MANUAL OF STANDARDS
(176 – SEARCH AND RESCUE) 2024

REVISION 2
EFFECTIVE 26 NOVEMBER 2026

ARRANGEMENT OF PARAGRAPHS

PART 1

PRELIMINARY

1. Citation and commencement
2. Definitions
3. Application of this Manual

PART 2

Division 1 — General

4. Search and rescue services
5. Rescue coordination centre
6. Search and rescue communications
7. Search and rescue units
8. Search and rescue equipment
9. Search and rescue operations manual

Division 2 — Cooperation

10. Cooperation with other States
11. Cooperation with other services
12. Dissemination of information

Division 3 — Preparatory Measures

13. Preparatory information
14. Plans of operation
15. Readiness of search and rescue units
16. Training and exercises
17. Contingency arrangements

Division 4 — Operating Procedures

18. Information concerning emergencies
19. Procedures for rescue coordination centre during emergency phases
20. Procedures where responsibility for operations extends to two or more States
21. Procedures for rescue coordination centres – termination and suspension of operations
22. Procedures in the field
23. Procedures for a pilot of an aircraft

FIRST SCHEDULE ─ DEFINITIONS

In exercise of the powers conferred by paragraph 5(2) of the Civil Aviation Authority of Singapore (Air Navigation Services) Directions 2010 (Ministerial Direction No. 1/2010), the Civil Aviation Authority of Singapore ("the Authority") issues the following Manual of Standards:

PART 1

PRELIMINARY

Citation and commencement

1. This Manual is the Manual of Standards (176 – Search and Rescue) 2024 and come into operation on 15 April 2024.

Definitions

2. In this Manual, unless the context otherwise requires, any term defined in the First Schedule has the meaning given to that term in that Schedule.

Application of this Manual

3. This Manual applies to the provider of air navigation services within the Singapore Flight Information Region and such other area as the Minister for Transport may authorise (called in this Manual the Air Navigation Services Provider or "ANSP") in its provision of search and rescue services within the Singapore search and rescue region.

PART 2

Division 1 — General

Search and rescue services

4.— (1) The ANSP must —

(a) arrange for the establishment and prompt provision of search and rescue services within the Singapore search and rescue region to ensure that assistance is rendered to persons in distress;

(b) ensure the search and rescue services mentioned in sub-paragraph (a) is provided throughout a 24-hour period;

(c) arrange for the establishment and provision of search and rescue services, by itself or in cooperation with other States, for the portions of high seas or areas of undetermined sovereignty for which the ANSP has accepted responsibility to provide such services under any regional air navigation agreement;

(d) ensure that the basic elements are available in the provision of search and rescue services, which must include resources, communication facilities and a workforce skilled in coordination and operational functions;

(e) establish processes to improve the effectiveness of provision of search and rescue services, including but not limited to the aspects of planning, domestic and international cooperative arrangements and training.

(2) The ANSP must provide assistance to aircraft in distress and to survivors of aircraft accidents regardless of the nationality or status of such persons or the circumstances in which such persons are found.

(3) The ANSP 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.

(4) Where separate aeronautical and maritime rescue coordination centres serve the same area, the ANSP must take all reasonably practicable measures to ensure the closest practicable coordination between such centres.

Rescue coordination centre

5.— (1) The ANSP must establish a rescue coordination centre within the Singapore search and rescue region.

(2) The ANSP must ensure that the rescue coordination centre is staffed —

(a) 24 hours a day;

(b) by personnel trained in aeronautical search and rescue and proficient in the use of the English language for radiotelephony communications.

(3) The ANSP must ensure that up-to-date contact information of the rescue coordination centre is maintained in the OPS Control Directory.

[Revision 1, effective 28 Nov 2024]

(4) The ANSP must ensure that the rescue coordination centre subscribes and maintains access to the location of an aircraft in distress repository (LADR).

