SUBJ: Flight Services

1. Purpose of This Change. This change transmits revised pages to Federal Aviation Administration Order JO 7110.10U, Flight Services, and the Briefing Guide.

2. Audience. This change applies to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and to all air traffic field facilities, international aviation field offices, and the interested aviation public.


4. Explanation of Policy Change. See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures. The Briefing Guide lists only new or modified material, along with background.

5. Distribution. This change is distributed to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and to all air traffic field facilities, international aviation field offices, and the interested aviation public.

6. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.

7. Page Control Chart. See the page control chart attachment.

Elizabeth L. Ray  
Vice President, Mission Support Services  
Air Traffic Organization

Date: June 10, 2011

Distribution: ZAT-793; ZAT-464; ZAT-423 (External)  
Initiated By: AJV-0  
Vice President, Mission Support Services
Flight Services
Explanation of Changes

Direct questions through appropriate facility/service center office staff
to the Office of Primary Interest (OPI)

a. 8–2–1 INITIAL ACTION/QALQ and
8–4–1 ALNOT

This change removes the local Alaska specific
instructions that are included in FAA Order JO
7110.10. This change cancels and incorporates N JO
7110.555, Local Search and Rescue Group Code
Addresses for Alaska, effective April 25, 2011.

b. 9–2–12 PIREP HANDLING

The requirement to deliver urgent pilot reports to
WFOs is deleted. This change cancels and
incorporates N JO 7110.544, Pilot Report (PIREP)
Handling, effective January 3, 2011.

c. Additional editorial/format changes were made
where necessary. Revision bars were not used
because of the insignificant nature of these changes.
# PAGE CONTROL CHART

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1–2–1. WORD MEANINGS
As used in this order:

a. “Shall” or “must” means a procedure is mandatory.

b. “Should” means a procedure is recommended.

c. “May” or “need not” means a procedure is optional.

d. “Will” means futurity, not a requirement for application of a procedure.

e. “Shall not” or “must not” means a procedure is prohibited.

f. Singular words include the plural.

g. Plural words include the singular.

h. “Aircraft” means the airframe, crew members, or both.

i. “Altitude” means indicated altitude mean sea level (MSL), flight level (FL), or both.

j. “Miles” means nautical miles unless otherwise specified and means statute miles in conjunction with visibility.

k. “Time,” when used for ATC operational activities, is the hour and the minute/s in Coordinated Universal Time (UTC). Change to the next minute is made at the minute plus 30 seconds, except time checks are given to the nearest quarter minute. The word “local” or the time zone equivalent shall be stated when local time is given during radio and telephone communications. The term “ZULU” may be used to denote UTC.

l. “Sector,” when used in conjunction with FSS functions, means a specifically described geographic area that is assigned a NADIN address.

m. “Tie–in facility,” as indicated in FAA Order JO 7350.8, Location Identifiers, for the purposes of this order, designates the responsible facility/sector for sending/receiving flight plans, flight notification messages, and performing search and rescue duties for the listed location.

n. “Shared database” is a database within an FSS operational system that is accessible by specialists in other geographical locations.

o. “Transmit” means to send data via NADIN or WMSCR to an outside recipient or to process data internally within an operational system that shares a global database.

p. “Form” means a paper record or an automated equivalent. Both must be retained in accordance with FAA directives.

q. “History files” means one or more digital or paper repositories of data that must be retained in accordance with FAA directives.

1–2–2. NOTES
Statements of fact or of an explanatory nature and relating to the use of directive material have been identified and worded as “Notes.”

1–2–3. JO 7110.10 CHANGES
a. Each reprinted, revised, or additional page will show the change number and the effective date of the change.

b. Bold lines in the margin of the text will mark the location of all changes except editorial corrections.

1–2–4. ABBREVIATIONS
Abbreviations authorized for use in the application of the procedures in this order are those contained in FAA Order JO 7340.2, Contractions.

1–2–5. EXAMPLES
Any illustration used which serves to explain subject material is identified as an “Example.”

1–2–6. PHRASEOLOGY
Phraseology depicted in this order is mandatory.

NOTE–
Exceptions to this para are referenced in para 5–1–1.

1–2–7. SYSTEM INSTRUCTIONS
Different operational systems are used to provide flight services within the United States. Each individual operational system must have instructions in the form of a user’s manual or guide, either electronically or in paper form, that provide the...
necessary steps to accomplish the requirements set forth in this order.
Section 5. Special VFR Operation

4–5–1. AUTHORIZATION

a. Special VFR (SVFR) operations in weather conditions less than VFR minima are authorized:

1. For helicopters and fixed-wing aircraft at any location not prohibited by 14 CFR Part 91, Appendix D, Section 3, or when an exception to 14 CFR Part 91, Appendix D, Section 3 has been granted and an associated letter of agreement established.

REFERENCE–
14 CFR Part 91, Appendix D, Section 3. Controlled airspace within which special V–F–R weather minimums are not authorized.

2. Only within surface areas.

3. Only when requested by the pilot.

b. When the primary airport is reporting VFR, SVFR operations may be authorized for aircraft transiting surface areas when the pilot advises the inability to maintain VFR.

NOTE–
Control facilities shall always retain SVFR operations authority when IFR operations are being conducted in surface areas.

4–5–2. REQUESTS FOR SPECIAL VFR CLEARANCE

a. Transmit SVFR clearances only for operations within surface areas on the basis of weather conditions. If weather conditions are not reported, transmit an SVFR clearance whenever a pilot advises unable to maintain VFR and requests an SVFR clearance, provided the pilot reports having at least 1–mile flight visibility.

PHRASEOLOGY–
ATC CLEARS (aircraft identification) TO ENTER/OUT OF/THROUGH (name) SURFACE AREA, and if applicable, (direction) OF (name) AIRPORT (specified routing),

and

MAINTAIN SPECIAL V–F–R CONDITIONS AT OR BELOW (altitude) (if applicable) WHILE IN SURFACE AREA.

ATC CLEARS (aircraft identification) TO OPERATE WITHIN (name) SURFACE AREA. MAINTAIN SPECIAL V–F–R CONDITIONS AT OR BELOW (altitude).

b. Transmit clearance for local SVFR operations for a specified period (series of takeoffs and landings, etc.) upon request if the aircraft can be recalled when traffic or weather conditions require. Where warranted, letters of agreement may be established.

PHRASEOLOGY–
LOCAL SPECIAL V–F–R OPERATIONS IN THE IMMEDIATE VICINITY OF (name) AIRPORT ARE AUTHORIZED UNTIL (time). MAINTAIN SPECIAL V–F–R CONDITIONS AT OR BELOW (altitude).

c. If an aircraft operating under visual flight rules attempts to enter, depart, or operate within surface areas contrary to the provisions of 14 CFR Section 91.157 (Special VFR Weather Minimums), ensure the pilot is aware of the current weather conditions. Provide the following information:

1. At airports with commissioned ASOS/AWOS with continuous automated voice capability, instruct the pilot to monitor the automated broadcast and advise intentions.

PHRASEOLOGY–
MONITOR (location) ASOS/AWOS (frequency). ADVISE INTENTIONS.

2. At airports without a commissioned ASOS/AWOS, or, if the pilot is unable to receive the ASOS/AWOS broadcast, issue the most current weather report available. Advise the pilot that the weather is below VFR minima, and request the pilot’s intentions.

PHRASEOLOGY–
(Location) WEATHER, CEILING (height), VISIBILITY (miles). (Location) SURFACE AREA IS BELOW V–F–R MINIMA. AN ATC CLEARANCE IS REQUIRED. ADVISE INTENTIONS.

NOTE–
Helicopters performing hover taxiing operations (normally not above 10 feet) within the boundary of the airport are considered to be taxiing aircraft.

d. At a pilot’s request, issue an SVFR clearance, if appropriate, when an SVFR letter of agreement exists between an AFSS/FSS and the control facility. If no agreement exists, request clearance from the control facility. State the aircraft’s location and route of flight.

PHRASEOLOGY–
(Facility name) RADIO. REQUEST SPECIAL V–F–R CLEARANCE (aircraft identification) (direction) OF
(location) AIRPORT (specified routing) INTO/OUT OF/THROUGH THE (location) SURFACE AREA.

NOTE–
  IFR aircraft shall normally have priority over special VFR (SVFR) aircraft.

1. If the pilot is operating outside surface area and requests SVFR clearance, issue the clearance or if unable, advise the pilot to maintain VFR outside surface area and to standby for clearance.

