

Kingdom of Saudi Arabia  
General Authority of Civil Aviation

# **GACA REGULATION**



## **Section 12 Search and Rescue**

Edition 2.0

## FOREWORD

The following Regulations governing Air Navigation Services (ANS) are based on Articles 1, 2, 4, 5, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 175 and 177 of the Civil Aviation Act as approved by Council of Ministers Resolution No. 185, dated 17/07/1426 H as authorized by Royal Decree No. M/44, dated 18/07/1426 H, and are in accordance with ICAO Annex 12 – Search and Rescue and the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume I — Organization and Management, Volume II — Mission Co-ordination, and Volume III — Mobile Facilities (Doc 9731).

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 of the General Authority of Civil Aviation Board of Directors.

The General Authority of Civil Aviation is responsible for the preparation and distribution of all regulations and procedures 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: 15 November 2012

**CONTENT RULES****1) Organization Structure**

- a) GACA has established an Air Navigation System Safety Division (ANS Safety) within the Safety Department (SD) of the Safety and Economic Regulation Sector (S&ER) with the following responsibilities:
1. Ensure and enforce compliance with the applicable regulations and procedures of GACAR Section 12 including the identification of conditions and circumstances under which ANS (Search and Rescue Unit) are allowed to deal with, and resolve, events involving certain deviations internally, within the context of the ANS safety management system (SMS);
  2. perform safety oversight functions include audits, inspections, investigations and data analysis;
  3. conduct on site facilities audits based on pre-established annual audit program and frequent inspections of areas of greater safety concern or need, as identified by the analysis of data, or as instructed by senior management;
  4. ensure the capture and storage of data on safety risks and deviations;
  5. perform analysis of the stored data and actively exchange safety information with the concerned departments within Air Navigation Services;
  6. organize internal training, communication and dissemination of safety information; and
  7. Promote dissemination of Safety information to support, within Air Navigation services, the development of an organizational culture that fosters an effective and efficient Safety Management System.
- b) Under current arrangements for Search and Rescue activities in Kingdom of Saudi Arabia, GACA is responsible for coordination with the concerned departments to comply with ICAO Standards and Recommended Practices (SARPs) of Annex 12. GACA has delegated this activity to GACA Air Navigation Services – Air Traffic Management Department.
- c) The Search and Rescue Section, a unit within the Air Traffic Management Department, is responsible for the coordination activities related to Search and Rescue plans. It is also designated as focal point for COSPAS-SARSAT.
- d) This regulation cover all Search and Rescue activities that should be performed by GACA Air Navigation Services – Air Traffic Management Department and is based on the provisions of ICAO Annex 12. When the content of this regulation do not cover any item related to Search and Rescue, the Air Traffic Management department shall apply the Standards and Recommended Practices of ICAO Annex 12 and its related documents and guidance materials.

## 2) 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&ER 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 Vice President, Safety and Economic Regulation (S&ER) who in turn will provide a copy of this amendment to the concerned department for 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&ER will analyze this proposal and forward its comments and any proposed decision action to the S&ER Vice President.
3. An accepted amendment proposal will be prepared as draft amendment to the GACAR-Section 12 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&ER 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 12 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 12 accordingly.
9. It is the responsibility of all concerned parties to keep their copy of GACAR-Section 12 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.



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## AMENDMENT RECORD

This edition incorporates all amendments to ICAO Annex 12 up to and including amendment 18

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**LIST OF CURRENT DIFFERENCES TO ICAO SARPS**

GACA Regulation Section-12 is based on ICAO ANNEX-12. The following is a list of differences between the GACA Regulation and the ICAO Standards and Recommended Practices (SARPS). Differences have been notified to ICAO and are also published in the KSA Aeronautical Information Publication (AIP-GEN 1.7).

ICAO Annex 12 – SEARCH AND RESCUE – 8 <sup>th</sup> Edition – Amendment 18		
SARP Identifier	Regulation Reference	Difference
		No Differences to Annex 12



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**CHAPTER 1 – DEFINITIONS****1.1 Definitions**

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

**Alerting post**

Any facility intended to serve as an intermediary between a person reporting an emergency and KSA rescue coordination centre or rescue sub-centre.

**Alert phase**

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

**Distress phase**

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

**Ditching**

The forced landing of an aircraft on water.

