
GACAR PART 177 – SEARCH AND RESCUE SERVICES

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GACAR PART 177 – SEARCH AND RESCUE SERVICES

SUBPART A – ORGANIZATION

§ 177.1 Search and rescue services.

- (a) The provision of search and rescue services within the territory of the KSA must be established in accordance with the requirements of this Part to ensure that assistance is rendered to persons in distress. Such services must be provided on a 24-hour basis.
- (b) Those portions of the high seas or areas of undetermined sovereignty within which the KSA provides search and rescue services must be determined on the basis of regional air navigation agreements and include the establishment, wherever possible, of communications with the relevant entities in adjacent States. The search and rescue services in such areas must be established and provided in accordance with the provisions of this Part.
- (c) Basic elements of search and rescue services must include a legal framework, a responsible authority, organized available resources, communication facilities and a workforce skilled in coordination and operational functions.
- (d) The search and rescue authorities must establish processes to improve service provision, including the aspects of planning, domestic and international cooperative arrangements and training.
- (e) In providing assistance to aircraft in distress and to survivors of aircraft accidents, the search and rescue authorities must do so regardless of the nationality or status of such persons or the circumstances in which such persons are found.
- (f) The search and rescue authorities must 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.
- (g) The search and rescue authorities must ensure consistency and the closest practicable cooperation between aeronautical and maritime search and rescue services where they both serve the same area.
- (h) The search and rescue authorities must establish joint rescue coordination centers to coordinate aeronautical and maritime search and rescue operations, where practical.

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§ 177.3 Search and rescue region.

(a) The KSA search and rescue region within which search and rescue services are provided must be described and delineated. Such region must not overlap with neighboring regions and must be contiguous with those regions.

(b) The KSA search and rescue region must cover the following:

- (1) Jeddah Flight Information Region;
- (2) KSA maritime search and rescue region for those areas over the high seas; and
- (3) additional areas within the political boundaries.

§ 177.5 Rescue coordination centers and rescue sub centers.

(a) The President designates the certified ATS provider as responsible for the establishment of an aeronautical rescue coordination center.

(b) The designated ATS provider must establish an aeronautical rescue coordination center in the KSA search and rescue region.

(c) The KSA rescue coordination center and, as appropriate, rescue sub centers, must be staffed 24 hours a day by trained personnel proficient in the use of the language used for radio-telephony communications.

(d) The designated ATS provider must ensure that KSA aeronautical rescue coordination center personnel involved in the conduct of radiotelephony communications are proficient in the use of the English language.

(e) In areas where public telecommunications facilities would not permit persons observing an aircraft in emergency to notify the KSA aeronautical rescue coordination center directly and promptly, the designated ATS provider must, in so far as practicable and when possible, identify suitable public units (e.g. police or military stations) as alerting posts and make the required arrangements to allow these posts to report any aircraft emergency.

(f) The KSA aeronautical rescue coordination center and, as appropriate, rescue sub centers, must:

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- (1) maintain up-to-date contact details in the Operations (OPS) Control Directory; and
- (2) subscribe and maintain access to the Location of an Aircraft in Distress Repository (LADR).

Note.— Guidance on the use of the OPS Control Directory and the LADR is contained in the ICAO Manual on Global Aeronautical Distress and Safety System (GADSS) (Doc 10165).

§ 177.7 Search and rescue communications.

(a) The KSA aeronautical rescue coordination center must have means of rapid and reliable two-way communication with:

- (1) associated air traffic services units;
- (2) associated rescue sub centers;
- (3) appropriate direction-finding and position-fixing stations;
- (4) where appropriate, coastal radio stations capable of alerting and communicating with surface vessels in the region;
- (5) the headquarters of search and rescue units in the region;
- (6) all maritime rescue coordination centers in the region and aeronautical, maritime or joint rescue coordination centers in adjacent regions;
- (7) a designated meteorological office or meteorological watch office;
- (8) search and rescue units;
- (9) alerting posts;
- (10) the Saudi Arabian Mission Control Center (SAMCC) servicing the KSA search and rescue region.

