advice and information useful for the safe and efficient conduct of flights.

2.3.3 The General Manager of ANS is responsible for determining the types of ATS to be provided by an Air Traffic Services Unit (ATSU).

2.4 Establishment of ATSUs

2.4.1 The following types of Air Traffic Service Units (ATSUs) are established to provide ATS:

- a) Area Control Centers (ACCs);
- b) Approach Control Units (APPs);
- c) Aerodrome Control Towers (TWRs); and
- d) Flight Information Services (FISs)

2.4.2 The General Manager of ANS is responsible for the development of policy and procedures to determine the capacity of the ATS system including the number of staff required to ensure the provision of an adequate ATS.

2.5 Division of airspace

2.5.1 KSA airspace is divided into two Flight Information Regions (FIRs). Within each FIR the airspace below FL245 is designated as the Lower FIR and the airspace at and above FL245 is designated as the Upper Flight Information Region (UIR).

2.5.2 Airspace within each FIR shall be designated with an airspace classification which determines the applicable flight rules and the minimum services that are to be provided. This classification shall comply with the criteria given in Appendix 1 to this Regulation.

2.6 Application of ATC service

2.6.1 ATC Services shall be provided to:

- a) IFR flights in controlled airspace (Classes A, B, C, D and-E as described in Appendix 1);
- b) VFR flights in Class B airspace; and
- c) Aerodrome traffic at controlled aerodromes.

2.7 ATS procedures manual

2.7.1 General

2.7.1.1 Procedures and practices for the provision of Air Traffic Services with the Kingdom of Saudi Arabia shall be published in an Air Traffic Services Procedures (ATSP) Manual. This Manual shall be published in two volumes:

- a) ATSP Part 1 (designated as 7300.1-1 or simply ATSP 1), will specify procedures and practices applicable to all ATSUs in the Kingdom of Saudi Arabia. This document is prepared and maintained by ANS and issued under the authority of the Safety and Economic Regulation Division.
- b) ATSP Part 2 (designated as 7300.1-2 or simply ATSP 2), will specify complementary Unit Procedures applicable to individual ATSUs. Subject to 2.7.2 below, ATSP Part 2 is issued under the authority of ANS. ATSP Part 2 Unit Procedures shall be published in separate parts, one for each unit even if more than one unit is established at a location.

2.7.1.2 The ATS Procedures Manual shall be approved by GACA-S&AT in accordance with a pre-determined approval process.

2.7.2 Formatting and Administration

2.7.2.1 The pages of the ATS Procedures Manual (Parts 1 and 2) shall indicate the date of the original document or the date of any subsequent amendment. In addition, each page shall indicate the following elements:

- a) authorizing authority;
- b) page number;
- c) procedure section; and
- d) Part number.

2.7.2.2 The ATS Procedures Manual shall be amended at regular intervals by means of an amendment service, which will consist mainly of replacement pages although minor corrections can be made by means of handwritten amendments.

2.7.2.3 Replacement pages shall be annotated with a vertical line in the outer margin to indicate the portion, which has been revised as follows:

- a) A vertical line beside text or diagram indicates that the item has been amended.
- b) The specific editorial or typographical changes will not otherwise be marked.

- c) A vertical line beside a blank space in between text indicates that a previous item has been removed. The amendment number will appear at the foot of the page date.

2.7.2.4 Urgent changes or temporary instructions shall be notified by the issue of Supplementary Procedures, which shall be deemed to form a part of the main text until either incorporated therein by a routine amendment or canceled. Supplementary Procedures shall be retained in the special section provided at the rear of the document until no longer required.

2.7.2.5 No changes shall be made to the procedures contained in the ATS Procedures Manual except by an Amendment or Supplementary Procedure issued from the office of either the General Manager of ATM for Part 1 or the relevant Unit Manager/Chief for Part 2.

2.7.3 Distribution

2.7.3.1 Each unit will be issued with a sufficient number of copies of ATSP 1 and ATSP 2 to provide the following distribution:

- a) one copy to each individual assigned to that unit;
- b) one copy for each control room operating within that unit;
- c) spare copies for Unit training and anticipated staff increase; and
- d) sufficient copies for ATS Training

2.7.3.2 The Unit Manager/Chief has the overall responsibility for all the documents assigned to his unit and is required to account for his holding to ANS Senior management. The Unit Manager/Chief is also responsible for internal unit distribution of copies, and any Amendments or Supplementary Procedures thereto which may be issued from time to time.

2.7.3.3 Individual holders are responsible to the Unit Manager/Chief for ensuring that their copies are amended as necessary. Controllers assigned to a new location shall take their copy with them to the new unit.

2.8 Administration of ATS

2.8.1 Responsibilities of Unit Managers

2.8.1.1 ATSU Managers/Chiefs shall use the policies, standards, criteria and information in the ATS Procedures Manual to administer and manage Air Traffic Services units.

2.8.1.2 ATSU Managers/Chiefs and supervisory personnel are expected to be familiar with all parts of this manual and to have an in-depth knowledge of those provisions that ascertain to their management and supervisory responsibilities.

2.8.1.3 ATSU Managers/Chiefs and supervisory personnel are expected to use their best judgment for the resolution of a situation for which direction is not provided.

***Note:** ATSU Managers/Chiefs should consult with GACA Headquarters Office if dealing with situations which may set precedents or have ramifications on other units.*

2.8.2 Responsibilities of Personnel

2.8.2.1 Personnel shall not discuss operations or incidents that come to their attention by reason of employment except:

- a) when requested to do so by an authorized ANS or GACA-S&AT official; or
- b) as otherwise excepted in the ATS procedures Manual.

2.8.2.2 Personnel shall avoid criticism reflecting on users of air traffic services or on other ATSUs or personnel. They should, however, provide advice and criticism through normal channels for action.

Note: When in direct contact with the public, as representatives of GACA, all personnel are expected to exercise a high degree of tact and good judgment

2.8.3 Release of information

2.8.3.1 All information and documents associated with the provision of ATS in KSA are proprietary. As a general principle, information will not normally be disclosed to outside parties except where required by law or if the information is subject to a contractor Agreement with GACA.

2.8.3.2 The Head of ATM shall consult with GACA-S&AT regarding the release of unit operational records or material contained in them for any other situation than those specified in this document.

2.8.3.3 Following an accident or incident, the affected ATS Unit supervisor shall quarantine all involved operational records and deny access to those records to anyone without GACA-S&AT approval, except in the following circumstances:

- a) permit only unit personnel who were not directly involved in the accident or incident under investigation access to unit operational records, for the purpose of verification, routine research and efficiency checks.
- b) permit Rescue Coordination Center personnel, access as required in support of search activities.

Note: Audio and radar tape recordings may be played back, and the information released to the RCC, during active search and rescue operations.

- c) provide access to personnel authorized by the GACA-S&AT IIC investigating an accident, incident or regulatory infraction.
- d) GACA-S&AT investigators may at their discretion request an informal interview with ATS personnel alleged to have contravened the Civil Aviation Act or the KSA Aviation Regulations.

2.8.4 Operating irregularities

2.8.4.1 If an irregular occurrence has taken place, ANS shall immediately arrange for the removal from operational duties of any controller directly involved in the occurrence until the circumstances have been fully examined.

2.8.4.2 As soon as practicable after an irregular occurrence has taken place, ANS shall ensure that a preliminary investigation is conducted to examine the basic facts and to determine if an operating irregularity occurred.

Note: ANS shall ensure that:

- a) all relevant documentation is secured; and
- b) Appropriate reporting is initiated.

2.8.4.3 ANS shall ensure that operating irregularities are reported to GACA-S&AT

2.8.5 Standardization of operations

2.8.5.1 Operations shall be uniform and to this end ANS shall put in place a system whereby all operational staff are informed at appropriate intervals of any developments.

2.8.6 Forms

2.8.6.1 ANS shall ensure that all staff are familiar with operational forms. Instructions shall be issued as to preparation and distribution of such forms.

2.8.7 Unit logs

2.8.7.1 ANS shall make appropriate logs available at all units and issue instructions on completion and forwarding.

2.8.8 Retention of data

2.8.8.1 ANS shall ensure that the unit log forms and documents are filed and stored on a daily (local time) basis as follows:

- a) forms, messages, reports, etc. are to be grouped by type, packaged and labeled indicating the site name, year, month and day;
- b) data strips are to be separately packaged for each location;
- c) tapes, diskettes, cassettes or any other similar device used to store digital data from electronic systems certified for electronic logging are to be separately packaged; and
- d) revenue messages for domestic and international services are to be separately packaged for long-term retention.

Note 1: GACA-S&AT may request that the log or portions thereof be retained for longer periods.

Note 2: Operational weather data will not normally be retained unless required as a result of an aircraft accident, incident or an aircraft occurrence.

2.8.8.2 ANS shall ensure that the unit log material is retained for the following periods:

- a) A minimum of 30 days for recorded tapes, forms, documents and any device used to store digital data from electronic systems;
- b) 5 years for domestic service revenue messages;
- c) current year and 5 years thereafter for international service revenue messages; and
- d) 5 years for the unit Log Book.

2.8.8.3 ANS shall ensure that log material secured as a result of an aircraft accident is retained as follows:

- a) a minimum of five (5) years when the accident involves fatalities or serious personal injury; or
- b) for a period of five (5) years where accidents of a less serious nature are involved.

Note: This period may be reduced at the discretion of GACA-S&AT when it can be determined that further retention serves no useful purpose.

2.8.8.4 ANS shall ensure that logs secured as a result of an aircraft accident are not erased or destroyed without Headquarters approval.

2.8.8.5 ANS shall ensure that all log material secured as a result of an incident or regulatory infraction is retained until the investigation or enforcement action is completed.

Note: GACA-S&AT in coordination with ANS will determine when retention is no longer required.

2.8.8.6 ANS shall ensure, at units where electronic logging is performed, that adequate procedures are in place to back-up electronically logged data on a daily basis.

2.8.9 Unit libraries

2.8.9.1 ANS shall ensure that unit libraries are maintained at all operating ATSUs. Information contained in unit libraries shall be available to all operating personnel on a 24-hour basis and shall contain relevant documents of both general and local nature.

2.8.9.2 ANS shall instruct each unit to:

- a) provide, in suitable binders, information necessary for the operation of a unit, sector, or position;
- b) provide separate binders for each sector if a unit is sectorized;
- c) ensure that sector/unit binders are readily available at a position when it is in operation;

2.8.9.3 ANS shall instruct units to periodically review data contained in all publications relative to their respective unit and initiate action as required to ensure accuracy and completeness of published data.

2.8.10 Unit directives

2.8.10.1 All unit directives shall be issued as Operations Letters (OL), Operations Bulletins (OB) or Staff Memos (SM), as appropriate.

- a) Operations Letters (OL) shall contain information of an operational nature that will be effective for the long

- term i.e., up to one year or longer. Operations Letters shall be numbered consecutively.
- b) Operations Bulletins (OB) shall contain information of an operational nature that is more temporary in nature and will be effective for a shorter period of duration, generally three months or less. Operations Bulletins shall be numbered consecutively.
 - c) Staff Memos (SM) shall contain information that is administrative or informative in nature only.
 - d) Unit directives shall be cancelled when the information they contain is no longer valid or has expired. A list of current contents shall be maintained separately for operations letters (OL), operations bulletins (OB) and staff memos (SM).

2.8.11 Letters of Agreement (LoA)

2.8.11.1 ANS shall ensure that letters of agreement (LOAs) between adjacent ATSUs are established. Letters of agreement shall describe supplementary procedures needed to minimize coordination and to ensure compatibility of procedures between adjacent ATSUs. Letters of agreement between adjacent KSA units shall be signed by the Head of both ATSU.

2.8.11.2 Letters of agreement between ATSUs in adjacent States shall be developed and signed at the Head of ATSU level. International agreements shall also be signed by the respective Heads of ATM at the respective headquarters level.

2.8.11.3 A copy of all letters of agreement shall be forwarded to ANS Headquarters for retention.

2.8.11.4 A copy of all LoAs of the unit shall be kept in the ATSP 7300 1-2

2.8.12 Legal responsibility of employees

2.8.12.1 GACA-S&AT can at the request of ANS suspend, cancel, refuse to renew or refuse to issue an air traffic controller's license on the grounds that the license holder:

- a) contravenes any provision of the GACA Regulations;
- b) is incompetent;
- c) is no longer qualified or does not meet, or comply with, conditions attached to the license;
- d) is medically unfit; or
- e) poses an immediate threat to aviation safety or is likely to pose a threat to aviation safety as a result of an act done under the authority of the license.

2.8.13 Forms

28.13.1 ANS shall provide and publish a comprehensive list including copies of all relevant forms in ATSP 7300 1-1

2.9 Units of measurement

2.9.1 The units of measurement used throughout this regulation generally conform to ICAO Annex 5 – Units of Measurement to be Used in Air and Ground Operations. Within KSA, however, in order to facilitate operational use, all altitudes are expressed in feet, Flight Levels are expressed in hundreds (00s) of feet and meteorological visibility measurements are expressed in meters and/or kilometers.

Note: See GACA Regulation - Section 5 - Units of Measurement to be Used in Air and Ground Operations.

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CHAPTER 3 - ATS SAFETY MANAGEMENT

3.1 ATS Safety Management

3.1.1 ANS shall implement systematic and appropriate ATS Safety Management System to ensure that safety is maintained in the provision of ATS within all airspace and at aerodromes in accordance with the provisions of GACAR Section 19.

3.1.2 The acceptable level of safety and safety objectives applicable to the provision of ATS within airspaces and at aerodromes shall be established by the ANS and published in the SMS Manual.

3.1.3 The ATS safety management system shall, *inter alia*:

- a) identify actual and potential safety hazards;
- b) ensure the implementation of remedial action necessary to maintain agreed safety performance;
- c) provide for continuous monitoring and regular assessment of the safety performance; and
- d) aim to make continuous improvement to the overall performance of the Safety Management System.

3.1.4 The ANS safety management system shall clearly define lines of safety accountability throughout the air traffic services provider, including a direct accountability for safety on the part of senior management.

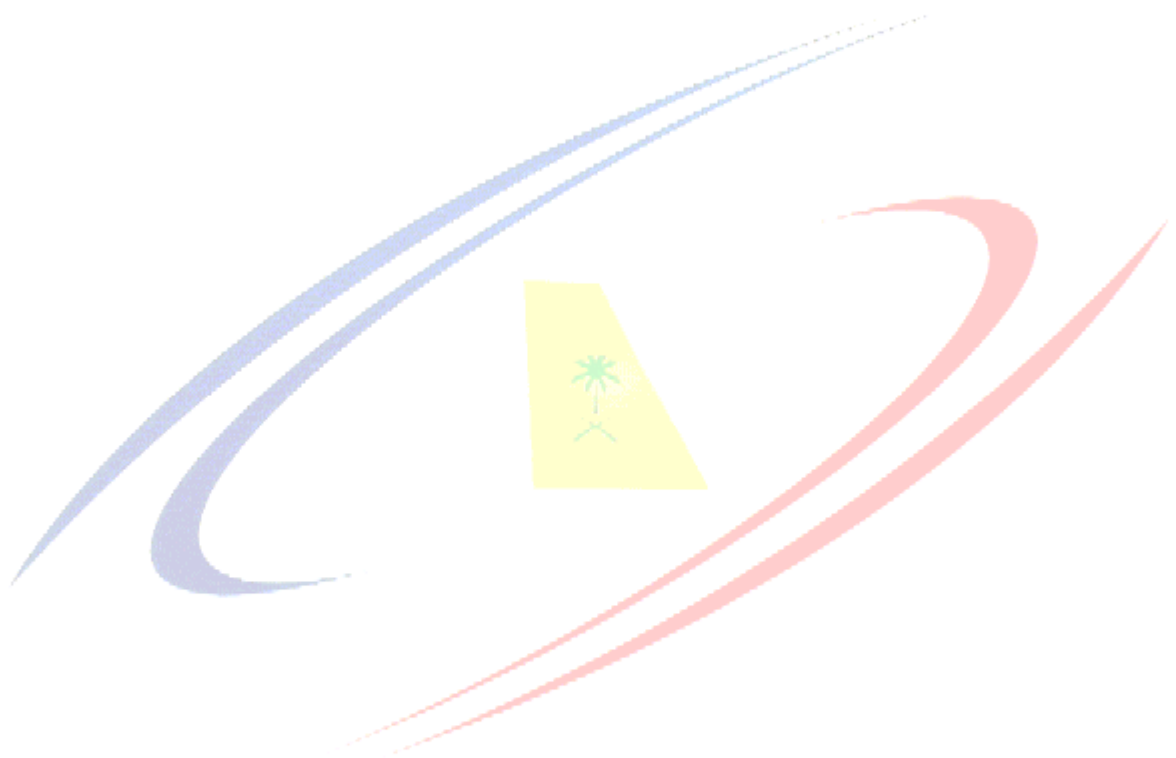
3.1.5 Any significant safety-related change to the ATS system, including the implementation of a reduced separation minimum or a new procedure, shall only be effected after a safety assessment has demonstrated that an acceptable level of safety will be met and users have been consulted. When appropriate, the ANS shall ensure that adequate provision is made for post-implementation monitoring to verify that the defined level of safety continues to be met.

3.1.6 ANS shall develop procedures to ensure the continued competency of air traffic controllers on changes to the ATS system or new procedures.

CHAPTER 4 - ATC LICENSING, REQUIREMENTS AND ASSOCIATED GUIDANCE

4.1 Requirements

4.1.1 Requirements relating to the training and licensing of air traffic controllers are contained in GACA Regulation Section 1.



CHAPTER 5 - EQUIPMENT

5.1 General

5.1.1 ANS shall ensure that instructions are issued in ATSP 7300 1-2 (ATSP 2) to personnel that prohibits tampering or interfering with the normal operating status of equipment.

