

**SUBJ: FLIGHT SERVICES**

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- 1. PURPOSE.** This change transmits revised pages to Order JO 7110.10T, Flight Services, and a Briefing Guide.
- 2. DISTRIBUTION.** This change is distributed to select offices in Washington headquarters, regional offices, the William J. Hughes Technical Center, and the Mike Monroney Aeronautical Center; to all air traffic field facilities and international aviation field offices; and to interested aviation public.
- 3. EFFECTIVE DATE.** August 27, 2009.
- 4. EXPLANATION OF CHANGES.** 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 information.
- 5. DISPOSITION OF TRANSMITTAL.** Retain this transmittal until superseded by a new basic order.
- 6. PAGE CONTROL CHART.** See the Page Control Chart attachment.



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Date: JUN 18 2009



## Flight Services Explanation of Changes

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

**a. 1-3-2. DUTY PRIORITY and  
4-1-1. INFLIGHT SERVICES**

The statement concerning “NAVAID monitoring and restoration” is removed from the paragraph. Also, LAA is spelled out as “airport advisories” to include local and remote advisories.

**b. 3-2-1. CONDUCT OF STANDARD  
BRIEFING**

References to Prohibited Areas P-40, P-49, P-56, and the Special Flight Rules Area for Washington DC, are relocated. References to local NOTAMs, OASIS, M1FC, SUA/ISE, and non-automated Alaska facilities are deleted. In addition, editorial changes are made.

**c. 4-4-1. GENERAL**

This change adds guidance to flight service stations where AFIS and other Airport Advisory Services are provided.

**d. 6-1-5. TELEPHONE REQUESTS FOR ATC  
CLEARANCES**

This new paragraph explains the rationale for the procedure; expands the definition of “city” to include Alaskan villages and other remote locations; and, refers

the specialist to paragraph 4-3-7 for guidance on relaying ATC clearances.

**e. 6-2-1. FLIGHT PLAN RECORDING**

This change adds a note explaining when an international flight plan form will be used to file a flight plan in domestic U.S. airspace. All references to M1FC and OASIS are deleted, and “OD” is added to Table 6-2-5.

**f. 13-1-1. PURPOSE;  
13-1-2. DUTIES;  
13-1-3. MALFUNCTIONS;  
13-1-4. AIRCRAFT REPORTED  
MALFUNCTIONS;  
13-1-5. ADJUSTMENT TO NAVAIDS;  
13-1-6. NAVAID FLIGHT CHECK, and  
13-1-7. MONITORING OF NAVAIDS BY  
TECHNICAL OPERATIONS SERVICES  
PERSONNEL**

The paragraphs of Chapter 13, which address NAVAID monitoring, are deleted. Paragraph 13-1-4, Aircraft Reported Malfunctions, is revised and relocated to Chapter 4, Inflight Services, Section 1, General. Paragraph 13-1-6, NAVAID Flight Check, is also relocated to Chapter 4, Section 1, General.



## PAGE CONTROL CHART

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## Section 3. Responsibility

### 1-3-1. PROCEDURAL APPLICATIONS

Apply the procedures in this order, except when other procedures are contained in a letter of agreement (LOA) or other appropriate FAA documents, provided they only supplement this order and any standards they specify are not less than those in this order.

**NOTE—**

1. *Pilots are required to abide by applicable provisions of 14 CFR or any other pertinent regulations regardless of the application of any procedure in this order.*

2. *FAAO JO 7210.3, Facility Operation and Administration, contains administrative instructions pertaining to these letters and documents.*

### 1-3-2. DUTY PRIORITY

Because there are many variables involved, it is impossible to provide a standard list of duty priorities that apply to every situation. Each set of circumstances must be evaluated on its own merit, and when more than one action is required, personnel shall exercise their best judgment based on the facts and circumstances known to them. Action which appears most critical from a safety standpoint should be performed first.

a. The following order of duty priorities is offered as a guideline.

1. Emergency Situations.
2. Inflight Services.
3. Preflight Services.

b. Emergency situations are those where life or property is in immediate danger. Inflight services are those provided to or affecting aircraft in flight or otherwise operating on the airport surface. This includes services to airborne aircraft, such as airport advisories, delivery of ATC clearances, advisories or requests, issuance of military flight advisory messages, EFAS, NOTAM, SAR communications searches, flight plan handling, transcribed or live broadcasts, weather observations, PIREPs, and pilot briefings. Preflight services are those which directly affect aircraft operations but which are provided prior to actual departure and usually by telephone. These include pilot briefings, recorded data, flight plan

filing/processing, and aircraft operational reservations.

### 1-3-3. DUTY FAMILIARIZATION AND TRANSFER OF POSITION RESPONSIBILITY

The transfer of position responsibility shall be accomplished in accordance with appropriate facility directives each time the operational responsibility for a position is transferred from one specialist to another. The relieving specialist and the specialist being relieved shall share equal responsibility for the completeness and accuracy of the position relief briefing.

a. *Purpose.* This para prescribes the method and the step-by-step process for conducting a position relief briefing and transferring position responsibility from one specialist to another.

b. *Discussion.*

1. In all operational facilities, the increase in traffic density and the need for the expeditious movement of air traffic without compromising safety have emphasized the importance of the position relief process. Major problems occur whenever there is a heavy reliance upon memory unsupported by routines or systematic reminders. This procedure addresses the complete task of transferring position responsibility and the associated relief briefing.

2. Position relief unavoidably provides added workload for specialists at the time of relief. The intent of this procedure is to make the transfer of position responsibility take place smoothly and to ensure a complete transfer of information with a minimum amount of workload. The method takes advantage of a self-briefing concept in which the relieving specialist obtains needed status information by reading from the Status Information Areas to begin the relief process. Up-to-the-minute information relating to the provision of flight services to pilots and aircraft in flight requires verbal exchanges between specialists during the relief process. The method also specifies the point when the transfer of position responsibility occurs.

3. In the final part of the relief process, the specialist being relieved monitors and reviews the

position to ensure that nothing has been overlooked or incorrectly displayed and that the transfer of position responsibility occurred with a complete briefing.