(b) Each rescue sub center must have means of rapid and reliable two-way communication with:

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- (1) adjacent rescue coordination center and associated sub centers;
- (2) an appropriate meteorological office or meteorological watch office;
- (3) search and rescue units; and
- (4) alerting posts.

§ 177.9 Search and rescue units.

- (a) KSA search and rescue authorities must designate as search and rescue units elements of public or private services suitably located and equipped for search and rescue operations.
- (b) KSA search and rescue authorities must 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.

§ 177.11 Search and rescue equipment.

- (a) KSA search and rescue authorities must liaise with appropriate authorities to ensure that search and rescue units are provided with equipment for locating promptly, and for providing adequate assistance at, the scene of an accident.
- (b) Each search and rescue aircraft must be equipped to be able to communicate on the aeronautical distress and on-scene frequencies and on such other frequencies as may be prescribed.
- (c) Each search and rescue aircraft must be equipped with a device for homing on distress frequencies.
- (d) Each search and rescue aircraft, when used for search and rescue over maritime areas, must be equipped to be able to communicate with vessels.

Note: Many vessels can communicate with aircraft on 2182 kHz, 4125 kHz, 121.5 MHz and 123.1 MHz. However, these frequencies, and in particular 121.5 MHz and 123.1 MHz, may not be routinely monitored by vessels. Rather, vessels monitor Channel 16 (156.8 MHz), the international maritime distress, safety and calling frequency.

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

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SUBPART B – COOPERATION

§ 177.13 Cooperation with search and rescue authorities.

All civil aerodromes, aircraft operators, and aviation-related organizations whose activities may require search and rescue services within the KSA Flight Information Region must establish an arrangement or coordination framework with the concerned rescue coordination center or sub-center serving the area of operation to allow immediate assistance to be provided to survivors and property.

§ 177.15 Cooperation with other States.

- (a) KSA search and rescue authorities must coordinate their search and rescue arrangements with those of neighboring States.
- (b) Search and rescue authorities must, whenever necessary, coordinate their search and rescue operations with those of neighboring States especially when these operations are close to the boundaries of adjacent search and rescue regions.
- (c) Search and rescue authorities must, 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.
- (d) Subject to conditions prescribed by KSA authorities, KSA search and rescue authorities must 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.
- (e) The authorities of a neighboring State who wish their search and rescue units to enter the KSA territory for search and rescue purposes must transmit a request, providing full details of the projected mission and the need for it, to the KSA aeronautical rescue coordination center or to the appropriate KSA authority as defined under the KSA AIP.
- (f) The KSA relevant authorities must:
 - (1) immediately acknowledge the receipt of such a request, and

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(2) as soon as possible, indicate the conditions under which the projected mission may be undertaken.

(3) search and rescue authorities must, in so far as practicable and when possible, propose arrangements with neighboring States for expediting entry of each other's search and rescue units into their respective territories with the least possible formalities.

(g) KSA search and rescue authorities must, in so far as practicable and when possible:

(1) request from other rescue coordination centers such assistance, including aircraft, vessels, persons or equipment, as may be needed;

(2) grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory; and

(3) make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.

(h) KSA search and rescue authorities must, in so far as practicable and when possible provide, when requested, assistance to other rescue coordination centers, including assistance with search and rescue facilities such as aircraft, vessels, persons or equipment.

(i) KSA search and rescue authorities must, in so far as practicable and when possible, make arrangements for joint training exercises involving the KSA aeronautical rescue coordination center, rescue sub centers, and search and rescue units, with those of other States and operators, in order to promote search and rescue efficiency.

(j) KSA search and rescue authorities must, in so far as practicable and when possible, make arrangements for periodic liaison visits by personnel of the KSA aeronautical rescue coordination center and sub centers to the centers of neighboring States.

§ 177.17 Cooperation with other services.