[Revision 1, effective 28 Nov 2024]

Search and rescue communications

6. The ANSP must ensure that the rescue coordination centre established under paragraph 5(1) has means for rapid and reliable two-way communication with —

(a) associated air traffic services units;

(b) appropriate direction-finding and position-fixing stations;

(c) where appropriate, coastal radio stations capable of alerting and communicating with surface vessels in the search and rescue region;

(d) the headquarters of search and rescue units in the search and rescue region;

(e) all maritime rescue coordination centres in the search and rescue region and aeronautical, maritime or joint rescue coordination centres in adjacent search and rescue regions;

(f) a designated meteorological office or meteorological watch office;

(g) search and rescue units;

(h) alerting posts; and

(i) the Cospas-Sarsat Mission Control Centre servicing the search and rescue region.

Search and rescue units

7.— (1) The ANSP must designate as search and rescue units such public or private service providers who are suitably located and equipped for search and rescue operations.

(2) The ANSP must establish arrangements for the provision of search and rescue services with each search and rescue unit designated under sub-paragraph (1).

(3) As part of the search and rescue plan of operation, the ANSP must designate, and establish arrangements with, such other public or private service providers that do not qualify as search and rescue units but are able to participate in a search and rescue operation.

Search and rescue equipment

8.— (1) The ANSP must take all reasonably practicable measures to ensure that each search and rescue aircraft that is deployed in a search and rescue operation is equipped, at the scene of an accident, for locating promptly and providing adequate assistance to an aircraft in distress.

(2) The equipment required under sub-paragraph (1) must:

(a) allow the pilot of the search and rescue aircraft to communicate on the aeronautical distress and on-scene frequencies and on such other frequencies as the ANS Regulator may specify;

(b) home on distress frequencies; and

(c) allow communication with vessels when used for search and rescue over maritime areas.

(3) The ANSP must establish arrangements such that each search and rescue aircraft mentioned in sub-paragraph (1) carries a copy of the International Code of Signals to overcome language difficulties that may be experienced in communicating with ships when used for search and rescue over maritime areas.

Search and rescue operations manual

9.— (1) The ANSP must establish and maintain a search and rescue operations manual, which demonstrates the means and methods for ensuring continuous compliance with the requirements in this Manual.

(2) The operations manual established for the purposes of sub-paragraph (1) must include the following —

(a) a job description of each search and rescue personnel which must contain the job function and responsibilities;

(b) the procedures necessary to ensure compliance with —

(i) this Manual; and

(ii) the Manual of Standards (170 – Air Navigation Services Provider) 2024; and

(c) the procedures to control, amend and distribute the operations manual, including the distribution of the initial and all subsequent amendments made to the operations manual.

(3) The ANSP must notify the ANS Regulator of any changes made to the operations manual in a timely manner.

(4) The ANSP must ensure that the operations manual is readily available to all personnel concerned with search and rescue.

(5) The ANSP must ensure that the operations manual being used by all search and rescue personnel contains current information.

(6) The ANSP must submit a copy of the current version of the operations manual to the ANS Regulator.

(7) The ANSP must update, amend or add to the operations manual as the ANS Regulator may require for ensuring:

(a) the accuracy of the operations manual; and

(b) the safety, efficiency or regularity of air navigation.

Division 2 — Cooperation

Cooperation with other States

10.— (1) The ANSP must establish arrangements for the coordination of search and rescue with the search and rescue organisations of neighbouring States.

(2) The ANSP must permit immediate entry into its territory of search and rescue units of other States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents, subject to the provisions of any search and rescue agreement that had been concluded between the Authority and the search and rescue organisations of those other States.

(3) The ANSP, in preparation for its search and rescue units to enter the territory of any State for search and rescue purposes, must transmit a request, with full details of the projected mission and the need for that mission, to the rescue coordination centre of that State or to such other authority as had been designated by that State.

(4) When the ANSP receives a request from another State for that State's search and rescue units to enter Singapore's territory for search and rescue purposes, the ANSP must —

(a) immediately acknowledge the receipt of such a request; and

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

(5) The ANSP's rescue coordination centre must provide instructions to the control which will be exercised on entry of aircraft or personnel from other States in accordance with the standing plan for the conduct of search and rescue in the area.

