



CIVIL AVIATION SAFETY AUTHORITY OF PNG

PNG

Civil Aviation Rule

Part 176

**Search and Rescue Service
Organisations – Certification and
Operation**

Applicable 13 November 2018

DESCRIPTION

Part 176 prescribes the –

- rules governing the certification and operation of organisations providing search and rescue services for Papua New Guinea on behalf of the Authority; and
- operating requirements and technical standards for search and rescue services

BULLETIN

This Part will come into force on 11 November 2018.

Amendment	Effective Date
Amendment 1	13 November 2018

Summary of amendments:

Amendment 1: (Docket18/CAR/176/05)	Propose issue of a new Civil Aviation Rule (CAR) Part 176 provision of Search and Rescue Services.
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Subpart A —General

176.1 Purpose

This Part prescribes—

- (1) rules governing the certification and operation of organisations providing search and rescue services in Papua New Guinea on behalf of the Authority; and
- (2) the operating and technical standards for the provision of search and rescue services by those organisations.

176.3 Definitions

In this Part-

Alerting post means any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue subcentre.

Alert phase means a situation wherein apprehension exists as to the safety of an aircraft and its occupants.

Distress phase means 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 means the forced landing of an aircraft on water.

Emergency phase is a generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

Joint rescue coordination centre (JRCC) means a rescue coordination centre responsible for both aeronautical and maritime search and rescue operations.

Rescue means 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) means a unit responsible for promoting efficient organisation of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Rescue subcentre (RSC) means a unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities.

Search means an operation normally coordinated by a rescue coordination centre or rescue subcentre using available personnel and facilities to locate persons in distress.

Search and rescue aircraft means an aircraft provided with specialised equipment suitable for the efficient conduct of search and rescue missions.

Search and rescue facility means any mobile resource, including designated search and rescue units, used

to conduct search and rescue operations.

Search and rescue service means 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) means an area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

Search and rescue unit means a mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

Uncertainty phase means a situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

176.5 Requirement for certificate

No person shall provide search and rescue service for the Port Moresby FIR except under the authority of, and in accordance with, the provisions of a search and rescue service certificate issued under this Part.

176.7 Application for certificate

An applicant for the grant of a search and rescue service certificate shall complete form CA 176/01 and submit it to the Director with—

- (1) the exposition required by 176.73; and
- (2) a payment of the appropriate application fee prescribed by regulations made under the Act.

176.9 Issue of certificate

An applicant is entitled to a search and rescue service certificate if the Director is satisfied that—

- (1) the applicant meets the requirements of Subpart B; and
- (2) the applicant, and the applicant's senior person or persons required by 176.51(a)(1)(2) and (3) are fit and proper persons; and
- (3) the granting of the certificate is not contrary to the interests of aviation safety.

176.11 Privileges of certificate

The search and rescue service certificate specifies the search and rescue services that the certificate holder is authorised to provide.

176.13 Duration of certificate

- (a) A Search and Rescue service certificate may be granted or renewed for a period of up to 5 years.
- (b) The holder of a search and rescue service certificate that expires or is revoked shall forthwith surrender the certificate to the Director.

- (c) The holder of a search and rescue service certificate that is suspended, shall forthwith produce the certificate to the Director for appropriate endorsement.

176.15 Renewal of certificated

- (a) An application for the renewal of a search and rescue service certificate shall be made on form CA 176/01, and
- (b) The application shall be submitted to the Director before the application renewal date specified on the certificate or, if no such date is specified, not less than 30 days before the certificate expires.

Subpart B — Certification Requirements

176.51 Personnel requirements

- (a) An applicant for the grant of a search and rescue service certificate shall engage, employ, or contract—
- (1) a senior person identified as the Chief Executive who has the authority within the applicant's organisation to ensure that all activities undertaken by the organisation can be financed and carried out to meet applicable operational requirements, and in accordance with the requirements prescribed by this Part; and
 - (2) a senior person or group of senior persons who are responsible for ensuring that the applicant's organisation complies with the requirements of this Part. Such nominated person or persons shall be ultimately responsible to the Chief Executive; and
 - (3) sufficient personnel to supervise, plan, coordinate and conduct search and rescue operations in accordance with the applicant's exposition; and
- (b) The applicant must –
- (1) establish a procedure to initially assess the competence of those personnel authorised by the applicant to conduct search and rescue operations listed in their exposition; and
 - (2) establish a procedure to maintain the competence of those authorised personnel; and
 - (3) provide those authorised personnel with written evidence of the scope of their authorisation.