(a) KSA search and rescue authorities must arrange for all aircraft, vessels and local services and facilities, which do not form part of the search and rescue organization and operations to cooperate fully with the latter in search and rescue and to extend any possible assistance to the survivors of aircraft accidents.

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- (b) The KSA aeronautical rescue coordination center must ensure the closest practicable coordination with the KSA maritime rescue coordination center to provide for the most effective and efficient search and rescue services.
- (c) KSA search and rescue authorities must 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.
- (d) The designated ATS provider must ensure that the SAMCC is capable of receiving and acknowledging Cospas-Sarsat distress alert data and is responsible for ensuring timely notification to the KSA aeronautical rescue coordination center for the initiation of appropriate search and rescue response action.

§ 177.19 Dissemination of information.

The concerned KSA search and rescue authorities must 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 arrangements.

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SUBPART C – PREPARATORY MEASURES

§ 177.21 Preparatory information.

(a) The KSA aeronautical rescue coordination center must provide sufficient resources, including:

(1) rescue coordination center personnel – a suitable number of trained and skilled staff, supplemented by a pool of trained support staff where appropriate;

(2) rescue coordination center facilities:

(i) appropriate facility space;

(ii) minimum tools (such as current charts, plotting equipment, documentation, etc.);

(iii) ability to identify and task available search and rescue units;

(iv) aircraft and vessel tracking information including ATS surveillance, automatic identification system, etc.;

(v) reliable and rapid H24 communications, and a suitable means to;

(A) receive, communicate and acknowledge distress alerts;

(B) communicate with ATS units, other rescue coordination centers, Cospas-Sarsat Mission Control Centres (MCCs), military units, meteorological offices, etc.;

(vi) information technology;

(A) workstation computers;

(B) software including basic databases, drift modelling, incident management, etc.

(3) contingency – back-up facility, or arrangement with another rescue coordination center as a contingency against inability to operate from the primary facility due to the need to evacuate or loss of systems, etc.

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(4) training support – rescue coordination center staff – basic, refresher and advance courses.

(b) The KSA aeronautical rescue coordination center must have readily available at all times up-to-date information concerning the following in respect of its search and rescue region:

(1) search and rescue units, associated rescue sub centers and alerting posts;

(2) air traffic services units;

(3) means of communication that may be used in search and rescue operations;

(4) addresses and telephone numbers of all operators, or their designated representatives, engaged in operations in the region; and

(5) any other public and private resources including medical and transportation facilities that are likely to be useful in search and rescue.

(c) The KSA aeronautical rescue coordination center must, in so far as practicable and when possible, have readily available all other information of interest to search and rescue, including information regarding:

(1) the locations and hours of watch of services keeping radio watch, and the frequencies guarded;

(2) locations where supplies of droppable emergency and survival equipment are stored;

(3) objects which it is known might be mistaken for unlocated or unreported wreckage, particularly if viewed from the air;

(4) the position, course and speed of aircraft that may be able to provide assistance to aircraft in distress; and

(5) where the search and rescue region includes maritime areas, the position, course and speed of ships that may be able to provide assistance to aircraft in distress and information on how to contact them.

(d) In cooperation with the KSA maritime rescue coordination center, the designated ATS provider

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must ensure the availability to the aeronautical rescue coordination center of information supporting monitoring and communication links with regional ship reporting systems to facilitate search and rescue operations in the Red Sea and Arabian Gulf areas.

§ 177.23 Plans of operation.

- (a) The KSA aeronautical rescue coordination center must prepare detailed plans of operation for the conduct of search and rescue operations within its search and rescue region.
- (b) Search and rescue plans of operations must be developed jointly with representatives of relevant authorities, aircraft 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.
- (c) The plans of operation must 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.
- (d) The search and rescue plans of operation must contain details regarding actions to be taken by those persons engaged in search and rescue, including:
- (1) the manner in which search and rescue operations are to be conducted in the search and rescue region;
 - (2) the use of available communication systems and facilities;
 - (3) the actions to be taken jointly with other rescue coordination centers;
 - (4) the methods of alerting en-route aircraft and ships at sea;
 - (5) the duties and prerogatives of persons assigned to search and rescue;
 - (6) the possible redeployment of equipment that may be necessitated by meteorological or other conditions;
 - (7) the methods for obtaining essential information relevant to search and rescue operations, such as weather reports and forecasts, appropriate NOTAM, etc.;