PHRASEOLOGY–
MAINTAIN V−F−R OUTSIDE (location) SURFACE AREA. STANDBY FOR CLEARANCE.

2. When an aircraft requests a SVFR clearance to enter surface area during periods of SVFR activity, instruct the pilot to maintain VFR conditions outside surface area pending arrival/recall/departure of SVFR operations.

PHRASEOLOGY–
MAINTAIN V−F−R CONDITIONS OUTSIDE OF THE (location) SURFACE AREA PENDING ARRIVAL/RECALL/DEPARTURE OF IFR/SPECIAL V−F−R AIRCRAFT.

3. If the pilot is operating inside the surface area and requests an SVFR clearance, advise the pilot to maintain VFR and standby for clearance.

PHRASEOLOGY–
MAINTAIN V−F−R, STANDBY FOR CLEARANCE.

e. Suspend SVFR operations when necessary to comply with instructions contained in subpara 4−5−4b or when requested by the control facility.

PHRASEOLOGY–
SPECIAL V−F−R AUTHORIZATION DISCONTINUED. RETURN TO AIRPORT OR DEPART SURFACE AREA. ADVISE INTENTIONS.

After response

REPORT LANDING COMPLETED/LEAVING SURFACE AREA.

4−5−3. VISIBILITY BELOW 1 MILE

a. When the ground visibility is officially reported at an airport as less than 1 mile, treat requests for SVFR operations at that airport by other than helicopters as follows:

NOTE–
14 CFR Part 91 does not prohibit helicopter Special VFR flights when visibility is less than 1 mile.

1. Inform departing aircraft that ground visibility is less than 1 mile and that a clearance cannot be issued.

PHRASEOLOGY–
(Location) VISIBILITY (value). A−T−C UNABLE TO ISSUE DEPARTURE CLEARANCE.

2. Inform arriving aircraft operating outside of the surface area that ground visibility is less than 1 mile and, unless an emergency exists, a clearance cannot be issued.

PHRASEOLOGY–
(Location) VISIBILITY (value). A−T−C UNABLE TO ISSUE ENTRY CLEARANCE UNLESS AN EMERGENCY EXISTS.

3. Inform arriving aircraft operating within the surface area that ground visibility is less than 1 mile and request the pilot’s intentions. Relay the pilot’s response to the control facility immediately.

PHRASEOLOGY–
(Location) VISIBILITY (value). ADVISE INTENTIONS.

b. When weather conditions are not officially reported at an airport and the pilot advises the flight visibility is less than 1 mile, treat request for SVFR operations at that airport by other than helicopters as follows:

NOTE–
14 CFR Part 91 prescribes use of officially reported ground visibility at airports where it is provided, and landing or takeoff flight visibility where it is not, as the governing ground visibility for VFR and SVFR operations.

1. Inform departing aircraft that a clearance cannot be issued.

PHRASEOLOGY–
UNABLE TO ISSUE DEPARTURE CLEARANCE.

2. Inform arriving aircraft operating outside the surface area that unless an emergency exists, a clearance cannot be issued.

PHRASEOLOGY–
ATC UNABLE TO ISSUE ENTRY CLEARANCE UNLESS AN EMERGENCY EXISTS.

3. Request intentions of arriving aircraft operating within surface areas. Relay the pilot’s response to the control facility immediately.

PHRASEOLOGY–
ADVISE INTENTIONS.

c. Transmit a clearance to scheduled air carrier aircraft to conduct operations if ground visibility is not less than 1/2 mile.
c. AEO–100 will provide the nearest location. Have AEO–100 standby while the information is relayed to the pilot.

d. If the pilot wishes to divert to the airport location provided, obtain an estimated arrival time from the pilot and advise the person in charge of the watch.

e. After the aircraft destination has been determined, estimate the arrival time and advise AEO–100. AEO–100 will then notify the appropriate airport authority at the diversion airport. In the event the K–9 team is not available at this airport, AEO–100 will advise the air traffic facility and provide them with the secondary location. Relay this to the pilot concerned for appropriate action.

REFERENCE–
FAAO 7210.3, Para 2–1–11, Explosives Detection K–9 Teams.

5–2–12. NAVY FLEET SUPPORT MISSIONS

Handle Navy Fleet Support Missions aircraft as follows:

a. When you receive information concerning an emergency to a U.S. Navy Special Flight Number aircraft, inform the nearest ARTCC of all pertinent information.

b. Relay the words SPECIAL FLIGHT NUMBER followed by the number given as part of the routine IFR flight information.

5–2–13. COUNTRIES IN THE SPECIAL INTEREST FLIGHT PROGRAM

Upon receipt of any flight movement data on an aircraft registered in a communist–controlled country, notify the supervisor and the appropriate ARTCC immediately. Additionally, if the aircraft is making an emergency or an unscheduled landing in the United States, notify the nearest Bureau of Customs and Border Protection office.

NOTE–
Communist–controlled countries include Albania, Bulgaria, Cambodia, Peoples Republic of China, Cuba, North Korea, Outer Mongolia, Romania, Former USSR countries recognized as the Russian Federation Commonwealth of Independent States, and Socialist Republic of Vietnam.

5–2–14. MINIMUM FUEL

If an aircraft declares a state of “minimum fuel,” inform any facility to whom control jurisdiction is transferred of the minimum fuel problem and be alert for any occurrence which might delay the aircraft en route.

NOTE–
Use of the term minimum fuel indicates recognition by a pilot that the fuel supply has reached a state whereupon reaching destination, any undue delay cannot be accepted. This is not an emergency situation, but merely an advisory that indicates an emergency situation is possible should any undue delay occur. A minimum fuel advisory does not imply a need for traffic priority. Common sense and good judgment will determine the extent of assistance to be given in minimum fuel situations. If, at any time, the remaining usable fuel supply suggests the need for traffic priority to ensure a safe landing, the pilot should declare an emergency and report fuel remaining in minutes.

5–2–15. AIRCRAFT BOMB THREATS

a. When information is received from any source that a bomb has been placed on, in, or near an aircraft for the purpose of damaging or destroying such aircraft, notify the supervisor or facility manager. If the threat is general in nature, handle it as a suspicious activity. When the threat is targeted against a specific aircraft and you are in contact with that aircraft, take the following actions as appropriate:
NOTE—

1. Facility supervisors are expected to notify the appropriate offices, agencies, and operators/air carriers according to applicable plans, directives, FAA JO 7210.3, Facility Operation and Administration, or military directives.

2. Suspicious activity is covered in FAA JO 7210.3, Facility Operation and Administration. Military facilities would report a general threat through the chain of command or according to service directives.

3. A specific threat may be directed at an aircraft registry or tail number, the air carrier flight number, the name of an operator, crew member or passenger, the departure/arrival point or times, or combinations thereof.

   1. Advise the pilot of the threat.

   2. Inform the pilot that technical assistance can be obtained from an FAA aviation explosives expert.

      NOTE—An FAA aviation explosives expert is on call at all times and may be contacted by calling the FAA Operations Center, Washington, DC, (202) 267–3333, ETN 521–0111, or DSN 851–3750. Technical advice can be relayed to assist civil or military air crews in their search for a bomb and in determining what precautionary action to take if one is found.

   3. Ask if the pilot desires to climb or descend to an altitude that would equalize or reduce the outside air pressure/existing cabin air pressure differential. Obtain and relay an appropriate clearance considering MEA, MOCA, MRA, and weather.

      NOTE—Equalizing existing cabin air pressure with outside air pressure is a key step which the pilot may wish to take to minimize the damage potential of a bomb.

   4. Handle the aircraft as an emergency, and/or provide the most expeditious handling possible with respect to the safety of other aircraft, ground facilities, and personnel.

      NOTE—Emergency handling is discretionary and should be based on the situation. With certain types of threats, plans may call for a low-key action or response.

   5. Obtain and relay clearance to a new destination, if requested.

   6. When a pilot requests technical assistance or if it is apparent that such assistance is needed, do NOT suggest what actions the pilot should take concerning a bomb, but obtain the following information and notify the supervisor who will contact the FAA aviation explosives expert:

      NOTE—This information is needed by the FAA aviation explosives expert so that the situation can be assessed and immediate recommendations made to the pilot. The aviation explosives expert may not be familiar with all military aircraft configurations but can offer technical assistance which would be beneficial to the pilot:

         (a) Type, series, and model of the aircraft.

         (b) Precise location/description of the bomb device if known.

         (c) Other details which may be pertinent.