**c. Terms.** The following terms are important for a complete understanding of this procedure:

**1. Status Information Areas.** Manual or automated displays of the current status of position-related equipment and operational conditions or procedures.

**2. Written Notes.** Manually recorded items of information kept at designated locations on the positions of operation are elements of Status Information Areas.

**3. Checklist.** An ordered listing of items to be covered in a position relief.

**d. Precautions.**

**1.** Specialists involved in the position relief process should not rush or be influenced to rush.

**2.** During position operation, each item of status information which is or may be an operational factor for the relieving specialist should be recorded as soon as it is operationally feasible so that it will not be forgotten or incorrectly recorded.

**3.** Extra care should be taken when more than one specialist relieves or is being relieved from a position at the same time; e.g., combining or decombining positions.

**e. Responsibilities.** The specialist being relieved shall be responsible for ensuring that any pertinent status information of which he/she is aware is relayed to the relieving specialist and is either:

**1.** Accurately displayed in the Status Information Areas for which he/she has responsibility, or

**2.** Relayed to the position having responsibility for accurately displaying the status information. Prior to accepting responsibility for a position, the relieving specialist shall be responsible for ensuring that any unresolved questions pertaining to the operation of the position are resolved. The specialists engaged in a position relief shall conduct the relief process at the position being relieved, unless other procedures have been established and authorized by the facility air traffic manager.

**f. Step-By-Step Process of Position Relief.**

## 1. Preview of the Position

### RELIEVING SPECIALIST

**(a)** Follow the checklist and review the Status Information Areas.

#### NOTE—

*This substep may be replaced by an authorized pre duty briefing provided an equivalent review of checklist items is accomplished.*

**(b)** Observe position equipment, operational situation, and the work environment.

**(c)** Listen to voice communications and observe other operational actions.

**(d)** Observe current and pending aircraft and vehicular traffic and correlate with flight and other movement information.

**(e)** Indicate to the specialist being relieved that the position has been previewed and that the verbal briefing may begin.

#### NOTE—

*Substeps (b), (c), and (d) may be conducted concurrently or in order.*

## 2. Verbal Briefing

### SPECIALIST BEING RELIEVED

**(a)** Review with the relieving specialist, the checklist, Status Information Areas, written notes, and other prescribed sources of information, and advise of known omissions, updates, and inaccuracies. Also brief the relieving specialist on the abnormal status of items not listed on the Status Information Areas, as well as on any items of special operational interest calling for verbal explanation or additional discussion.

**(b)** Brief on traffic, if applicable.

**(c)** Completely answer any questions asked.

**(d)** Observe overall position operation. If assistance is needed, provide or summon it as appropriate.

**(e)** Sign off the position in accordance with existing directives or otherwise indicate that the relief process is complete.

#### REFERENCE—

*FAAO JO 7210.3, Para 2-2-3, Duty Familiarization and the Transfer of Position Responsibility.*

### RELIEVING SPECIALIST

**(f)** Ask questions necessary to ensure a complete understanding of the operations situation.

## Section 2. Preflight Pilot Briefing

### 3-2-1. CONDUCT OF STANDARD BRIEFING

a. Brief by translating, interpreting, and summarizing available data for the intended flight. Do not read individual weather reports or forecasts unless, in your judgment, it is necessary to emphasize an important point or unless specifically requested to do so by the pilot. Obtain the following information if it is pertinent and not evident or already known:

1. Type of flight planned.
2. Aircraft identification or pilot's name.
3. Aircraft type.
4. Departure point.
5. Route of flight.
6. Destination.
7. Flight altitude(s).
8. ETD and ETE.

Pilot briefer shall issue the following cautionary advisory to a pilot planning a flight outside of United States controlled airspace, unless the pilot states "I have the international cautionary advisory."

#### **PHRASEOLOGY—**

*CHECK DATA AS SOON AS PRACTICAL AFTER ENTERING FOREIGN AIRSPACE, AS OUR INTERNATIONAL DATA MAY BE INACCURATE OR INCOMPLETE.*

b. Using all sources of weather and aeronautical information, provide the following data when it is applicable to the proposed flight. Provide items 1 through 8 in the sequence listed except as noted.

1. *Adverse Conditions.* Include this element when meteorological or aeronautical conditions are reported or forecast that might influence the pilot to alter the proposed flight. Emphasize conditions that are particularly significant, such as low level wind shear, thunderstorms, reported icing, frontal zones along the route of flight, airport closures, air traffic delays, etc. Weather advisories (WS, WA, WST, CWA, and AWW) shall be given by stating the type of advisory followed by the pertinent information.

#### **EXAMPLE—**

*"An AIRMET is in effect until 1400 for possible moderate turbulence below 10,000 feet over the mountainous area of southern California."*

#### **2. VFR Flight Not Recommended (VNR).**

Include this statement when VFR flight is proposed and sky conditions or visibilities are present or forecast, surface or aloft, that in your judgment would make flight under visual flight rules doubtful. Describe the conditions, affected locations, and times.

#### **EXAMPLE—**

*"There are broken clouds along the entire route between nine and one one thousand feet at the present time. With the approach of a cold front, these clouds are forecast to become overcast and to lower to below seven thousand with mountains and passes becoming obscured. V-F-R flight is not recommended between Salt Lake City and Grand Junction after two two zero zero ZULU."*

*"V-F-R flight is not recommended in the Seattle area until early afternoon. The current weather at Seattle is indefinite ceiling three hundred sky obscured, visibility one, mist, and little improvement is expected before one eight zero zero ZULU."*

#### **NOTE—**

*This recommendation is advisory in nature. The decision as to whether the flight can be conducted safely rests solely with the pilot.*

3. *Synopsis.* Provide a brief statement describing the type, location, and movement of weather systems and/or air masses which might affect the proposed flight. This element may be combined with adverse conditions and/or the VNR element, in any order, when it will help to more clearly describe conditions.

4. *Current Conditions.* Summarize from all available sources reported weather conditions applicable to the flight. This element may be omitted if the proposed time of departure is beyond 2 hours unless the information is requested by the pilot.

