



Search and Rescue

NEXT



"We have the downed aircraft in sight at these coordinates..."



Purpose

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This lesson covers Search and Rescue (SAR) responsibilities, handling, and procedures. It also covers the actions taken when an aircraft becomes overdue, unreported, or missing.



Objectives

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In this lesson, you will identify the:

1. Purpose of the National Search and Rescue Plan
2. Roles, responsibilities, and procedures of search and rescue

You will meet the objectives in accordance with the following references:

- FAA Order JO 7110.10, Flight Services
- FAA Order JO 7110.65, Air Traffic Control
- Aeronautical Information Manual (AIM)
- National Search and Rescue Plan





Purpose

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The National Search and Rescue Plan is an interagency agreement which provides for the effective use of all available resources in all types of civil search and rescue missions.

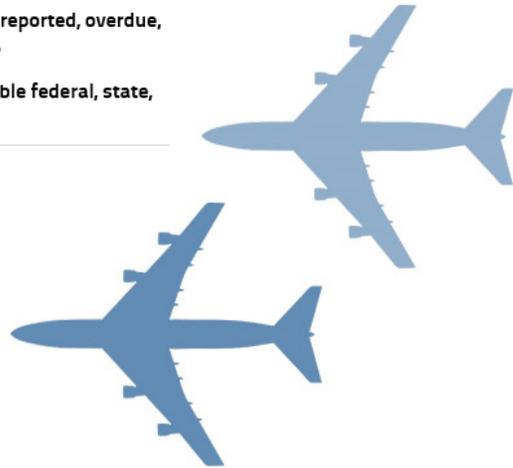
SEARCH – An operation using available personnel and facilities to locate persons in distress

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

Search and rescue associated with aviation is a service which seeks unreported, overdue, or missing aircraft and assists those found to be in need of assistance.

- It is a cooperative effort using the facilities and services of available federal, state, and local agencies.

JO 7110.65, Pilot/Controller Glossary National Search and Rescue Plan





National Search and Rescue Plan

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Search and Rescue Facility

A search and rescue facility is responsible for maintaining and operating a search and rescue service to render aid to persons and property in distress.

- It is any search and rescue unit, station, or other operational activity which can be usefully employed during the mission.



Roles and Responsibilities

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Federal Aviation Administration (FAA)

Under the National Search and Rescue Plan, the Federal Aviation Administration (FAA):

- Provides emergency service(s) to aircraft in distress
- Ensures that search and rescue procedures are initiated if an aircraft is overdue or missing
- Attempts to locate aircraft through communications search via the:
 - ATC system for IFR aircraft
 - Flight plan program for VFR aircraft

JO 7110.65, Chap. 10





Roles and Responsibilities

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FAA SAR Facility Responsibility

<i>TYPE OF FLIGHT PLAN</i>	<i>FACILITY</i>
<ul style="list-style-type: none">• VFR, DVFR• NO FLIGHT PLAN FILED• VFR PORTION OF COMPOSITE FLIGHT PLAN	AFSS
<ul style="list-style-type: none">• IFR• SPECIAL VFR• IFR PORTION OF COMPOSITE FLIGHT PLAN	ARTCC



Roles and Responsibilities

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AFSS Responsibility

Automated Flight Service Stations (AFSSs) initiate search and rescue procedures for overdue or missing aircraft:

- On a VFR flight plan
- Where no flight plan has been filed
- On VFR portion of composite VFR/IFR flight plan

JO 7110.65, Chap. 10





Roles and Responsibilities

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ARTCC Responsibility

The Air Route Traffic Control Center (ARTCC) initiates search and rescue procedures for aircraft that are overdue or missing:

- On an IFR flight plan
- On a composite VFR/IFR flight plan and 30 minutes have passed since the pilot requested IFR clearance, and neither communication nor radar contact can be established
- On a Special VFR clearance
- When an Emergency Locator Transmitter (ELT) signal is received or reported

JO 7110.65, Chap. 10





Roles and Responsibilities

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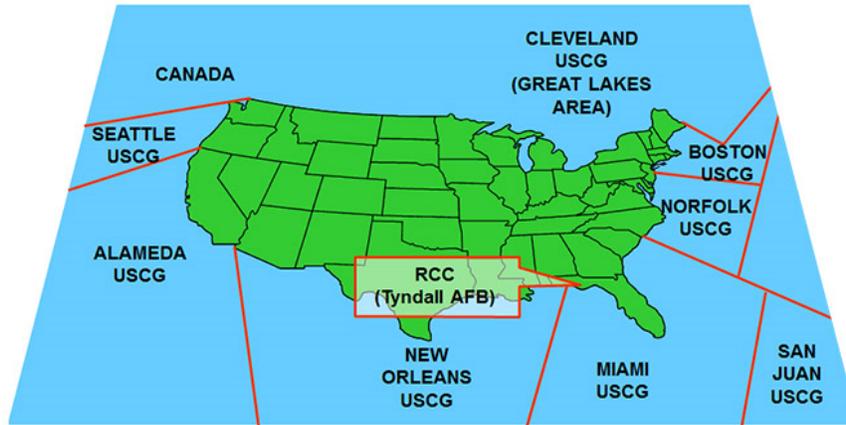
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Military Responsibility

The military coordinates and conducts physical search and rescue operations through Rescue Coordination Centers (RCCs).