5.1.2 ANS shall ensure that instructions are issued in ATSP 7300 1-2 which include the following procedures directed to unit personnel detecting an equipment malfunction:

- a) Immediately report the malfunction to the maintenance personnel responsible for corrective action;
- b) Do not use the equipment if it is apparent that the malfunction could create a hazardous situation.

5.1.3 ANS shall ensure that procedures exist and are published in ATSP 7300 1-2 directing unit personnel to coordinate release of equipment for routine maintenance with appropriate maintenance personnel.

5.2 Records

5.2.1 ANS shall ensure that all operational voice and surveillance circuits are recorded and the recorder monitor panel is located in the ATS operational unit if:

- a) No maintenance facility is located at the same site; or
- b) The maintenance facility is not staffed during the operational hours of the ATSU.

5.2.2 Where it is not practical for maintenance to assume full responsibility for recorders, ANS shall ensure that:

- a) All circuits and frequencies on each recorder channel are monitored at least once daily to ensure proper recording level, good voice quality and that the time correlation is functioning correctly.
- b) Recordings are suitably filed with the date and time of use indicated.
- c) ATC voice and surveillance recordings shall be retained for a period of 60 days. Details regarding release of ATC recording tapes are found in GACA Order 6670.1 Voice Recorder Monitoring and Custody of Recorded Tapes.

5.2.3 These procedures shall be published in ATSP 7300 1-1 (ATSP 1) and any local variations published in ATSP 7300 1-2.

5.2.4 Heads of ATSU shall forward a report to GACA-S&AT if a failure occurs in recorder equipment during a period when an incident is known to have occurred.

5.3 Clocks/time used in ATS

5.3.1 Each ATSU shall use Coordinated Universal Time (UTC) expressed in hours and minutes and when required, seconds of the 24-hour day, beginning at midnight (0000).

5.3.2 ANS shall ensure that all ATS units are equipped with clocks indicating the time in hours, minutes and seconds, clearly visible from each operating position in the unit concerned.

5.3.3 All other procedures for time checks and time adjustments shall be as prescribed in ICAO Annex 11 Chapter 2 paragraph 2.25 and published in ATSP 7300 1-1.

5.4 Altimeter setting indicator

5.4.1 The atmospheric pressure shall be measured in Hectopascals and be transmitted to the aircraft when appropriate as published in ATSP 7300 1-1.

5.4.2 The reading from the altimeter setting indicator shall be compared to the weather report from the meteorological office and any discrepancy will be resolved in coordination with this office.

5.5 Fire prevention and facility evacuation

5.5.1 ANS shall prepare and publish in ATSP 7300 1-2 a Fire Prevention and Protection Plan and shall ensure that all unit personnel receive direction with regard to design and operational characteristics of fire detection, alarm and suppression system.

5.5.2 ANS shall develop and publish in ATSP 7300 1-2 procedures and processes that in the event of forced evacuation of an ATS unit ensure that:

- a) All aircraft are provided with the minimum service necessary to maintain flight safety;
- b) Personnel can be evacuated safely;
- c) Evacuation plans and procedures are viable and satisfactory; and
- d) A periodic review of evacuation plans and any necessary updates and changes performed.

5.5.3 ANS shall periodically conduct emergency evacuation test drills. Such test drills shall be conducted in such a way so as not to interfere with normal operation.

5.6 Opening and closing control positions

5.6.1 ANS shall establish instructions in ATSP 7300 1-2 for opening and closing of control positions.

5.6.2 Such instructions shall take into account the difference between the individual ATSUs.

5.7 Display of operational information

5.7.1 ANS is responsible for establishing and publishing in ATSP 7300 1-2 the standards and criteria for high quality display of operational information in ATSUs such as:

- a) Display of appropriate aviation weather information as required by site.
 - i) Altimeter setting data provided in hectopascals given in 4 digits.
 - ii) Local wind direction provided in degrees magnetic and the wind speed provided in knots;
 - iii) Runway visual range provided in meters
- b) Time provided in hours, minutes and seconds
- c) Indications of the selected status (ON or OFF) of each airfield lighting facility operated are provided.
- d) For monitoring electrical power:
 - i) Uninterruptible electrical power (UPS) status for each UPS is provided; and
 - ii) Category II electrical power status for all electrical power system components required for Category II operations is provided;
- e) For precision approach aids: - operating status of each component of ILS systems is provided.
- f) For audio and video recorders: - status of audio and video recorders used for recording ATS communications and surveillance is provided.

5.7.2 ANS shall ensure that the display of operational information meets the criteria as specified in ICAO Doc 9426.

5.8 Radar and automated systems

5.8.1 ANS shall ensure that information concerning equipment performance, obtained from flight checks and quality of performance checks, is made available and published in ATSP 7300 1-2 to controllers and develop arrangements or procedures that use the capabilities of automated systems to process and display flight data.

5.8.2 ANS shall develop procedures that ensure the integrity of flight data exchanged between units. These procedures shall include the requirement to:

- a) Forward revised flight data;
- b) Obtain appropriate information if the flight data received from another unit cannot be processed or is incomplete.
- c) Define co-ordination procedures to inform control sectors of revised or incomplete flight data.

5.9 Radar Hand-Off

- 5.9.1 If hand-offs using surveillance system capabilities are to be used, ANS shall publish in ATSP 7300 1-2 and through coordination with other units if necessary, ensure that:
- a) Each of the surveillance system displays to be used provides reliable surveillance coverage for a sufficient distance beyond the proposed hand-off point;
 - b) Both displays present surveillance data in the hand-off area with an accuracy that meets required tolerances; and
 - c) The hand-off point and any special conditions or procedures are defined in an arrangement, operations letter or operations bulletin.
- 5.9.2 ANS can develop arrangements which omit the requirement for verbal hand-offs between IFR units subject to detailed procedures established between the units

5.10 Automated system failures

- 5.10.1 ANS shall ensure that Automated Systems inform operational personnel immediately of any failure of an automated system component that may limit their use of the equipment.

5.11 Performance of radar equipment

- 5.11.1 The safety and efficiency of radar services depend to a large extent on the reliability and coverage of the radar equipment in its day to day performance, and the accuracy with which the radar displays are set up and checked. Controllers shall ensure that:
- a) The performance of the radar equipment is checked in accordance with procedures published in ATSP 7300 1-2; and
 - b) The technical instructions issued in respect to each radar equipment set are complied with.

5.12 Performance of backup communications

- 5.12.1 ANS shall establish and publish in ATSP 7300 1-2 procedures to ensure that operational personnel check all backup radios, stand-alone transceivers and speed dial phones for functionality at regular intervals.

5.13 Interruptions to NAVAIDS / Frequencies

- 5.13.1 ANS shall ensure that procedures for unit personnel to determine the circumstances under which navigational aids or frequencies should be permitted to be shutdown are published in ATSP 7300 1-2.

5.14 Aeronautical data integrity

- 5.14.1 Determination and reporting of air traffic services related aeronautical data shall be in accordance with the accuracy and integrity requirements set forth in Tables contained in Appendix 3 to this Regulation while taking into account the established quality system procedures. Accuracy requirements for aeronautical data are based upon a 95 per cent confidence level, and in that respect three types of positional data shall be identified: surveyed points (e.g. navigation aids positions), calculated points (mathematical calculations from the known surveyed points of points in space, fixes) and declared points (e.g. flight information region boundary points).

5.14.2 ANS shall ensure that that integrity of aeronautical data is maintained throughout the data process from survey/origin to the next intended user.

Based on the applicable integrity classification, the validation and verification procedures shall:

- a) for routine data: avoid corruption throughout the processing of the data;
- b) for essential data: assure corruption does not occur at any stage of the entire process and may include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level; and
- c) for critical data: assure corruption does not occur at any stage of the entire process and include additional integrity assurance procedures to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks..

5.14.3 Electronic aeronautical data sets shall be protected by the inclusion in the data sets of a 32-bit cyclic redundancy check (CRC) implemented by the application dealing with the data sets. This shall apply to the protection of all integrity levels of data sets as specified above..

5.14.4 Geographical coordinates indicating latitude and longitude shall be determined and reported to the aeronautical information services authority in terms of the World Geodetic System - 1984 (WGS-84) geodetic reference datum, identifying those geographical coordinates which have been transformed into WGS-84 coordinates by mathematical means and whose accuracy of original field work does not meet the requirements in Appendix 3 to this Regulation..

5.14.5 The resulting operational navigation data for the phases of flight will order of accuracy of the field work and determinations and calculations derived therefrom shall be such that the be within the maximum deviations, with respect to an appropriate reference frame, as indicated in the tables contained in Appendix 3.



CHAPTER 6 - UNIT TRAINING

6.1 Roles and Responsibilities

6.1.1 ANS shall assign the over-all responsibility of managing a specific unit to the Head of ATSU who is responsible for the development, implementation, and monitoring of Unit Training Programs. The Head of ATSU, or his assigned delegate, is responsible for the establishment and continuation of a quality assurance program that adheres to the standards and procedures established by ANS.

6.1.2 ANS shall direct Head of ATSU to assign a Training Officer. A detailed terms of reference for the training officer shall be described in ATSP 7300 1-1 and 1-2.

6.2 Unit recurrent (refresher) training

6.2.1 ANS shall ensure that all operational personnel receive annual Recurrent Unit Training, including issues affecting all units and supplemented with critical and local issues, if required.

6.2.2 The annual Recurrent Unit Training shall cover human performance, including principles of threat and error management.

6.2.1 ANS shall maintain training records or files for all operational personnel.

6.3 Remedial training

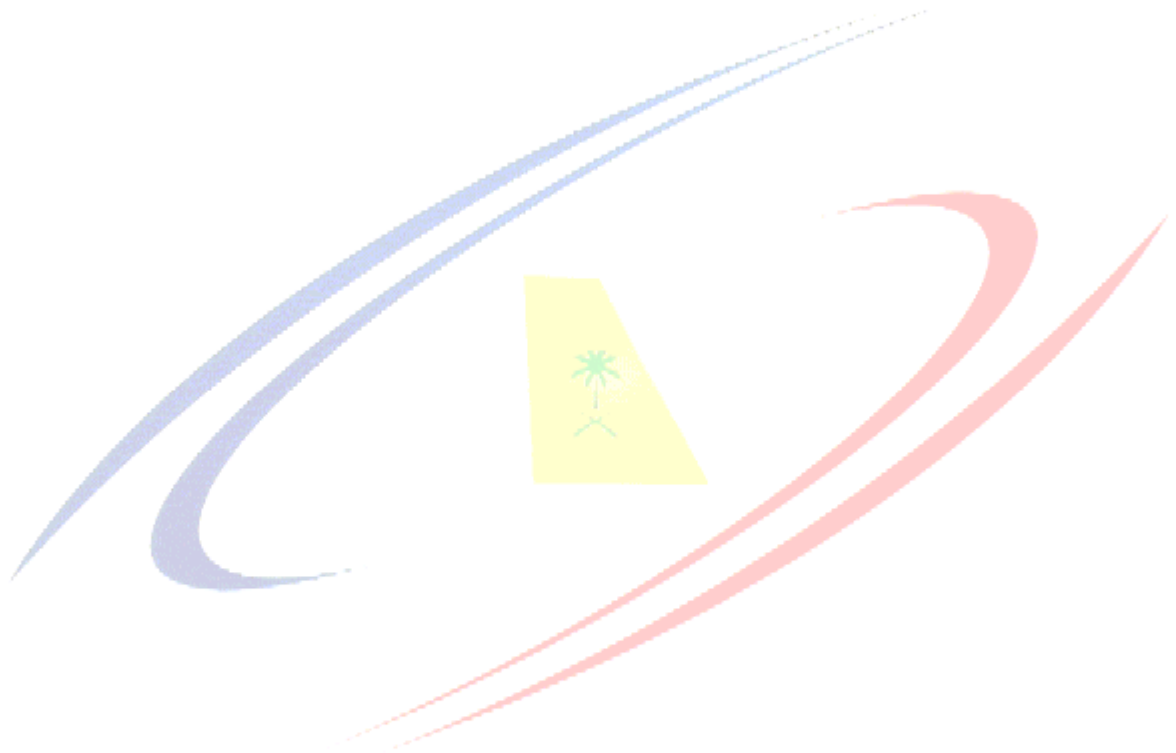
6.3.1 ANS shall publish instructions for remedial training in ATSP 7300 1-1 aimed at ensuring that proficiency standards are maintained.

6.4 On-The-Job Training Instructor

6.4.1 An On-The-Job-Training Instructor (OJTI) is a rated controller, who, under the direction of the Training Officer, provides any training that is given at a worksite rather than in a formal classroom environment.

6.4.2 ANS shall details the duties of the OJTI in ATSP 7300 1-1 and 1-2.

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CHAPTER 7 - CAPACITY AND AIR TRAFFIC FLOW MANAGEMENT

7.1 Capacity Management

7.1.1 ANS shall ensure that every effort is made to provide sufficient capacity to cater to both normal and peak traffic levels; however, in implementing any measures to increase capacity, ATSU Management shall ensure, in accordance with the procedures specified herein, that safety levels are not jeopardized.

7.1.2 ANS shall ensure that the number of aircraft provided with an ATC service shall not exceed that which can be safely handled by the ATSU concerned under the prevailing circumstances. In order to define the maximum number of flights, which can be safely accommodated, Unit Management shall assess and declare the ATC capacity for control areas, for control sectors within a control area and for aerodromes; such figures shall be published in ATSP 7300 1-2.

7.1.3 ATC capacity shall be expressed as the maximum number of aircraft which can be accepted over a given period of time within the airspace, airway or at the aerodrome concerned.

7.2 Capacity Assessment

7.2.1 In assessing capacity values ANS shall take into account as a minimum the following factors:

- a) The level and type of ATS provided;
- b) The structural complexity of the control area, the control sector or the aerodrome concerned, runway acceptance rates;
- c) Controller workload, including control and coordination tasks to be performed;
- d) The types of communications, navigation and surveillance systems in use, their degree of technical reliability and availability as well as the availability of back-up systems and/or procedures;
- e) Availability of ATC systems providing controller support and alert functions; and
- f) Any other factor or element deemed relevant to controller workload.

7.3 Regulation of ATC capacity and traffic volumes

7.3.1 ANS shall implement procedures to vary the number of operational sectors or working positions to meet the prevailing and anticipated demand. Applicable procedures shall be contained in ATSP 7300 1-2 for the unit.

7.3.2 In case of particular events, which have a negative impact on the declared capacity of an airspace or aerodrome, the capacity of the airspace or aerodrome concerned shall be reduced accordingly for the required time period. Whenever possible, the capacity pertaining to such events shall be predetermined.

7.3.3 To ensure that safety is not compromised whenever the traffic demand in the airspace or at an aerodrome is forecast to exceed the available ATC capacity, measures shall be implemented to regulate traffic volumes accordingly.

7.4 Enhancements of ATC capacity

7.4.1 In the event that traffic demand regularly exceeds ATC capacity, resulting in continuing and frequent traffic delays, or it becomes apparent that forecast traffic demand will exceed capacity values, the ANS shall, as far as practicable:

- a) Implement steps aimed at maximizing the use of the existing system capacity; and
- b) Develop plans to increase capacity to meet the actual or forecast demand.

7.4.2 ANS shall, through the establishment of agreements and procedures, make provision for the flexible use of all airspace in order to increase airspace capacity and to improve the efficiency and flexibility of aircraft operations. When applicable, such agreements and procedures should be established based on a regional air navigation agreement.

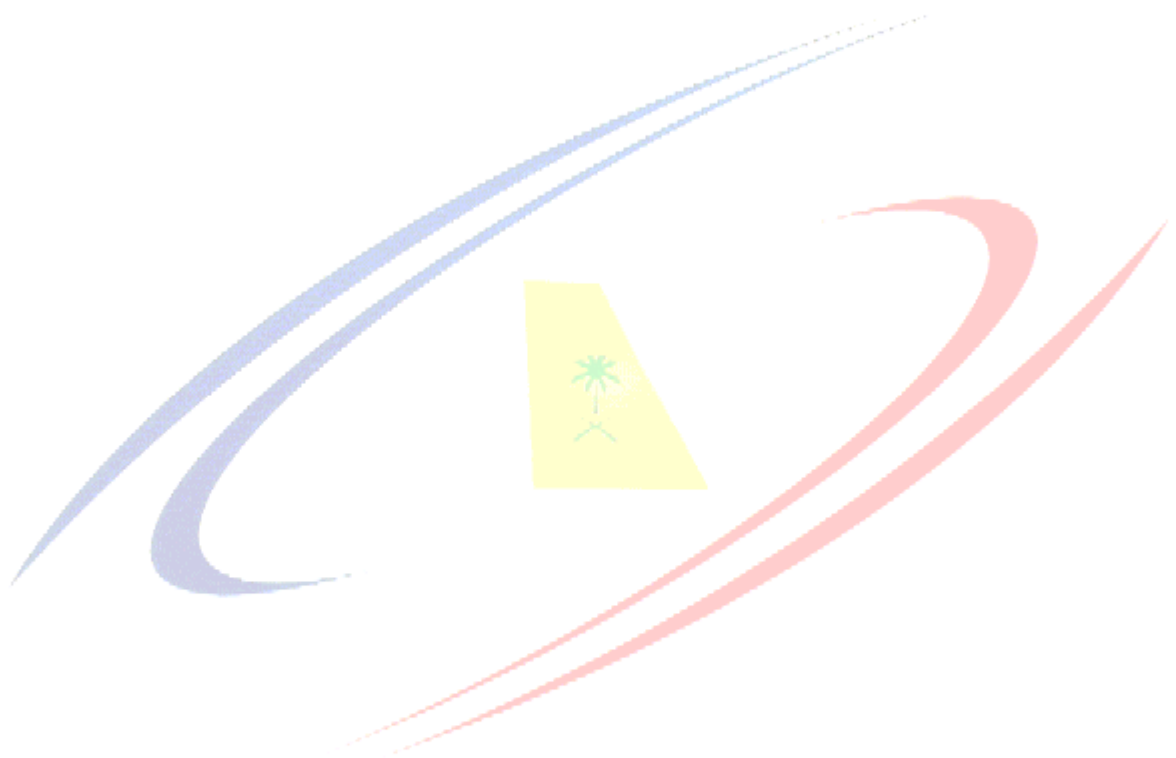
7.4.3 Agreements and procedures providing for a flexible use of airspace should specify all relevant details for the use of this airspace.