#### **NOTE—**

1. *If the surface meteorological observation originates from an automated observation facility and is presented as a singular report, follow the location announcement with the phrase "AUTOMATED."*

**2.** *The briefer should provide sufficient automated surface observation information when requested by the pilot or when deemed pertinent to the briefing.*

**5. En Route Forecast.** Summarize from appropriate data (Area Forecast) TAFs, prognosis charts, weather advisories, etc., forecast conditions applicable to the proposed flight. Provide the information in a logical order; i.e., climb out, en route, and descent.

**6. Destination Forecast.** Provide the destination forecast including significant changes expected within 1 hour before and after the ETA.

**7. Winds Aloft.** Provide forecast winds aloft for the proposed route using degrees of the compass. Interpolate wind directions and speeds between levels and stations as necessary. Provide temperature information on request.

**NOTE—**

*OASIS will interpolate wind direction and speed between levels and stations as necessary if an altitude is provided.*

**8. Notices to Airmen (NOTAM).** Provide NOTAM information pertinent to the flight:

(a) NOTAM (D). All NOTAMs (D), including Special Use Airspace (SUA) NOTAMs for Restricted Areas, Aerial Refueling, and Night Vision Goggles (NVG).

**NOTE—**

*Other SUA NOTAMs (D), such as Military Operations Area (MOA), Military Training Route (MTR) and Warning Area NOTAMs, are considered “upon request” briefing items as indicated in paragraph 3–2–1b12(a).*

(b) Prohibited Areas P–40, P–49, P–56 and the Special Flight Rules Area (SFRA) for Washington, DC.

(c) Flight Data Center (FDC) NOTAMs not already carried in the Notices to Airmen publication.

(d) Combine this element with current conditions when it would be logical and advantageous to do so.

**9. ATC Delays.** Inform the pilot of any known ATC delays and/or any flow control advisories on hand that might affect the proposed flight.

**10. Request for PIREPs.** Include this element when, in your judgment, a report of actual inflight conditions is beneficial or when conditions meet criteria for solicitation of PIREPs (para 9–2–5).

Advise the pilot to contact Flight Watch or Flight Service to report en route conditions.

**11. EFAS.** When appropriate, inform pilots of the availability of Flight Watch for weather updates; e.g., thunderstorms, icing.

**12. Upon Request.** Provide any information requested by the pilot, including, but not limited to:

(a) Special Use Airspace, except those listed in paragraph 3–2–1b8(a), SUA related airspace (i.e., Air Traffic Control Assigned Airspace (ATCAA)) and military training route (MTR) activity. For all SUA and MTR data requests, advise the pilot that information may be updated periodically and to contact the appropriate ATC facility for additional information while in flight.

**NOTE—**

*For the purpose of this paragraph, SUA and related airspace includes the following types of airspace: Alert Area, Military Operations Area (MOA), Warning Area and Air Traffic Control Assigned Airspace (ATCAA). MTR data includes the following types of airspace: IFR Training Routes (IR), VFR Training Routes (VR), and Slow Training Routes (SR).*

(b) Approximate density altitude data.

(c) Information regarding such items as air traffic service and rules, customs/immigration procedures, ADIZ rules, SAR, Flight Watch, etc.

(d) LORAN C NOTAMs.

**REFERENCE—**

*FAAO 7930.2, Para 5–3–7o, NOTAM (D) NAVAID.*

(e) Military NOTAMs.

**REFERENCE—**

*FAAO 7930.2, Para 8–3–1, Military NOTAM Availability.*

(f) GPS Receiver Autonomous Integrity Monitoring (RAIM) Aeronautical Information. RAIM information shall be provided 1–hour before to 1–hour after the ETA, or a time frame requested by the pilot.

(g) Runway friction measurement NOTAMs.

(h) Special FDC instrument approach procedure changes.

## **3–2–2. CONDUCT OF ABBREVIATED BRIEFING**

Provide an abbreviated briefing when a pilot requests information to supplement mass disseminated data; update a previous briefing; or when the pilot requests that the briefing be limited to specific information.

Pilot briefers shall issue the following cautionary advisory to a pilot planning a flight outside of United States controlled airspace, unless the pilot states “I have the international cautionary advisory”:

**PHRASEOLOGY—**

*CHECK DATA AS SOON AS PRACTICAL AFTER ENTERING FOREIGN AIRSPACE, AS OUR INTERNATIONAL DATA MAY BE INACCURATE OR INCOMPLETE.*

Conduct abbreviated briefings as follows:

**a.** When a pilot desires specific information only, provide the requested information. If adverse conditions are reported or forecast, advise the pilot of this fact. Provide details on these conditions in accordance with subpara 3-2-1b1, at the pilot’s request.

**b.** When a pilot requests an update to a previous briefing, obtain from the pilot the time the briefing was received and necessary background information. To the extent possible, limit the briefing to appreciable changes in meteorological and aeronautical conditions since the previous briefing.

**c.** When a pilot requests information to supplement data obtained through AFSS/FSS mass dissemination media, obtain pertinent background information, the specific items required by the pilot, and provide the information in the sequence listed in subpara 3-2-1b.

**d.** Solicit PIREPs in accordance with subpara 3-2-1b10.

**e.** When a pilot requests to file a flight plan only, ask if he/she requires the latest information on adverse conditions along the route of flight. If he/she responds “yes”:

**1.** Provide information on adverse conditions pertinent to the intended route of flight.

**2.** Provide details on these conditions in accordance with subpara 3-2-1b1.

### **3-2-3. CONDUCT OF OUTLOOK BRIEFING**

**a.** Provide an outlook briefing when the proposed departure is 6 hours or more from the time of the briefing. Conduct the briefing in accordance with subpara 3-2-1b, but limit the briefing to forecast data applicable to the proposed flight. Omit items 2, 4, and 7 through 11 unless specifically requested by the pilot or deemed pertinent by the briefer.

**b.** When the proposed flight is scheduled to be conducted beyond the valid time of the available forecast material, provide a general outlook and then advise the pilot when complete forecast data will be available for the proposed flight. Upon request transfer the call to, or furnish the telephone number of the appropriate NWS office.