      NOTE—The following details may be of significance if known, but it is not intended that the pilot should disturb a suspected bomb/bomb container to ascertain the information:

         1. The altitude or time set for the bomb to explode.

         2. Type of detonating action (barometric, time, anti-handling, remote radio transmitter).

         3. Power source (battery, electrical, mechanical).

         4. Type of initiator (blasting cap, flash bulb, chemical).

         5. Type of explosive/incendiary charge (dynamite, black powder, chemical).

      b. When a bomb threat involves an aircraft on the ground and you are in contact with the suspect aircraft, take the following actions in addition to those discussed in the preceding paragraphs which may be appropriate:

         1. If the aircraft is at an airport where tower control or LAA is not available, or if the pilot ignores the threat at any airport, recommend that takeoff be delayed until the pilot or aircraft operator establishes that a bomb is not aboard in accordance with 14 CFR Part 121. If the pilot insists on taking off, and in your opinion the operation will not adversely affect other traffic, issue or relay an ATC clearance.

         REFERENCE—14 CFR Part 121.537.

         2. Advise the aircraft to remain as far away from other aircraft and facilities as possible, to clear the runway, if appropriate, and to taxi to an isolated or designated search area. When it is impractical or if the pilot takes an alternative action, such as parking and offloading immediately, advise other aircraft to
Section 2. Flight Plan Proposals

6–2–1. FLIGHT PLAN RECORDING

Record flight plans on FAA Form 7233–1, or electronic equivalent. Completion of all blocks or fields is not required in every case, and all items filed are not always transmitted. Use authorized abbreviations where possible. The instructions below are for completion of FAA Form 7233–1, Flight Plan. For electronic versions of flight plan forms, refer to that system’s operating instructions.

NOTE–

a. Item 1. Type of flight plan. Check the appropriate box.

b. Item 2. Aircraft Identification. Enter as follows, but do not exceed seven alphanumeric characters:

1. Civil Aircraft Including Air Carrier: Aircraft letter/digit registration including the letter T prefix for air taxi aircraft, the letter L for LIFEGUARD aircraft, or the three–letter aircraft company designator specified in FAAO JO 7340.2, Contrac–
tions followed by the trip or the flight number.

EXAMPLE–
N12345
TN5552Q
AAL192
LN751B

NOTE–
The letter L shall not be entered in Item 2 of the flight plan for air carrier or air taxi LIFEGUARD aircraft. Include the word LIFEGUARD in the remarks section of the flight plan.


(a) Use the military abbreviation followed by the last five digits of the aircraft’s number. For certain tactical mission aircraft, enter the assigned three–to–six letter code word followed by a one–to–four digit number. (See TBL 6–2–1)

(b) Aircraft carrying the President, Vice President, and/or their family members will use the identifiers in the following tables. (See TBL 6–2–2 and TBL 6–2–3)

TBL 6–2–1

<table>
<thead>
<tr>
<th>Military Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>A USAF</td>
</tr>
<tr>
<td>C Coast Guard</td>
</tr>
<tr>
<td>E Air Evacuation</td>
</tr>
<tr>
<td>G Air/Army National Guard</td>
</tr>
<tr>
<td>L LOGAIR (USAF contract)</td>
</tr>
<tr>
<td>R Army</td>
</tr>
<tr>
<td>RCH REACH (USAF Air Mobility Command)</td>
</tr>
<tr>
<td>S Special Air Mission</td>
</tr>
<tr>
<td>VM Marine Corps</td>
</tr>
<tr>
<td>VV Navy</td>
</tr>
</tbody>
</table>

TBL 6–2–2

<table>
<thead>
<tr>
<th>Service</th>
<th>President</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force</td>
<td>AF1</td>
<td>EXEC1F</td>
</tr>
<tr>
<td>Marine</td>
<td>VM1</td>
<td>EXEC1F</td>
</tr>
<tr>
<td>Navy</td>
<td>VV1</td>
<td>EXEC1F</td>
</tr>
<tr>
<td>Army</td>
<td>RR1</td>
<td>EXEC1F</td>
</tr>
<tr>
<td>Coast Guard</td>
<td>C1</td>
<td>EXEC1F</td>
</tr>
<tr>
<td>Guard</td>
<td>G1</td>
<td>EXEC1F</td>
</tr>
<tr>
<td>Commercial</td>
<td>EXEC1</td>
<td>EXEC1F</td>
</tr>
</tbody>
</table>

TBL 6–2–3

<table>
<thead>
<tr>
<th>Service</th>
<th>Vice President</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force</td>
<td>AF2</td>
<td>EXEC2F</td>
</tr>
<tr>
<td>Marine</td>
<td>VM2</td>
<td>EXEC2F</td>
</tr>
<tr>
<td>Navy</td>
<td>VV2</td>
<td>EXEC2F</td>
</tr>
<tr>
<td>Army</td>
<td>RR2</td>
<td>EXEC2F</td>
</tr>
<tr>
<td>Coast Guard</td>
<td>C2</td>
<td>EXEC2F</td>
</tr>
<tr>
<td>Guard</td>
<td>G2</td>
<td>EXEC2F</td>
</tr>
<tr>
<td>Commercial</td>
<td>EXEC2</td>
<td>EXEC2F</td>
</tr>
</tbody>
</table>

3. Canadian Military Aircraft. The abbreviations shall be followed by a number group not to exceed four digits. (See TBL 6–2–4.)

TBL 6–2–4

<table>
<thead>
<tr>
<th>Military Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFC Canadian Forces</td>
</tr>
<tr>
<td>CTG Canadian Coast Guard</td>
</tr>
</tbody>
</table>
c. Item 3. Aircraft Type. Insert the name or abbreviation (two-to-four alphanumeric characters) of the manufacturer’s or military designation. For amateur-built/experimental aircraft, use HXA, HXB, or HXC in accordance with the FAAO JO 7340.2, Contractions. Spell out aircraft type in Remarks.

1. Prefix to Aircraft Type (one-to-two alphanumerics). For IFR operations, if the aircraft’s weight class is heavy, indicate this with the prefix “H.” If a formation flight is planned, enter the number and type of aircraft; e.g., 2H/B52.

2. Suffix to Aircraft Type (one alpha character). Indicate for IFR operations the aircraft’s radar transponder, DME, or RNAV (includes LORAN) capability by adding the appropriate symbol preceded by a slant (/). (See TBL 6–2–5.)

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Aircraft Equipment Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DME</td>
<td>/A Transponder with Mode C.</td>
</tr>
<tr>
<td></td>
<td>/B Transponder with no Mode C.</td>
</tr>
<tr>
<td></td>
<td>/D No transponder.</td>
</tr>
<tr>
<td>NO DME</td>
<td>/T Transponder with no Mode C.</td>
</tr>
<tr>
<td></td>
<td>/U Transponder with Mode C.</td>
</tr>
<tr>
<td></td>
<td>/X No transponder.</td>
</tr>
<tr>
<td>TACAN ONLY</td>
<td>/M No transponder.</td>
</tr>
<tr>
<td></td>
<td>/N Transponder with no Mode C.</td>
</tr>
<tr>
<td></td>
<td>/P Transponder with Mode C.</td>
</tr>
<tr>
<td>AREA NAVIGATION (RNAV)</td>
<td>/C LORAN, VOR/DME, or INS, transponder with no Mode C.</td>
</tr>
<tr>
<td></td>
<td>/I LORAN, VOR/DME, or INS, transponder with Mode C.</td>
</tr>
<tr>
<td></td>
<td>/Y LORAN, VOR/DME, or INS with no transponder.</td>
</tr>
<tr>
<td>ADVANCED RNAV With Transponder and Mode C</td>
<td>/E Flight Management System (FMS) with DME/DME and IRU position updating.</td>
</tr>
<tr>
<td></td>
<td>/F FMS with DME/DME position updating.</td>
</tr>
</tbody>
</table>

TBL 6–2–5

Suffix to Aircraft Type

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Aircraft Equipment Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/G Global Navigation Satellite System (GNSS), including GPS or WAAS, with en route and terminal capability.</td>
</tr>
<tr>
<td></td>
<td>/R Required Navigational Performance. The aircraft meets the RNP type prescribed for the route segment(s), route(s) and/or area concerned.</td>
</tr>
</tbody>
</table>

Reduced Vertical Separation Minimum (RVSM). Prior to conducting RVSM operations within the U.S., the operator must obtain authorization from the FAA or from the responsible authority, as appropriate.