AIM, Chap. 6

U.S. Coast Guard (USCG) and Air Force Rescue Coordination Centers (RCCs)





Roles and Responsibilities

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Military Responsibility

- Air Force RCCs
 - Tyndall Air Force Base (AFB), FL is responsible for search and rescue coordination for the inland region within the contiguous states.
 - Ft. Richardson is responsible for Alaska.
 - Usually uses civilian resources to conduct physical search, such as Civil Air Patrol and state agencies
- Coast Guard (USCG) RCCs
 - Using various stations around the country, they are responsible for coordination and conducting search and rescue for the maritime region.
- Joint RCCs
 - Hawaii Joint Rescue Coordination Center located in Honolulu is responsible for Hawaii.

AIM, Chap. 6





Overdue Aircraft Procedures

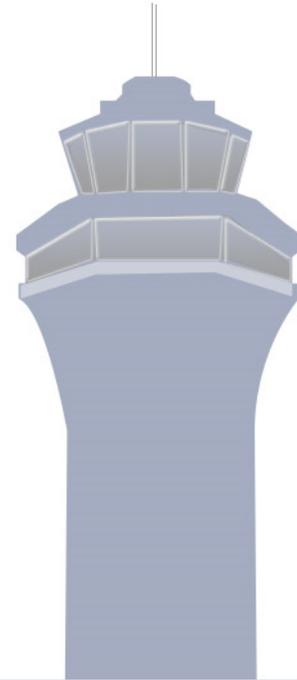
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Initiating SAR Service

The initiation of search and rescue depends on whether or not a flight plan was filed and activated, and the type of flight plan filed:

- VFR flight plan
- IFR flight plan
- No flight plan





Overdue Aircraft Procedures

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VFR Overdue Aircraft Procedures

An aircraft on a VFR or DVFR flight plan is considered overdue 30 minutes after the Estimated Time of Arrival (ETA) and communications or location cannot be established.

- **OVERDUE = ETA + 30 Minutes**

A communications search is initiated by AFSS.

JO 7110.10, Chap. 8





Overdue Aircraft Procedures

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Aircraft NOT on a Flight Plan

An aircraft with no flight plan is considered overdue at the actual time a reliable source reports it to be at least one hour late at the destination.

- Reliable source may be family member, business associate, fixed base operator, etc.

A communications search is initiated by AFSS.

7110.10, Chap. 8





Overdue Aircraft Procedures

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Definitions

- **Information Request (INREQ)** is a request originated by AFSS for information concerning an overdue VFR/DVFR aircraft. An INREQ is a limited communications search and when complete, with negative results, is followed by an ALNOT. (This message is to all ATC facilities and airports along the aircraft's planned route from last known position to the destination.)
- **Alert Notice (ALNOT)** is an alert notice originated by an AFSS or ARTCC for an extensive communications search for overdue, unreported or missing aircraft. (This message is to all ATC facilities and airports within 50 miles either side of the aircraft's planned route from last known position to the destination.)

NOTE: AFSS conducts a communication search on all overdue aircraft that are not on an IFR/SVFR flight plan. INREQs are issued by AFSS. ALNOTs are issued by AFSS for VFR/DVFR aircraft. ARTCC issues ALNOTs for IFR/SVFR aircraft. A communications search begins at the ALNOT stage on IFR/SVFR aircraft.

JO 7110.65, Glossary





Overdue Aircraft Procedures

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IFR Overdue Aircraft Procedures

An aircraft on an IFR flight plan is considered overdue when neither communications nor radar contact can be established and 30 minutes have passed since its:

- ETA over a specified or compulsory reporting point or at a clearance limit
- Clearance void time

If you have reason to believe that the aircraft is overdue prior to 30 minutes, take immediate action as required.

If an IFR aircraft is determined to be overdue, unreported, or missing, the search and rescue process starts at this stage.

NOTE: The center in whose area the aircraft is first overdue or unreported will make these determinations and is responsible for taking any subsequent action required.