7.5 Air traffic flow management

7.5.1 An air traffic flow management (ATFM) service shall be implemented for airspace where traffic demand at times exceeds the declared ATC capacity, or where it is required to ensure the orderly flow of air traffic.

7.5.2 Detailed procedures governing the provision of the ATFM measures, and service within a region or area shall be specified in ATSP 73001-1 and 1-2.

7.5.3 Certain flights may be exempt from ATFM measures, or be given priority over other flights.



CHAPTER 8 - AIR TRAFFIC SERVICES**8.1 Control areas**

8.1.1 Control areas including, inter alia, airways and terminal control areas shall be delineated so as to encompass sufficient airspace to contain the flight paths of those IFR flights or portions thereof to which it is desired to provide the applicable parts of the air traffic control service, taking into account the capabilities of the navigation aids normally used in that area.

8.1.2 A lower limit of a control area shall be established at a height above the ground or water of not less than 700 ft.

8.1.3 The lower limit of a control area should, when practicable and desirable in order to allow freedom of action for VFR flights below the control area

8.1.4 When the lower limit of a control area is above 3 000 ft MSL it should coincide with a VFR cruising level in accordance with the relevant standards and requirements in force.

8.1.5 An upper limit of a control area shall be established when either:

- air traffic control service will not be provided above such upper limit; or
- the control area is situated below an upper control area, in which case the upper limit shall coincide with the lower limit of the upper control area.

8.1.6 **Flight information regions or control areas in the upper airspace.** Where it is desirable to limit the number of flight information regions or control areas through which high flying aircraft would otherwise have to operate, a flight information region or control area, as appropriate, should be delineated to include the upper airspace within the lateral limits of a number of lower flight information regions or control areas.

8.1.7 **Control zones.** The lateral limits of control zones shall encompass at least those portions of the airspace, which are not within control areas, containing the paths of IFR flights arriving at and departing from aerodromes to be used under instrument meteorological conditions.

8.1.8 The lateral limits of a control zone shall extend to at least 5 NM from the center of the aerodrome or aerodromes concerned in the directions from which approaches may be made.

8.1.9 If a control zone is located within the lateral limits of a control area, it shall extend upwards from the surface of the earth to at least the lower limit of the control area.

8.1.10 If it is desired to establish the upper limit of a control zone at a level higher than the lower limit of the control area established above it, or if the control zone is located outside of the lateral limits of a control area, its upper limit should be established at a level which can easily be identified by pilots. When this limit is above 3 000 ft MSL it should coincide with a VFR cruising level in accordance with the relevant standards and requirements in force.

8.2 Application

8.2.1 Air traffic control service shall be provided to all:

- IFR flights in airspace Classes A, B, C, D and E;
- VFR flights in airspace Classes B, C and D;
- Special VFR flights;
- aerodrome traffic at controlled aerodromes.

8.3 Provision of air traffic control service

8.3.1 The parts of air traffic control service described in 8.2.1 shall be provided by the various units as follows:

- a) Area control service:
 - i) by an area control center; or
 - ii) by the unit providing approach control service in a control zone or in a control area of limited extent which is designated primarily for the provision of approach control service and where no area control center is established.
- b) Approach control service:
 - i) by an aerodrome control tower or area control center when it is necessary or desirable to combine under the responsibility of one unit the functions of the approach control service with those of the aerodrome control service or the area control service;
 - ii) by an approach control unit when it is necessary or desirable to establish a separate unit.
- c) Aerodrome control service: by an aerodrome control tower.

8.4 Operation of air traffic control service

8.4.1 ANS shall ensure that in order to provide air traffic control service, an air traffic control unit shall:

- a) be provided with information on the intended movement of each aircraft, or variations therefrom, and with current information on the actual progress of each aircraft;
- b) determine from the information received, the relative positions of known aircraft to each other;
- c) issue clearances and information for the purpose of preventing collision between aircraft under its control and of expediting and maintaining an orderly flow of traffic;
- d) coordinate clearances as necessary with other units:
 - i) whenever an aircraft might otherwise conflict with traffic operated under the control of such other units;
 - ii) before transferring control of an aircraft to such other units.

8.4.2 Information on aircraft movements, together with a record of air traffic control clearances issued to such aircraft, shall be so displayed as to permit ready analysis in order to maintain an efficient flow of air traffic with adequate separation between aircraft.

8.4.3 When it is possible, air traffic control units should be equipped with devices that record background communication and the aural environment at air traffic controller work stations, capable of retaining the information recorded during at least the last twenty-four hours of operation.

8.4.4 ANS shall ensure that clearances issued by air traffic control units shall provide separation in accordance with the airspace classification table.

8.5 Separation standards

8.5.1 ANS shall determine and publish in ATSP 7300 1-1 the minimum separation standards to be used within KSA airspace.

8.6 Identification of air traffic services units and airspace

8.6.1 An area control center or flight information center should be identified by the name of a nearby town or city or geographic feature.

8.6.2 An aerodrome control tower or approach control unit should be identified by the name of the aerodrome at which it is located.

8.6.3 A control zone, control area or flight information region should be identified by the name of the unit having jurisdiction over such airspace.

8.7 Identification and delineation of prohibited, restricted and danger areas

8.7.1 ANS shall ensure that for each prohibited area, restricted area, or danger area established be given an identification and full details shall be promulgated.

8.7.2 ANS shall ensure that the identification assigned to each prohibited area, restricted area, or danger area shall be used to identify the area in all subsequent notifications pertaining to that area.

8.7.3 The identification shall be composed of a group of letters and figures as follows:

- a) nationality letters for location indicators assigned to Saudi Arabia (OE)
;
- b) a letter P for prohibited area, R for restricted area and D for danger area as appropriate; and
- a) a number unduplicated.

8.7.4 To avoid confusion, identification numbers shall not be reused for a period of at least one year after cancellation of the area to which they refer.

8.7.5 When a prohibited, restricted or danger area is established, the area should be as small as practicable and be contained within simple geometrical limits, so as to permit ease of reference by all concerned.

8.7 Establishment and identification of ATS routes

8.7.1 When ATS routes are established, a protected airspace along each ATS route and a safe spacing between adjacent ATS routes shall be provided

8.7.2 When warranted by density, complexity or nature of the traffic, special routes should be established for use by low-level traffic, including helicopters operating to and from helidecks on the high seas. When determining the lateral spacing between such routes, account should be taken of the navigational means available and the navigation equipment carried on board helicopters.

8.7.3 Designators for ATS routes other than standard departure and arrival routes shall be selected in accordance with the relevant ICAO standards and requirements in force.

8.7.4 Standard departure and arrival routes and associated procedures shall be identified in accordance with the relevant standards and requirements in force.

8.8 Establishment of changeover points

8.8.1 Change-over points shall be established by ANS on ATS route segments defined by reference to very high frequency omni-directional radio ranges where this will assist accurate navigation along the route segments. The establishment of change-over points should be limited to route segments of 110 km (60 NM) or more, except where the complexity of ATS routes, the density of navigation aids or other technical and operational reasons warrant the establishment of change-over points on shorter route segments.

8.8.2 Unless otherwise established in relation to the performance of the navigation aids or frequency protection criteria, the change-over point on a route segment should be the mid-point between the facilities in the case of a straight route segment or the intersection of radials in the case of a route segment which changes direction between the facilities.

8.9 Establishment and identification of significant points

8.9.1 Significant points shall be established by ANS for the purpose of defining an ATS route or instrument approach procedure and/or in relation to the requirements of air traffic services for information regarding the progress of aircraft in flight.

8.9.2 Significant points shall be identified by designators.

8.9.3 Significant points shall be established and identified in accordance with the principles set forth in Appendix 2.

8.10 Establishment and identification of standard routes for taxiing aircraft

8.10.1 Where necessary, ANS shall establish standard routes for taxiing aircraft on an aerodrome between runways, aprons and maintenance areas. Such routes should be direct, simple and where practicable, designed to avoid traffic conflicts.

8.10.2 Standard routes for taxiing aircraft should be identified by designators distinctively different from those of the runways and ATS routes.

8.11 Coordination between the operator and air traffic services

8.11.1 Air traffic services units, in carrying out their objectives, shall have due regard for the requirements of the operators consequent on their obligations in accordance with the relevant standards and requirements in force, and, if so required by the operators, shall make available to them or their designated representatives such information as may be available to enable them or their designated representatives to carry out their responsibilities.

8.11.2 When so requested by an operator, messages (including position reports) received by air traffic services units and relating to the operation of the aircraft for which operational control service is provided by that operator shall, so far as practicable, be made available immediately to the operator or a designated representative in accordance with locally agreed procedures.

8.12 Division of control responsibility

8.12.1 Controlled flights shall be under the jurisdiction of only one air traffic control unit or one sector at any given time.

8.12.2 Responsibility for the control of all aircraft operating within a specified block of airspace shall be vested in only one ATSU but control of specified aircraft may be delegated to other units provided that the required coordination, as published in unit procedures, has been effected.

8.13 Transfer of control

8.13.1 ANS shall publish relevant procedures for transfer of control between the individual types of control units. These procedures shall be published in ATSP 7300 1-1.

8.14 Responsibility in respect of military traffic

8.14.1 Certain military flights require a degree of operational freedom, which is not consistent with the application of ATC procedures. To ensure flight safety, the military authorities are required to inform ATC prior to operating such flights in airspace under ANS jurisdiction.

8.14.2 Reduced separation minima necessary to accomplish operational freedom for military flights may be authorized when so requested. However, ATC is then only responsible for separating civil traffic from such military units and any reduced separation shall be applicable only between individual military aircraft forming part of such units and not between military and civil aircraft.

8.14.3 When necessary, temporary airspace reservations may be established for certain military operations. The military authority is responsible for coordinating notifications of airspace reservations.

8.15 Position reporting

8.15.1 ANS shall ensure that compulsory reporting points are published for all ATS routes and terminal areas.

8.15.2 ANS shall ensure that AIREP data obtained from aircraft at all compulsory meteorological reporting points are forwarded to the meteorological office in accordance with unit procedures.

8.15.3 ANS shall publish the required contents of position reports in ATSP 7300 1-1 and AIP.

8.16 Procedures for airborne collision avoidance system (ACAS)

8.16.1 The procedures to be applied for the provision of ATC to aircraft equipped with ACAS shall be identical to those applicable to non-ACAS equipped aircraft.

8.16.2 When a pilot reports a maneuver induced by an ACAS resolution advisory (RA), the controller shall not attempt to modify the aircraft flight path until the pilot reports returning to the terms of the current air traffic control instruction or clearance but shall provide traffic information as appropriate.

8.16.3 ANS shall publish phraseologies for controllers to be used in response to ACAS reports in ATSP 7300 1-1.

8.16.4 Following an RA event or other significant ACAS event, pilots and air traffic controllers should complete an ACAS report in accordance with the reporting procedures detailed in ATSP 7300 1-1.

8.17 VFR flight rules

8.17.1 Rules pertaining to the operation of civil VFR flights within the Kingdom of Saudi Arabia in accordance with Civil Aviation Act shall be published by ANS in both AIP and ATSP 7300 1-1.

8.18 IFR flight rules

8.18.1 Rules pertaining to the operation of civil IFR flights within the Kingdom of Saudi Arabia in accordance with Civil Aviation Act shall be published by ANS in both AIP and ATSP 7300 1-1.

8.19 Change from IFR to VFR flight

8.19.1 Change from IFR flight to VFR flight is only acceptable when a message initiated by the pilot-in-command containing the specific expression “canceling my IFR flight plan”, together with the changes, if any, to be made to the current flight plan, is received by an ATS unit.

8.19.2 Details of such procedures shall be published in ATSP 7300 1-1.

8.20 Language proficiency

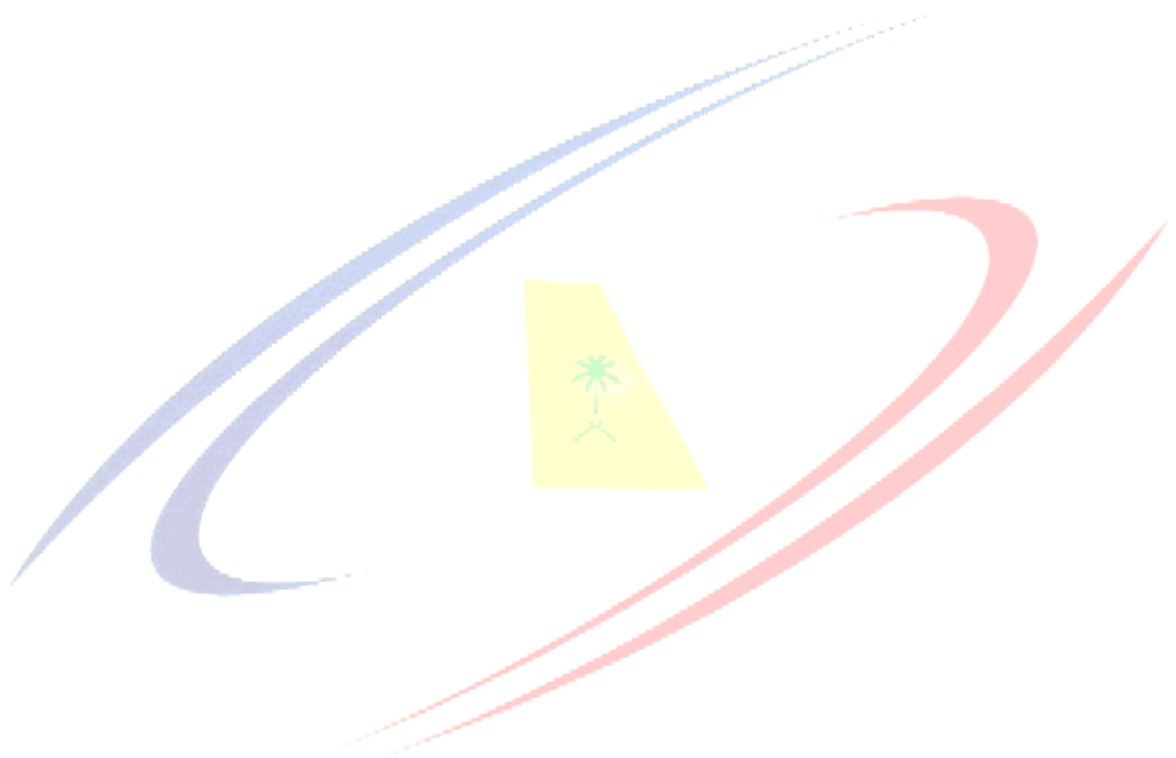
8.20.1 ANS shall ensure that air traffic controllers speak and understand the language(s) used for radiotelephony communications in accordance with the ICAO Language Proficiency Requirements.

8.20.2 Except when communications between air traffic control units are conducted in a mutually agreed language, the English language shall be used for such communications.

8.21 Contingency arrangements

8.21.1 ANS shall develop and promulgate in ATSP 7300 1-1 contingency plans for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which they are responsible for the provision of such services. Such contingency plans shall be developed with the assistance of ICAO as necessary, in close coordination with the air traffic services authorities responsible for the provision of services in adjacent

portions of airspace and with airspace users concerned. The development, promulgation and implementation of contingency plans shall comply with the requirements of Appendix 6 to this regulation.



CHAPTER 9 - AERODROME CONTROL SERVICE**9.1 Objectives**

9.1.1 ANS shall define the objectives and functions of Aerodrome Control (TWR) and publish these in the ATSP 7300 1-1.

9.1.2 The ATSP 7300 1-1 shall further contain instructions for the Aerodrome Controller to carry out his responsibility of alerting service.

9.1.3 ANS shall ensure that instructions for visual surveillance from the control tower are published in the ATSP 7300 1-2.

9.2 Aerodrome traffic circuit

9.2.1 ANS shall publish circuit procedures for each airport in the Kingdom in the AIP and ATSP 7300 1-2.

9.2.2 If no specific procedure has been established, aircraft will follow the standard ICAO circuit procedures.

9.2.3 In the event of radio failure the procedures published for each airport shall be followed. Where no specific radio failure procedures have been published for an airport ICAO standard procedures will be followed.

9.3 Selection of runway-in-use

9.3.1 ANS shall ensure that the tower selects the runway-in-use that will permit aircraft to land and take-off as near as possible into wind unless safety, the runway configuration or traffic conditions determine that a different direction is preferable. In selecting the runway in-use, the tower shall take into consideration; besides the surface wind speed and direction, other relevant factors such as hazardous meteorological (MET) conditions in the approach area and landing aids available.

9.3.2 Instructions for the selection of runway-in-use shall be published in ATSP 7300 1-2.

9.4 Recording of persons on board

9.4.1 Control TWRs and AFISs shall request the Persons on Board (POB) for all flights departing within KSA airspace at initial contact with ATC. This information shall be recorded and maintained and released to the ACC if requested as detailed in ATSP 7300 1-1.