**Emergency phase**

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

**Operator**

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

**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.

**Rescue**

An operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

**Rescue coordination centre (RCC)**

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

**Rescue sub-centre (RSC)**

A unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities.

**Search**

An operation normally coordinated by a rescue coordination centre or rescue sub-centre using available personnel and facilities to locate persons in distress.

**Search and rescue aircraft**

An aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

**Search and rescue facility**

Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

**Search and rescue service**

The performance of distress monitoring, communication, coordination and search and rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations.

**Search and rescue region (SRR)**

An area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

**Search and rescue unit**

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

**State of Registry**

The State on whose register the aircraft is entered.

**Uncertainty phase**

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

## 1.2 Abbreviations

<b>AIP</b>	Aeronautical Information Publication
<b>ICAO</b>	International Civil Aviation Organization
<b>GACA</b>	General Authority of Civil Aviation
<b>GACAR</b>	GACA Regulation
<b>KSA</b>	Kingdom of Saudi Arabia
<b>S&amp;ER</b>	Safety and Economic Regulation
<b>VP</b>	Vice President



## CHAPTER 2 – ORGANIZATION

### 2.1 Search and rescue services

2.1.1 The General Authority of Civil Aviation (GACA) shall arrange for the establishment and prompt provision of search and rescue services within Saudi territory to ensure that assistance is rendered to persons in distress. Such services shall be provided on a 24-hour basis.

2.1.1.1 In those portions of the high seas or areas of undetermined sovereignty, search and rescue services will be provided based on agreements with adjacent States. These agreements are maintained by the concerned units within the Ministry of Defense and GACA.

2.1.1.2 Search and rescue services are regulated by Civil Aviation Act under Chapter. GACA is designated as coordinator Authority for SAR services. The KSA Ministry of Interior and Ministry of Defense and Aviation are responsible for the operational functions.

2.1.1.3 GACA and other authorities' search and rescue services shall establish processes to improve service provision, including the aspects of planning, domestic and international cooperative arrangements and training.

2.1.2 In providing assistance to aircraft in distress and to survivors of aircraft accidents, GACA and other authorities shall do so regardless of the nationality or status of such persons or the circumstances in which such persons are found.

2.1.3 GACA and the other concerned authorities shall use search and rescue units and other available facilities to assist any aircraft or its occupants that are or appear to be in a state of emergency.

2.1.4 GACA and other concerned authorities shall ensure consistency and cooperation between aeronautical and maritime search and rescue services.

2.1.5 GACA and the other concerned authorities shall establish joint rescue coordination centres to coordinate aeronautical and maritime search and rescue operations, where practical.

### 2.2 Search and rescue region

2.2.1 GACA shall delineate the KSA search and rescue region within which they will provide search and rescue services. Such region shall not overlap neighbouring regions and shall be contiguous with those regions.

2.2.1.1 The KSA search and rescue region shall cover the Jeddah Flight Information Region and additional areas within the political boundary.

### 2.3 Rescue coordination centres and rescue sub-centres

2.3.1 GACA and concerned authorities shall establish a rescue coordination centre (or centres as appropriate) within the KSA search and rescue region.

2.3.2 Reserved

2.3.3 KSA rescue coordination centres and, as appropriate, rescue sub-centres, shall be staffed 24 hours a day by trained personnel proficient in the use of the language used for radio-telephony communications.

2.3.4 GACA shall ensure that RCC personnel involved in the conduct of radiotelephony communications are proficient in the use of the English language.

2.3.5 In areas where public telecommunications facilities would not permit persons observing an aircraft in emergency to notify the KSA rescue coordination centre concerned directly and promptly, GACA and concerned authorities shall

coordinate to designate suitable units of public or private services as alerting posts.

## 2.4 Search and rescue communications

2.4.1 Each KSA rescue coordination centre shall have means of rapid and reliable two-way communication with:

- a) associated GACA air traffic services units;
- b) associated rescue sub-centres;
- c) appropriate direction-finding and position-fixing stations;
- d) where appropriate, coastal radio stations capable of alerting and communicating with surface vessels in the region;
- e) the headquarters of search and rescue units in the region;
- f) all maritime rescue coordination centres in the region and aeronautical, maritime or joint rescue coordination centres in adjacent regions;
- g) a designated meteorological office or meteorological watch office;
- h) search and rescue units;
- i) alerting posts; and
- j) the Cospas-Sarsat Mission Control Centre servicing KSA search and rescue region.