JO 7110.65, Chap. 10





Overdue Aircraft Procedures

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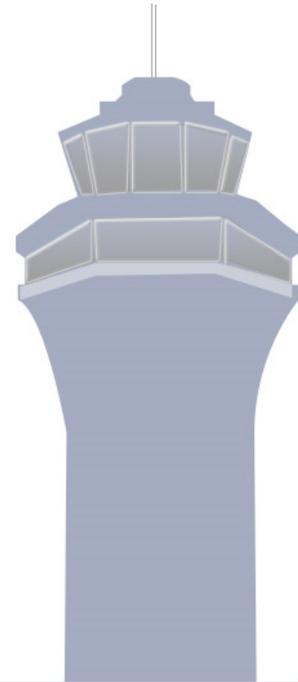
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Information to be Forwarded to ARTCCS by Terminals

When an aircraft is considered to be in emergency status that may require SAR procedures, or an IFR aircraft is overdue, the Terminal facility shall alert the ARTCC and forward information, as available.

- Flight plan, including color or aircraft, if known
- Time of last transmission received, by whom and frequency used
- Last position report and how determined
- Action taken by reporting facility and proposed action
- Number of persons on board
- Fuel status
- Facility working the aircraft and frequency
- Last known position, estimated present position, and maximum range of flight of the aircraft based on remaining fuel and airspeed
- Position of other aircraft near the aircraft's route of flight, when requested
- Whether or not an ELT signal has been heard or reported in the vicinity of the last known position
- Other pertinent information

JO 7110.65, Chap. 10





Overdue Aircraft Procedures

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Information to be Forwarded to RCC by ARTCCs

When an aircraft is considered to be in emergency status or an IFR aircraft is overdue, the ARTCC shall alert RCC and forward the following information, as available:

- Facility and person calling
- Flight plan, including color of aircraft, if known
- Time of last transmission received, by whom and frequency used
- Last position report and how determined
- Action taken by reporting facility and proposed action
- Number of persons on board
- Fuel status
- Facility working the aircraft and frequency
- Last known position, estimated present position, and maximum range of flight of the aircraft based on remaining fuel and airspeed
- Position of other aircraft near the aircraft's route of flight, when requested
- Whether or not an ELT signal has been heard or reported in the vicinity of the last known position
- Other pertinent information

JO7110.65, Chap. 10





Overdue Aircraft Procedures

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Issuance of ALNOT

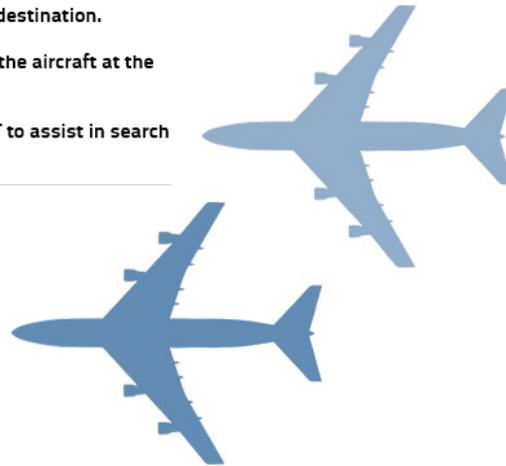
An ALNOT is transmitted by circuit code to air traffic facilities, and military base operations (BASOPS) along the route, along with the Regional Operations Center (ROC), and the RCC.

The search area expands from the proposed route of flight to 50 miles on either side of the proposed route of flight from the last reported position to the destination.

- The search area may be expanded to the maximum range of the aircraft at the request of RCC or the air traffic facility issuing the ALNOT.

All information about the overdue aircraft is included in the ALNOT to assist in search activities.

JO 7110.65, Chap. 10





Overdue Aircraft Procedures

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ALNOT Search Area: Airports Within 50 Miles Each Side of Route

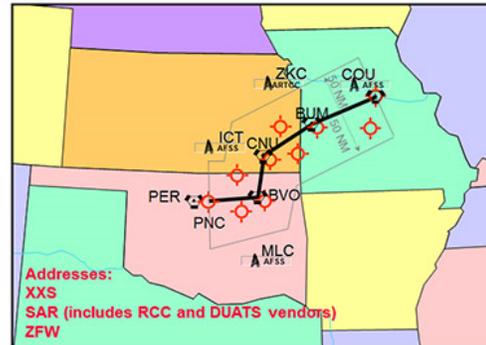
Upon receipt of an ALNOT, each facility having jurisdiction within the ALNOT search area:

- Conducts a communications search of airports within the ALNOT search area that could accommodate the aircraft that were not checked during the INREQ search
 - Requests law enforcement agencies to check airports which cannot be checked otherwise
- Notifies appropriate ATCT facilities
- Requests search assistance from aircraft traversing the search area

A reply to the ALNOT should be sent to the originator within one hour.