9.5 Start-up procedures

9.5.1 Start-up time procedures should be implemented where necessary to avoid congestion and excessive delays on the maneuvering area or when warranted by ATFM regulations. Start-up time procedures shall be contained in ATSP 7300 1-2, and should specify the criteria and conditions for determining when and how start-up times shall be calculated and issued to departing flights.

9.6 Aerodrome and meteorological information

9.6.1 Prior to start-up the pilot shall be informed of any relevant meteorological detail unless the pilot on initial contact indicates that the information has been received.

9.7 Control of taxiing aircraft

9.7.1 The TWR shall issue concise instructions and adequate information to the pilot to permit him to determine the correct taxi route particularly at runway and taxi-way intersections and to assist him in avoiding collision with other aircraft or objects.

9.7.2 Specific procedures for helicopters air-taxiing shall be detailed in ATSP 7300 1-2.

9.7.3 An aircraft known or believed to be the subject of unlawful interference or which for other reasons needs isolation

from normal aerodrome activities shall be cleared to the designated isolated parking position as detailed in ATSP 7300 1-2.

9.8 Control of persons and vehicles

9.8.1 ANS shall publish procedures in ATSP 7300 1-1 for the movement of persons or vehicles on the maneuvering area who shall be subject to permission from the TWR and shall be controlled as necessary for their own safety and to avoid hazard to aircraft landing, taxiing or taking-off.

9.8.1 In cases of emergency, priority should be given to the movement of rescue and fire fighting vehicles to ensure the most expeditious passage of such vehicles, having regard to all other operations.

9.9 Control of aircraft in the traffic circuit

9.9.1 Aircraft in traffic circuit shall be controlled as per prescribed separation minima as detailed in ATSP 7300 1-1 and ATSP 7300 1-2 except that:

- a) Aircraft in formation (more than one aircraft in a group) shall be exempted from the separation minima with respect to separation from other aircraft of the same formation;
- b) Aircraft operating on runways suitable for simultaneous landing or take-off shall be exempted from the separation minima; and
- c) Lower minima shall apply to aircraft operations in accordance with military requirements when so prescribed.

9.9.2 If an aircraft enters the traffic circuit without authorization, it shall be permitted to land if its maneuvers indicate it so desires.

9.9.3 In cases of emergency it may be necessary for an aircraft to enter the traffic circuit and land without authorization. Controllers should recognize the possibilities of emergency action and render all assistance possible.

9.9.4 Special authorization to use any part of the maneuvering area shall be given to

- a) An aircraft which anticipates being compelled to land because of factors affecting its safe operation;
- b) Hospital aircraft or aircraft carrying any sick or seriously injured persons,
- c) Aircraft engaged in search and rescue operations; and
- d) Other aircraft as may be determined by the appropriate authority.

9.9.5 Local procedures regarding an aircraft that has been compelled to land without authorization shall be detailed in ATSP 7300 1-2.

9.10 Order of priority for arriving and departing aircraft

9.10.1 An aircraft landing or in the final stages of an approach to land shall normally be given priority over aircraft intending to depart.

9.10.2 Departing aircraft shall normally be cleared in the order in which they are ready for takeoff, except that deviations may be made from this order of priority to facilitate the maximum number of departures with the least average delay.

9.11 Control of arriving and departing aircraft

9.11.1 ANS shall stipulate in ATSP 7300 1-1 which minimum general separation minima shall be applied between arriving and departing aircraft.

9.11.2 ANS may authorize the application of lower minima at individual airports. Such lower minima shall be published in ATSP 7300 1-2 and will depend on a number of factors.

9.12 Landing Clearance

9.12.1 A landing clearance may be issued when there is reasonable assurance that the prescribed separation from other aircraft will exist when the aircraft crosses the runway threshold.

9.12.2 If requesting a landing aircraft to perform a specific landing and/or roll-out manoeuvre, the type of aircraft, runway length, location of exit taxiways, reported braking action on runway and taxiway, and prevailing meteorological conditions shall be considered. These factors and considerations shall be published in ATSP 7300 1-2.

9.13 Take-off clearance

9.13.1 As detailed in ATSP 7300 1-1 take-off clearance shall normally be issued when the aircraft is ready for take-off at or approaching the runway-in-use, the traffic situation permits and there is reasonable assurance that the prescribed separation from other aircraft will exist when the aircraft commences take-off.

9.14 Low visibility operations

9.14.1 ANS shall publish general procedures for low visibility operations in ATSP 7300 1-1.

9.14.2 Local procedures for Instrument Landing System - Category II and III (ILS CAT II and III) operations shall be published in ATSP 7300 1-2.

9.14.3 Low visibility operations shall be initiated by or through the aerodrome control tower.

9.15 Obstructed runway or runway incursion

9.15.1 Instructions with regard to actions to be taken in the event of an obstructed runway or a runway incursion shall be published in ATSP 7300 1-1 and 1-2.

9.16 Suspension of VFR operations

9.16.1 As detailed in ATSP 7300 1-1 all suspension of VFR operations shall be accomplished through or notified to the TWR.

9.16.2 Whenever VFR operations are suspended, the TWR shall:

- a) Hold all departures other than those which file IFR;
- b) Recall all local VFR flights; or obtain approval for SVFR operations;
- c) Notify the APP or the ACC of the action taken; and
- d) Notify all operators affected or their designated representatives of the reason for taking such action, if necessary or requested.

9.17 Authorization of SVFR flights

9.17.1 When traffic conditions permit SVFR flights may be authorized by the TWR to operate within a control zone on pilot request.

9.17.2 Separation shall be effected between all SVFR flights in accordance with the minima prescribed by ANS and between SVFR flights and IFR flights in accordance with the applicable separation minima as detailed in ATSP 7300 1-1.

9.18 Aeronautical ground lights

9.18.1 Procedures for the operation of ground lights shall be published by ANS in the ATSP 7300 1-2.

9.18.2 ANS shall issue instructions to reduce the effect of the emission of laser beams that could affect departing and arriving aircraft.

9.19 Approach lighting

9.19.1 Procedures for the operation of approach lights shall be published by ANS in the ATSP 7300 1-2.

9.20 Runway lighting

9.20.1 Procedures for the operation of runway lights shall be published by ANS in the ATSP 7300 1-2.

9.21 Taxiway lighting

9.21.1 Procedures for the operation of taxiway lights shall be published by ANS in the ATSP 7300 1-2.

9.22 Aircraft navigation lights

9.22.1 When aircraft navigation lights are observed to be off or unserviceable, in whole or in part, the pilot shall be advised.

9.23 Obstacle lighting

9.23.1 Procedures for the operation of obstacle lights shall be published by ANS in the ATSP 7300 1-2.

9.24 Aerodrome traffic signals

9.24.1 Signal used by light-gun in the TWR together with appropriate response shall be published in the ATSP 7300 1-1.

9.25 Time checks

9.25.1 Aerodrome control towers shall, prior to an aircraft taxiing for take-off, provide the pilot with the correct time, unless arrangements have been made for the pilot to obtain it from other sources.

9.25.2 Air traffic services units shall, in addition, provide aircraft with the correct time on request.

9.25.3 Time checks shall be given to the nearest half minute.

9.26 TWR and APP coordination

9.26.1 Regulations for coordination requirements between APP and TWR shall be published in the ATSP 7300 1-1.

9.27 Pressure altitude reporting transponders

9.27.1 ANS shall establish requirements for carriage and operation of pressure-altitude reporting transponders within defined portions of airspace and publish these in both ATSP 7300 1-1 and AIP.

9.28 VIP flights

9.28.1 General ATC procedures for management of VIP flights shall be established and published in ATSP 7300 1-1. Unit specific procedures shall be published in ATSP 7300 1-2.

9.28.2 Aerodromes provided with ATC service shall establish procedures and include detailed instructions for VIP flights at the unit.

9.28.3 Where an ATC service is required at aerodromes normally not handling ATC service, a temporary ATC service will be provided either from the TWR if one is installed or from a mobile unit specifically brought in.

9.28.4 Except as required in ATSP 7300 1-1, standard separation shall be provided between VIP flights and other controlled flights.

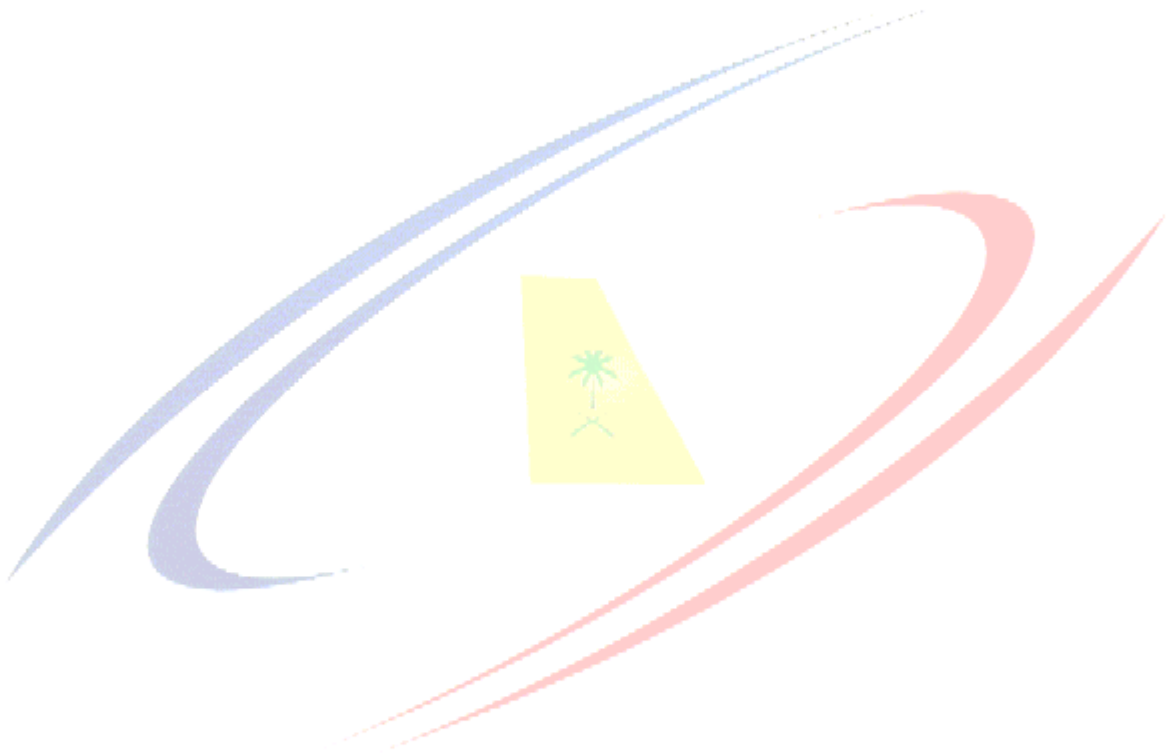
9.28.5 VIP flights shall be given priority for landing and take-off except in the case of another aircraft being subject to an emergency.

9.29 Use of surface movement radar

9.29.1 Radar and ADS-B ground systems should provide for the display of safety-related alerts and warnings, including conflict alert, conflict prediction, minimum safe altitude warning and unintentionally duplicated SSR codes.

9.29.2 In the absence of visual observation of all or part of the manoeuvring area or to supplement visual observation, surface movement radar (SMR) provided in accordance with the relevant ICAO standards and requirements in force, or other suitable surveillance equipment, should be utilized to:

- a) monitor the movements of aircraft and vehicles on the manoeuvring area;
- b) provide directional information to pilots and vehicle drivers as necessary; and
- c) provide advice and assistance for the safe and efficient movement of aircraft and vehicles on the manoeuvring area.



CHAPTER 10 - APPROACH CONTROL SERVICE

10.1 Approach control

10.1.1 Objectives

10.1.1.1 The Approach Control Service (APP) shall issue clearances and information to aircraft under control to achieve a safe, orderly and expeditious flow of air traffic in the APP area of responsibility as detailed in ATSP 7300 1-1.

10.1.2 Minimum levels

10.1.2.1 ANS shall publish Minimum En-route Altitudes (MEA) for all route segments in the AIP and an aircraft shall not be cleared for an initial approach unless:

- The pilot has reported passing a designated point associated with an instrument approach procedure or defined by a radio aid; or
- The aircraft has been observed by radar to have passed a designated point associated with an instrument approach procedure; or
- The crew reports that they have and can maintain the aerodrome in sight and requests a visual approach as specified in ATSP 7300 1-1.

10.1.3 Expected approach time (EAT)

10.1.3.1 ANS shall detail instructions in ATSP 7300 1-1 for the requirement of issuing EATs to arriving aircraft at individual airports.

10.1.4 Holding

10.1.4.1 ANS shall publish holding procedures for all instrument approaches at all KSA airports in ATSP 7300 1-2.

10.1.4.2 These holding procedures shall normally be constructed from a ground based navigation aid.

10.1.4.3 ANS shall ensure that controllers are aware of situations where the protected areas associated with holding patterns overlap.

10.1.4.4 Controllers shall be familiar with the relevant holding procedures.

10.1.5 Approach clearance

10.1.5.1 Approach clearance shall be issued in an order which will facilitate arriving of the maximum number of aircraft with the least average delay as detailed in ATSP 7300 1-1, except that a special priority shall be given to:

- Aircraft which anticipate being compelled to land because of factors affecting their safe operation, e.g., engine failure, shortage of fuel, etc.; and
- Hospital aircraft or aircraft carrying any sick or seriously injured person requiring urgent medical attention.
- Aircraft in search and rescue operations; and
- Other aircraft as may be determined by the appropriate authority.

10.1.5.2 Procedures for timed approaches shall be published in ATSP 7300 1-1.

10.1.5.3 Conditions for visual approaches shall be published in ATSP 7300 1-1.

10.1.6 Coordination

10.1.6.1 As published in ATSP 7300 1-1 the approach unit shall keep the Area Control Centre (ACC) informed of relevant data affecting the approach sequence such as:

- Lowest level at the clearance limit for use by the ACC.
- Expected type of instrument approach procedure;

- c) Next available EAT;
- d) Revisions of EAT when 5 minutes or more different from that issued to the ACC;
- e) Departure times;
- f) Missed approach; and
- g) Information on overdue or unreported aircraft.

10.1.6.2 The APP shall keep the TWR advised of the following data:

- a) ETA of arriving aircraft, not less than 15 minutes before ETA;
- b) Statement of transfer of control and communication to the TWR, giving relevant information; and
- c) Anticipated delay to departing traffic.

10.1.7 Use of radar in the provision of approach control services

10.1.7.1 As detailed in ATSP 7300 1-1 the information presented on a radar display may be used to perform the following functions in the provision of approach control services:

- a) Provide radar vectoring of arriving traffic on to final approach aids;
- b) Provide radar monitoring of parallel ILS approaches and instruct aircraft to take appropriate action in the event of possible or actual penetrations of the Non Transgression Zone (NTZ);
- c) Provide radar vectoring of arriving traffic to a point from which a visual approach can be completed;
- d) Provide radar monitoring of other pilot-interpreted approaches;
- e) Provide radar separation between:
 - i) Succeeding departing aircraft;
 - ii) Succeeding arriving aircraft; and
 - iii) A departing aircraft and a succeeding arriving aircraft.

10.1.8 General approach radar procedures

10.1.8.1 ANS shall publish general procedures for the use of radar in approach control function in ATSP 7300 1-1.

10.1.8.2 ANS shall determine and publish radar separation minima applicable within the Terminal Area (TMA) including reduced minima together with any conditions affecting the use in ATSP 7300 1-2.

10.1.9 Radar equipment failure

10.1.9.1 ANS shall detail in ATSP 7300 1-1 the list of actions to be taken by the radar controller, in the event of complete failure of the radar equipment. This list shall include immediate re-organization of traffic by altitude, and any other means, which will ensure separation of all aircraft under the ATC control, and performing of the necessary actions to establish non-radar separation between the aircraft.

10.1.10 Ground radio failure

10.1.10.1 ANS shall detail in ATSP 7300 1-1 the actions to be taken by the controller in the event of complete failure of the ground radio equipment used for radar control:

- a) Without delay, inform all adjacent control positions or ATSUs, as applicable, of the failure;
- b) Appraise such positions or units of the current traffic situation;
- c) Request their assistance, in respect of aircraft which may establish communications with those positions or units, in establishing radar or non-radar separation between and maintaining control of such aircraft; and
- d) Instruct adjacent control positions or ATSUs to hold or reroute all controlled flights outside the area of responsibility of the position or ATSU that has experienced the failure until such time that the provision of normal services can be resumed.

10.1.11 Operations on parallel runways

10.1.11.1 Procedures and requirements for operating on parallel runways shall be published by ANS in ATSP 7300 1-2.

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CHAPTER 11 - AREA CONTROL SERVICE

11.1 Area control service

11.1.1 Objectives

11.1.1.1 ANS shall define the objectives of area control service in ATSP 7300 1-1 as:

- a) Prevent collisions between aircraft; and
- b) Maintain a safe, orderly and expeditious flow of air traffic.

11.1.2 Airspace responsibility

11.1.2.1 ANS shall divide the airspace into sectors. Sector airspace is allocated according to control transfer point density, route structure, equipment availability and manning requirements.

11.1.3 Principles of operation

11.1.3.1 Separation of traffic shall be achieved by issuing appropriate clearances to ensure vertical, lateral or longitudinal separation as published in ATSP 7300 1-1 exists between aircraft.

11.1.4 ATC Clearances

11.1.4.1 Clearances shall be issued in accordance with ATSP 7300 1-1 to aircraft entering the FIR at, or as soon as possible after passing, the appropriate entry point.

11.1.4.2 Clearances shall only be required for the provision of Air Traffic Control (ATC) Service in controlled airspace.

11.1.5 Transfer of control

11.1.5.1 The ACC shall retain control of aircraft until the transfer of control point prescribed in unit procedures in ATSP 7300 1-2.