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- (8) the methods for obtaining, from other rescue coordination centers, assistance, including search and rescue facilities such as aircraft, vessels, persons or equipment, as may be needed;
- (9) the methods for obtaining approval to allow search and rescue units from an assisting State to enter into the territory of the KSA;
- (10) the methods for assisting distressed aircraft being compelled to ditch to a rendezvous location with surface craft;
- (11) the methods for assisting search and rescue or other aircraft to proceed to aircraft in distress; and;
- (12) cooperative actions to be taken in conjunction with air traffic services units and relevant entities to assist aircraft known or believed to be subject to unlawful interference.

§ 177.25 Search and rescue units.

- (a) KSA search and rescue authorities must ensure that each search and rescue unit:
 - (1) be cognizant of all parts of the plans of operation prescribed in §177.23 that are necessary for the effective conduct of its duties; and
 - (2) keep the KSA aeronautical rescue coordination center informed of its preparedness.
- (b) All relevant authorities must:
 - (1) maintain in readiness the required number of search and rescue facilities; and
 - (2) maintain adequate supplies of rations, medical stores, signaling devices and other survival and rescue equipment.

§ 177.27 Training and exercises.

To achieve and maintain maximum efficiency in search and rescue, the KSA search and rescue authorities must provide for regular training and exercises for their search and rescue personnel, which include both land and maritime environments as appropriate, containing both search and

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rescue operations, remote from an aerodrome.

Note: The need for regular training and exercises may be moderated commensurate with the frequency of real search and rescue responses which demonstrate satisfactory and effective search and rescue performance.

§ 177.29 Accident sites and wreckage.

(a) KSA search and rescue authorities must ensure that search and rescue personnel that may be required to respond to an aircraft accident site are trained in the management of related occupational health risks.

Note: Guidance related to effective occupational health practices at aircraft accident sites is contained in the ICAO Manual of Aircraft Accident and Incident Investigation, Part I — Organization and Planning (Doc 9756) and ICAO Circular 315 — Hazards at Aircraft Accident Sites.

(b) KSA search and rescue authorities must ensure that wreckage resulting from aircraft accidents within the KSA territory or, in the case of accidents in areas of the Red Sea or Arabian Gulf within the search and rescue region for which they are 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.

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SUBPART D – OPERATING PROCEDURES

§ 177.31 Information and procedures concerning emergencies.

- (a) Any authority or any element of the search and rescue organization having reason to believe that an aircraft is in an emergency must give immediately all available information to the KSA aeronautical rescue coordination center.
- (b) The KSA aeronautical rescue coordination center must, immediately upon receipt of information concerning aircraft in emergency, cooperate to the utmost with air traffic services units and other appropriate agencies and services to evaluate such information and assess the extent of the operation required.
- (c) When information concerning aircraft in emergency is received from other sources than air traffic services units, the KSA aeronautical rescue coordination center must determine to which emergency phase the situation corresponds and must apply the procedures applicable to that phase in accordance with the appropriate plan of operation.

§ 177.33 Procedures for the KSA aeronautical rescue coordination center during emergency phases.