# Chapter 4. Inflight Services

## Section 1. General

### 4-1-1. INFLIGHT SERVICES

Inflight services are those provided to or affecting aircraft inflight or otherwise operating on the airport surface. This includes services to airborne aircraft, such as airport advisories, delivery of ATC clearances, advisories or requests, issuance of military flight advisory messages, EFAS, NOTAM, SAR communications searches, flight plan handling, transcribed or live broadcast, weather observations, PIREPs, and pilot briefings.

**NOTE—**

*Provide inflight services in accordance with the procedures in this chapter to aircraft on a “first come, first served” basis, as circumstances permit.*

### 4-1-2. EN ROUTE FLIGHT ADVISORY SERVICE (EFAS/FLIGHT WATCH)

A service specifically designed to provide, upon pilot request, timely weather information pertinent to the type of flight, intended route of flight, and altitude.

**NOTE—**

*The facilities providing this service are listed in the Airport/Facility Directory (A/FD).*

### 4-1-3. OPERATIONAL PRIORITY

a. Emergency situations are those where life or property are in immediate danger. Aircraft in distress have priority over all other aircraft.

b. Provide priority service to civilian air ambulance (LIFEGUARD), or military air evacuation (AIR EVAC, MED EVAC) flights. When requested by the pilot, provide notifications to expedite ground handling of patients, vital organs, or urgently needed medical materials. Assist the pilots of air ambulance/evacuation aircraft to avoid areas of significant weather and turbulent conditions.

**NOTE—**

*Air carrier/Air taxi usage of “Lifeguard” call sign indicates that operational priority is requested.*

c. Provide maximum assistance to search and rescue (SAR) aircraft performing a SAR mission.

d. Provide special handling as required to expedite Flight Check and SAFI aircraft.

### 4-1-4. INFLIGHT WEATHER BRIEFING

Upon request, provide the pilot with an inflight weather briefing, in accordance with the procedure outlined in Chapter 3, Section 2. The following cautionary advisory shall be issued to a pilot planning a flight outside of United States controlled airspace, unless the pilot states “I have the international cautionary advisory.”

**PHRASEOLOGY—**

*CHECK DATA AS SOON AS PRACTICAL AFTER ENTERING FOREIGN AIRSPACE, AS OUR INTERNATIONAL DATA MAY BE INACCURATE OR INCOMPLETE.*

### 4-1-5. INFLIGHT EQUIPMENT MALFUNCTIONS

a. Inflight equipment malfunctions include partial or complete failure of equipment which may affect either safety and/or the ability of the flight to proceed. Specialists may expect reports from pilots regarding VOR, ADF, Low Frequency Navigation Receivers, impairment of air-ground communications capability, or other equipment deemed appropriate by the pilot.

b. When a pilot reports a flight equipment malfunction, determine the nature and extent of any assistance desired.

c. Provide maximum assistance possible consistent with equipment, workload, and any special handling requested.

d. Relay to other specialists or facilities who will subsequently handle the aircraft all pertinent details concerning the aircraft and any special handling requested or being provided.

### 4-1-6. AIRCRAFT REPORTED NAVAID MALFUNCTIONS

a. Aircraft reported NAVAID malfunctions are subject to varying circumstances. When an aircraft

reports a ground-based NAVAID malfunction, take the following action:

1. Request a report from a second aircraft.
2. If the second aircraft reports normal operations, if able, inform the first aircraft. Record the incident on FAA Form 7230-4.
3. If the second aircraft confirms the malfunction:
  - (a) Notify the appropriate IFR control facility or sector.
  - (b) Notify Technical Operations personnel.
  - (c) Take NOTAM action, if necessary.
  - (d) Record the incident on FAA Form 7230-4.
4. In the absence of a second aircraft report:
  - (a) Notify Technical Operations and advise what time the initial aircraft reported the failure and when a second aircraft report might be obtained.
  - (b) Record the incident on FAA Form 7230-4.
- b. When an aircraft reports a GPS/GNSS anomaly:
  1. Request the following information:
    - (a) Aircraft call sign and type aircraft.
    - (b) Date and time of the occurrence.
    - (c) Location of anomaly.
    - (d) Altitude.
  2. Record the incident on FAA Form 7230-4.

3. Forward this information to the Traffic Management Unit (TMU) and Technical Operations personnel.

c. When an aircraft reports a WAAS anomaly, request the following information and/or take the following actions:

1. Determine if the pilot has lost all WAAS service.

**EXAMPLE–**

*“Are you receiving any WAAS service?”*

2. If the pilot reports receipt of any WAAS service, acknowledge the report and continue normal operations.
3. If the pilot reports loss of all WAAS service, report as a GPS anomaly using procedures in paragraph 4-1-6b.

#### 4-1-7. NAVAID FLIGHT CHECK

Provide maximum assistance to aircraft engaged in flight inspection of NAVAIDs. Unless otherwise agreed to, maintain direct contact with the pilot and provide information regarding known traffic in the area and request the pilot's intentions.

**NOTE–**

1. *Many flight inspections are accomplished using automatic recording equipment. An uninterrupted flight is necessary for successful completion of the mission. The workload for the limited number of aircraft engaged in these activities requires strict adherence to a schedule.*
2. *Flight inspection operations which require special participation of ground personnel, specific communications, or radar operation capabilities are considered to require special handling. These flights are coordinated with appropriate facilities before departure.*

## Section 4. Airport Advisory Services

### 4-4-1. GENERAL

Airport advisory services are provided at airports without an operating control tower that have certified automated weather reporting via voice capability.

**a.** Local Airport Advisory (LAA) is a service provided by facilities, which are located on the landing airport, have ground-to-air communication on a discrete frequency or the tower frequency when the tower is closed, automated weather reporting with voice broadcasting, and a continuous ASOS/AWOS data display, other continuous direct reading instruments, or manual observations available to the specialist.

**b.** Remote Airport Advisory (RAA) is a remote service which may be provided by facilities, which are not located on the landing airport, but have ground-to-air communication on a discrete frequency or the tower frequency when the tower is closed, automated weather reporting with voice available to the pilot at the landing airport, and a continuous ASOS/AWOS data display, other direct reading instruments, or manual observation is available to the AFSS specialist.