11.1.6 Transfer of communication

11.1.6.1 Communication transfer shall occur at the same time as the transfer of control unless a different procedure is coordinated.

11.1.7 Control procedures

11.1.7.1 ANS shall detail in ATSP 7300 1-1 the use of the following control procedures:

- a) Release not before;
- b) Clearance expiry;
- c) Criteria for release of inbound traffic.

11.1.8 Coordination ACC/ACC

11.1.8.1 ANS shall detail in ATSP 7300 1-1 the procedures for information interchange between adjacent ACCs including flight plan data.

11.1.8.2 The procedures shall include transfer of control and communication, which shall be detailed in Letters of Agreement and published in ATSP 7300 1-2.

11.1.9 Coordination between ACC and APP

11.1.9.1 General coordination procedures between ACC and APP shall be detailed in ATSP 7300 1-1.

11.1.9.2 Local procedures for coordination shall be published in ATSP 7300 1-2.

11.1.10 Coordination between ACC positions

11.1.10.1 Data exchange between individual positions and/or sectors shall be detailed in ATSP 7300 1-2.

11.1.11 Performance-based navigation (PBN) operations

11.1.11.1 In applying performance-based navigation, navigation specifications shall be prescribed by ANS. When applicable, the navigation specification(s) for designated areas, tracks or ATS routes shall be prescribed on the basis of regional air navigation agreements. In designating a navigation specification, limitations may apply as a result of navigation infrastructure constraints or specific navigation functionality requirements.

11.1.11.2 Performance-based navigation operations should be implemented as soon as practicable.

11.1.11.3 The prescribed navigation specification shall be appropriate to the level of communications, navigation and air traffic services provided in the airspace concerned.

11.1.12 Required communication performance (RCP) for en-route operations

11.1.12.1 Where required, RCP types shall be prescribed by ANS. When applicable, the RCP type(s) shall be prescribed on the basis of regional air navigation agreements.

11.1.12.2 The prescribed RCP type shall be appropriate to the air traffic services provided in the airspace concerned.



CHAPTER 12 - RADAR**12.1 General**

12.1.1 ANS shall publish the relevant functions that radar can be used for in Air Traffic Control in ATSP 7300 1-1.

12.2 Operational procedures

12.2.1 ANS shall publish the type of surveillance system to be used and the functionality of same in ATSP 7300 1-1.

12.3 Performance checks

12.3.1 ANS shall stipulate requirements for performance checks on radar displays including reporting procedures for any deficiencies or faults in ATSP 7300 1-2.

12.4 Minimum use of levels

12.4.1 ANS shall publish established minimum vectoring altitudes for all Approach Radar Units in the KSA in the AIP and ATSP 7300 1-2. Such altitudes shall be depicted on a map displayed prominently for the Approach Radar Controller.

12.4.2 In addition, ANS shall establish minimum en route altitudes for all controlled airspace within KSA FIRs together with the lowest usable flight level and publish these in the AIP and ATSP 7300 1-2.

12.5 Coordination of traffic under radar and procedural control

12.5.1 ANS shall stipulate procedures in ATSP 7300 1-1 for aircraft being transferred from a procedural environment to a radar controlled environment and vice versa.

12.6 Use of SSR

12.6.1 ANS shall, in accordance with the ICAO Middle East area (MID) Regional SSR Code Employment Plan, distribute codes for domestic and local flights to the individual radar units.

12.6.2 ANS shall have in place instructions that ensure that relevant other authorities shall be able to recognize such allocated codes.

12.6.3 Allocated SSR codes should be used for the duration of the flight within the MID Region.

12.6.4 In the event of international armed conflict ICAO will reserve codes for medical aircraft and ANS shall have a system in place to notify adjacent FIRs and internal radar units of such allocations.

12.6.5 International emergency codes together with relevant procedures for the affected aircraft shall be published in the AIP and ATSP 7300 1-1 and made easily accessible to all radar controllers.

12.7 Information based on mode C

12.7.1 ANS shall publish procedures for verification of Mode C derived level information as displayed to the controller in ATSP 7300 1-1.

12.7.2 ANS shall further publish procedures for determination of level occupancy in both RVSM and non RVSM airspace in ATSP 7300 1-1.

12.8 Radar identification procedures

12.8.1 ANS shall publish procedures to be used for identification of aircraft using both primary and secondary radars in

ATSP 7300 1-1.

12.8.2 Before implementing any new surveillance technology ANS shall publish identification procedures to be used by the controllers in ATSP 7300 1-1.

12.9 Transfer of radar identification

12.9.1. ANS shall publish approved methods for transfer of radar identification both by electronic and other means in ATSP 7300 1-1.

12.10 Transfer of radar control

12.10.1 ANS shall publish procedures in ATSP 7300 1-1 governing the controllers in transferring of radar control both internally and externally and using secondary as well as primary radar control.

12.10.2 When using secondary radar the SSR Code shall be known to the accepting unit.

12.11 Provision of position information

12.11.1 ANS shall determine and issue instructions in ATSP 7300 1-1 as to when position information shall be passed to an aircraft.

12.11.2 ANS shall direct controllers on how to pass such position information to an aircraft and should always use a position enabling the pilot to refer to such information.

12.12 Collision hazard information

12.12.1 ANS shall publish procedures in ATSP 7300 1-1 for hazard information ensuring that as many relevant details as practical, such as Mode C information, is passed to the controlled aircraft even if such information has not been verified.

12.13 Adverse weather information

12.13.1 ANS shall instruct controllers through ATSP 7300 1-1 to advise aircraft of observed or reported adverse weather information.

12.13.2 ANS shall further ensure that radar controllers are aware of radar limitations in respect of indicating weather information.

12.14 Radar vectoring

12.14.1 ANS shall publish procedures in ATSP 7300 1-1 pertaining to radar vectoring of aircraft for either:

- 1) Sequencing of aircraft on approach
- 2) To ensure minimum separation
- 3) To avoid severe weather
- 4) When requested by the pilot due to unreliable instruments.
- 5) To maintain flight within controlled airspace
- 6) To ensure terrain clearance

12.15 Application of radar separation

12.15.1 ANS shall determine and publish applicable procedures in ATSP 7300 1-1 for establishing of the minimum required radar separation.

12.15.2 ANS shall further establish procedures for the use of radar against traffic arriving from a non-radar environment.

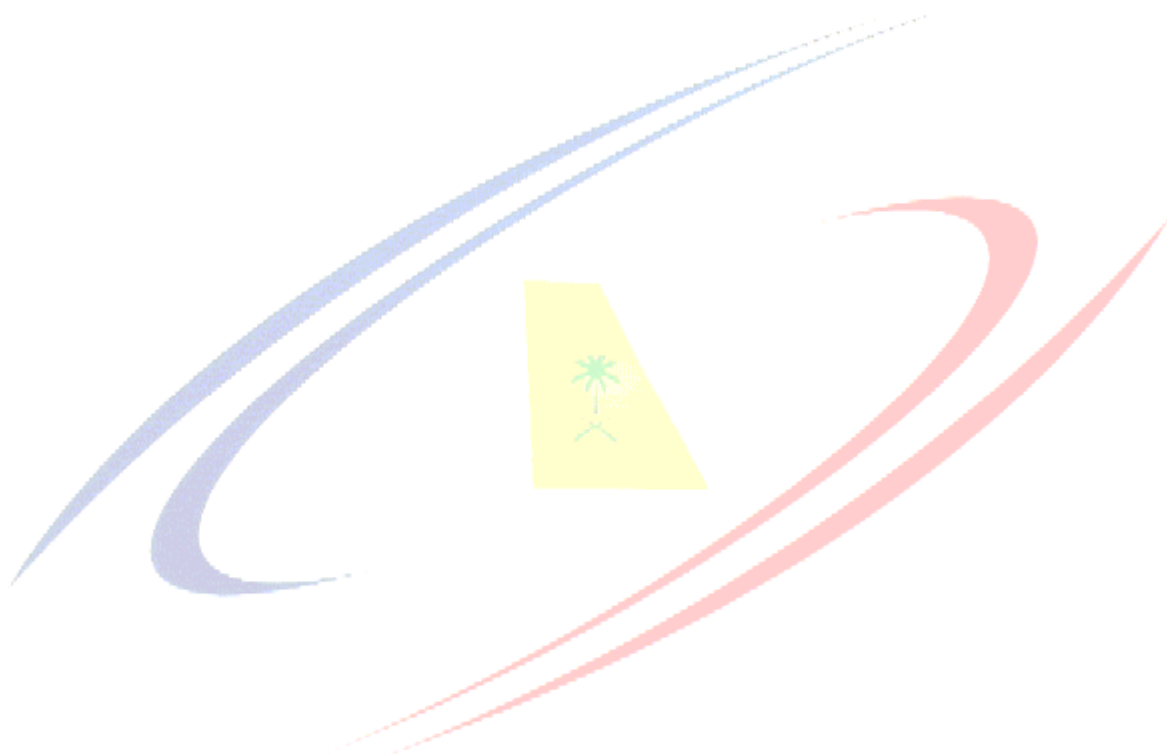
12.15.3 ANS shall publish minimum wake turbulence separation applicable to all phases of flight.

12.16 Speed control

12.16.1 ANS shall provide and publish instructions for the application of speed control in ATSP 7300 1-1. Speed control shall be based on criteria such as type/class of aircraft and the actual weight of the aircraft

12.17 Equipment failure

12.17.1 ANS shall issue instructions in respect of equipment failure such as communication, transponder, radar, and aircraft emergencies in ATSP 7300 1-1. ANS shall publish comprehensive guidance on ATS unit role during potential contingencies.



CHAPTER 13 - CLEARANCES AND COORDINATION**13.1 General**

13.1.1 ANS shall publish instructions in ATSP 7300 1-1 for the issuance of clearances, detailing the procedures for providing ATC service to known traffic. Such instructions shall contain, *inter alia*, the following items:

- a) Clearance coordination
- b) Clearance validity
- c) Clearance issuance
- d) Clearance content
- e) Revised clearances
- f) Clearances out of controlled airspace
- g) Clearances coordination and downstream clearances.

13.2 Transfer of control

13.2.1 ANS shall publish instructions in ATSP 7300 1-1 that stipulate procedures for the transfer of control from one ATSU to the next unit whether internally or externally.

13.2.2 ANS shall further determine procedures for an ATSU in acceptance in the transfer of control.

13.3 Coordination between ATC and users

13.3.1 ANS shall publish instructions in ATSP 7300 1-1 that detail conditions where an aircraft operator shall be informed of conditions of his aircraft, e.g., any abnormal situation.

13.3.2 ANS shall publish instructions in ATSP 7300 1-1 that provide specific procedures for coordination with military authorities within the KSA.

13.4 Potential hazards to civil aircraft

13.4.1 ANS will publish procedures and guidance in ATSP 7300 1-1 that assist controllers to avoid potential hazards to aircraft under their control.

Note:-It is not possible to list all potential hazards, but ANS should provide a comprehensive list covering the most likely scenarios within Jeddah FIR

13.4.2 ANS shall ensure that all relevant authorities and users are informed of any potential hazards.

CHAPTER 14 - SEPARATION STANDARDS**14.1 General**

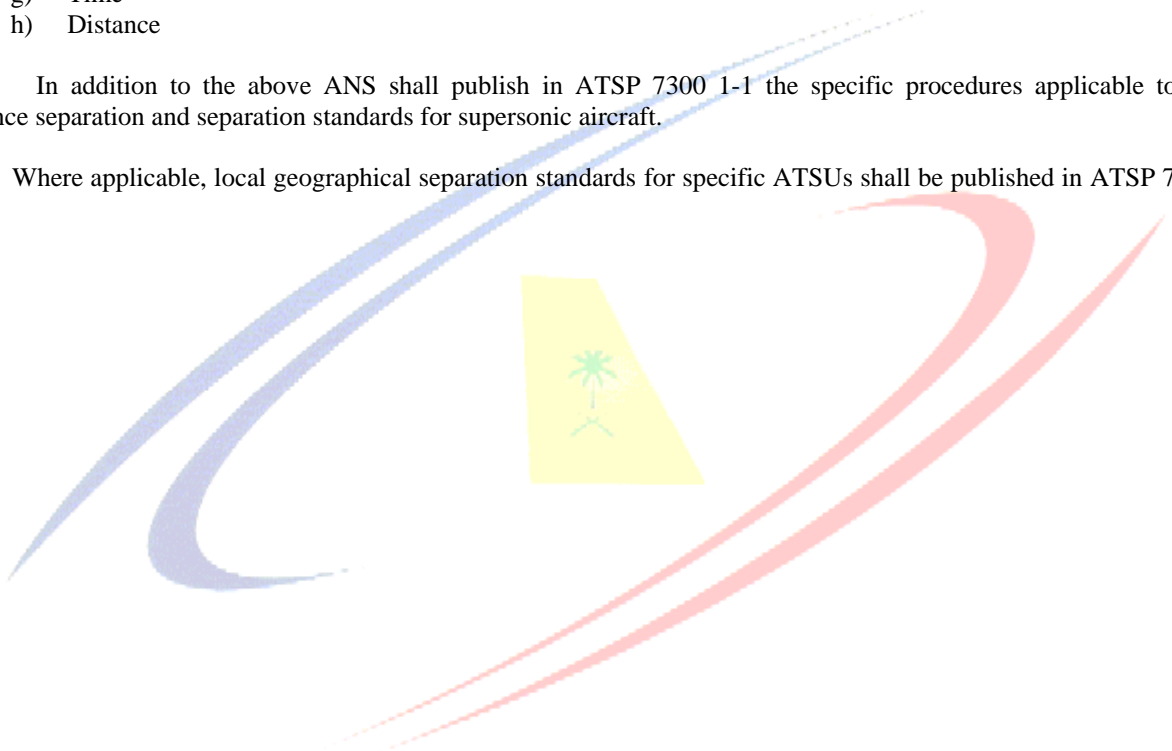
14.1.1 ANS shall publish in ATSP 7300 1-1 all applicable separation methods and minima in accordance with ICAO Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) (ICAO Doc 4444).

14.1.2 ATSP 7300 1-1 shall describe in detail the following types of separation methods and minima:

- a) Vertical
- b) Horizontal
- c) Lateral
- d) Longitudinal
- e) Geographical
- f) Track
- g) Time
- h) Distance

14.1.3 In addition to the above ANS shall publish in ATSP 7300 1-1 the specific procedures applicable to wake turbulence separation and separation standards for supersonic aircraft.

14.2.3 Where applicable, local geographical separation standards for specific ATSUs shall be published in ATSP 7300 1-2.



CHAPTER 15 - SPECIAL PROCEDURES

15.1 General

15.1.1 A number of non-standard procedures shall be described in ATSP 7300 1-1 to provide instructions for the controllers. By nature such procedures can never be comprehensive, but shall include relatively frequent occurring situations.

15.2 Fuel dumping

15.2.1 ANS shall publish instructions in ATSP 7300 1-2 for locations suitable for fuel dumping.

15.2.2 ANS shall publish the separation requirements in ATSP 7300 1-1 between an aircraft dumping fuel and all other known aircraft.

15.3 Photographic survey flights

15.3.1 ANS shall publish comprehensive instructions concerning aircraft carrying out aerial surveys in ATSP 7300 1-1. This shall include approval and flight planning procedures.

15.4 Uncoordinated flights over the Red Sea

15.4.1 ANS shall publish procedures in the AIP and ATSP 7300 1-2 for uncoordinated flights over the Red Sea providing information on pilot procedures for both RVSM and non-RVSM aircraft.

15.5 Strayed or unidentified aircraft

15.5.1 As soon as an air traffic services unit becomes aware of a strayed aircraft it shall take all necessary steps in accordance with the relevant standards and requirements in force and published in ATSP 7300 1-1 to assist the aircraft and to safeguard its flight

15.5.2 If the aircraft's position is not known, the air traffic services unit shall:

- a) attempt to establish two-way communication with the aircraft, unless such communication already exists;
- b) use all available means to determine its position;
- c) inform other ATS units into whose area the aircraft may have strayed or may stray, taking into account all the factors which may have affected the navigation of the aircraft in the circumstances;
- d) inform, in accordance with locally agreed procedures, appropriate military units and provide them with pertinent flight plan and other data concerning strayed aircraft;
- e) request from the units referred to in c) and d) and from other aircraft in flight every assistance in establishing communication with the aircraft and determining its position.

15.5.3 When the aircraft's position is established, the air traffic services unit shall:

- a) advise the aircraft of its position and corrective action to be taken; and
- b) provide, as necessary, other ATS units and appropriate military units with relevant information concerning the strayed aircraft and any advice given to that aircraft.

15.5.4 As soon as an air traffic services unit becomes aware of an unidentified aircraft in its area, it shall endeavour to establish the identity of the aircraft whenever this is necessary for the provision of air traffic services or required by the appropriate military authorities in accordance with locally agreed procedures as published in ATSP 7300 1-2. To this end, the air traffic services unit shall take such of the following steps as are appropriate in the circumstances:

- a) attempt to establish two-way communication with the aircraft;
- b) inquire of other air traffic services units within the flight information region about the flight and request their assistance in establishing two-way communication with the aircraft;
- c) inquire of air traffic services units serving the adjacent flight information regions about the flight and request their assistance in establishing two-way communication with the aircraft;
- d) attempt to obtain information from other aircraft in the area.