(6) The ANSP must develop and apply appropriate procedures for its rescue coordination centre 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.

(7) The ANSP must develop and apply appropriate procedures for its rescue coordination centre to facilitate, when requested, assistance to other rescue coordination centres, including assistance in the form of aircraft, vessels, persons or equipment.

(8) The ANSP must make arrangements for joint training exercises involving its rescue coordination centre and search and rescue units, with those of States and operators, to promote search and rescue efficiency.

[Revision 2, effective 26 Nov 2026]

Cooperation with other services

11.— (1) The ANSP must establish arrangements for all aircraft, vessels and local services and facilities which do not form part of the ANSP to cooperate fully with the ANSP in search and rescue and to extend any possible assistance to the survivors of aircraft accidents.

(2) The ANSP must ensure that its search and rescue services cooperate with:

(a) the investigation of an accident; and

(b) any person responsible for the care of the victims of the accident.

(3) The ANSP must designate a 24-hour search and rescue point of contact available for the receipt and acknowledgement of Cospas-Sarsat distress alert data that ensures timely notification to the responsible rescue coordination centre for the initiation of appropriate search and rescue response action.

[Revision 2, effective 26 Nov 2026]

Dissemination of information

12. The ANSP must publish and disseminate all information necessary for the entry of search and rescue units of other States into its territory or alternatively, include this information in search and rescue service arrangements.

Division 3 — Preparatory Measures

Preparatory information

13. The ANSP's rescue coordination centre must have readily available and up-to-date information at all times concerning the following in respect of the Singapore search and rescue region —

(a) search and rescue units and alerting posts;

(b) 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.

Plans of operation

14.— (1) The ANSP's rescue coordination centre must prepare plans for the conduct of its operations within the Singapore search and rescue region.

(2) The plans prepared under sub-paragraph (1) must, with sufficient particularity —

(a) specify arrangements for the servicing and refuelling, as far as reasonably practicable, of aircraft, vessels and vehicles employed in search and rescue operations, including those made available by other States;

(b) contain details regarding actions to be taken by persons engaged in search and rescue, including —

(i) the manner in which search and rescue operations are to be conducted in the search and rescue region;

(ii) the use of available communication systems and facilities;

(iii) the actions to be taken jointly with other rescue coordination centres;

(iv) the methods of alerting en-route aircraft and ships at sea;

(v) the duties and prerogatives of persons assigned to search and rescue;

(vi) the possible redeployment of equipment that may be necessitated by meteorological or other conditions;

(vii) the methods for obtaining essential information relevant to search and rescue operations, including weather reports and forecasts, appropriate NOTAM;

(viii) the methods for obtaining, from other rescue coordination centres, such assistance, including aircraft, vessels, persons or equipment, as may be needed;

(ix) the methods for obtaining approval to allow search and rescue units from an assisting State to enter into the territory of the State of the RCC;

[Revision 2, effective 26 Nov 2026]

(x) the methods for assisting distressed aircraft being compelled to ditch to rendezvous with surface craft;

[Revision 2, effective 26 Nov 2026]

(xi) the methods for assisting search and rescue or other aircraft to proceed to aircraft in distress; and

[Revision 2, effective 26 Nov 2026]

(xii) cooperative actions to be taken in conjunction with air traffic service units and other authorities concerned to assist aircraft known or believed to be subject to unlawful interference.

[Revision 2, effective 26 Nov 2026]

Readiness of search and rescue units

15.— (1) The ANSP must develop and apply appropriate procedures to ensure that each of its search and rescue unit —

(a) is cognizant of all parts of the plans of operation specified in paragraph 14 that are necessary for the effective conduct of its duties; and

(b) keep the rescue coordination centre informed of its preparedness in relation to the suitability of its location, availability and equipment for search and rescue operations.