- (a) The emergency phases are divided as follows:
- (1) Uncertainty phase: upon the occurrence of an uncertainty phase, the KSA aeronautical rescue coordination center must cooperate to the utmost with air traffic services units and other appropriate agencies and services in order that incoming reports may be speedily evaluated.
 - (2) Alert phase: upon the occurrence of an alert phase the KSA aeronautical rescue coordination centre must immediately alert search and rescue units and initiate any necessary action.
 - (3) Distress phase: upon the occurrence of a distress phase, the KSA aeronautical rescue coordination centre must:

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- (i) immediately initiate action by search and rescue units in accordance with the appropriate plan of operation;
- (ii) 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;
- (iii) notify the operator, where possible, and keep the operator informed of developments;
- (iv) notify other rescue coordination centers, the help of which seems likely to be required, or which may be concerned in the operation;
- (v) notify the associated air traffic services unit, when the information on the emergency has been received from another source;
- (vi) 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:
 - (A) 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 given in ICAO Annex 10, Volume III, are 121.5 MHz and 406.0 to 406.1 MHz. The Cospas-Sarsat 406 MHz channel assignment plan is contained in Cospas-Sarsat Document C/S T.012.

- (B) assist the aircraft in distress as far as practicable; and
- (C) inform the rescue coordination center of any developments;
 - (i) 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;
 - (ii) amend as necessary, in the light of evolving circumstances, the detailed plan of action;
 - (iii) notify GACA; and

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(iv) notify the State of Registry of the aircraft.

(b) The order in which these actions are described must be followed unless circumstances dictate otherwise.

§ 177.35 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 must apply:

(a) When the KSA aeronautical rescue coordination center is notified of the existence of an emergency phase and is unaware of other centers taking appropriate action, it must assume responsibility for initiating suitable action in accordance with paragraph (b) below and confer with neighboring rescue coordination centers with the objective of designating one rescue coordination center to assume responsibility forthwith.

(b) Unless otherwise decided by common arrangements or agreement of the rescue coordination centers concerned, the rescue coordination center to coordinate search and rescue action must be the centre responsible for:

(1) the region in which the aircraft last reported its position; or

(2) the region to which the aircraft was proceeding when its last reported position was on the line separating the KSA search and rescue region from another search and rescue region; or

(3) the region to which the aircraft was destined when it was not equipped with suitable two-way radio communication or not under obligation to maintain radio communication; or

(4) the region in which within the distress site is located as identified by the Cospas-Sarsat system.

(c) After declaration of the distress phase, if the rescue coordination center with overall coordination responsibility is the KSA aeronautical rescue coordination center it must inform all rescue coordination centers that may become involved in the operation of all the circumstances of the emergency and subsequent developments. Likewise, in the event that the KSA aeronautical rescue coordination center does not have overall coordination responsibility but becomes aware

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of any information pertaining to the emergency, it must inform the rescue coordination center that has overall responsibility.

§ 177.37 Passing of information to aircraft in respect of which an emergency phase has been declared.

Whenever applicable, the KSA aeronautical rescue coordination center must forward to the appropriate air traffic services unit, information of the search and rescue actions initiated, in order that such information can be passed to the aircraft.

§ 177.39 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 centers located in neighboring States, the KSA aeronautical search and rescue center must take action in accordance with the relevant plan of operations.

§ 177.41 Procedures for authorities in the field.

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

- (a) Give instructions to the units under their direction and inform the rescue coordination center of such instructions; and
- (b) Keep the rescue coordination center informed of developments.

§ 177.43 Procedures for rescue coordination centers — termination and suspension of operations.

- (a) Search and rescue operations must continue, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed;
- (b) In coordination with the concerned search and rescue authority, the KSA aeronautical rescue coordination center must be responsible for determining when to discontinue search and rescue operations;

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(c) When a search and rescue operation has been successful or when the KSA aeronautical rescue coordination center considers, or is informed, that an emergency no longer exists, the emergency phase must be cancelled, the search and rescue operation must be terminated and any authority, facility or service that has been activated or notified must be promptly informed;

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

§ 177.45 Procedures at the distress scene.