**c.** Remote Airport Information Service (RAIS) is a temporary service provided by facilities, which are not located on the landing airport, but have communication capability and automated weather reporting available to the pilot at the landing airport.

**d.** Final Guard Service is a value added service provided in conjunction with LAA/RAA only during periods of significant and fast changing weather conditions that may affect landing and takeoff operations.

**1.** When the pilot reports “On final” or “Taking the active runway,” the specialist shall provide the current wind direction, speed, and altimeter.

**2.** If during the operation conditions change and in the specialist’s opinion, the changing information might be useful to the pilot, the specialist shall broadcast the information in the blind.

**3.** Pilots will not be required or expected to acknowledge the broadcast.

**NOTE–**

*FAA policy requires pilots to access the current automated*

*weather prior to requesting any remote ATC services at nontowered airports. It is the pilot’s responsibility to comply with the Federal Aviation Regulations (FARs) if landing clearance is required.*

**e.** During initial contact if the pilot reports: “I have the automated weather,” do not provide weather information unless specifically requested by the pilot or a special report is transmitted.

**EXAMPLE–**

**RAIS:**

*Pilot – “Green Bay radio, Cessna 12RG, ten northeast, landing Eau Claire, request airport information, I have the automated weather.”*

*FSS – “Cessna 12RG, Eau Claire airport information, your traffic is a Cessna 172 entering downwind and a Convair 660 reported on final, both one minute ago. There is an airport maintenance vehicle . . .”*

**f.** If additional pilots initiate contact a short time after LAA/RAIS/RAA was provided, determine if the new pilot(s) copied the information when it was provided.

**1.** If the new pilot responds in the affirmative, do not repeat the information.

**2.** If the new pilot acknowledges the LAA/RAIS/RAA information then requests specific information, provide only the information requested.

**NOTE–**

*The intent is to reduce frequency clutter while insuring that the pilots are aware of the situation as it changes.*

**g.** If a pilot asks for LAA/RAIS/RAA at an airport where the requested service is not available but one of the three services is available, inform the pilot about what service is available, and provide the appropriate service.

**PHRASEOLOGY–**

*(Airport name) LOCAL AIRPORT ADVISORY IS NOT AVAILABLE. REMOTE AIRPORT INFORMATION . . .*

**h.** At airports where automated current weather is available to the pilot via ASOS/AWOS voice recording:

**1.** When the pilot reports, “I have the automated weather,” provide the appropriate nonweather elements.

**2.** 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.*

3. If the pilot reports the AWOS/ASOS is out of service, provide the last reported weather available.

i. If the pilot requests special VFR clearance, provide the appropriate elements and follow the procedures in Chapter 4, Section 5, Special VFR Operations.

j. Automatic Flight Information Service (AFIS) is available, confirm receipt of the current AFIS information if the pilot does not initially state the appropriate AFIS code. Issue the current AFIS information to pilots who are unable to receive the AFIS.

**EXAMPLE–**

*“Verify you have information ALFA.”*

#### **4–4–2. LAA/RAIS/RAA ELEMENTS AND PHRASEOLOGY**

a. State the airport name and the words, Airport Advisory, Airport Information, or Remote Advisory.

**PHRASEOLOGY–**

*(Airport name), AIRPORT ADVISORY . . . or (Airport name), AIRPORT INFORMATION . . . or (Airport name), REMOTE ADVISORY . . .*

b. Provide the information as appropriate, sequencing the elements in the following manner or to best serve the current traffic situation:

1. Final Guard is a value added wind and altimeter monitoring service provided in conjunction with LAA/RAA during periods of significant and/or fast changing weather conditions that may affect landing and takeoff operations. The specialist shall monitor the remotized display of the current wind and altimeter. Provide Final Guard as follows:

(a) When the pilot reports “On final” or “Taking the active runway,” the specialist shall provide the current wind direction, speed, and altimeter.

(b) If during the landing or takeoff operation conditions change and, in the specialist’s opinion, the changing information might be useful to the pilot, the specialist shall broadcast the new wind and/or altimeter information in the blind.

(c) Pilots will not be required or expected to acknowledge the broadcast.

**PHRASEOLOGY–**

*N12RG, WIND NOW (Direction) AT (Speed).*

**NOTE–**

*FAA policy requires pilots to access the current automated weather prior to requesting any remote ATC services at nontowered airports. It is the pilot’s responsibility to comply with the FARs if landing clearance is required. Final Guard is never provided with RAIS.*

2. Favored or Designated Runway is a value added service offered in conjunction with LAA/RAA. The specialist shall check the current wind data and provide the runway information as follows:

(a) For takeoff and landing operations state the runway most nearly aligned into the wind.

(b) Inform the pilot when the current wind direction is varying enough that the selection of the favored runway may be affected, when there is more than 10 knots between peaks and lulls, or the pilot has requested the information.

(c) If there is no wind, state the runway currently in use, the runway favored by a shorter taxiway, or other local consideration.

(d) When airport management has designated a runway to be used under certain wind or other conditions (and has informed the FSS in writing) issue runway information accordingly.

(e) If the majority of the traffic has been using a runway other than the favored or designated runway, advise the pilot.

**EXAMPLE–**

*Landing airport has runways 27 (longer) and 32 with most pilots utilizing the shorter runway, “FAVORED RUNWAY 32, WINDS VARYING BETWEEN 280 AND 340, SPEED 15 GUSTING 28.”*

(f) When a pilot advises he/she will use a runway other than the favored or the designated runway, inform all known concerned traffic.

**PHRASEOLOGY–**

*ATTENTION ALL AIRCRAFT. (Aircraft type) DEPARTING/LANDING RUNWAY (number).*

(g) If a pilot requests the distance between an intersection and the runway end, furnish measured data from the local airport intersection takeoff diagram or other appropriate sources.

(h) The favored or designated runway is never provided with RAIS.

3. Traffic. Factual information about observed or reported traffic, which may constitute a collision

hazard. This may include positions of aircraft inflight and/or aircraft and vehicles operating on the airport.

**PHRASEOLOGY–**

*TRAFFIC (Aircraft type), (position), (minutes) AGO.*

**4. Altimeter Setting.**

(a) LAA/RAA: Apply special procedures when the altimeter setting is more than 31.00 inches Hg. Stations with the capability of reading altimeter settings above 31.00 inches Hg. shall issue altimeter settings.