(2) The ANSP must establish arrangements to —

(a) maintain in readiness the required number of search and rescue facilities; and

(b) maintain adequate supplies of rations, medical stores, signalling devices and other survival and rescue equipment.

Training and exercises

16.— (1) The ANSP must ensure that its search and rescue personnel are regularly trained and participate in appropriate search and rescue exercises in a maritime environment, containing both search and rescue elements, remote from an aerodrome, to enable such personnel to achieve and maintain maximum efficiency in search and rescue.

[Revision 2, effective 26 Nov 2026]

(2) The training in aeronautical search and rescue provided by the ANSP must consist of theoretical and practical knowledge of aeronautical search and rescue operations.

(3) The ANSP must ensure that its search and rescue personnel maintain their competency by undergoing refresher training that includes knowledge about updates of ICAO provisions and other provisions pertaining to search and rescue.

(4) The ANSP must maintain training records for its search and rescue personnel.

(5) The ANSP must establish arrangements such 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.

[Revision 2, effective 26 Nov 2026]

Contingency arrangements

17.— (1) The ANSP must develop and implement contingency plans to ensure minimum disruption to the provision of search and rescue services during each 24-hour period.

(2) The ANSP must conduct regular exercises to ensure that the contingency plans mentioned in sub-paragraph (1) continue to be relevant and that the search and rescue personnel continue to be familiar with these contingency plans.

Division 4 — Operating Procedures

Information concerning emergencies

18.— (1) If the ANSP reasonably believes that an aircraft is in an emergency, the ANSP must ensure that the appropriate unit of the ANSP immediately gives all available information to its rescue coordination centre.

(2) The ANSP's rescue coordination centre must, immediately upon receipt of information concerning an aircraft in emergency, evaluate such information and assess the extent of the operation required.

(3) When information concerning aircraft in emergency is received from sources other than the ANSP's air traffic services units, the rescue coordination centre must determine to which emergency phase the situation corresponds and must apply the procedures applicable to that phase.

Procedures for rescue coordination centre during emergency phases

19.— (1) Upon the occurrence of an uncertainty phase, the ANSP's rescue coordination centre must coordinate with the ANSP's air traffic services units and other appropriate agencies and services to ensure that the rescue coordination centre is able to receive and expeditiously evaluate up-to-date information and reports on the possible location of the aircraft.

(2) Upon the occurrence of an alert phase, the ANSP's rescue coordination centre must immediately alert search and rescue units and initiate any necessary action.

(3) Upon the occurrence of a distress phase, the ANSP's rescue coordination centre must take the following actions in the following order, unless circumstances dictate otherwise —

(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 such rescue coordination centres from whom assistance may 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 for assistance at an early stage from such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation to:

(i) maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or an emergency locator transmitter (ELT);

(ii) assist the aircraft in distress as far as practicable; and

(iii) inform the 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 rescue operation required and communicate that 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 the appropriate accident investigation authorities; and

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

(4) If an emergency phase is declared by the ANSP's air traffic services unit in respect of an aircraft whose position is unknown or may be in one of two or more search and rescue regions, the ANSP's rescue coordination centre must do the following —

(a) when the rescue coordination centre is notified of the existence of an emergency phase and is unaware of other neighbouring rescue coordination centres taking appropriate action, the rescue coordination centre must —

(i) assume responsibility for initiating suitable action in accordance with sub-paragraphs (1), (2) and (3); and

(ii) confer with neighbouring rescue coordination centres with the objective of designating one rescue coordination centre to assume responsibility for search and rescue operations immediately;

(b) unless otherwise decided by common agreement with other rescue coordination centres, the ANSP's rescue coordination centre must coordinate search and rescue action if it is responsible for —

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

(ii) the region to which the aircraft was proceeding when its last reported position was on the line separating two search and rescue regions;

(iii) 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

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

(c) after declaration of the distress phase, if the ANSP's rescue coordination centre is responsible for coordinating the search and rescue action, the rescue coordination centre must —

(i) notify all other rescue coordination centres that may become involved in the operation of all the circumstances of the emergency and subsequent developments;

(ii) provide the rescue coordination centre that has overall responsibility for the search and rescue action with any information pertaining to the emergency that it becomes aware of.