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Aircraft Equipment Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>/I</td>
<td>/E with RVSM</td>
</tr>
<tr>
<td>/K</td>
<td>/F with RVSM</td>
</tr>
<tr>
<td>/L</td>
<td>/G with RVSM.</td>
</tr>
<tr>
<td>/Q</td>
<td>/R with RVSM.</td>
</tr>
<tr>
<td>/W</td>
<td>RVSM.</td>
</tr>
</tbody>
</table>

NOTE—The /E and /F suffixes will only be used by aircraft operating to and from airports within the U.S., unless authorized by the controlling authority.


d. Item 4. True Airspeed (TAS Knots) Enter two-to-four digits for TAS in knots; M followed by three digits for Mach number; or SC for “speed classified.”

e. Item 5. Departure Point. Enter two-to-twelve alphanumerics and slant characters for name or identifier of the departure airport or point over which the flight plan is activated.

f. Item 6. Departure Time. Enter departure time in UTC.

g. Item 7. Cruising Altitude. Proposed altitude or flight level using two-to-seven characters; e.g., 80 or 080, OTP, OTP/125, VFR, ABV/060.

h. Item 8. Route of Flight. Enter identifiers for airways or jet routes to clearly indicate the proposed flight path. For direct flight, use names or identifiers of navigation aids, Navigation Reference System (NRS) waypoints, and geographical points or coordinates. If more than one airway or jet route is to be flown, clearly indicate the transition points.

NOTE—

1. On some direct flights beyond the departure center’s airspace, it may be necessary to include a fix in the adjacent center’s airspace or latitude/longitude coordi-
(c) Restrictions.

(1) If Field 02 is to be amended, no other field may be amended in the same message. If Field 02 and other fields are to be amended, send an RS message and reenter the entire corrected flight plan. If an attempt is made to amend Field 02 within a multiple amendment message or to amend Field 02 to M, the following rejection message is returned: “REJECT—INVALID AMENDMENT.”

NOTE—Alternate procedure is to send two amendments—the first amends field 2; the second amends the other field or fields.

(2) Field 07 Amendments. An attempt to amend Field 07 to anything other than a P−time is not allowed. If such an amendment is attempted, the following error message is returned: “COFIE INVALID TIME PREFIX.”

(3) Amendment to Fields 06, 07, and 10: Where Fields 06, 07, and 10 are amended with a single AM message, the following rules apply:

[a] The amended Field 06 replaces the previously stored coordination fix (Field 06).

[b] The amended Field 07, with appropriate letter prefix, replaces the previously stored coordination time (Field 07).

[c] The amended route data (Field 10) may completely replace the previously filed Field 10 or may be merged with the filed Field 10.

[d] If the last element of the amended route data is followed by a destination indicator, this last element becomes the new destination fix.

[e] When amended route data are merged with filed data, it replaces all data between the departure point and the first nonamended element remaining in the field. The last element of the amended data must match the first element of the remaining nonamended data, otherwise the following rejection message is returned: “REJECT—(last element) CANNOT MERGE.”

(4) Amendment to Field 10 Only. Except as permitted above, a Field 10 amendment must be the only field amended; no other field may be amended with the same message. Otherwise, the following is returned: “REJECT—INVALID AMENDMENT.”

3. Correction Message (CM). When the ARTCC computer detects an error in a flight plan, an error message is generated to the sender when the sender is within the departure ARTCC’s adapted boundaries.

NOTE—These procedures may not apply to all operational systems.

(a) Eligibility. CM messages may be entered only for the period for which the departure ARTCC’s program is adapted, normally 5 minutes. After that time, the flight plan in error drops out to the ARTCC Primary A position for reentry. The sender has primary responsibility for corrective action.

NOTE—Error messages are generated only on messages from sending stations within the adaptation parameters of the departure ARTCC and for only that portion of the route within that ARTCC’s adapted boundaries. Other flight plans in error are referred to a Primary A position.

(b) Format. Responses to error messages must be transmitted in the form of a CM message within the time parameters adapted for your ARTCC.

EXAMPLE—

<table>
<thead>
<tr>
<th>Sending Facility</th>
<th>MSG Type</th>
<th>MSG NR</th>
<th>Field in Error</th>
<th>Data in Error</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCA</td>
<td>Error</td>
<td>NR123</td>
<td>08</td>
<td>9A</td>
<td>FORMAT</td>
</tr>
</tbody>
</table>

CM Format:

Field 00
DCA 1820123

MSG Type Correct Data

CM 090

(e) When a CM message in response to an error message results in any change to a pilot−filed
Field 06 (Departure Point) or Field 10 (Route of Flight) once the flight plan has been accepted, an AM message must be sent to add a field 11 intra–ARTCC remark. In remarks, insert “FRC PILOT FILED (original data).”

(d) Should a “NOT YOUR CONTROL” response be received, do not retransmit the flight plan or the AM. Confirm ARTCC receipt of the flight plan or AM (FRC/REMARKS) via interphone with the Primary A position. (See TBL 6–3–3.)

TBL 6–3–3

Computer Flight Data Input

<table>
<thead>
<tr>
<th>Field</th>
<th>Element</th>
<th>Example</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Start of Message (SOM code)</td>
<td>New Line Key</td>
<td>Required for SOM recognition.</td>
</tr>
<tr>
<td>B</td>
<td>Preamble Line</td>
<td>FF KZFWQZKZ X</td>
<td>Provides priority, and addressee.</td>
</tr>
<tr>
<td>C</td>
<td>Originator</td>
<td>DTG KMLECYFY X</td>
<td>Required for ending the message header.</td>
</tr>
<tr>
<td>D</td>
<td>End of Line (New Line Key)</td>
<td>EOL.</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>End of Message (Enter Function)</td>
<td></td>
<td>End of Message.</td>
</tr>
</tbody>
</table>

6–3–4. COORDINATE RNAV ROUTES

a. When accepting flight plans containing coordinate RNAV routes, ensure that the route of flight after the departure fix is defined by latitude/longitude coordinates and a fix identifier.

b. The arrival fix must be identified by both the latitude/longitude coordinates and the fix identifier.

EXAMPLE–

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIA</td>
<td>SRQ</td>
<td>3407/10615</td>
<td>3407/11546</td>
<td>TNP</td>
<td>LAX</td>
</tr>
</tbody>
</table>

1. Departure airport.

2. Departure fix.

3. Intermediate fixes defined by latitude/longitude coordinates.

4. Arrival fix for the destination airport in terms of both the latitude/longitude coordinates and the fix identifier.

5. Destination airport.
Section 2. Overdue Aircraft Action

8–2–1. INITIAL ACTION/QALQ

a. As soon as a VFR/DVFR aircraft (military or civil) becomes overdue, the destination tie-in facility/sector (including intermediate destination tie-in facilities for military aircraft) must attempt to locate the aircraft by checking the destination airport and all adjacent airports that could accommodate the aircraft. Check appropriate ATCT facilities and ARTCC sectors through the area manager. If this communications search does not locate the aircraft, send a QALQ to the departure tie-in facility/sector and, when appropriate, the DUAT vendor or facility where the flight plan information is on file.

EXAMPLE –
FF KCOU FYX
DTG KBNAY FYX
QALQ N12345

b. If it is determined by the flight service specialist that the local field search cannot be completed before the INREQ transmission time, the QALQ must be transmitted in time to receive the information for the INREQ message. The local field search must continue without reference to time until completed.

c. Use of long distance telephone in carrying out SAR responsibilities is authorized when appropriate.

d. In the case of a U.S. registered aircraft, or any aircraft known to be piloted by or transporting U.S. citizens and en route within a foreign country or between two foreign countries, if an overdue report is received either from someone directly concerned or from aviation authorities of a foreign country, notify the Washington Communications Control Center immediately via Service B message addressed to KRWAYAYX.

e. Upon receipt of a QALQ message from the destination tie-in facility concerning a flight for which a proposed flight plan was transmitted, the facility which transmitted the proposal must immediately transmit a message to the destination tie-in facility containing all information not previously sent. After a local airport check, no further search action is required of the facility which transmitted the proposal, and no further messages will be received by this facility unless the search area extends into its flight plan area.

f. Automated systems will accept properly formatted QALQs, INREQs, ALNOTs, INCERFAs, ALERFAs and DETRESFAs and place them on the Search and Rescue list. A SAR alert may be generated at designated workstations. SAR messages must be deleted from the SAR list when the SAR is cancelled.