176.53 Facility requirements

- (a) An applicant for the grant of a search and rescue service certificate must establish a Rescue Coordination Centre (RCC) offices and facilities that are appropriate for the search and rescue services listed in their exposition.
- (b) An applicant for the grant of a search and rescue service certificate must ensure that the RCC and, as appropriate, rescue sub-centre(s), is staffed 24 hours a day by trained personnel proficient in the use of the language used for radio telephony communications.
- (c) An applicant for the grant of a search and rescue service certificate must ensure that the RCC have means of rapid and reliable two-way communication with:
- (d) associated air traffic services units;

- (1) appropriate direction-finding and position-fixing stations;
- (2) where appropriate, coastal radio stations capable of alerting and communicating with surface vessels in the region;
- (3) the headquarters of search and rescue units in the region;
- (4) all maritime rescue coordination centres in the region and aeronautical, maritime or joint rescue coordination centres in adjacent regions;
- (5) a designated meteorological office or meteorological watch office;
- (6) search and rescue units (or elements of public or private services suitably located and equipped for search and rescue operations);
- (7) the Cospas-Sarsat Mission Control Centre servicing the search and rescue region, and
- (8) Each rescue subcentre shall have means of rapid and reliable two-way communication with:
 - adjacent rescue subcentres;
 - a meteorological office or meteorological watch office;
 - search and rescue units; and
 - alerting posts.

176.55 Security Programme

- (a) An applicant for the grant of a search and rescue service certificate shall establish a security programme for the facilities listed in their exposition.
- (b) The security programme required by paragraph (a) shall specify the physical security requirements, practices and procedures that may be necessary-
 - (1) to minimise the risk of destruction, damage, or interference, to the certificate holder's facilities if such an act to a facility is likely to endanger the safety of air navigation; and
 - (2) to prevent unauthorised access to a facility; and
 - (3) for personnel to follow in the event of a bomb threat or other threat of violence at a facility; and
 - (4) to monitor unattended facilities to detect unauthorised intrusion or interference at a facility.
- (c) The security programme required under paragraph (a) shall include procedures to notify, investigate and report security incidents to the Director in accordance with Rule Part 12.

176.57 Scope of search and rescue service

An applicant for the grant of a search and rescue service certificate shall specify; —

- (1) the geographic area (SRR) of its search and rescue responsibilities; and
- (2) the location of its rescue coordination centre and rescue subcentres and alerting posts within the SRR.

176.59 Documentation

- (a) An applicant for the grant of a search and rescue service certificate shall—
- (1) document the standards and procedures for search and rescue services published under the authority of their certificate; and
 - (2) ensure that the standards and procedures take into account improvement to service provision, including the aspects of planning, domestic and international cooperative arrangements and training; and
 - (3) hold copies of relevant reference material, standards, practices and procedures (including Annex 12), and any other documentation that is necessary for search and rescue services listed in their exposition.
- (b) The applicant shall establish a procedure to control all the documentation required by paragraph (a), to ensure that—
- (1) the documentation is reviewed and authorised by appropriate personnel before issue; and
 - (2) current issues of relevant documentation are available to staff at all locations where they need access to such documentation for the provision of search and rescue services; and
 - (3) all obsolete documentation are promptly removed from all points of issue or use; and
 - (4) changes to documentation are reviewed and approved by appropriate personnel; and
 - (5) the current version of each item of documentation can be identified to preclude the use of out-of-date editions.

176.61 Preparatory of information

An applicant for the grant of a search and rescue service certificate must ensure that the RCC has 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, rescue subcentres and alerting posts;
- (b) air traffic service units
- (c) means of communications 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.

176.63 Plans of operation

An applicant for the grant of a search and rescue service certificate must ensure that the RCC prepare detailed plans of operation for the conduct of search and rescue operations within its search and rescue region, containing 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 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 air traffic services units and other authorities concerned to assist aircraft known or believed to subject to unlawful interference.

176.65 Search and Rescue Signals

An applicant for the grant of a search and rescue service certificate must ensure that the signals used for search and rescue meets the requirements of Appendix A.

176.67 Records

- (a) An applicant for the grant of a search and rescue service certificate shall establish procedures to identify, collect, index, store, maintain and dispose of the records that are necessary for the search and rescue services listed in their exposition.
- (b) The procedures shall ensure that—
 - (1) there are records enabling all incoming and outgoing search and rescue information to be readily identified by serial number and date, and that supplementary information can be similarly verified and, where necessary, authenticated; and
 - (2) there is a record of each internal quality assurance review of the applicant's organisation carried out under the procedures required by 176.71; and
 - (3) all records are legible and of a permanent nature; and
 - (4) all records are retained for at least 5years except NOTAM, AIP Supplements and Aeronautical Information Circulars, which need only be retained for 30 days' after cancellation.