(5) If the ANSP's rescue coordination centre is responsible for coordinating the search and rescue action, it must forward to the air traffic services unit serving the flight information region in which the aircraft is operating with information of the search and rescue action that has been initiated, in order that such information can be passed to the aircraft.

Procedures where responsibility for operations extends to two or more States

20. Where the conduct of operations over the entire search and rescue region is the responsibility of more than one State, the ANSP must take action in accordance with the relevant plan of operations when so requested by the rescue coordination centre of the region.

Procedures for rescue coordination centres – termination and suspension of operations

21.— (1) The ANSP's rescue coordination centre must continue its search and rescue operations, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.

(2) If the ANSP's rescue coordination centre is responsible for coordinating the search and rescue action, it may determine when to discontinue search and rescue operations after taking into consideration the views of other States or rescue coordination centres involved in the search and rescue operations.

(3) Despite sub-paragraph (2), the ANSP's rescue coordination centre must terminate the search and rescue operation and cancel the emergency phase:

(a) when a search and rescue operation has been successful; or

(b) when the ANSP's rescue coordination centre considers, or is informed, that an emergency no longer exists.

(4) The ANSP's rescue coordination centre must promptly inform every authority, facility or service that has been activated or notified of the search and rescue operation of the termination of the search and rescue operation.

(5) If a search and rescue operation becomes impracticable and the ANSP's rescue coordination centre concludes that there might still be survivors, the rescue coordination centre must —

(a) temporarily suspend on-scene activities pending further developments;

(b) promptly inform any authority, facility or service which has been activated or notified of the search and rescue operation of the suspension of the on-scene activities; and

(c) evaluate any relevant information subsequently received for justification and practicability to resume search and rescue operations.

Procedures in the field

22.— (1) The ANSP must establish an arrangement with the authority of each search and rescue unit involved in the search and rescue operations to enable the authority immediately directing the conduct of operations or any part thereof to —

(a) give instructions to the units under their direction and notify the rescue coordination centre of such instructions; and

(b) keep the rescue coordination centre informed of developments.

(2) When multiple facilities are engaged in search and rescue operations at the scene of the accident, the ANSP's rescue coordination centre must designate one or more units at the 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.

Procedures for a pilot of an aircraft

23. The ANSP must notify, by means of the Aeronautical Information Publication, a pilot of an aircraft of the procedures to follow for the following —

(a) when the pilot observes that another aircraft or a surface craft is in distress;

(b) whenever the pilot intercepts a distress transmission;

(c) when the pilot observes any of the search and rescue signals contained in Annex 12 of the Chicago Convention.

FIRST SCHEDULE – DEFINITIONS

Paragraph 2

"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.

"ANS Regulator" means the Division in the Civil Aviation Authority of Singapore charged with the function of exercising safety regulatory oversight of the provision of air navigation services by the Minister for Transport in the CAAS (Air Navigation Services) Directions 2010.

"Chicago Convention" means the Convention on International Civil Aviation concluded at Chicago on 7 December 1944 (as in force and amended from time to time).

"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.

"Ditch" means the forced landing of an aircraft on water.

"Emergency phase" means a generic term referring to, 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.

"Operator" means a person, organisation or enterprise engaged in or offering to engage in an aircraft operation.

"Pilot-in-command" means 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" 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" 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" 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 region" means an area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

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

“Singapore search and rescue region” means the search and rescue region that corresponds with the Singapore Flight Information Region.

“State of Registry” means the State on whose register the aircraft is entered.

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

REVISION HISTORY

This Amendment History is provided for the convenience of users of the Manual of Standards (176 – Search and Rescue) 2024. It is not part of this Manual.

1. Initial Issue, effective 15 April 2024
2. Revision 1, effective 28 November 2024
3. Revision 2, effective 26 November 2026