**PHRASEOLOGY–**

*ALTIMETER IN EXCESS OF THREE ONE ZERO ZERO. HIGH PRESSURE ALTIMETER SETTING PROCEDURES ARE IN EFFECT.*

(b) RAIS: Do not provide the altimeter unless specifically requested. Then, provide the altimeter from the last official weather report.

**5. Weather.** When the pilot does not have the weather conditions, issue the last reported or known weather information as follows:

(a) LAA/RAIS/RAA:

- (1) Wind direction and speed.
- (2) Altimeter.
- (3) Ceiling and visibility to VFR aircraft when less than basic VFR conditions exist.
- (4) Visibility to VFR aircraft when it is less than three miles in any quadrant.
- (5) Touchdown RVR/RVV for the runway in use where RVR/RVV readout equipment is located at the workstation providing the service.

(6) To IFR aircraft executing an instrument approach or departure and to the appropriate control facility when visibility is less than 3 miles or when the ceiling is less than 1,000 feet or below the highest circling minimum, whichever is greater.

**6. Weather advisory alert.** Provide in accordance with subpara 4-3-5a.

**PHRASEOLOGY–**

*(Advisory description) IS CURRENT FOR (condition) OVER (area).*

**7. Density Altitude.**

(a) Facilities at airports with field elevations of 2,000 feet MSL or higher, transmit a density altitude advisory to departing general aviation

aircraft whenever the temperature reaches the criteria contained in [TBL 2-2-1](#).

**PHRASEOLOGY–**

*CHECK DENSITY ALTITUDE*

(b) Omit this advisory if pilot states the computation has been done or if the specialist is aware that a density altitude computation for that aircraft was included in the preflight briefing.

**8. Wake Turbulence.** Issue cautionary information to any aircraft if in your judgment wake turbulence may have an adverse effect on it.

**PHRASEOLOGY–**

*CAUTION WAKE TURBULENCE (traffic information).*

**NOTE–**

*Wake turbulence may be encountered by aircraft in flight as well as when operating on the airport movement area. Because wake turbulence is unpredictable, air traffic personnel are not responsible for anticipating its existence or effect.*

**9. NOTAM.** NOTAMs concerning local NAVAIDs and field conditions pertinent to flight.

**EXAMPLE–**

*“All runways covered by packed snow 6 inches deep.”*

**10. Braking Action.** Furnish braking action reports as received from pilots or airport management to all aircraft as follows:

(a) Describe braking action using the terms fair, poor, or nil. If the pilot or airport management reports braking action in other than the foregoing terms, ask them to categorize braking action in these terms.

(b) When known, include the type of aircraft or vehicle from which the report is received.

**EXAMPLE–**

*“Braking action poor.”*

*“Braking action poor, reported by a Cessna Four–Oh–One.”*

(c) If the braking action report affects only a portion of a runway, obtain enough information from the pilot or airport management to describe braking action in terms easily understood by the pilot.

**EXAMPLE–**

*“Braking action poor first half of Runway Six, reported by a Gulfstream Two.”*

*“Braking action poor Runway Two–Seven, reported by a Boeing Seven Twenty–Seven.”*

**NOTE–**

*Descriptive terms, such as first/last half of the runway,*

*should normally be used rather than landmark descriptions, such as opposite the fire station, south of a taxiway.*

**11. Runway Friction.** Provide runway friction measurement readings/values as received from airport management to aircraft as follows:

(a) At airports with friction measuring devices, provide runway friction reports, as received from airport management, to pilots. State the runway number followed by the MU number for each of the three runway zones, the time of the report in UTC, and a word describing the cause of the runway friction problem.

**EXAMPLE–**

*“Runway two seven, MU forty–two, forty–one, twenty–eight at one zero one eight ZULU, ice.”*

(b) Issue the runway surface condition and/or the runway condition reading (RCR), if provided, to all USAF and ANG aircraft. Issue the RCR to other aircraft upon request.

**EXAMPLE–**

*“Ice on runway, R–C–R zero five, patchy.”*

**NOTE–**

*USAF has established RCR procedures for determining the average deceleration readings of runways under conditions of water, slush, ice, or snow. The use of RCR code is dependent upon the pilot’s having a “stopping capability chart” specifically applicable to his/her aircraft. USAF offices furnish RCR information at airports serving USAF and ANG aircraft.*

**12.** Do not approve or disapprove simulated instrument approaches.

#### **4–4–3. CHARTS**

Keep charts depicting runways, local taxi routes, intersection takeoff information, airport traffic patterns, and instrument approach procedures convenient to the airport advisory position.

#### **4–4–4. AUTHORIZED FREQUENCIES**

**a. LAA/RAA:**

**1.** Provide LAA/RAA on the appropriate discrete frequency at nontower locations and on the tower local control frequency at an airport with a part–time tower when that facility is not operating.

**2.** If a pilot calls on another frequency, issue advisories on the frequency to which the pilot is listening, in addition to the appropriate LAA/RAA frequency.

**3.** Encourage the pilot to guard the LAA/RAA frequency or tower local control frequency within a 10–mile radius of the airport.

**NOTE–**

*In situations where the inflight position is split, advise pilot of appropriate frequency to obtain LAA/RAA/RAIS.*

**PHRASEOLOGY–**

*FOR FURTHER ADVISORY SERVICE AT (airport name), MONITOR (frequency) WITHIN ONE ZERO MILES.*

**b. RAIS:**

**1.** Provide RAIS on the existing discrete frequency located at the remote airport.

**2.** If a pilot calls and appears to be unaware that RAIS is available, offer the service.

**3.** If a pilot calls on another frequency, issue advisories on the frequency the pilot is listening, in addition to the appropriate LAA/RAA frequency.

**4.** If RAIS is requested when it is not offered, inform the pilot that the service is not available and follow para 4–4–5.