2.4.2 Each rescue sub-centre shall have means of rapid and reliable two-way communication with:

- a) adjacent rescue coordination centre and associated sub-centres;
- b) a meteorological office or meteorological watch office;
- c) search and rescue units; and
- d) alerting posts.

## 2.5 Search and rescue units

2.5.1 KSA shall designate as search and rescue units elements of public or private services suitably located and equipped for search and rescue operations.

2.5.2 GACA in coordination with the relevant authorities shall designate as parts of the search and rescue plan of operation, elements of public or private services that do not qualify as search and rescue units but are nevertheless able to participate in search and rescue operations.

## 2.6 Search and rescue equipment

2.6.1 GACA and relevant authorities shall ensure that search and rescue units shall be provided with equipment for locating promptly, and for providing adequate assistance at, the scene of an accident.

2.6.2 Each search and rescue unit shall have means of rapid and reliable two-way communication with other search and rescue facilities engaged in the same operation.

2.6.3 Each search and rescue aircraft shall be equipped to be able to communicate on the aeronautical distress and on-scene frequencies and on such other frequencies as may be prescribed.

2.6.4 Each search and rescue aircraft shall be equipped with a device for homing on distress frequencies.

2.6.5 Each search and rescue aircraft, when used for search and rescue over maritime areas, shall be equipped to be able to communicate with vessels.

2.6.6 Each search and rescue aircraft, when used for search and rescue over maritime areas shall carry a copy of the International Code of Signals to enable it to overcome language difficulties that may be experienced in communicating with ships.

2.6.7 Unless it is known that there is no need to provide supplies to survivors by air, at least one of the aircraft participating in a search and rescue operation shall carry droppable survival equipment.

2.6.8 GACA shall coordinate with the concerned authorities in order to locate near international aerodromes, survival equipment suitably packed for dropping by aircraft.



## CHAPTER 3 – COOPERATION

### 3.1 Cooperation with States

3.1.1 GACA and the relevant authorities shall coordinate their search and rescue organizations with those of neighboring States.

3.1.2 GACA and the relevant authorities shall, whenever necessary, coordinate their search and rescue operations with those of neighboring States especially when these operations are proximate to KSA search and rescue region.

3.1.2.1 GACA shall, in so far as practicable and when possible, develop common search and rescue plans and procedures to facilitate coordination of search and rescue operations with those of neighboring States.

3.1.3 The concerned authorities shall permit immediate entry into KSA territory of search and rescue units of neighboring States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.

3.1.4 The authorities of a neighboring State who wish their search and rescue units to enter the KSA territory for search and rescue purposes shall transmit a request, giving full details of the projected mission and the need for it, to the KSA rescue coordination centre or to the appropriate Saudi authority.

3.1.4.1 The Saudi authorities shall:

- immediately acknowledge the receipt of such a request, and
- as soon as possible, indicate the conditions, if any, under which the projected mission may be undertaken.

3.1.5 GACA and the relevant authorities shall propose agreements with neighboring States to strengthen search and rescue cooperation and coordination, setting forth the conditions for entry of each other's search and rescue units into their respective territories. These agreements shall also provide arrangements for expediting entry of such units with the least possible formalities.

3.1.6 GACA and the relevant authorities shall authorize its rescue coordination centre(s) to:

- a) request from other rescue coordination centres such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- b) grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory; and
- c) make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.

3.1.7 GACA and the relevant authorities shall authorize its rescue coordination centres to provide, when requested, assistance to other rescue coordination centres, including assistance in the form of aircraft, vessels, persons or equipment.

3.1.8 GACA and the relevant authorities shall make arrangements for joint training exercises involving their search and rescue units, those of other States and operators, in order to promote search and rescue efficiency.

3.1.9 GACA and the relevant authorities shall make arrangements for periodic liaison visits by personnel of their rescue coordination centres and sub-centres to the centres of neighboring States.

### 3.2 Cooperation with other services

3.2.1 GACA and the relevant authorities shall arrange for all aircraft, vessels and local services and facilities which do not form part of the search and rescue organization to cooperate fully with the latter in search and rescue and to extend any possible assistance to the survivors of aircraft accidents.