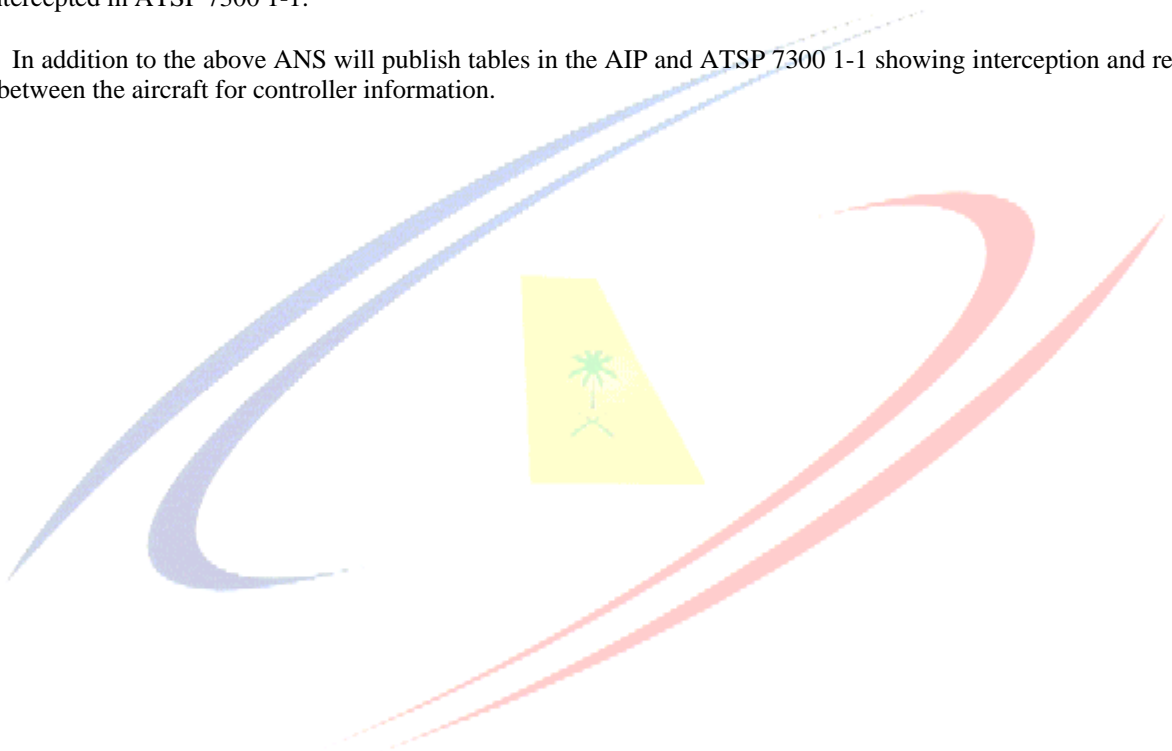
15.5.5 The air traffic services unit shall, as necessary, inform the appropriate military unit as soon as the identity of the aircraft has been established.

15.5.6 Should the ATS unit consider that a strayed or unidentified aircraft may be the subject of unlawful interference; ANS shall immediately be informed, in accordance with ATSP 7300 1-2

15.6 Interception of civil aircraft

15.6.1 ANS shall publish procedures to be followed by the controller in the event of notification that a civil aircraft is being intercepted in ATSP 7300 1-1.

15.6.2 In addition to the above ANS will publish tables in the AIP and ATSP 7300 1-1 showing interception and response signals between the aircraft for controller information.



CHAPTER 16 - ALERTING SERVICE

16.1 General

16.1.1 ANS shall determine and publish which flights are provided with alerting service.

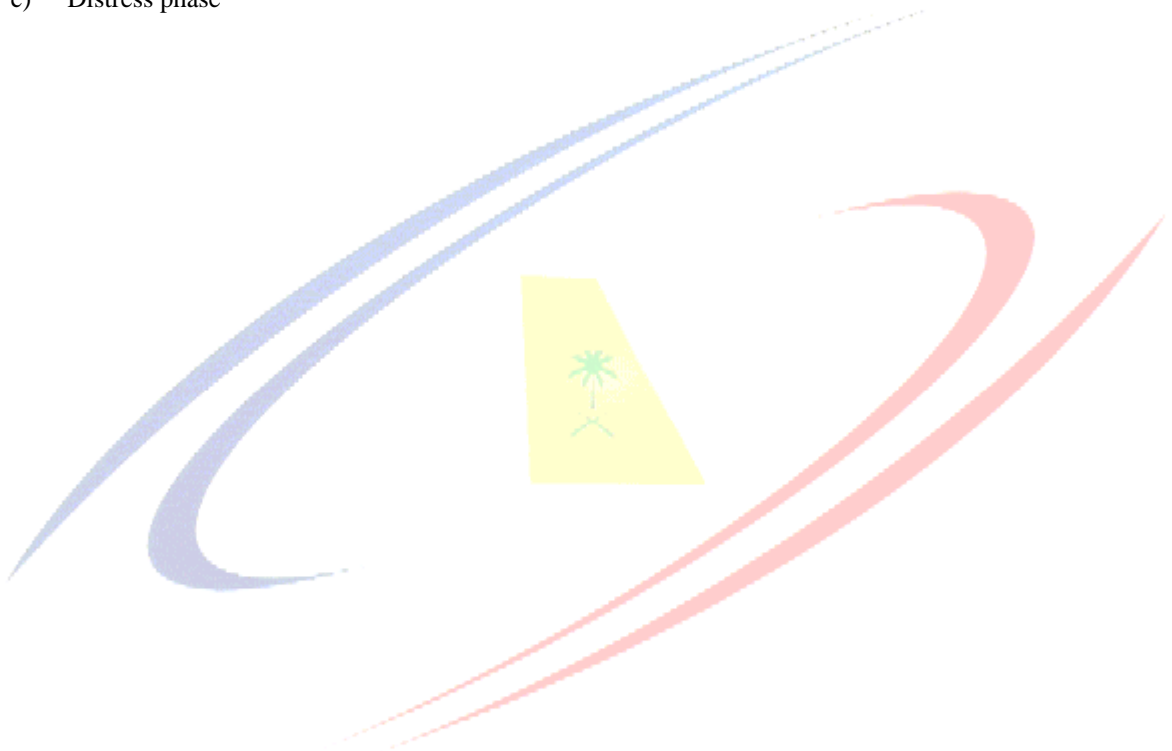
16.1.2 ANS shall stipulate who has the overall responsibility for the provision of alerting service and whom to notify.

16.1.3 ANS shall publish details for compliance in ATSP 7300 1-1.

16.2 Alerting phases

16.2.1 ANS shall publish in ATSP 7300 1-1 definitions and instructions that describe the management and notification requirements of the following Alerting Phases:

- a) Uncertainty phase
- b) Alert phase
- c) Distress phase



CHAPTER 17 - EMERGENCIES**17.1 General**

17.1.1 ANS shall provide instructions for controllers in the event of an aircraft declaring or appearing to be in an emergency situation. These instructions shall be published in ATSP 7300 1-1.

17.2 Signals

17.2.1 ANS shall publish in in ATSP 7300 1-1 details of signals that will indicate either a distress or an urgency situation.

17.2.2 In communications between ATS units and aircraft in the event of an emergency, Human Factors principles shall be observed.

17.3 Unlawful interference

17.3.1 ANS shall provide methods for controllers on how to handle the situation where an aircraft is subject to unlawful interference.

Note: Due to the uncontrollable nature of such incidents it is impossible to provide anything but rough guidelines and controllers shall be informed to use common sense if the situation has not been covered within the guidelines.

17.3.2 ANS shall also publish in ATSP 7300 1-1 recommended phraseologies to be used if the aircraft is in two-way radio contact.

17.4 Radio communication failure

17.4.1 ANS shall publish in ATSP 7300 1-1 procedures to be followed when either an airborne or ground-based radio station appears unable to establish two-way communication. This shall include expected actions by the aircraft in the event of major communication failures.

17.5 Bomb threats

17.5.1 ANS shall issue instructions on handling of bomb threats to aircraft or buildings within the airport and publish them in in ATSP 7300 1-1 and 1-2.

17.6 Emergency separation

17.6.1 ANS shall provide in ATSP 7300 1-1 instructions for emergency separation if horizontal or vertical separation cannot be maintained due to an aircraft emergency or following ATC surveillance system alerts or warnings.

CHAPTER 18 - FLIGHT INFORMATION SERVICES**18.1 General**

- 18.1.1 ANS shall determine the responsibility for the provision of flight information service in ATSP 7300 1-1.
- 18.1.2 ANS will detail such information that constitutes relevant flight information to all flights in ATSP 7300 1-1.
- 18.1.3 ANS shall further detail in which format the transmission of flight information can take place in ATSP 7300 1-1.

18.2 Automatic terminal information service

- 18.2.1 ANS shall determine in which format the ATIS at individual units will be broadcast and whether a separate broadcast will be provided for arrivals and departures in ATSP 7300 1-1.
- 18.2.2 ANS shall detail the contents of the ATIS broadcast in ATSP 7300 1-1.

18.3 Traffic information

- 18.3.1 ANS shall publish procedures for issuing both general traffic information and essential traffic information in ATSP 7300 1-1.
- 18.3.2 ANS shall publish procedures for traffic information broadcasts by aircraft, which may be used for traffic management outside controlled airspace or when there is a need to supplement collision hazard information or in case of temporary disruption of flight information service. These procedures shall comply with the requirements of Appendix 5 to this Regulation.

18.4 Meteorological information

- 18.4.1 As weather phenomena play a vital role in aircraft safety, ANS shall detail requirements for the reporting of:
- a) Sigmet and airmet information
 - b) Special reports and amended aerodrome forecast
 - c) Surface wind
 - d) Visibility
 - e) Runway visual range
 - f) Present weather
 - g) Cloud base
 - h) Air temperature and dew point
 - i) Altimeter setting
 - j) Volcanic activity

18.5 Air traffic advisory service

- 18.5.1 ANS shall provide instructions with regard to Air Traffic Advisory Service in respect of format and when to use in ATSP 7300 1-1.

CHAPTER 19 - AERONAUTICAL INFORMATION SERVICES

19.1 General

19.1.1 ANS shall issue instructions for the procedures pertaining to the issuance of NOTAMs in ATSP 7300 1-1.

19.2 AIP amendments and supplements

19.2.1 ANS shall designate a department within ATM that is responsible for issuing AIP Amendments and Supplements through AIS in ATSP 7300 1-1.

19.3 Departmental NOTAM Responsibilities

19.3.1 ANS shall list the different department's area of responsibility when issuing NOTAM in ATSP 7300 1-1

19.4 Procedures to be followed in case of NAVAID or communications equipment failure

19.4.1 ANS shall publish procedures for issuing NOTAM in the event of failure to navigational or communications equipment in ATSP 7300 1-1.

19.5 Navigation warning NOTAM

19.5.1 ANS shall publish procedures for issuing navigation warning NOTAM in ATSP 7300 1-1.

19.6 Circumstances to be notified by AIRAC

19.6.1 ANS shall publish instructions for issuing of AIRAC affecting significant information or procedures in ATSP 7300 1-1.

19.6.2 Before ANS is introducing changes to the air navigation system, due account shall be taken by the services responsible for such changes of the time needed by the aeronautical information service for the preparation, production and issuance of relevant material for promulgation. To ensure timely provision of the information to the aeronautical information service, close coordination between those services concerned is therefore required.

19.6.3 Of particular importance are changes to aeronautical information that affect charts and/or computer-based navigation systems which qualify to be notified by the Aeronautical Information Regulation and Control (AIRAC) system, as specified in the relevant GACA's regulation. The predetermined, internationally agreed AIRAC effective dates in addition to 14 days postage time shall be observed by the responsible air traffic services when submitting the raw information/data to aeronautical information services.

19.6.4 The air traffic services responsible for the provision of raw aeronautical information/data to the aeronautical information services shall do so while taking into account accuracy and integrity requirements for aeronautical data as specified in the relevant GACA regulation.

19.7 Coordination between aeronautical information services and air traffic services authorities

19.7.1 To ensure that aeronautical information services units obtain information to enable them to provide up-to-date pre-flight information and to meet the need for in-flight information, arrangements shall be made between aeronautical information services and air traffic services authorities responsible for air traffic services to report to the responsible aeronautical information services unit, with a minimum of delay:

- a) information on aerodrome conditions;
- b) the operational status of associated facilities, services and navigation aids within their area of responsibility;
- c) the occurrence of volcanic activity observed by air traffic services personnel or reported by aircraft; and
- d) any other information considered to be of operational significance.

19.8 Common reference systems**19.8.1 Horizontal reference system**

World Geodetic System - 1984 (WGS-84) shall be used as the horizontal (geodetic) reference system for air navigation. Reported aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum.

19.8.2 Vertical reference system

Mean sea level (MSL) datum, which gives the relationship of gravity-related height (elevation) to a surface known as the geoid, shall be used as the vertical reference system for air navigation.

19.8.3 Temporal reference system

The Gregorian calendar and Coordinated Universal Time (UTC) shall be used as the temporal reference system for air navigation.

CHAPTER 20 - COMMUNICATIONS**20.1 Categories of ATS messages**

20.1.1 ATSP 7300 1-1 shall detail the categories of messages that is handled by aeronautical mobile service together with a description of the individual categories.

20.2 Message composition

20.2.1 ANS shall detail in ATSP 7300 1-1 the composition of messages to be handled by the aeronautical mobile and fixed services.

20.3 Phonetics and numbers

20.3.1 ANS shall list the phonetic alphabet and the pronunciation of numbers from 0 to 10 in ATSP 7300 1-1.

20.4 Transmitting technique

20.4.1 ANS shall publish procedures for radio transmitting technique in ATSP 7300 1-1.

20.5 Ground station call signs

20.5.1 ANS shall publish a table listing the approved ground station call signs in ATSP 7300 1-1.

20.6 Aircraft call signs

20.6.1 ANS shall issue instructions for the use of both full and abbreviated call signs in ATSP 7300 1-1.

20.7 Exchange of communications

20.7.1 ANS shall detail in ATSP 7300 1-1 procedures for exchange of communication between ground stations and aircraft including requirements for sections that should be read back or include corrections and repetitions.

20.8 Distress and urgency radio telephony communication procedures

20.8.1 ANS shall publish detailed procedures in association with aircraft in distress in ATSP 7300 1-1. These procedures shall include the following:

- a) Actions by aircraft in distress.
- b) Action by station acknowledging distress message.
- c) In position of silence.
- d) Action by other stations.

20.8.2 ANS shall further in detail publish procedures in ATSP 7300 1-1 for action when an aircraft is reporting an urgency condition. This shall include:

- a) Action by station acknowledging an urgency message.
- b) Action by all other stations.

20.9 Medical transport aircraft radio telephony communication

20.9.1 ANS shall comprehensively detail procedures for communication with medical transport aircraft in ATSP 7300 1-1. This shall include all relevant information to ensure the most expeditious flight profile available.

20.10 Coordination with an aeronautical communication station

20.10.1 ANS shall in ATSP 7300 1-2 detail coordination procedures between the ATS Unit and an aeronautical communication station.

20.10.2 These procedures shall be included in ATSP 7300 1-1 in general terms.

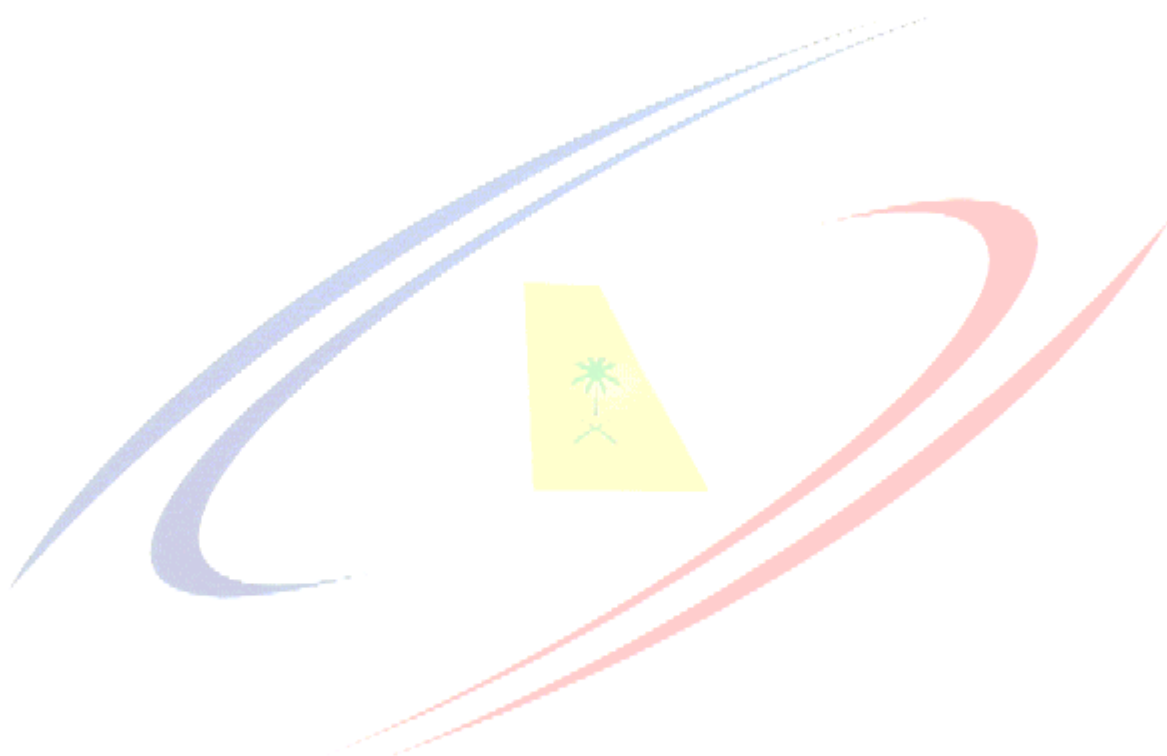
20.11 Unauthorized use of ATC frequency

20.11.1 ANS shall detail procedures to be followed in the event of false and deceptive transmissions on ATC frequencies in ATSP 7300 1-1.