8–2–2. ACTION BY DEPARTURE STATION ON RECEIPT OF QALQ

Upon receipt of the QALQ inquiry, the departure tie-in facility must check locally for any information about the aircraft, and take the following action:

a. If the aircraft is located, notify the destination facility. The destination tie-in facility will close the flight plan and cancel the QALQ.

EXAMPLE –
FF KCOU FYX
DTG KPRCY FYX
QALQ N12345 C1255

d. If unable to obtain additional information transmit a message to the destination tie-in facility containing all information not previously sent. Include any verbal or written remarks made by the pilot which may be pertinent to the search. The data transmitted may be obtained from the flight plan information or any other pertinent information located in the history files. The QALQ reply must be properly formatted for automated processing.

EXAMPLE –
FF KFTW FYX
DTG KDCA FYX
QALQ N12345 C150X 110 PBF D1235 85
LIT PAH 0130/0400 CLARENCE NEWBERN
601 E 12TH MKC 555–123–4567 2 POB
WHITE/RED
NOTE—
OASIS facilities, retrieve data from the history files using the SAR Search dialog box, format the message and transmit using the Transmit Search and Rescue dialog box.

8–2–3. CANCELLATION OF THE QALQ
If the aircraft is located by the destination facility after the QALQ is sent, transmit a cancellation message addressed to all recipients of the QALQ.

EXAMPLE—
FF KSTLYFYX
DTG KHONYFYX
QALQ N12345 CNLD
Section 4. Alert Notices (ALNOTs)

8–4–1. ALNOT

If the replies to the INREQ are negative, or if the aircraft is not located within 1 hour after transmission of the INREQ, whichever occurs first, the destination station shall transmit an ALNOT.

a. Address ALNOT messages to your Regional Operations Center and those facilities within the search area. In addition, address the DUAT vendors and RCC using the collective address KSARYCYX. The search area is normally that area extending 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 the RCC or by the destination station. If the departure airport, route of flight, destination airport, or alternate airports are within 50 miles of the Great Lakes, include Cleveland AFSS as an addressee. They will relay to the Cleveland RCC.

b. Include all information in the ALNOT message that will assist in search activities (same as INREQ plus any additional information received).

EXAMPLE−

AISR
SS (appropriate ARTCC circuit codes as identified in subpara 10–1–4, other addresses as identified in subpara 8–4–1–h and KSARYCYX)
DTG KRDUYYFYX
ALNOT N12345 BE36/R 150 RDU D1840 75
RDU EWN FEXHA 2140
CLARENCE E. NEWBERN
601 E 12TH MKC 555–123–4567 2 POB
BROWN/TAN (any other information available)

M1FC
ORIGIN:RDU PRECEDENCE:SS TIME: ACK:N
ADDR:(appropriate ARTCC circuit code as identified in subpara 10–1–4, other addresses as identified in subpara 8–4–1–h and KSARYCYX
TEXT:ALNOT N12345 FR:V AT:C172/T TS:100
ALD:CRG..DAB..ORL..ISM AD:ISM TE:0400
RM:$REFUEL CRG FB:0430 AA:PD:JOHN M.
BROWN DQY 704–555–1212 NB:3 CR:W/R/B
OP: CP:KPIYEYFYX TA:291845
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:00 EQY ISM
RMKS:VNR

NOTE−
OASIS facilities, retrieve data from the history files using the SAR Search dialog box, format the message and transmit using the Transmit Search and Rescue dialog box.

c. Ten minutes after issuance of the ALNOT, call Tyndall AFB to ensure delivery of the ALNOT and to answer any inquiries. (Alaska: Call Fort Richardson, 11th RCC at (907) 428–7230, 800–420–7230, or DSN 317–384–6726.)

NOTE−
RCC (Tyndall AFB) phone numbers are:
800–851–3051 or 850–283–5955.
Defense Switching Network 523–5955.

8–4–2. ACTION UPON RECEIPT OF ALNOT

Upon receipt of an ALNOT, each station whose flight plan area extends into the ALNOT search area shall:

a. Immediately conduct a communications search of those flight plan area airports which fall within the ALNOT search area that could accommodate the aircraft and which were not checked during the INREQ search. Notify the appropriate ATCT facilities. Request the appropriate law enforcement agency to check airports which cannot be contacted otherwise. Stations that have any portion of their incoming calls and/or Service B diverted to another facility shall notify that facility of the ALNOT. The facility receiving diverted traffic shall check their records and advise of any information or contact with the aircraft.

b. Within 1 hour after receipt of the ALNOT, notify the originator of the results or status of the communications search. If the reply contains pertinent information, such as aircraft location or position report, transmit to the destination station. The destination station shall retransmit the information, as necessary, to all original addresses.

EXAMPLE−

AISR
SS KFODYFYX
DTG KANBYFYX
ALNOT N12345 FLD CK INCOMP
8−4−2. ALERT NOTICES (ALNOTs)

AISR
SS KFODYFYX
DTG KANBYFYX
ALNOT N12345 ACFT LCTD OG DHN

M1FC
ORIGIN: GFK PRECEDENCE: SS TIME: ACK: N
ADDR: COU
TEXT: ALNOT N12345 FLD CK COMPL NEG INFO
ORIGIN: GFK PRECEDENCE: SS TIME: ACK: N
ADDR: COU
TEXT: ALNOT N12345 ACFT LCTD OG DIK

c. Stations within the ALNOT search area shall record the ALNOT. (See Para 2–2−2j, Phraseology.)

d. Request search assistance from aircraft traversing the search area.

8−4−3. REPORTING ALNOT STATUS TO RCC

If the extended communications search fails to locate the aircraft or if 1 hour has elapsed since ALNOT transmission, whichever occurs first, the destination station shall call the RCC and, if appropriate, the Cleveland AFSS, which notifies the Cleveland RCC. Provide all pertinent available information about the overdue aircraft not already provided in the ALNOT to include:

a. Agency and the person calling.

b. Details of the flight plan. If the aircraft was not on a flight plan, include all the facts about the source of the report.

c. Time the last radio transmission was received, by whom, and the frequency used.

d. Last position report.

e. Whether an ELT signal was heard or reported along the route of flight.

f. Action taken and the proposed action by the reporting station.

g. Upon request, furnish positions of other aircraft known to be along or near the route of flight of the missing aircraft.

8−4−4. CANCELLATION OF ALNOT

The ALNOT remains current until the aircraft is located or the search is suspended by the RCC. The ALNOT originator shall then transmit a cancellation message with the location of the aircraft, if appropriate, addressed to all recipients of the ALNOT. Each facility shall notify all previously alerted facilities and agencies of the cancellation.

EXAMPLE−
AISR
SS (appropriate ARTCC circuit codes as identified in subpara 10−1−4c, other addresses as identified in subpara 8−4−3b and KSARYCYX)
DTG KEWNYFYX
ALNOT N12345 CNLD ACFT LCTD JAX

AISR
SS (appropriate ARTCC circuit codes as identified in para 10−1−4c, other addresses as identified in subpara 8−4−3b and KSARYCYX)
DTG KEWNYFYX
ALNOT N1513B CNLD SEARCH SUSPENDED

M1FC
ORIGIN: OLU PRECEDENCE: SS TIME: ACK: N
ADDR: (appropriate ARTCC circuit codes as identified in subpara 10−1−4c, other addresses as identified in subpara 8−4−3b and KSARYCYX)
TEXT: ALNOT N1513B CNLD ACFT LCTD MCK

NOTE−
OASIS facilities, transmit the ALNOT cancellation using the Transmit Search and Rescue dialog box.
g. Solicit from other air traffic facilities.

9–2–11. **PIREP CLASSIFICATION**

Categorize PIREPs as follows:

a. **URGENT.** The following weather phenomena shall be classified as an URGENT (UUA) PIREP:
   1. Tornadoes, funnel clouds, or waterspouts.
   2. Severe or extreme turbulence (including clear air turbulence).
   3. Severe icing.
   4. Hail.
   5. Low level wind shear. Classify LLWS PIREPs as UUA if the pilot reports air speed fluctuations of 10 knots or more. Classify reports of LLWS with air speed fluctuations less than 10 knots as routine. If air speed fluctuation is not reported, classify PIREP as UUA.
   7. Any other weather phenomena reported which are considered by the specialist as being hazardous, or potentially hazardous, to flight operations.

   **NOTE—** LLWS defined as windshear within 2,000 feet of the surface.

b. **ROUTINE.** Classify as ROUTINE (UA) all PIREPs received except those listed above.