3.2.2 GACA and the relevant authorities shall ensure the closest practicable coordination with the maritime authorities to

provide for the most effective and efficient search and rescue services.

3.2.3 GACA and the relevant authorities shall ensure that their search and rescue services cooperate with those responsible for investigating accidents and with those responsible for the care of those who suffered from the accident.

3.2.4 To facilitate accident investigation, rescue units shall, when practicable, be accompanied by persons qualified in the conduct of aircraft accident investigations.

3.2.5 GACA shall designate a search and rescue point of contact for the receipt of Cospas-Sarsat distress data.

### 3.3 Dissemination of information

3.3.1 GACA and the relevant authorities shall publish and disseminate all information necessary for the entry of search and rescue units of neighboring States into KSA territory or, alternatively, include this information in search and rescue service.

3.3.2 When such information could benefit the provision of search and rescue services, GACA shall make available, through the rescue coordination centres or other agencies, information regarding their search and rescue plans of operation.

3.3.3 GACA in coordination with the relevant authorities shall, to the extent desirable and practicable, disseminate information to the general public and emergency response authorities regarding actions to be taken when there is reason to believe that an aircraft's emergency situation may become cause for public concern or require a general emergency response.





## CHAPTER 4 - PREPARATORY MEASURES

### 4.1 Preparatory information

4.1.1 KSA rescue coordination centres shall have readily available at all times up-to-date information concerning the following in respect of its search and rescue region:

- a) search and rescue units, associated rescue sub-centres and alerting posts;
- b) GACA air traffic services units;
- c) means of communication that may be used in search and rescue operations;
- d) addresses and telephone numbers of all operators, or their designated representatives, engaged in operations in the region; and
- e) any other public and private resources including medical and transportation facilities that are likely to be useful in search and rescue.

4.1.2 KSA rescue coordination centres shall have readily available all other information of interest to search and rescue, including information regarding:

- a) the locations, call signs, hours of watch, and frequencies of all radio stations likely to be employed in support of search and rescue operations;
- b) the locations and hours of watch of services keeping radio watch, and the frequencies guarded;
- c) locations where supplies of droppable emergency and survival equipment are stored; and
- d) objects which it is known might be mistaken for unlocated or unreported wreckage, particularly if viewed from the air.

4.1.3 KSA rescue coordination centre shall have ready access to information regarding the position, course and speed of ships within Red Sea and Arabian Gulf that may be able to provide assistance to aircraft in distress and information on how to contact them.

4.1.4 KSA concerned authorities shall either establish ship reporting systems in cooperation with maritime authorities or arrange communication links with Amver or regional ship reporting systems to facilitate search and rescue operations over the Red Sea and Arabian Gulf.

*Note.— Amver is a cooperative international ship reporting system with worldwide coverage that is available for interrogation by all rescue coordination centres.*

### 4.2 Plans of operation

4.2.1 KSA rescue coordination centres shall prepare detailed plans of operation for the conduct of search and rescue operations within its search and rescue region.

4.2.2 Search and rescue plans of operations shall be developed jointly with representatives of concerned authorities, GACA and operators and other public or private services that may assist in providing search and rescue services or benefit from them, taking into account that the number of survivors could be large.

4.2.3 The plans of operation shall specify arrangements for the servicing and refueling, to the extent possible, of aircraft, vessels and vehicles employed in search and rescue operations, including those made available by other adjacent States.

4.2.4 The search and rescue plans of operation shall contain details regarding actions to be taken by those persons engaged in search and rescue, including:

- a) the manner in which search and rescue operations are to be conducted in the search and rescue region;
- b) the use of available communication systems and facilities;
- c) the actions to be taken jointly with other rescue coordination centres;
- d) the methods of alerting en-route aircraft and ships at sea;
- e) the duties and prerogatives of persons assigned to search and rescue;
- f) the possible redeployment of equipment that may be necessitated by meteorological or other conditions;
- g) the methods for obtaining essential information relevant to search and rescue operations, such as weather reports and forecasts, appropriate NOTAM, etc.;
- h) the methods for obtaining, from other rescue coordination centres, such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- i) the methods for assisting distressed aircraft being compelled to ditch to rendezvous with surface craft;
- j) the methods for assisting search and rescue or other aircraft to proceed to aircraft in distress; and
- k) cooperative actions to be taken in conjunction with GACA air traffic services units and other authorities concerned to assist aircraft known or believed to be subject to unlawful interference.