176.69 Training and exercises

An applicant for the grant of a search and rescue service certificate shall ensure that it provide regular training of its search and rescue personnel and arrange for the conduct of appropriate search and rescue exercises.

176.71 Safety Management System

An applicant for the grant of a search and rescue service certificate shall establish, implement and maintain a safety management system which meets the requirements of Part100.

176.73 Quality Management System

An applicant for the grant of a search and rescue service certificate shall establish, implement and maintain a quality management system which meets the requirements of Part100.

176.75 Organisation exposition

(a) An applicant for the grant of a search and rescue service certificate shall provide the Director with an exposition containing—

- (1) a statement signed by the Chief Executive on behalf of the applicant's organisation confirming that—
 - (i) the exposition and any included manuals define the organisation and demonstrate its means and methods for ensuring ongoing compliance with this Part; and
 - (ii) the exposition and any included manuals will be complied with at all times; and
- (2) the titles and names of the senior person or persons required by 176.51(a)(1) and (2); and
- (3) the duties and responsibilities of the senior persons specified in paragraph(a)(2) including matters for which they have responsibility to deal directly with the Director or the Authority on behalf of the organisation; and
- (4) an organisation chart showing lines of responsibility of the senior persons specified in paragraph (a)(2); and
- (5) a summary of the applicant's staffing structure for each search and rescue service listed under paragraph 176.51(a) (2, 3); and
- (6) a list of the search and rescue services to be covered by the certificate; and
- (7) the location and address details of the applicable offices required by 176.103(b)(1) and 176.105(1); and
- (8) details of the applicant's procedures required by—
 - (i) 176.51(4) regarding the competence of personnel; and
 - (ii) 176.55 regarding the applicant's security programme; and
 - (iii) 176.59(b) regarding the control of documentation; and
 - (iv) 176.67(a) regarding the identification, collection, indexing, storage, maintenance, and disposal of records; and
 - (v) 176.71 regarding safety management system; and
 - (vi) 176.73 regarding quality management system; and

- (9) procedures to control, amend and distribute the exposition.
- (b) The applicant's exposition must be acceptable to the Director.

Subpart C — Operating Requirements

176.101 Continued compliance

The holder of a search and rescue service certificate shall—

- (1) hold at least one complete and current copy of their exposition at each office listed in their exposition; and
- (2) comply with all procedures and standards detailed in their exposition; and
- (3) make each applicable part of their exposition available to personnel who require those parts to carry out their duties; and
- (4) continue to meet the standards and comply with the requirements of Subpart B prescribed for certification under this Part; and
- (5) notify the Director of any change of address for service, telephone number, or facsimile number required by form CA 176/01 within 28 days of the change.

176.103 Reserved

176.105 Search and rescue services

- (a) The holder of a search and rescue service shall provide, for compliance by its personnel, an operations manual or system of manuals for the services listed in its exposition.

176.107 Changes to certificate holder's organisation

- (a) The holder of a search and rescue service certificate shall ensure that their exposition is amended so as to remain a current description of the holder's organisation and services.
- (b) The certificate holder shall ensure that any amendments made to the holder's exposition meet the applicable requirements of this Part and comply with the amendment procedures contained in the holder's exposition.
- (c) The certificate holder shall provide the Director with a copy of each amendment to the holder's exposition as soon as practicable after its incorporation into the exposition.
- (d) Where a certificate holder proposes to make a change to any of the following, prior notification to and acceptance by the Director is required:
 - (1) the Chief Executive;
 - (2) the listed senior persons;
 - (3) the search and rescue services provided by the holder;
 - (4) the format and standards for the search and rescue services published under the authority of their certificate.
- (e) The Director may prescribe conditions under which a certificate holder may operate during or following any of the changes specified in paragraph (d).

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- (f) The certificate holder shall comply with any conditions prescribed under paragraph (e).
 - (g) Where any of the changes referred to in this rule requires an amendment to the certificate, the certificate holder shall forward the certificate to the Director as soon as practicable.
 - (h) The certificate holder shall make such amendments to the holder's exposition as the Director may consider necessary in the interests of aviation safety.

Appendices

A Search and Rescue Signals

A.1 Signals with surface craft

The following manoeuvres 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 manoeuvres has the same meaning.

The following manoeuvres 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:

- 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.



Note. – See Note following 1. (b), (3).

A.2 Ground-air visual signal code

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	↑

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

Symbols shall be at least 2.5 metres (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.

A.3 Air-to-ground signals

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.

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