- If unable to complete the search within the hour, a status report is sent, followed by a final report when the search is complete.
- In the reply, facilities report any new information about the aircraft or send a negative statement.
 - If new information is found, the originator of the ALNOT retransmits the ALNOT, including the new information.

JO 7110.65 Chap. 10





Overdue Aircraft Procedures

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Responsibility Transfer to RCC

Transfer of search responsibility to RCC occurs when:

- The ALNOT search has been completed with negative results
- The aircraft has not been located within one hour after ALNOT issuance
- Thirty minutes have elapsed after the estimated aircraft fuel exhaustion time

JO 7110.65, Chap. 10





Overdue Aircraft Procedures

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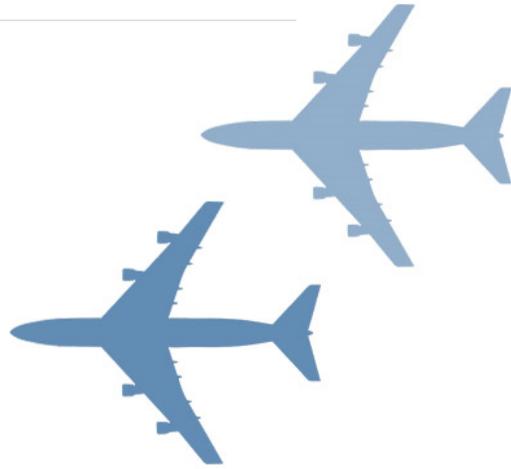
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Cancellation of ALNOT

The ALNOT remains active until the aircraft is located or RCC suspends the search.

- The ALNOT originator then transmits a cancellation message with the location of the aircraft, if found, to all recipients of the ALNOT.
 - ATCT facilities are notified via phone.

JO 7110.65, Chap. 10





Other Search and Rescue Actions

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Aircraft Crossing Hazardous Areas

Reporting service programs have been established over:

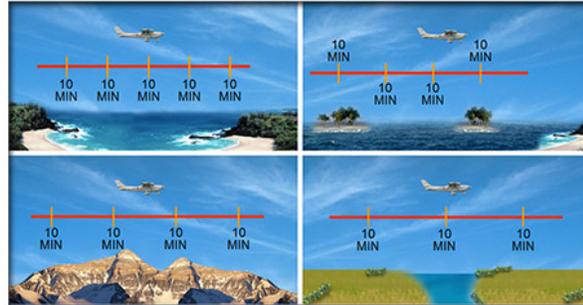
- Lakes
- Islands
- Mountains
- Swamps

Action depends on the pilot requesting the service and establishing AFSS radio contact every ten minutes or at designated check points.

INREQ procedures are bypassed.

If ten minutes have passed since the last actual contact with the pilot, and no further contact can be established, an additional five minute period (a buffer) is allowed to pass prior to initiating search and rescue procedures.

- Total of 15 minutes since last pilot contact



JO 7110.10, Chap. 8; AIM, Chap. 4

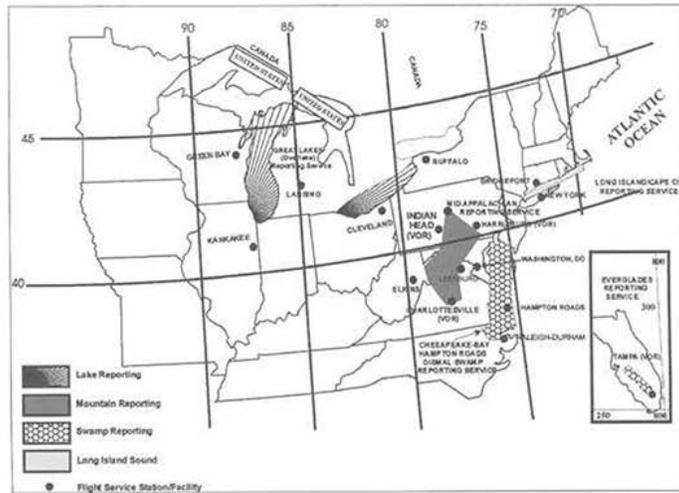


Other Search and Rescue Actions

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Aircraft Crossing Hazardous Areas



JO 7110.10, Chap. 8; AIM, Chap. 4



Conclusion

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Lesson Summary



This lesson covered:

- National Search and Rescue Plan
- Roles and Responsibilities
- Overdue Aircraft Procedures
- Other Search and Rescue Actions





Resources

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[Click here to access all the Appendices for Lesson 23.](#)