4.2.5 Search and rescue plans of operation shall be integrated with airport emergency plans to provide for rescue services in the vicinity of aerodromes including areas of water.

### 4.3 Search and rescue units

4.3.1 Each KSA search and rescue unit shall:

- a) be cognizant of all parts of the plans of operation prescribed in 4.2 that are necessary for the effective conduct of its duties; and
- b) keep the KSA rescue coordination centre informed of its preparedness.

4.3.2 All the concerned authorities shall:

- a) maintain in readiness the required number of search and rescue facilities; and
- b) maintain adequate supplies of rations, medical stores, signaling devices and other survival and rescue equipment.

### 4.4 Training and exercises

To achieve and maintain maximum efficiency in search and rescue, concerned authorities shall provide for regular training of their search and rescue personnel and arrange appropriate search and rescue exercises.

### 4.5 Wreckage

GACA in coordination with the concerned authorities shall ensure that wreckage resulting from aircraft accidents within KSA territory or, in the case of accidents in areas of Red Sea or Arabian Gulf, within the search and rescue region for which it is responsible, is removed, obliterated or charted following completion of the accident investigation, if its presence might constitute a hazard or confuse subsequent search and rescue operations.

## CHAPTER 5 - OPERATING PROCEDURES

### 5.1 Information concerning emergencies

5.1.1 Any authority or any element of the KSA search and rescue organization having reason to believe that an aircraft is in an emergency shall give immediately all available information to the rescue coordination centre concerned.

5.1.2 Rescue coordination centres shall, immediately upon receipt of information concerning aircraft in emergency, evaluate such information and assess the extent of the operation required.

5.1.3 When information concerning aircraft in emergency is received from other sources than GACA air traffic services units, the rescue coordination centre shall determine to which emergency phase the situation corresponds and shall apply the procedures applicable to that phase.

### 5.2 Procedures for rescue coordination centres during emergency phases

#### 5.2.1 Uncertainty phase

Upon the occurrence of an uncertainty phase, the rescue coordination centre shall cooperate to the utmost with air traffic services units and other appropriate agencies and services in order that incoming reports may be speedily evaluated.

#### 5.2.2 Alert phase

Upon the occurrence of an alert phase the rescue coordination centre shall immediately alert search and rescue units and initiate any necessary action.

#### 5.2.3 Distress phase

Upon the occurrence of a distress phase, the rescue coordination centre shall:

- a) immediately initiate action by search and rescue units in accordance with the appropriate plan of operation;
- b) ascertain the position of the aircraft, estimate the degree of uncertainty of this position, and, on the basis of this information and the circumstances, determine the extent of the area to be searched;
- c) notify the operator, where possible, and keep the operator informed of developments;
- d) notify other rescue coordination centres, the help of which seems likely to be required, or which may be concerned in the operation;
- e) notify the associated air traffic services unit, when the information on the emergency has been received from another source;
- f) request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist to:
  - 1) maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or an ELT;  
*Note.— The frequencies contained in the specifications for ELTs are 121.5 MHz and 406 MHz.*
  - 2) assist the aircraft in distress as far as practicable; and
  - 3) inform the concerned rescue coordination centre of any developments;
- g) from the information available, draw up a detailed plan of action for the conduct of the search and/or rescue operation required and communicate such plan for the guidance of the authorities immediately directing the conduct of such an operation;
- h) amend as necessary, in the light of evolving circumstances, the detailed plan of action;
- i) notify GACA-S&ER; and
- j) notify the State of Registry of the aircraft.

The order in which these actions are described shall be followed unless circumstances dictate otherwise.