(a) When multiple facilities are engaged in search and rescue operations on-scene, the KSA aeronautical rescue coordination center or rescue sub center must designate one or more 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;

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

(1) keep the craft in distress in sight until compelled to leave the scene or advised by the KSA aeronautical rescue coordination center that it is no longer necessary;

(2) determine the position of the craft in distress;

(3) as appropriate, report to the rescue coordination center or air traffic services unit as much of the following information as possible:

(i) type of craft in distress, its identification and condition;

(ii) its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;

(iii) time of observation expressed in hours and minutes Coordinated Universal Time (UTC);

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- (iv) number of persons observed;
 - (v) whether persons have been seen to abandon the craft in distress;
 - (vi) whether any distress signals, including distress beacon transmissions, have been received or observed;
 - (vii) on-scene weather conditions;
 - (viii) apparent physical condition of survivors;
 - (ix) apparent best ground access route to the distress scene;
 - (x) position and description of any other craft in the area that may assist; and
- (4) act as instructed by the KSA aeronautical rescue coordination center or air traffic services unit;
- (c) If the first aircraft to reach the distress scene is not a search and rescue aircraft, it must take charge of on-scene activities of all other aircraft subsequently arriving until the first search and rescue aircraft reaches the distress scene. If, in the meantime, such aircraft is unable to establish communication with the appropriate rescue coordination center or air traffic services unit, it must, 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;
- (d) When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication is not available, it must, if practicable, drop communication equipment that would enable direct contact to be established, or convey the information by dropping a hard copy message;
- (e) When a ground signal has been displayed, the aircraft must indicate whether the signal has been understood or not by the means described in §177.25 or, if this is not practicable, by making the appropriate visual signal;

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(f) 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 must do so by transmitting precise instructions by any means at its disposal. If no radio communication can be established, the aircraft must make the appropriate visual signal;

Note.— Air-to-surface and surface-to-air visual signals are published in Appendix A – Search and Rescue Signals and in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume III – Mobile Facilities (Doc 9731).

(g) When carrying a device for measuring actual surface drift a search and rescue aircraft must drop the device as soon as it reaches the scene of an accident.

Note.— The deployment of such devices will assist with search area planning accuracy and, therefore, minimize search times.

§ 177.47 Procedures for a pilot-in-command intercepting a distress transmission.

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

- (1) acknowledge the distress transmission;
- (2) record the position of the craft in distress if given;
- (3) take a bearing on the transmission;
- (4) inform the KSA aeronautical rescue coordination center or air traffic services unit of the distress transmission, giving all available information;
- (5) at the pilot's discretion, while awaiting instructions, proceed to the distress position;
and
- (6) attempt to establish communications with the person(s) in distress;

(b) Whenever a pilot monitors 121.5 MHz, and intercepts a transmission from a distress beacon, the pilot must also:

- (1) record, and report as soon as possible, the position where the transmission was first

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received;

(2) not alter any settings for squelch on the aircraft's radio; and

(3) if feasible, continue to monitor the frequency until such time as the signal ceases, and inform the appropriate rescue coordination center or air traffic services unit of such.

Note.— Retaining the existing settings for squelch from the time the transmission is first received until the signal ceases provides rescue coordination centers with the most accurate potential location of the distress beacon.

§ 177.49 Search and rescue signals.

(a) The air-to-surface and surface-to-air visual signals in Appendix A must, when used, have the meaning indicated therein. They must be used only for the purpose indicated and no other signals likely to be confused with them must be used;

(b) Upon observing any of the signals given in Appendix A, aircraft must take such action as may be required by the interpretation of the used signal.

§ 177.51 Maintenance of records.

The KSA aeronautical rescue coordination center must keep a record of the operational efficiency of aeronautical search and rescue in its region.

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SUBPART E – COSPAS-SARSAT MISSION CONTROL CENTER

§ 177.53 Cospas-Sarsat Mission Control Center.

Note.— The KSA Cospas-Sarsat Mission Control Centre (MCC) serves as the central data information hub for 406 distress beacon signals sent by satellites in the Cospas-Sarsat system. All Cospas-Sarsat MCCs are inter-connected through a Data Distribution System.