9–2–12. **PIREP HANDLING**

Upon receipt of a PIREP, accomplish the following:

a. Urgent.
   1. Deliver to the ARTCC Weather Coordinator as soon as possible.
   2. Enter on Service A at the first opportunity.
   3. Use in weather briefings, as appropriate.

b. Routine.
   1. Transmit on Service A as soon as practical.
   2. Broadcast in accordance with established procedures in Chapter 2.
   3. Use in weather briefings, as appropriate.

9–2–13. **OFFSHORE COASTAL ROUTES**

When your station has been given responsibility for collecting offshore coastal route PIREPs:

a. Include the coastal water area when soliciting PIREPs. At least one PIREP is required hourly regardless of weather conditions.

b. Pacific. Hawaiian Island station areas coincide with the Honolulu ARTCC sectors and the entire Hawaiian area is designated as offshore areas for PIREP purposes.

   **NOTE—** The Flight Services Operations Area Office assigns PIREP responsibility for an offshore coastal area, route, or route segment to a specific station. The area assigned will be within the same ARTCC area as the station, and the station shall have adequate air–ground communications coverage over its assigned offshore area.

9–2–14. **PIREP PREPARATION**

To assure proper dissemination of PIREPs to all system users, the encoding procedures listed below shall be followed:

a. Identify each element by a Text Element Indicator (TEI).

b. Ensure each report includes TEIs for message type, location, time, altitude/flight level, type aircraft, and at least one other to describe the reported phenomena.

c. Precede each TEI, except message type, with a space and a solidus (/).

d. Follow each TEI, except altitude/flight level, with a space.

e. Insert zeros in reported values when the number of digits in the report is less than the number required by the format.

f. Use only authorized aircraft designators and contractions.

   **g.** In the location TEI, include any three–letter identifier to describe locations or routes.

h. Omit entries of TEIs, except as listed in subpara 9–2–14b, for which no data was reported.

9–2–15. **PIREP FORMAT**

Using TEIs as described below, prepare PIREPs for system entry in the following format:
a. UUA or UA. Message type – Urgent or Routine PIREP.

b. /OV.

1. Location in reference to a VHF NAVAID or an airport, using the three or four alphanumeric identifier. If appropriate, encode the identifier, then three digits to define a radial and three digits to define the distance in nautical miles.

   **EXAMPLE**—
   /OV KJFK
   /OV KJFK107080
   /OV KFMG233016/RM RNO 10SW

2. Route segment. Two or more fixes to describe a route.

   **EXAMPLE**—
   /OV KSTL−KMKC
   /OV KSTL090030−KMKC045015

c. /TM. Time that the reported phenomenon occurred or was encountered. Report time in four digits UTC.

   **EXAMPLE**—
   /TM 1315

d. /FL. Altitude/flight level. Enter the altitude in hundreds of feet (MSL) where the phenomenon was first encountered. If not known, enter UNKN. If the aircraft was climbing or descending, enter the appropriate contraction (DURC or DURD) in the remarks/RM TEI. If the condition was encountered within a layer, enter the altitude range within the appropriate TEI describing the condition.

   **EXAMPLE**—
   /FL093
   /FL310
   /FLUNKN /RM DURC

e. /TP. Type aircraft. Enter aircraft type. If not known, enter UNKN. Icing and turbulence reports must always include the type aircraft.

   **EXAMPLE**—
   /TP AEST
   /TP B74A
   /TP P28R
   /TP UNKN

f. /SK. Sky condition. Report height of cloud bases, tops, and cloud coverage as follows:

1. Enter the height of the base of a layer of clouds in hundreds of feet (MSL). Enter the top of a layer in hundreds of feet (MSL) preceded by the word “−TOP.” If reported as clear above the highest cloud layer, enter a space and “SKC” following the reported level.

   **EXAMPLE**—
   /SK OVC100−TOP110/ SKC
   /SK OVC015−TOP035/OVC230
   /SK OVC−TOP085
   /SK TOP090

2. Use authorized contractions for cloud cover.

   **EXAMPLE**—
   BKN
   FEW
   OVC
   SCT
   SKC

3. Cloud cover amount ranges will be entered with a hyphen and no spaces separating the amounts; i.e., BKN−OVC.

   **EXAMPLE**—
   /SK SCT−BKN050−TOP100
   /SK BKN−OVCUNKN−TOP060/BKN120−TOP150/ SKC

4. Unknown heights are indicated by the contraction UNKN.

   **EXAMPLE**—
   /SK OVC065−TOPUNKN

5. If a pilot indicates he/she is in the clouds, enter IMC in the remarks.

   **EXAMPLE**—
   /SK OVC065−TOPUNKN /RM IMC

6. When more than one layer is reported, separate layers by a solidus (/).

g. /WX. Flight visibility and flight weather. Report weather conditions encountered by the pilot as follows:

1. Flight visibility, if reported, will be the first entry in the /WX field. Enter as FV followed by a two–digit visibility value rounded down, if necessary, to the nearest whole statute mile and append “SM” (FV03SM). If visibility is reported as unrestricted, enter FV99SM.
PURPOSE

a. This Glossary was compiled to promote a common understanding of the terms used in the Air Traffic Control system. It includes those terms which are intended for pilot/controller communications. Those terms most frequently used in pilot/controller communications are printed in *bold italics*. The definitions are primarily defined in an operational sense applicable to both users and operators of the National Airspace System. Use of the Glossary will preclude any misunderstandings concerning the system’s design, function, and purpose.

b. Because of the international nature of flying, terms used in the Lexicon, published by the International Civil Aviation Organization (ICAO), are included when they differ from FAA definitions. These terms are followed by “[ICAO].” For the reader’s convenience, there are also cross references to related terms in other parts of the Glossary and to other documents, such as the Code of Federal Regulations (CFR) and the Aeronautical Information Manual (AIM).

c. This Glossary will be revised, as necessary, to maintain a common understanding of the system.

EXPLANATION OF CHANGES

a. Terms Added:
   WIND SHEAR ESCAPE

b. Terms Modified:
   AIRPORT LIGHTING
   NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY (NGA)

c. Editorial/format changes were made where necessary. Revision bars were not used due to the insignificant nature of the changes.
AIRCRAFT SURGE LAUNCH AND RECOVERY– Procedures used at USAF bases to provide increased launch and recovery rates in instrument flight rules conditions. ASLAR is based on:

a. Reduced separation between aircraft which is based on time or distance. Standard arrival separation applies between participants including multiple flights until the DRAG point. The DRAG point is a published location on an ASLAR approach where aircraft landing second in a formation slows to a predetermined airspeed. The DRAG point is the reference point at which MARSA applies as expanding elements effect separation within a flight or between subsequent participating flights.

b. ASLAR procedures shall be covered in a Letter of Agreement between the responsible USAF military ATC facility and the concerned Federal Aviation Administration facility. Initial Approach Fix spacing requirements are normally addressed as a minimum.

AIRMEN’S METEOROLOGICAL INFORMATION–
(See AIRMET.)

AIRMET– In-flight weather advisories issued only to amend the area forecast concerning weather phenomena which are of operational interest to all aircraft and potentially hazardous to aircraft having limited capability because of lack of equipment, instrumentation, or pilot qualifications. AIRMETs concern weather of less severity than that covered by SIGMETs or Convective SIGMETs. AIRMETs cover moderate icing, moderate turbulence, sustained winds of 30 knots or more at the surface, widespread areas of ceilings less than 1,000 feet and/or visibility less than 3 miles, and extensive mountain obscurement.
(See AWW.)
(See CONVECITIVE SIGMET.)
(See CWA.)
(See SIGMET.)
(Refer to AIM.)

AIRPORT– An area on land or water that is used or intended to be used for the landing and takeoff of aircraft and includes its buildings and facilities, if any.

AIRPORT ADVISORY AREA– The area within ten miles of an airport without a control tower or where the tower is not in operation, and on which a Flight Service Station is located.
(See LOCAL AIRPORT ADVISORY.)
(Refer to AIM.)

AIRPORT ARRIVAL RATE (AAR)– A dynamic input parameter specifying the number of arriving aircraft which an airport or airspace can accept from the ARTCC per hour. The AAR is used to calculate the desired interval between successive arrival aircraft.

AIRPORT DEPARTURE RATE (ADR)– A dynamic parameter specifying the number of aircraft which can depart an airport and the airspace can accept per hour.