20.12 Phraseologies

20.12.1 ANS shall publish in ATSP 7300 1-2 the approved phraseologies for use by ATS personnel in the provision of Air Traffic Services.

20.12.2 These phraseologies shall comply with ICAO Doc 4444, but a number is permitted to be either omitted or modified to better suit actual conditions within KSA FIRs.



CHAPTER 21 - METEOROLOGICAL REQUIREMENTS**21.1 General**

21.1.1 ANS shall in general describe required meteorological phenomena in the provision of ATC in ATSP 7300 1-1.

21.2 Flight information centers and air traffic control meteorological requirements

21.2.1 ANS shall in ATSP 7300 1-1 stipulate requirements for necessary meteorological details to be provided to FICs and ATCs including information for supersonic aircraft. The meteorological information and reports provided by the associated meteorological watch offices shall comply with the relevant standards and requirements in force.

21.3 Coordination between ATS and meteorological authorities

21.3.1 ANS shall ensure that arrangements are in place with the Presidency of Meteorology and Environment to provide relevant meteorological information to all ATC and FIC Units within the Kingdom. This information shall be included in ATSP 7300 1-2.

21.3.2 Each ATSU shall keep the relevant meteorological Office or the PME informed of any observed or reported meteorological phenomena.

21.3.3 To ensure that aircraft receive the most up-to-date meteorological information for aircraft operations, arrangements shall be made, where necessary, between meteorological and air traffic services authorities for air traffic services personnel:

- a) in addition to using indicating instruments, to report, if observed by air traffic services personnel or communicated by aircraft, such other meteorological elements as may be agreed upon;
- b) to report as soon as possible to the associated meteorological office meteorological phenomena of operational significance, if observed by air traffic services personnel or communicated by aircraft, which have not been included in the aerodrome meteorological report;
- c) to report as soon as possible to the associated meteorological office pertinent information concerning pre-eruption volcanic activity, volcanic eruptions and information concerning volcanic ash cloud. In addition, area control centers and flight information centers shall report the information to the associated meteorological watch office and volcanic ash advisory centers (VAACs).

21.3.4 Close coordination shall be maintained between area control centers, flight information centers and associated meteorological watch offices to ensure that information on volcanic ash included in NOTAM and SIGMET messages is consistent.

CHAPTER 22 - OCCURRENCE REPORTING IN AIR TRAFFIC MANAGEMENT

22.1 Mandatory Reporting

22.1.1 The ANS shall ensure that occurrences covered by Appendix 4 of this Regulation are reported to the Safety and Economic Regulation by every person listed below in the exercise of his functions:

- a) a person who performs a function of an air traffic controller;
- b) a person who performs a function connected with the installation, modification, maintenance, repair, overhaul, flight-checking or inspection of air navigation facilities;

22.1.2 The ANS shall encourage voluntary reporting on occurrences listed in Appendix 4 to this Regulation by every person working in Air Traffic Services.

22.2 Collection and storage of information

22.2.1 The ANS shall designate one or more department(s) to put in place a mechanism and a database to collect, evaluate, process and store occurrences related to Air Traffic Management.

22.3 Exchange of information

22.3.1 The ANS shall participate in an exchange of information by making all relevant safety-related information stored in the its database available to the Safety and Economic Regulation and to other ANS provider as required.

22.4 Dissemination of information

22.4.1 Any concerned ANS department or entity shall have access to information on occurrences collected and exchanged to enable it to draw the safety lessons from the reported occurrences.

22.5 Dissemination of information

22.5.1 The designated department under §22.2 above shall adopt measures for the dissemination to interested parties of the information related to Air Traffic Management occurrences and the associated conditions. These measures shall be based on the need:

- to provide persons and ANS departments with the information they need to improve the safety of Air Traffic Services,
- to limit the dissemination of information to what is strictly required for the purpose of its users, in order to ensure appropriate confidentiality of that information.

22.5.2 The decision to disseminate information under this paragraph shall be limited to what is strictly required for the purpose of its user.

22.5.3 The designated department under §22.4 shall publish at least annually a safety review containing information on the types of ATM occurrences collected. This department can also publish dis-identified reports.

22.6 Protection of information

22.6.1 ANS shall take necessary measures to ensure appropriate confidentiality of the information received. They shall use this information solely for the objective of this chapter.

22.6.2 Regardless of the type or classification of ATM occurrence and serious incident, names or addresses of individual persons shall never be recorded on the database mentioned in 22.2 above.

22.7 Sanctions

22.7.1 ANS shall refrain from instituting proceedings in respect of unpremeditated or inadvertent infringements of the

Air Traffic Management rules and procedures which come to their attention only because they have been reported under the mandatory or voluntary occurrence-reporting scheme, except in cases of gross negligence.

22.7.2 ANS shall ensure that Staff who report incidents of which they may have knowledge are not subjected to any prejudice by their department or entity.

22.8 Voluntary reporting

22.8.1 In addition to the system of ATM mandatory reporting scheme, ANS shall designate one department to put in place a system of voluntary reporting to collect and analyze information on observed deficiencies in Air Traffic Services which are not required to be reported under the system of mandatory reporting, but which are perceived by the reporter as an actual or potential hazard.

22.8.2 The designated department shall establish the conditions for the disidentification, of voluntary reports presented under the voluntary reporting scheme.

22.9 Handling and reporting ATC incidents

22.9.1 ANS shall publish procedures to be followed by all ATSU(s) in reporting of any incident or accident in ATSP 7300 1-1.

22.9.2 ANS shall in detail and as comprehensive as possible publish reporting procedures for any types of incidents or accidents in ATSP 7300 1-1.

22.9.3 ANS shall further publish coordination procedures for adjacent ATSUs that might be affected by the incident/accident in ATSP 7300 1-1.

22.9.4 ANS shall provide all ATSUs with incident/accident report forms that have to be completed as early as practical and forwarded according to reporting procedures.

22.9.5 ANS shall advise all units of restrictions concerning access to ATC audio and video recordings.

CHAPTER 23 - JOB DESCRIPTIONS**23.1 General**

23.1.1 ANS shall detail and publish job descriptions for the following staff:

- a) Head of ATSU
- b) Senior Operations Specialist
- c) Training Officer
- d) Shift Supervisor
- e) Approach Executive Controller
- f) ACC Executive Controller
- g) APP/ACC Planner Controller
- h) Tower Controller
- i) Head of Communications Center
- j) Communications Training Officer
- k) Communications Systems Operations Officer
- l) Communications Statistics Officer
- m) Aeronautical Telecommunications Officer



APPENDIX 1 – AIRSPACE CLASSIFICATION

<i>Class</i>	<i>Type of flight</i>	<i>Separation provided</i>	<i>Service provided</i>	<i>Speed limitation*</i>	<i>Radio communication requirement</i>	<i>Subject to an ATC clearance</i>
A	IFR only	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
	VFR	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Continuous two-way	Yes
	VFR	VFR from IFR	1) Air traffic control service for separation from IFR; 2) VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	Yes
D	IFR	IFR from IFR	Air traffic control service, traffic information about VFR flights (and traffic avoidance advice on request)	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	Yes
	VFR	Nil	IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	Yes
E	IFR	IFR from IFR	Air traffic control service and, as far as practical, traffic information about VFR flights	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	Yes
	VFR	Nil	Traffic information as far as practical	250 kt IAS below 3 050 m (10 000 ft) AMSL	No	No
F	IFR	IFR from IFR as far as practical	Air traffic advisory service; flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	No	No
G	IFR	Nil	Flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	250 kt IAS below 3 050 m (10 000 ft) AMSL	No	No
* When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft.						

APPENDIX 2 - PRINCIPLES GOVERNING THE ESTABLISHMENT AND IDENTIFICATION OF SIGNIFICANT POINTS

1. Establishment of significant points

1.1 Significant points should, whenever possible, be established with reference to ground-based or space-based radio navigation aids, preferably VHF or higher frequency aids.

1.2 Where such ground-based or space-based radio navigation aids do not exist, significant points shall be established at locations which can be determined by selfcontained airborne navigation aids, or, where navigation by visual reference to the ground is to be effected, by visual observation. Specific points may be designated as “transfer of control” points by agreement between adjacent air traffic control units or control positions concerned.

2. Designators for significant points marked by the site of a radio navigation aid

2.1 Plain language name for significant points marked by the site of a radio navigation aid

2.1.1 Whenever practicable, significant points shall be named with reference to an identifiable and preferably prominent geographical location.

2.1.2 In selecting a name for the significant point, care shall be taken to ensure that the following conditions are met:

- a) the name shall not create difficulties in pronunciation for pilots or ATS personnel when speaking in the language used in ATS communications. Where the name of a geographical location in the national language selected for designating a significant point gives rise to difficulties in pronunciation, an abbreviated or contracted version of this name, which retains as much of its geographical significance as possible, shall be selected;

Example: FUERSTENFELDBRUCK = FURSTY

- b) the name shall be easily recognizable in voice communications and shall be free of ambiguity with those of other significant points in the same general area. In addition, the name shall not create confusion with respect to other communications exchanged between air traffic services and pilots;
- c) the name should, if possible, consist of at least six letters and form two syllables and preferably not more than three;
- d) the selected name shall be the same for both the significant point and the radio navigation aid marking it.

2.2 Composition of coded designators for significant points marked by the site of a radio navigation aid

2.2.1 The coded designator shall be the same as the radio identification of the radio navigation aid. It shall be so composed, if possible, as to facilitate association with the name of the point in plain language.

2.2.2 Coded designators shall not be duplicated within 1 100 km (600 NM) of the location of the radio navigation aid concerned, except as noted hereunder.

Note.— When two radio navigation aids operating in different bands of the frequency spectrum are situated at the same location, their radio identifications are normally the same.

2.3 States' requirements for coded designators shall be notified to the Regional Offices of ICAO for coordination.

3. Designators for significant points not marked by the site of a radio navigation aid

3.1 Where a significant point is required at a position not marked by the site of a radio navigation aid, and is used for ATC purposes, it shall be designated by a unique five-letter pronounceable "name-code" This name-code designator then serves as the name as well as the coded designator of the significant point.

3.2 The name-code designator shall be selected so as to avoid any difficulties in pronunciation by pilots or ATS personnel when speaking in the language used in ATS communications.

Examples: ADOLA, KODAP

3.3 The name-code designator shall be easily recognizable in voice communications and shall be free of ambiguity with those used for other significant points in the same general area.

3.4 The unique five-letter pronounceable name-code designator assigned to a significant point shall not be assigned to any other significant point. When there is a need to relocate a significant point, a new name-code designator shall be chosen. In cases when a State wishes to keep the allocation of specific name-codes for reuse at a different location, such name-codes shall not be used until after a period of at least six months.

3.5 States' requirements for unique five-letter pronounceable name-code designators shall be notified to the Regional Offices of ICAO for coordination.

3.6 In areas where no system of fixed routes is established or where the routes followed by aircraft vary depending on operational considerations, significant points shall be determined and reported in terms of World Geodetic System — 1984 (WGS-84) geographical coordinates, except that permanently established significant points serving as exit and/or entry points into such areas shall be designated in accordance with the applicable provisions in 2 or 3.

4. Use of designators in communications

4.1 Normally the name selected in accordance with 2 or 3 shall be used to refer to the significant point in voice communications. If the plain language name for a significant point marked by the site of a radio navigation aid selected in accordance with 2.1 is not used, it shall be replaced by the coded designator which, in voice communications, shall be spoken in accordance with the ICAO spelling alphabet.

4.2 In printed and coded communications, only the coded designator or the selected name-code shall be used to refer to a significant point.

5. Significant points used for reporting purposes

5.1 In order to permit ATS to obtain information regarding the progress of aircraft in flight, selected significant points may need to be designated as reporting points.

5.2 In establishing such points, consideration shall be given to the following factors:

- a) the type of air traffic services provided;
- b) the amount of traffic normally encountered;
- c) the accuracy with which aircraft are capable of adhering to the current flight plan;
- d) the speed of the aircraft;
- e) the separation minima applied;
- f) the complexity of the airspace structure;
- g) the control method(s) employed;
- h) the start or end of significant phases of a flight (climb, descent, change of direction, etc.);
- i) transfer of control procedures;
- j) safety and search and rescue aspects;
- k) the cockpit and air-ground communication workload.

5.3 Reporting points shall be established either as “compulsory” or as “on-request”.

5.4 In establishing “compulsory” reporting points the following principles shall apply:

- a) compulsory reporting points shall be limited to the minimum necessary for the routine provision of information to air traffic services units on the progress of aircraft in flight, bearing in mind the need to keep cockpit and controller workload and air-ground communications load to a minimum;
- b) the availability of a radio navigation aid at a location should not necessarily determine its designation as a compulsory reporting point;
- c) compulsory reporting points should not necessarily be established at flight information region or control area boundaries.

5.5 “On-request” reporting points may be established in relation to the requirements of air traffic services for additional position reports when traffic conditions so demand.

5.6 The designation of compulsory and on-request reporting points shall be reviewed regularly with a view to keeping the requirements for routine position reporting to the minimum necessary to ensure efficient air traffic services.

5.7 Routine reporting over compulsory reporting points should not systematically be made mandatory for all flights in all circumstances. In applying this principle, particular attention shall be given to the following:

- a) high-speed, high-flying aircraft should not be required to make routine position reports over all reporting points established as compulsory for low-speed, low-flying aircraft;
- b) aircraft transiting through a terminal control area should not be required to make routine position reports as frequently as arriving and departing aircraft.

5.8 In areas where the above principles regarding the establishment of reporting points would not be practicable, a reporting system with reference to meridians of longitude or parallels of latitude expressed in whole degrees may be established.

APPENDIX 3 – AERONAUTICAL DATA QUALITY REQUIREMENTS

Table 1. Latitude and longitude

Latitude and longitude	Accuracy Data type	Integrity Classification
Flight information region boundary points	2 km declared	routine
P, R, D area boundary points (outside CTA/CTZ boundaries)	2 km declared	routine
P, R, D area boundary points (inside CTA/CTZ boundaries)	100 m Calculated	essential
CTA/CTZ boundary points	100 m Calculated	essential
En-route nav aids and fixes, holding, STAR/SID points	100 m surveyed/calculated	essential
Obstacles in Area 1 (the entire State territory)	50 m Surveyed	routine
Obstacles in Area 2 (the part outside the aerodrome/heliport boundary)	5 m surveyed	essential
Final approach fixes/points and other essential fixes/points comprising the instrument approach procedure	3 m surveyed/calculated	essential

Table 2. Elevation/altitude/height

Elevation/altitude/height	Accuracy Data type	Integrity Classification
Threshold crossing height (Reference datum height), precision approaches	0.5 m Calculated	critical
Obstacle clearance altitude/height (OCA/H).	as specified in PANS-OPS (Doc 8168)	essential
Obstacles in Area 1 (the entire State territory), elevations	30 m surveyed	routine
Obstacles in Area 2 (the part outside the aerodrome/heliport boundary)	3 m surveyed	essential
Distance measuring equipment (DME), elevation	30 m (100 ft) Surveyed	essential
Instrument approach procedures altitude	as specified in PANS-OPS (Doc 8168)	essential
Minimum altitudes	50 m Calculated	routine

Table 3. Declination and magnetic variation

Declination/variation	Accuracy Data type	Integrity Classification
VHF NAVAID station declination used for technical line-up	1 degree surveyed	essential
NDB NAVAID magnetic variation	1 degree Surveyed	routine

Table 4. Bearing

Bearing Data type	Accuracy Classification	integrity
Airway segments	1/10 degree calculated	routine
Bearing used for the formation of an en route and of a terminal fix	1/10 degree calculated	routine
Terminal arrival/departure route segments	1/10 degree calculated	routine
Bearing used for the formation of an instrument approach procedure fix.	1/100 degree calculated	essential

Table 5. Length/distance/dimension

Length/ distance/ dimension	Accuracy Data type	Integrity Classification
Airway segments length	1/10 km calculated	routine
Distance used for the formation of an en-route fix	1/10 km calculated	routine
Terminal arrival/ departure route segments length....	1/100 km calculated	essential
Distance used for the formation of a terminal and..... instrument approach procedure fix	1/100 km calculated	essential

APPENDIX 4 - LIST OF AIR NAVIGATION SERVICES - RELATED OCCURRENCES TO BE REPORTED

Note 1: Although this Appendix lists the majority of reportable occurrences, it cannot be completely comprehensive. Any other occurrences, which are judged by those involved to be of hazardous nature should also be reported.

Note 2: This Appendix does not include accidents and serious incidents.

Note 3: This Appendix includes "ANS" (air navigation service) occurrences which pose an actual or potential threat to flight safety, or can compromise the provision of safe Air Navigation Services.

Note 4: The contents of this Appendix shall not preclude the reporting of any occurrence, situation or condition which, if repeated in different but likely circumstances or allowed to continue uncorrected, could create a hazard to ATM.

1.1 Near collision incidents (encompassing specific situations where one aircraft and another aircraft/the ground/a vehicle/person or objects are perceived to be too close to each other):

- a) separation minima infringement;
- b) inadequate separation;
- c) "near-CFIT" (near-controlled flight into terrain);
- d) runway incursion where avoiding action was necessary.

1.2 Potential for collision or near collision (encompassing specific situations having the potential to be an accident or a near collision, if another aircraft is in the vicinity):

- a) runway incursion where no avoiding action is necessary;
- b) runway excursion;
- c) aircraft deviation from ATC clearance;
- d) aircraft deviation from applicable "ATM" (air traffic management) regulation:
 - i) aircraft deviation from applicable published ATM procedures;
 - ii) unauthorised penetration of airspace;
 - iii) deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulation(s) / requirements.