#### **5.2.4 Initiation of search and rescue action in respect of an aircraft whose position is unknown**

In the event that an emergency phase is declared in respect of an aircraft whose position is unknown and may be in one of two or more search and rescue regions, the following shall apply:

- a) When a KSA rescue coordination centre is notified of the existence of an emergency phase and is unaware of other centres taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with 5.2 and confer with neighboring rescue coordination centres with the objective of designating one rescue coordination centre to assume responsibility forthwith.
- b) Unless otherwise decided by common arrangements/ agreement of the rescue coordination centres concerned, the KSA rescue coordination centre shall coordinate search and rescue action and have the responsibility as follows:
  - KSA search and rescue region if the aircraft last reported its position within this region; or
  - When the aircraft was proceeding into KSA search and rescue region and its last reported position was on the border separating KSA search and rescue region from other search and rescue regions; or
  - Within KSA search and rescue region in which the distress site is located as identified by the Cospas-Sarsat system.
- c) After declaration of the distress phase, the concerned KSA rescue coordination centre with overall coordination responsibility shall inform all rescue coordination centres that may become involved in the operation of all the circumstances of the emergency and subsequent developments. Likewise, all rescue coordination centres becoming aware of any information pertaining to the emergency shall inform the rescue coordination centre that has overall responsibility.

#### **5.2.5 Passing of information to aircraft in respect of which an emergency phase has been declared**

Whenever applicable, the KSA rescue coordination centre responsible for search and rescue action shall forward to GACA air traffic services unit, information of the search and rescue action initiated, in order that such information can be passed to the aircraft.

### **5.3 Procedures where responsibility for operations extends to two or more neighboring States**

Where the conduct of operations over the entire search and rescue region involves other search and rescue centres, KSA search and rescue centres will take action in accordance with the relevant plan of operations when so requested by the KSA rescue coordination centre of the region.

### **5.4 Procedures for authorities in the field**

The KSA authorities immediately directing the conduct of operations or any part thereof shall:

- a) give instructions to the units under their direction and inform the rescue coordination centre of such instructions; and
- b) keep the rescue coordination centre informed of developments.

### **5.5 Procedures for rescue coordination centres — termination and suspension of operations**

5.5.1 Search and rescue operations shall continue, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.

5.5.2 The KSA rescue coordination centre has the responsibility for determining when to discontinue search and rescue operations.

5.5.3 When a search and rescue operation has been successful or when the KSA rescue coordination centre considers, or

is informed, that an emergency no longer exists, the emergency phase shall be cancelled, the search and rescue operation shall be terminated and any authority, facility or service that has been activated or notified shall be promptly informed.

5.5.4 If a search and rescue operation becomes impracticable and the KSA rescue coordination centre concludes that there might still be survivors, the centre shall temporarily suspend on-scene activities pending further developments and shall promptly inform any authority, facility or service which has been activated or notified. Relevant information subsequently received shall be evaluated and search and rescue operations resumed when justified and practicable.

## 5.6 Procedures at the scene of an accident

5.6.1 When multiple facilities are engaged in search and rescue operations on-scene, the KSA rescue coordination centre or rescue sub-centre shall designate one or more of the units on-scene to coordinate all actions to help ensure the safety and effectiveness of air and surface operations, taking into account facility capabilities and operational requirements.

5.6.2 When a pilot-in-command observes that either another aircraft or a surface craft is in distress, the pilot shall, if possible and unless considered unreasonable or unnecessary:

- a) keep the craft in distress in sight until compelled to leave the scene or advised by the KSA rescue coordination centre that it is no longer necessary;
- b) determine the position of the craft in distress;
- c) as appropriate, report to the rescue coordination centre or air traffic services unit as much of the following information as possible:
  - type of craft in distress, its identification and condition;
  - its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;
  - time of observation expressed in hours and minutes Coordinated Universal Time (UTC);
  - number of persons observed;
  - whether persons have been seen to abandon the craft in distress;
  - on-scene weather conditions;
  - apparent physical condition of survivors;
  - apparent best ground access route to the distress site; and
- d) act as instructed by the KSA rescue coordination centre or GACA air traffic services unit.

5.6.2.1 If the first aircraft to reach the scene of an accident is not a search and rescue aircraft, it shall take charge of on-scene activities of all other aircraft subsequently arriving until the first search and rescue aircraft reaches the scene of the accident. If, in the meantime, such aircraft is unable to establish communication with the KSA rescue coordination centre or GACA air traffic services unit, it shall, by mutual agreement, hand over to an aircraft capable of establishing and maintaining such communications until the arrival of the first search and rescue aircraft.

5.6.3 When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication is not available, it shall, if practicable, drop communication equipment that would enable direct contact to be established, or convey the information by dropping a hard copy message.

5.6.4 When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in 5.6.3 or, if this is not practicable, by making the appropriate visual signal.

5.6.5 When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal. If no radio communication can be established, the aircraft shall make the appropriate visual signal.