**NOTE–**

*This service is only provided at remote airports that have an existing discrete communications capability between the airport and the flight service station serving the airport and a NOTAM D announcing the availability of the service is in effect.*

#### **4–4–5. REQUEST FOR LAA/RAIS/RAA AT AIRPORTS WHERE THE SERVICES ARE UNAVAILABLE**

Advise the pilot that the requested LAA/RAIS/RAA service is not available. Provide CTAF frequency and/or the ASOS/AWOS frequency, when available. When not available, issue the last known surface condition and altimeter.

**PHRASEOLOGY–**

*(Airport name) AIRPORT ADVISORY or AIRPORT INFORMATION or REMOTE ADVISORY NOT AVAILABLE. CONTACT (airport name) CTAF (frequency).*

#### 4-4-6. TRAFFIC CONTROL

When there is no control tower in operation and a pilot appears unaware of this fact, inform him/her as follows:

**PHRASEOLOGY–**

*NO CONTROL TOWER IN OPERATION.*

#### 4-4-7. AIRCRAFT EQUIPMENT CHECKS

When requested, provide observed information.

**PHRASEOLOGY–**

*LANDING GEAR APPEARS TO BE DOWN AND IN PLACE.*

#### 4-4-8. AUTOMATIC FLIGHT INFORMATION SERVICE (AFIS) – ALASKA FSSs ONLY

Use the AFIS to provide advance non-control airport, meteorological, and pertinent NOTAM information to aircraft.

**NOTE–**

*Use of the AFIS by pilots is not mandatory, but pilots who use two-way radio communication with the FSS are urged to use the service.*

a. Begin each new AFIS message with the airport/facility name and a phonetic alphabet letter. The phonetic alphabet letter shall also be spoken at the end of the message and be used sequentially, beginning with “Alfa,” ending with “Zulu.” Full-time facilities shall repeat the letter without regard to the beginning of a new day. Part-time facilities shall identify the first resumed broadcast message with “Alfa.”

b. The AFIS recording shall be reviewed for completeness, accuracy, speech rate, and proper enunciation before being transmitted.

c. Maintain an AFIS message that reflects the most current local airport information.

1. Make a new AFIS recording when any of the following occur:

(a) Upon receipt of any new official weather, regardless of any change in values.

(b) When runway braking action reports are received that indicate runway braking is worse than that which was included in the current AFIS broadcast.

(c) When there is a change in any other pertinent data for the airport or surrounding area, such as change in favored runway, new or canceled NOTAMs, AIRMETs, SIGMETs, CWAs, PIREPs, or other information that facilitates the repetitive transmission of essential but routine information.

2. Data may be omitted because of rapidly changing weather conditions or other circumstances when deemed necessary by the supervisor or controller-in-charge. When this occurs, the AFIS shall state the name of the appropriate facility to contact (and frequency, if different from airport CTAF) to obtain the missing data.

3. Broadcast, on the LAA frequency, the new airport AFIS phonetic alphabet identifier after each new recording.

4. After establishing two-way radio communication, if the pilot does not state that he/she has the current AFIS code, the specialist shall either:

(a) Use LAA procedures to issue pertinent AFIS information, or

(b) Advise the pilot to return to the AFIS frequency.

Specialists shall provide LAA information when the AFIS is not available.

5. At the discretion of the supervisor/controller-in-charge, AFIS broadcasts may be suspended within specified time periods. During these periods, the AFIS shall contain a brief statement the AFIS is suspended for the specified time and pilots should contact the FSS for LAA.

**PHRASEOLOGY–**

*“(Airport name) FLIGHT INFORMATION BROADCASTS ARE SUSPENDED UNTIL (time). CONTACT (facility name) RADIO ON (frequency) FOR AIRPORT INFORMATION.”*

6. Part-time and seasonal facilities shall record a message with the appropriate frequency and facility contact information as well as known information regarding resumption of FSS LAA.

**PHRASEOLOGY–**

*“(Name of FSS) HOURS OF OPERATION ARE (time) LOCAL TIME TO (time) LOCAL TIME. THE COMMON TRAFFIC ADVISORY FREQUENCY IS (frequency). PILOT CONTROLLED LIGHTING IS AVAILABLE ON (frequency). FOR ADDITIONAL INFORMATION CONTACT (name of AFSS) ON (frequency).”*

*“(Name of FSS) IS CLOSED FOR THE WINTER SEASON. THE COMMON TRAFFIC ADVISORY FREQUENCY IS (frequency). PILOT CONTROLLED LIGHTING IS AVAILABLE ON (frequency). FOR ADDITIONAL INFORMATION CONTACT (name of AFSS) ON (frequency).”*

**7.** In the event of an AFIS equipment failure, the supervisor/controller-in-charge shall make an entry in the Daily Record of Facility Operation, FAA Form 7230-4; notify the appropriate Technical Operations personnel; issue a NOTAM; and resume LAA.

**8.** Use the following format and include the following in AFIS broadcast as appropriate:

**(a)** (Airport/facility name) airport information.

**(b)** Phonetic alphabet designator.

**(c)** Special routing procedures in effect (when appropriate for the Ketchikan (KTN) area).

**(d)** Time of the AFIS preparation (UTC) followed by the word, “ZULU.”

**(e)** Weather information consisting of: Wind, visibility, present weather (obstructions to visibility), sky condition, temperature, dew point, altimeter, pertinent remarks included in the official weather observation. The ceiling/sky condition, visibility, and obstructions to vision may be omitted if the ceiling is above 5,000 feet and the visibility is more than 5 miles.

**EXAMPLE–**

*“The weather is better than five thousand and five.”*

**(f)** Favored runway and additional local information, as required.

**(g)** NOTAMs concerning local NAVAIDs and field conditions pertinent to flight.

**EXAMPLE–**

*“Notice to Airmen, Iliamna NDB out of service.”*

*“Transcribed weather broadcast out of service.”*

**(h)** Runway breaking action or friction reports when provided. Include the time of the report and a word describing the cause of the runway friction problem.

**PHRASEOLOGY–**

*“RUNWAY (number) MU (first value, second value, third value) AT (time), (cause).”*

**REFERENCE–**

FAAO JO 7110.10, Para 4-4-2, LAA/RAIS/RAA Elements and Phraseology.