The designated ATS provider operating the Saudi Arabian Mission Control Center (SAMCC) must ensure that:

(a) The SAMCC and all associate local user terminals (LUTs) perform in accordance with the Cospas-Sarsat requirements;

(b) Alert data is distributed to the responsible search and rescue points of contact (SPOCs) and, if required, other MCCs in accordance with the Cospas-Sarsat data distribution plan (DDP);

(c) A beacon registration database is maintained to store supplementary information about a beacon, such as contact details for its owner, and other emergency contacts and details of any associated vessel or aircraft;

(d) Suitable arrangements are made for ensuring:

(1) beacon registration information is easily accessible by the KSA search and rescue responsible agencies;

(2) approved changes in each part of the system are implemented; and

(3) up-to-date data on the operational status of the system is maintained;

(e) All monthly and annual reports are submitted to Cospas-Sarsat through the GACA representative in accordance with approved templates.

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**SUBPART F – GLOBAL AERONAUTICAL DISTRESS AND SAFETY SYSTEM
(GADSS)**

§ 177.55 Global Aeronautical Distress and Safety System (GADSS).

Note 1.— As of 1 January 2025, all aeroplanes of a maximum certificated take-off mass of over 27000 kg for which the individual certificate of airworthiness was first issued on or after 1 January 2024, must autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress. This is referred to as an autonomous distress tracking system (ADT).

Note 2.— ADT position information is collected and stored in a Location of an Aircraft in Distress Repository (LADR) with access provided to appropriate stakeholders to assist in accessing the last known position of an aircraft in distress and thereby enhance search and rescue and recovery capabilities.

Note 3.— The operator is responsible to make the position information of a flight in distress available to air traffic services units, rescue coordination centres and any additional entity as established by the State of the operator.

Note 4.— Where ADT uses a distinctive distress signal broadcast by an aircraft the distress notification will be forwarded directly from a Mission Control Centre (MCC) to the rescue coordination center. In that case, the air traffic services unit will be contacted by the rescue coordination center.

(a) The KSA aeronautical rescue coordination center must obtain accreditation from the LADR administrator by ensuring that LADR eligibility requirements are met as follows:

(1) be listed in the Cospas-Sarsat rescue coordination center database;

(2) maintain updated rescue coordination center operational control contact information with ICAO;

(b) The KSA aeronautical rescue coordination center must ensure that it has access to all ADT data in the LADR, i.e. last known position information concerning an aircraft in distress which includes but is not limited to the following elements:

(1) Latitude.

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- (2) Longitude.
- (3) Date and time of transmission.
- (4) Date and time of receipt.
- (5) 3LD.
- (6) Aircraft registration (with Nationality Mark).
- (7) Aircraft 24-bit address.
- (8) Selective calling system (SELCAL).
- (9) Flight call sign and flight number.
- (10) Contributor code.
- (11) Data source.

(c) If required, the KSA aeronautical rescue coordination center must request aircraft position information normally retained by the operator (i.e. normal aircraft tracking information). This information would normally be sent to the LADR.

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APPENDIX A - SEARCH AND RESCUE SIGNALS

Signals with surface craft.

(a) 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:

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

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

Note 2.— See Note following (a) (2) iii.

- (3) heading in the direction in which the surface craft is to be directed.
- (4) Repetition of such maneuvers has the same meaning.

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

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

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Note.— The following replies may be made by surface craft to the signal in (a):

— for acknowledging receipt of signals:

- (1) the hoisting of the “code pennant” (vertical red and white stripes) close up (meaning understood);
- (2) the flashing of a succession of “T’s” by signal lamp in the Morse code;
- (3) 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.


Ground-air visual signal code.

(a) Ground-air visual signal code for use by survivors

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

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(b) Ground-air visual signal code for use by rescue units

<i>No.</i>	<i>Message</i>	<i>Code symbol</i>
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

(c) Symbols must be at least 2.5 meters (8 feet) long and must 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.

Air-to-ground signals.

(a) The following signals by aircraft mean that the ground signals have been understood:

(1) during the hours of daylight:

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- (i) by rocking the aircraft's wings;
- (2) during the hours of darkness:
 - (i) flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.
- (b) Lack of the above signal indicates that the ground signal is not understood.