*Note.— Air-to-surface and surface-to-air visual signals are published in Volume III of ICAO Doc 9731.*

### 5.7 Procedures for a pilot-in-command intercepting a distress transmission

Whenever a distress transmission is intercepted in Jeddah FIR by a pilot-in-command of an aircraft, the pilot shall, if feasible:

- a) acknowledge the distress transmission;
- b) record the position of the craft in distress if given;
- c) take a bearing on the transmission;
- d) inform the KSA rescue coordination centre or GACA air traffic services unit of the distress transmission, giving all available information; and
- e) at the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission.

### 5.8 Search and rescue signals

5.8.1 The air-to-surface and surface-to-air visual signals in the Appendix shall, when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.

5.8.2 Upon observing any of the signals in the Appendix, aircraft shall take such action as may be required by the interpretation of the signal given in that Appendix.

### 5.9 Maintenance of records

5.9.1 Each KSA rescue coordination centre shall keep a record of the operational efficiency of the search and rescue organization in its region.

5.9.2 Each KSA rescue coordination centre shall prepare appraisals of actual search and rescue operations. These appraisals shall comprise any pertinent remarks on the procedures used and on the emergency and survival equipment, and any suggestions for improvement of those procedures and equipment. Those appraisals which are likely to be of interest to other States shall be submitted to ICAO for information and dissemination as appropriate.



## APPENDIX - SEARCH AND RESCUE SIGNALS

### 1 Signals with surface craft

1.1 The following maneuvers performed in sequence by an aircraft mean that the aircraft wishes to direct a surface craft towards an aircraft or a surface craft in distress:

- a) circling the surface craft at least once;
- b) crossing the projected course of the surface craft close ahead at low altitude and:
  - 1) rocking the wings; or
  - 2) opening and closing the throttle; or
  - 3) changing the propeller pitch.

*Note.— Due to high noise level on board surface craft, the sound signals in 2) and 3) may be less effective than the visual signal in 1) and are regarded as alternative means of attracting attention.*

- c) heading in the direction in which the surface craft is to be directed.

Repetition of such maneuvers has the same meaning.

1.2 The following maneuvers by an aircraft means that the assistance of the surface craft to which the signal is directed is no longer required:

- crossing the wake of the surface craft close astern at a low altitude and:
  - 1) rocking the wings; or
  - 2) opening and closing the throttle; or
  - 3) changing the propeller pitch.

*Note.— The following replies may be made by surface craft to the signal in 1.1:*

- *for acknowledging receipt of signals:*
  - a) *the hoisting of the “code pennant” (vertical red and white stripes) close up (meaning understood);*
  - b) *the flashing of a succession of “T’s” by signal lamp in the Morse code;*
  - c) *the changing of heading to follow the aircraft.*
- *for indicating inability to comply:*
  - 1) *the hoisting of the international flag “N” (a blue and white checkered square);*
  - 2) *the flashing of a succession of “N’s” in the Morse code.*

*Note.— See Note following 1.1 b), 3).*

### 2. Ground-air visual signal code

2.1 Ground-air visual signal code for use by survivors:

No.	Message	Code symbol
1	Require assistance	V
2	Require medical assistance	X
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	↑

## 2.2 Ground-air visual signal code for use by rescue units:

No.	Message	Code symbol
1	Operation completed	LLL
2	We have found all personnel	<u>LL</u>
3	We have found only some personnel	++
4	We are not able to continue. Returning to base	XX
5	Have divided into two groups. Each proceeding in direction indicated	↔
6	Information received that aircraft is in this direction	→ →
7	Nothing found. Will continue to search	NN

## 2.3 Symbols shall be at least 2.5 meters (8 feet) long and shall be made as conspicuous as possible.

*Note 1.— Symbols may be formed by any means such as: strips of fabric, parachute material, pieces of wood, stones or such like material; marking the surface by tramping, or staining with oil.*

*Note 2.— Attention to the above signals may be attracted by other means such as radio, flares, smoke and reflected light.*

## 3 Air-to-ground signals

### 3.1 The following signals by aircraft mean that the ground signals have been understood:

- a) during the hours of daylight:
  - by rocking the aircraft's wings;



b) during the hours of darkness:

- flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

3.2 Lack of the above signal indicates that the ground signal is not understood.