1.3 ATM-specific occurrences (encompassing those situations where the ability to provide safe ATM services is affected, including situations where, the safe operation of aircraft has not been jeopardised). This shall include the following occurrences:

- a) inability to provide ATM services:
 - i) inability to provide air traffic services;
 - ii) inability to provide airspace management services;
 - iii) inability to provide air traffic flow management services;
- b) failure of Communication function;
- c) failure of Surveillance function;

- d) failure of Data Processing and Distribution function;
- e) failure of Navigation function;
- f) ATM system security.

1.4 "ATC" (air traffic control) Navigation and Communications - significant malfunction or deterioration of service.

1.5 An aircraft was or could have been endangered by impairment of any member of ground staff (e.g. ATC, "AD" (aircraft dispatchers), Maintenance, etc.).

1.6 ATC overload.

1.6.1 Failure or unplanned shutdown of a major operational ATC computer system, requiring reversion to manual back-up and resulting in disruption to the normal flow of air traffic.

1.6.2 The following subparagraphs give examples of reportable ATM occurrences resulting from the application of the general criteria listed in paragraph 1.3 above.

1. Provision of significantly incorrect, inadequate or misleading information from any ground sources, e.g. ATC, "ATIS" (automatic terminal information service), meteorological services, navigation databases, maps, charts, manuals, etc.
2. Provision of less than prescribed terrain clearance.
3. Provision of incorrect pressure reference data (i.e. altimeter setting).
4. Incorrect transmission, receipt or interpretation of significant messages when this results in a hazardous situation.
5. Separation minima infringement.
6. Unauthorised penetration of airspace.
7. Unlawful radio communication transmission.
8. Failure of ANS ground or satellite facilities.
9. Major ATC/ATM failure or significant deterioration of aerodrome infrastructure.
10. Aerodrome manoeuvring areas obstructed by aircraft, vehicles, animals or foreign objects, resulting in a hazardous or potentially hazardous situation.
11. Errors or inadequacies in marking of obstructions or hazards on aerodrome movement areas resulting in a hazardous situation.
12. Failure, significant malfunction or unavailability of airfield lighting.

APPENDIX 5 - TRAFFIC INFORMATION BROADCASTS BY AIRCRAFT (TIBA) AND RELATED OPERATING PROCEDURES

1. Introduction and applicability of broadcasts

1.1 Traffic information broadcasts by aircraft are intended to permit reports and relevant supplementary information of an advisory nature to be transmitted by pilots on a designated VHF radiotelephone (RTF) frequency for the information of pilots of other aircraft in the vicinity.

1.2 ANS shall consider to introduce TIBAs only when necessary and as a temporary measure.

1.3 The broadcast procedures shall be applied in designated Jeddah FIR sector or portion of sector where:

1. there is a need to supplement collision hazard information provided by ANS air traffic services outside controlled airspace; or
2. there is a temporary disruption of normal air traffic services.

1.4 Such Jeddah FIR Sector or portion of sector shall be identified by the ANS and duly promulgated in aeronautical information publications or NOTAM, together with the VHF RTF frequency, the message formats and the procedures to be used. Where, in the case of 1.3 a), adjacent FIRs are concerned, ANS shall establish the required coordination procedures for TIBAs.

2. Details of broadcasts

2.1 VHF RTF frequency to be used

2.1.1 The VHF RTF frequency to be used shall be determined and promulgated. In the case of temporary disruption occurring in controlled sector, ANS may promulgate, as the VHF RTF frequency to be used within the limits of that sector, a frequency used normally for the provision of air traffic control service within that sector.

2.1.2 Where VHF is used for air-ground communications with ATS and an aircraft has only two serviceable VHF sets, one shall be tuned to the appropriate ATS frequency and the other to the TIBA frequency.

2.2 Listening watch

A listening watch shall be maintained on the TIBA frequency 10 minutes before entering the designated sector until leaving this sector. For an aircraft taking off from an aerodrome located within the lateral limits of the designated sector listening watch shall start as soon as appropriate after take-off and be maintained until leaving the sector.

2.3 Time of broadcasts

A broadcast shall be made:

1. 10 minutes before entering the designated sector or, for a pilot taking off from an aerodrome located within the lateral limits of the designated sector, as soon as appropriate after take-off;
2. 10 minutes prior to crossing a reporting point;

3. 10 minutes prior to crossing or joining an ATS route;
4. at 20-minute intervals between distant reporting points;
5. 2 to 5 minutes, where possible, before a change in flight level;
6. at the time of a change in flight level; and
7. at any other time considered necessary by the pilot.

2.4 Forms of broadcast

2.4.1 The broadcasts other than those indicating changes in flight level, i.e. the broadcasts referred to in 2.3 a), b), c), d) and g), shall be in the following form:

ALL STATIONS (necessary to identify a traffic information broadcast)

(call sign)

FLIGHT LEVEL (number) (or CLIMBING*¹ TO FLIGHT LEVEL (number))

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

POSITION (position**²) AT (time)

ESTIMATING (next reporting point, or the point of crossing or joining a designated ATS route) AT (time) (call sign)

FLIGHT LEVEL (number)

(direction)

2.4.2 Before a change in flight level, the broadcast (referred to in 2.3 e)) should be in the following form:

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) FOR FLIGHT
LEVEL (number) AT (position and time)

2.4.3 Except as provided in 2.4.4, the broadcast at the time of a change in flight level (referred to in 2.3 f)) shall be in the following form:

¹ * For the broadcast referred to in 2.3 a) in the case of an aircraft taking off from an aerodrome located within the lateral limits of the designated sector.

² ** For broadcasts made when the aircraft is not near an ATS significant point, the position shall be given as accurately as possible and in any case to the nearest 30 minutes of latitude and longitude.

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position)) LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed by:

ALL STATIONS

(call sign)

MAINTAINING FLIGHT LEVEL (number)

2.4.4 Broadcasts reporting a temporary flight level change to avoid an imminent collision risk should be in the following form:

ALL STATIONS

(call sign)

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed as soon as practicable by: ALL STATIONS

(call sign)

RETURNING TO FLIGHT LEVEL (number) NOW

2.5 Acknowledgement of the broadcasts

The broadcasts shall not be acknowledged unless a potential collision risk is perceived.

3. Related operating procedures

3.1 Changes of cruising level

3.1.1 Cruising level changes shall not be made within the designated sector, unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft shall be displayed while changing levels.

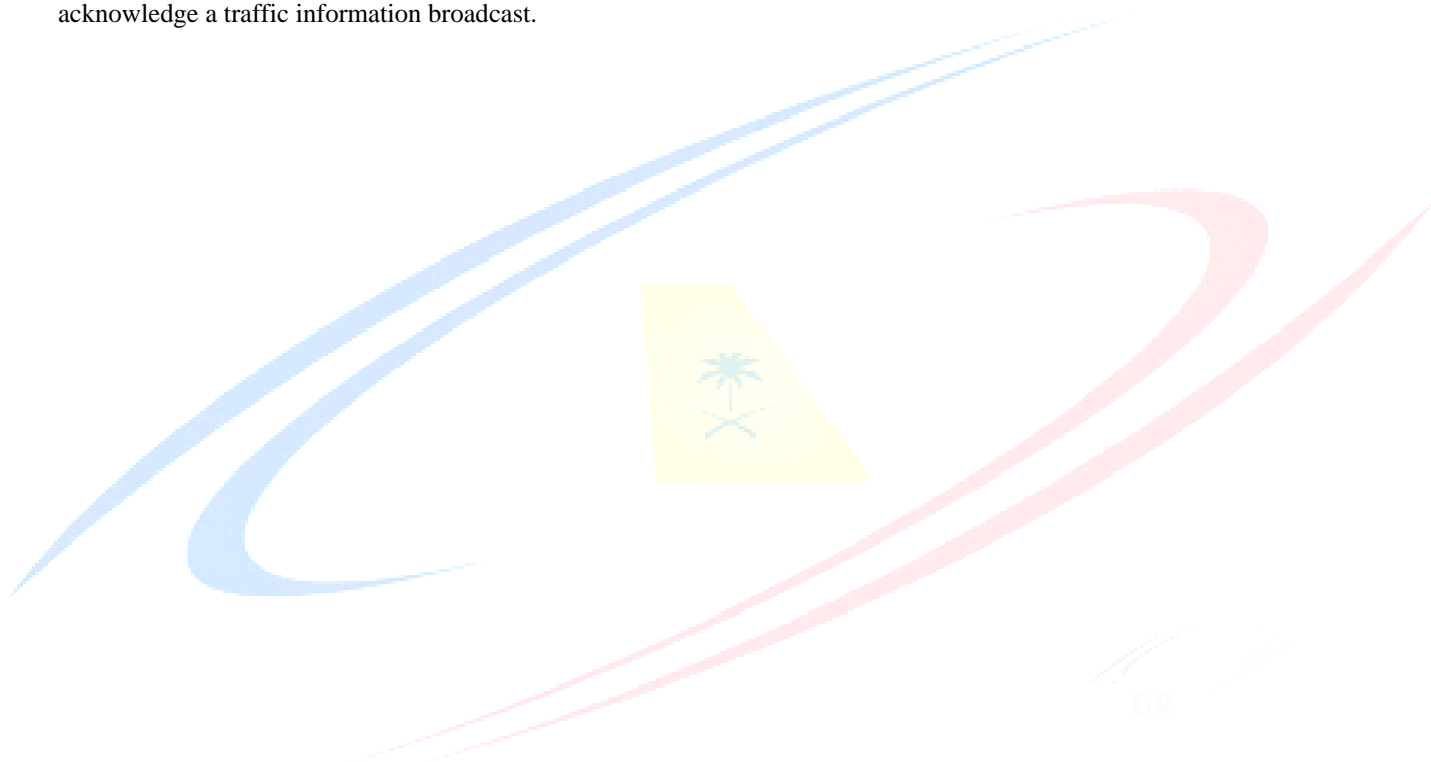
3.2 Collision avoidance

If, on receipt of a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk, and this cannot be achieved in accordance with the right-of-way provisions of GACAR Section 2 (ICAO Annex 2), the pilot shall:

- i. unless an alternative manoeuvre appears more appropriate, immediately descend 150 m (500 ft), or 300 m (1 000 ft) if above FL 290 in an area where a vertical separation minimum of 600 m (2 000 ft) is applied;
- ii. display all available aircraft lighting which would improve the visual detection of the aircraft;
- iii. as soon as possible, reply to the broadcast advising action being taken;
- iv. notify the action taken on the appropriate ATS frequency; and
- v. as soon as practicable, resume normal flight level, notifying the action on the appropriate ATS frequency.

3.3 Normal position reporting procedures

Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.



APPENDIX 6 - MATERIAL RELATING TO CONTINGENCY PLANNING

1. Introduction

1.1 The purpose of the guidelines is to assist ANS in providing for the safe and orderly flow of international air traffic in the event of disruptions of air traffic services and related supporting services and in preserving the availability of major air routes within Jeddah FIR in such circumstances.

2. Status of contingency plans

2.1 Contingency plans are intended to provide alternative facilities and services in Jeddah FIR when ANS facilities and services are temporarily not available. Contingency arrangements are therefore temporary in nature, remain in effect only until the ANS services and facilities are reactivated.

3. Responsibility for developing, promulgating and implementing contingency plans

3.1 ANS is responsible for providing air traffic services and related supporting services in Jeddah FIR is also responsible, in the event of disruption or potential disruption of these services, for instituting measures to ensure the safety of civil aviation operations and, where possible, for making provisions for alternative facilities and services. To that end the ANS shall develop, promulgate and implement appropriate contingency plans. Such plans shall be developed in consultation with other parties and airspace users concerned and with ICAO, as appropriate, whenever the effects of the service disruption(s) are likely to affect the services in adjacent airspace.

4. Preparatory action

4.1 Time is essential in contingency planning if hazards to air navigation are to be reasonably prevented. Timely introduction of contingency arrangements requires decisive initiative and action, which again presupposes that contingency plans have, as far as practicable, been completed and agreed between ANS and the parties concerned before the occurrence of the event requiring contingency action, including the manner and timing of promulgating such arrangements.

4.2 For the reasons given in 4.1, ANS shall take preparatory action, as appropriate, for facilitating timely introduction of contingency arrangements. Such preparatory action shall include:

- a) **NOTIFICATION OF SUSPECTED COMMUNICABLE DISEASES, OR OTHER PUBLIC HEALTH RISK, ON BOARD AN AIRCRAFT**

The ATS unit, upon receipt of information from a pilot regarding suspected case(s) of communicable disease, or other public health risk, on board the aircraft, or when a report of a suspected case(s) of communicable disease, is received by an ATS unit serving the destination/departure, from another ATS unit or from an aircraft or an aircraft operator, the unit concerned shall forward a message as soon as possible to the ATS unit serving the destination/departure, and for arrivals to KSA airports shall communicate the information received as soon as possible to the airport duty manager , or airport manager as appropriate , who in turn will advise concerned parties.

More information can be found in GACAR 9 Facilitation.
- b) preparation of general contingency plans for introduction in respect of generally foreseeable events;
- c) assessment of risk to civil air traffic due to military conflict or acts of unlawful interference with civil aviation as well as a review of the likelihood and possible consequences of natural disasters or public health emergencies. Preparatory action shall include initial development of special contingency plans in respect of natural disasters, public health emergencies, military conflicts or acts of unlawful interference with civil aviation that are likely to affect the availability of portion of Jeddah FIR for civil aircraft operations and/or the provision of air traffic services and supporting services.
- d) be recognized that avoidance of particular portions of airspace in Jeddah FIR on short notice will require special efforts by adjacent FIR and by international aircraft operators with regard to planning of alternative routings and services, and the ANS shall therefore, as far as practicable, endeavour to anticipate the need for

such alternative actions;

- e) monitoring of any developments that might lead to events requiring contingency arrangements to be developed and applied. ANS shall consider designating persons/ administrative units to undertake such monitoring and, when necessary, to initiate effective follow-up action; and
- f) designation/establishment of a secondary location which, in the event of disruption of air traffic services and introduction of contingency arrangements, would be able to provide, 24 hours a day, up-to-date information on the situation and associated contingency measures until the system has returned to normal. An ANS coordinating team shall be designated within, or in association with, such a secondary location for the purpose of coordinating activities during the disruption.

5. Coordination

5.1 ANS contingency plan should be acceptable to users of contingency services alike, i.e. in terms of safety of operations and traffic handling capacity provided by the plan in the circumstances.

5.2 When ANS anticipate or experience disruption of air traffic services and/or related supporting services, the ANS should advise, as early as practicable, the ICAO MID Regional Office, and other adjacent States whose services might be affected. Such advice should include information on associated contingency measures.

5.3 ANS should determine detailed coordination requirements.

5.4 In the case of contingency event with other States, ANS shall detailed coordination leading to formal agreement on contingency plan measures to apply with each ATSP of the concerned States.

5.5 Such detailed coordination should also be undertaken with those ASTPs whose services will be significantly affected, for example by re-routing of traffic.

5.5 Whenever necessary to ensure orderly transition to contingency arrangements, ANS detailed coordination referred to in this section should include agreement on a detailed, common NOTAM text to be promulgated at a commonly agreed effective date.

6. Development, promulgation and application of contingency plans

6.1 ANS contingency plan shall details all the information information on current and alternative routes, navigational capability of aircraft and availability or partial availability of navigational guidance from ground-based aids, surveillance and communications capability of ANS air traffic services units, volume and types of aircraft to be accommodated and the actual status of the air traffic services, communications, meteorological and aeronautical information services. The main elements to be considered for ANS contingency planning depending upon circumstances, shall take into account at least the following factors:

- a) re-routing of traffic to avoid the whole or part of the Jeddah FIR, normally involving establishment of additional routes or route segments with associated conditions for their use;
- b) establishment of a simplified route network through Jeddah FIR, if it is available, together with a flight level allocation scheme to ensure lateral and vertical separation, and a procedure for Riyadh and Jeddah ACC to establish longitudinal separation at the entry point and to maintain such separation through Jeddah FIR;
- c) reassignment of responsibility for providing air traffic services in Jeddah FIR or in delegated airspace;
- d) provision and operation of adequate air-ground communications, AFTN and ATS direct speech links, including reassignment, to adjacent FIR, of the responsibility for providing meteorological information and information on status of navigation aids;

- e) special arrangements for collecting and disseminating in-flight and post-flight reports from aircraft;
- f) a requirement for aircraft to maintain continuous listening watch on a specified pilot-pilot VHF frequency in specified areas where air-ground communications are uncertain or non-existent and to broadcast on that frequency, preferably in English, position information and estimates, including start and completion of climb and descent;
- g) a requirement for all aircraft in specified areas to display navigation and anti-collision lights at all times;
- h) a requirement and procedures for aircraft to maintain an increased longitudinal separation that may be established between aircraft at the same cruising level;
- i) a requirement for climbing and descending well to the right of the centre line of specifically identified routes;
- j) establishment of arrangements for controlled access to the contingency area to prevent overloading of the contingency system; and
- k) a requirement for all operations in the contingency area to be conducted in accordance with IFR, including allocation of IFR flight levels, from the relevant Table of Cruising Levels in Appendix A3 of GACAR Section 2, to ATS routes in the area.

6.2 Notification, by NOTAM, of anticipated or actual disruption of air traffic services and/or related supporting services should be dispatched to users of air navigation services as early as practicable. The NOTAM should include the associated contingency arrangements. In the case of foreseeable disruption, the advance notice should in any case not be less than 48 hours.

6.3 Notification by NOTAM of discontinuance of contingency measures and reactivation of the services set forth in the regional air navigation plan should be dispatched as early as practicable to ensure an orderly transfer from contingency conditions to normal conditions.