AIRPORT ELEVATION– The highest point of an airport’s usable runways measured in feet from mean sea level.
(See TOUCHDOWN ZONE ELEVATION.)
(See ICAO term AERODROME ELEVATION.)

AIRPORT/FACILITY DIRECTORY– A publication designed primarily as a pilot’s operational manual containing all airports, seaplane bases, and heliports open to the public including communications data, navigational facilities, and certain special notices and procedures. This publication is issued in seven volumes according to geographical area.

AIRPORT LIGHTING– Various lighting aids that may be installed on an airport. Types of airport lighting include:

a. Approach Light System (ALS)– An airport lighting facility which provides visual guidance to landing aircraft by radiating light beams in a directional pattern by which the pilot aligns the aircraft with the extended centerline of the runway on his/her final approach for landing. Condenser-Discharge Sequential Flashing Lights/Sequenced Flashing Lights may be installed in conjunction with the ALS at some airports. Types of Approach Light Systems are:

1. ALSF-1– Approach Light System with Sequenced Flashing Lights in ILS Cat-I configuration.

2. ALSF-2– Approach Light System with Sequenced Flashing Lights in ILS Cat-II configuration. The ALSF-2 may operate as an SSALR when weather conditions permit.

3. SSALF– Simplified Short Approach Light System with Sequenced Flashing Lights.
4. SSALR—Simplified Short Approach Light System with Runway Alignment Indicator Lights.

5. MALSF—Medium Intensity Approach Light System with Sequenced Flashing Lights.

6. MALSR—Medium Intensity Approach Light System with Runway Alignment Indicator Lights.

7. RLLS—Runway Lead-in Light System
   Consists of one or more series of flashing lights installed at or near ground level that provides positive visual guidance along an approach path, either curving or straight, where special problems exist with hazardous terrain, obstructions, or noise abatement procedures.

8. RAIL—Runway Alignment Indicator Lights—Sequenced Flashing Lights which are installed only in combination with other light systems.

9. ODALS—Omnidirectional Approach Lighting System consists of seven omnidirectional flashing lights located in the approach area of a nonprecision runway. Five lights are located on the runway centerline extended with the first light located 300 feet from the threshold and extending at equal intervals up to 1,500 feet from the threshold. The other two lights are located, one on each side of the runway threshold, at a lateral distance of 40 feet from the runway edge, or 75 feet from the runway edge when installed on a runway equipped with a VASI.
   (Refer to FAAO JO 6850.2, VISUAL GUIDANCE LIGHTING SYSTEMS.)

b. Runway Lights/Runway Edge Lights—Lights having a prescribed angle of emission used to define the lateral limits of a runway. Runway lights are uniformly spaced at intervals of approximately 200 feet, and the intensity may be controlled or preset.

c. Touchdown Zone Lighting—Two rows of transverse light bars located symmetrically about the runway centerline normally at 100 foot intervals. The basic system extends 3,000 feet along the runway.

d. Runway Centerline Lighting—Flush centerline lights spaced at 50-foot intervals beginning 75 feet from the landing threshold and extending to within 75 feet of the opposite end of the runway.

e. Threshold Lights—Fixed green lights arranged symmetrically left and right of the runway centerline, identifying the runway threshold.

f. Runway End Identifier Lights (REIL)—Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.

g. Visual Approach Slope Indicator (VASI)—An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that he/she is “on path” if he/she sees red/white, “above path” if white/white, and “below path” if red/red. Some airports serving large aircraft have three-bar VASIs which provide two visual glide paths to the same runway.

h. Precision Approach Path Indicator (PAPI)—An airport lighting facility, similar to VASI, providing vertical approach slope guidance to aircraft during approach to landing. PAPIs consist of a single row of either two or four lights, normally installed on the left side of the runway, and have an effective visual range of about 5 miles during the day and up to 20 miles at night. PAPIs radiate a directional pattern of high intensity red and white focused light beams which indicate that the pilot is “on path” if the pilot sees an equal number of white lights and red lights, with white to the left of the red; “above path” if the pilot sees more white than red lights; and “below path” if the pilot sees more red than white lights.

i. Boundary Lights—Lights defining the perimeter of an airport or landing area.
   (Refer to AIM.)

AIRPORT MARKING AIDS—Markings used on runway and taxiway surfaces to identify a specific runway, a runway threshold, a centerline, a hold line, etc. A runway should be marked in accordance with its present usage such as:


b. Nonprecision instrument.

c. Precision instrument.
   (Refer to AIM.)

AIRPORT REFERENCE POINT (ARP)—The approximate geometric center of all usable runway surfaces.

AIRPORT RESERVATION OFFICE—Office responsible for monitoring the operation of slot controlled airports. It receives and processes requests for unscheduled operations at slot controlled airports.

AIRPORT ROTATING BEACON—A visual NAVAID operated at many airports. At civil airports,
AN/TPX-42 Interrogator System. The Navy has two adaptations of the DAIR System—Carrier Air Traffic Control Direct Altitude and Identification Readout System for Aircraft Carriers and Radar Air Traffic Control Facility Direct Altitude and Identity Readout System for land-based terminal operations. The DAIR detects, tracks, and predicts secondary radar aircraft targets. Targets are displayed by means of computer-generated symbols and alphanumeric characters depicting flight identification, altitude, ground speed, and flight plan data. The DAIR System is capable of interfacing with ARTCCs.

DIRECTION FINDER—A radio receiver equipped with a directional sensing antenna used to take bearings on a radio transmitter. Specialized radio direction finders are used in aircraft as air navigation aids. Others are ground-based, primarily to obtain a “fix” on a pilot requesting orientation assistance or to locate downed aircraft. A location “fix” is established by the intersection of two or more bearing lines plotted on a navigational chart using either two separately located Direction Finders to obtain a fix on an aircraft or by a pilot plotting the bearing indications of his/her DF on two separately located ground-based transmitters, both of which can be identified on his/her chart. UDFs receive signals in the ultra high frequency radio broadcast band; VDFs in the very high frequency band; and UVDFs in both bands. ATC provides DF service at those air traffic control towers and flight service stations listed in the Airport/Facility Directory and the DOD FLIP IFR En Route Supplement.

(See DF FIX.)
(See DF GUIDANCE.)

DIRECTLY BEHIND—An aircraft is considered to be operating directly behind when it is following the actual flight path of the lead aircraft over the surface of the earth except when applying wake turbulence separation criteria.

DISCRETE BEACON CODE—
(See DISCRETE CODE.)

DISCRETE CODE—As used in the Air Traffic Control Radar Beacon System (ATCRBS), any one of the 4096 selectable Mode 3/A aircraft transponder codes except those ending in zero zero; e.g., discrete codes: 0010, 1201, 2317, 7777; nondiscrete codes: 0100, 1200, 7700. Nondiscrete codes are normally reserved for radar facilities that are not equipped with discrete decoding capability and for other purposes such as emergencies (7700), VFR aircraft (1200), etc.

(See RADAR.)
(Refer to AIM.)

DISCRETE FREQUENCY—A separate radio frequency for use in direct pilot-controller communications in air traffic control which reduces frequency congestion by controlling the number of aircraft operating on a particular frequency at one time. Discrete frequencies are normally designated for each control sector in en route/terminal ATC facilities. Discrete frequencies are listed in the Airport/Facility Directory and the DOD FLIP IFR En Route Supplement.

(See CONTROL SECTOR.)

DISPLACED THRESHOLD—A threshold that is located at a point on the runway other than the designated beginning of the runway.

(See THRESHOLD.)
(Refer to AIM.)

DISTANCE MEASURING EQUIPMENT—Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.

(See MICROWAVE LANDING SYSTEM.)
(See TACAN.)
(See VORTAC.)

DISTRESS—A condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.

DIVE BRAKES—
(See SPEED BRAKES.)

DIVERSE VECTOR AREA—In a radar environment, that area in which a prescribed departure route is not required as the only suitable route to avoid obstacles. The area in which random radar vectors below the MVA/MIA, established in accordance with the TERPS criteria for diverse departures, obstacles and terrain avoidance, may be issued to departing aircraft.

DIVERSION (DVRSN)—Flights that are required to land at other than their original destination for reasons beyond the control of the pilot/company, e.g. periods of significant weather.

DME—
(See DISTANCE MEASURING EQUIPMENT.)
DME FIX—A geographical position determined by reference to a navigational aid which provides distance and azimuth information. It is defined by a specific distance in nautical miles and a radial, azimuth, or course (i.e., localizer) in degrees magnetic from that aid.

(See DISTANCE MEASURING EQUIPMENT.)
(See FIX.)
(See MICROWAVE LANDING SYSTEM.)

DME SEPARATION—Spacing of aircraft in terms of distances (nautical miles) determined by reference to distance measuring equipment (DME).

(See DISTANCE MEASURING EQUIPMENT.)

DOD FLIP—Department of Defense Flight Information Publications used for flight planning, en route, and terminal operations. FLIP is produced by the National Geospatial-Intelligence Agency (NGA) for world-wide use. United States Government Flight Information Publications (en route charts and instrument approach procedure charts) are incorporated in DOD FLIP for use in the National Airspace System (NAS).

DOMESTIC AIRSPACE—Airspace which overlies the continental land mass of the United States plus Hawaii and U.S. possessions. Domestic airspace extends to 12 miles offshore.

DOWNBURST—A strong downdraft which induces an outburst of damaging winds on or near the ground. Damaging winds, either straight or curved, are highly divergent. The sizes of downbursts vary from 1/2 mile or less to more than 10 miles. An intense downburst often causes widespread damage. Damaging winds, lasting 5 to 30 minutes, could reach speeds as high as 120 knots.

DOWNWIND LEG—
(See TRAFFIC PATTERN.)

DP—
(See INSTRUMENT DEPARTURE PROCEDURE.)

DRAG CHUTE—A parachute device installed on certain aircraft which is deployed on landing roll to assist in deceleration of the aircraft.

DSP—
(See DEPARTURE SEQUENCING PROGRAM.)

DT—
(See DELAY TIME.)

DTAS—
(See DIGITAL TERMINAL AUTOMATION SYSTEM.)

DUE REGARD—A phase of flight wherein an aircraft commander of a State-operated aircraft assumes responsibility to separate his/her aircraft from all other aircraft.

(See also FAAO JO 7110.65, Para 1–2–1, WORD MEANINGS.)

DUTY RUNWAY—
(See RUNWAY IN USE/ACTIVE RUNWAY/DUTY RUNWAY.)

DVA—
(See DIVERSE VECTOR AREA.)

DVFR—
(See DEFENSE VISUAL FLIGHT RULES.)

DVFR FLIGHT PLAN—A flight plan filed for a VFR aircraft which intends to operate in airspace within which the ready identification, location, and control of aircraft are required in the interest of national security.

DVRSN—
(See DIVERSION.)

DYNAMIC—Continuous review, evaluation, and change to meet demands.

DYNAMIC RESTRICTIONS—Those restrictions imposed by the local facility on an “as needed” basis to manage unpredictable fluctuations in traffic demands.
W

WA–
(See AIRMET.)
(See WEATHER ADVISORY.)

WAAS–
(See WIDE-AREA AUGMENTATION SYSTEM.)

WAKE TURBULENCE– Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash both on the ground and in the air.
(See AIRCRAFT CLASSES.)
(See JET BLAST.)
(See VORTICES.)
(Refer to AIM.)

WARNING AREA–
(See SPECIAL USE AIRSPACE.)

WAYPOINT– A predetermined geographical position used for route/instrument approach definition, progress reports, published VFR routes, visual reporting points or points for transitioning and/or circumnavigating controlled and/or special use airspace, that is defined relative to a VORTAC station or in terms of latitude/longitude coordinates.

WEATHER ADVISORY– In aviation weather forecast practice, an expression of hazardous weather conditions not predicted in the area forecast, as they affect the operation of air traffic and as prepared by the NWS.
(See AIRMET.)
(See SIGMET.)

WHEN ABLE– When used in conjunction with ATC instructions, gives the pilot the latitude to delay compliance until a condition or event has been reconciled. Unlike “pilot discretion,” when instructions are prefaced “when able,” the pilot is expected to seek the first opportunity to comply. Once a maneuver has been initiated, the pilot is expected to continue until the specifications of the instructions have been met. “When able,” should not be used when expeditious compliance is required.

WIDE-AREA AUGMENTATION SYSTEM (WAAS)– The WAAS is a satellite navigation system consisting of the equipment and software which augments the GPS Standard Positioning Service (SPS). The WAAS provides enhanced integrity, accuracy, availability, and continuity over and above GPS SPS. The differential correction function provides improved accuracy required for precision approach.

WILCO– I have received your message, understand it, and will comply with it.

WIND GRID DISPLAY– A display that presents the latest forecasted wind data overlaid on a map of the ARTCC area. Wind data is automatically entered and updated periodically by transmissions from the National Weather Service. Winds at specific altitudes, along with temperatures and air pressure can be viewed.

WIND SHEAR– A change in wind speed and/or wind direction in a short distance resulting in a tearing or shearing effect. It can exist in a horizontal or vertical direction and occasionally in both.

WIND SHEAR ESCAPE– An unplanned abortive maneuver initiated by the pilot in command (PIC) as a result of onboard cockpit systems. Wind shear escapes are characterized by maximum thrust climbs in the low altitude terminal environment until wind shear conditions are no longer detected.

WING TIP VORTICES–
(See VORTICES.)

WORDS TWICE–
a. As a request: “Communication is difficult. Please say every phrase twice.”
b. As information: “Since communications are difficult, every phrase in this message will be spoken twice.”

WORLD AERONAUTICAL CHARTS–
(See AERONAUTICAL CHART.)

WS–
(See SIGMET.)
(See WEATHER ADVISORY.)

WST–
(See CONVECTIVE SIGMET.)
(See WEATHER ADVISORY.)
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  - UA/UUA, 9–1–1, 9–2–1
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1. **PARAGRAPH NUMBER AND TITLE:** 8–2–1 INITIAL ACTION/QALQ

2. **BACKGROUND:** Alaska specific instructions for use of local group code addresses for Search and Rescue recently updated the Alaska only paragraph in FAA Order JO 7110.10. After further review, instructions on the use of the group codes and Alaska specific addressing procedures would be better included in Alaska FSIAG directives since they meet or exceed the national requirements.

3. **CHANGE:** This change removes the local Alaska specific instructions that are included in FAA Order JO 7110.10. This change cancels and incorporates N JO 7110.555, Local Search and Rescue Group Code Addresses for Alaska, effective April 25, 2011.

<table>
<thead>
<tr>
<th>OLD</th>
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<tbody>
<tr>
<td><strong>8-2-1. INITIAL ACTION/QALQ</strong></td>
<td><strong>8-2-1. INITIAL ACTION/QALQ</strong></td>
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<tr>
<td>Title thru a</td>
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<tr>
<td>e. Alaska. In addition to subparas 8–2–1a and d, address QALQ messages and replies to PAQALQG, INREQ messages and replies to PAINREQX, and ALNOT messages and replies to PAAALNOTX.</td>
<td>Delete</td>
</tr>
<tr>
<td><strong>NOTE:</strong> RCCs other than Elmendorf AFB (PAEDYCYX) are not on Service B and must be notified by telephone.</td>
<td>Delete</td>
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<tr>
<td>f and g</td>
<td>e and f</td>
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1. **PARAGRAPH NUMBER AND TITLE:** 8-4-1 ALNOT

2. **BACKGROUND:** Alaska specific instructions for use of local group code addresses for Search and Rescue were added to FAA Order JO 7110.10. After further review, instructions on the use of the group codes and Alaska specific addressing procedures would be better included in Alaska FSIAG directives since they meet or exceed the national requirements.

3. **CHANGE:**

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<tr>
<td><strong>8-4-1. ALNOT</strong></td>
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<td>Title thru a</td>
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<tr>
<td>b. Alaska. Address to PANCYGYX, PANCYAYX, and KSARYCYX. (Only AFSSs/FSSs in the ALNOT search area are required to acknowledge.)</td>
<td>Delete</td>
</tr>
<tr>
<td>e and d.</td>
<td>b and e</td>
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</tbody>
</table>
1. PARAGRAPH NUMBER AND TITLE: 9–2–12. PIREP HANDLING

2. BACKGROUND: Weather Forecast Offices (WFO) do not enter PIREPs and do not require Flight Service to manually deliver urgent pilot reports to them. WFOs receive these reports from the air route traffic control centers' weather coordinators/center weather service units by automated means.

3. CHANGE: The requirement to deliver urgent pilot reports to WFOs is deleted. This change cancels and incorporates N JO 7110.544, Pilot Report (PIREP) Handling, effective January 3, 2011.

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<td>2. Deliver to the associated WSO as soon as possible.</td>
<td>Delete</td>
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<td>3 and 4</td>
<td>2 and 3</td>
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