**(i)** Low Level Wind shear (LLWS) advisory, including those contained in the terminal forecast and in pilot reports. (Include pilot report information at least 20 minutes following the report).

**EXAMPLE–**

*“Low level wind shear is forecast.”*

**(j)** Unauthorized Laser Illumination Events. When a laser event is reported, include reported unauthorized laser illumination events on the AFIS broadcast for one hour following the last report. Include the time, location, altitude, color, and direction of the laser as reported by the pilot.

**PHRASEOLOGY–**

*“UNAUTHORIZED LASER ILLUMINATION EVENT, (UTC time), (location), (altitude), (color), (direction).”*

**EXAMPLE–**

*“Unauthorized laser illumination event at zero one zero zero Zulu, eight-mile final runway one eight at three thousand feet, green laser from the southwest.”*

**(k)** Man-Portable Air Defense Systems (MANPADS) alert and advisory. Specify the nature and location of threat or incident, whether reported or observed and by whom, time (if known), and notification to pilots to advise ATC if they need to divert.

**PHRASEOLOGY–**

*“MANPADS ALERT. EXERCISE EXTREME CAUTION. MANPADS THREAT/ATTACK/POST-EVENT ACTIVITY OBSERVED/REPORTED BY (reporting agency) (location) AT (time, if known). (When transmitting to an individual aircraft) ADVISE ON INITIAL CONTACT IF YOU WANT TO DIVERT.”*

**EXAMPLE–**

*“MANPADS alert. Exercise extreme caution. MANPADS threat reported by TSA, Anchorage area. Advise on initial contact if you want to divert.”*

*“MANPADS alert. Exercise extreme caution. MANPADS attack observed by flight service station one-half mile northwest of airfield at one-two-five-zero Zulu. Advise on initial contact if you want to divert.”*

**NOTE–**

**1.** Upon receiving or observing an unauthorized MANPADS alert/advisory, contact the Alaska Flight Service Information Area Group through the Alaskan Region Regional Operations Center (ROC).

**2.** Continue broadcasting the MANPADS alert/advisory until advised by national headquarters the threat is no

longer present. Coordination may be through Alaska Flight Service Information Area Group or the Alaskan Region ROC.

**REFERENCE—**

FAAO JO 7210.3, Para 2–1–9, Handling MANPADS Incidents.

(l) Any other advisories applicable to the area covered by the FSS LAA.

(m) Local frequency advisory.

**PHRASEOLOGY—**

“CONTACT (facility name) RADIO ON (frequency) FOR TRAFFIC ADVISORIES.”

(n) Instructions for the pilot to acknowledge receipt of the FSS AFIS message on initial contact.

**EXAMPLE—**

“Dillingham airport information ALFA. One six five five Zulu. Wind one three zero at eight; visibility one five;

ceiling four thousand overcast; temperature four, dew point three; altimeter two niner niner zero. Favored runway one niner. Notice to Airmen, Dillingham V–O–R out of service. Contact Dillingham Radio on one two three point six for traffic advisories. Advise on initial contact you have ALFA.”

“Kotzebue information ALFA. One six five five Zulu. Wind, two one zero at five; visibility two, fog; ceiling one hundred overcast; temperature minus one two, dew point minus one four; altimeter three one zero five. Altimeter in excess of three one zero zero, high pressure altimeter setting procedures are in effect. Favored runway two six. Weather in Kotzebue surface area is below V–F–R minima –an ATC clearance is required. Contact Kotzebue Radio on one two three point six for traffic advisories and advise intentions. Notice to Airmen, Hotham NDB out of service. Transcribed Weather Broadcast out of service. Advise on initial contact you have ALFA.”



# Chapter 6. Flight Data

## Section 1. General

### 6-1-1. COMMUNICATIONS SERVICE

Most flight movement data exchanged outside of the facility is processed by automated systems such as the National Airspace Data Interchange Network (NADIN). It is important to adhere to strict format and procedures during normal operations as well as system interruption periods.

a. Circuit interruption notifications should be as follows:

#### 1. AFSS.

(a) MIFC. Notify their FSDPS and appropriate telco servicing company of all outages.

(b) OASIS. Notify NADIN or WMSCR, (as appropriate), the Harris Help Desk, and appropriate telco servicing company of all outages.

#### NOTE-

*The FSDPS notifies NADIN for Service B outages or AWP for Service A outages, as well as the ARTCC Systems Engineer (SE).*

2. FSS. Notify their guard facility, the AISR Customer Service Center, and NADIN.

b. All outage reports should refer to the correct circuit and/or equipment identification numbers. Facilities should obtain and record ticket numbers provided by AISR or the telco authority.

#### NOTE-

*OASIS facilities should obtain and record ticket numbers provided by Harris or the telco servicing company.*

c. AISR and NADIN telephone numbers are as follows:

1. NADIN/ATLANTA (KATLYTYX)  
(770) 210-7675.

2. NADIN/SALT LAKE CITY (KSLCYTYX)  
(801) 320-2172.

3. AISR HELPDESK 866-466-1336.

d. OASIS telephone numbers are as follows:

1. WMSCR/ATLANTA 770-210-7931.

2. WMSCR/SALT LAKE CITY  
801-320-2045.

3. HARRIS HELPDESK 877-373-0110.

### 6-1-2. FLIGHT PLANS

The filing of VFR flight plans is recommended. Brief pilots, as appropriate, on the following:

a. Identify the tie-in station for the departure point, and advise the pilot to report departure time directly to that facility.

b. When a departure report is unlikely because of inadequate communications capability, advise the pilot that the flight plan will be activated immediately, using the proposed departure time as the actual departure time. Include "ASMD DEP" in remarks. The pilot is responsible for cancelling or extending the flight plan if the flight is cancelled or delayed.

c. Determine the flight plan area in which the destination is located. Request the pilot close the flight plan with the tie-in station. Provide the pilot the tie-in station's phone number, upon request.

d. Recommend that a separate flight plan be filed for each leg of a VFR flight.

e. Request the pilot inform an AFSS/FSS whenever the filed time en route changes more than 30 minutes.

f. On return flights from remote areas, such as a fishing site, establish a mutually acceptable date/time with the pilot for alerting search and rescue.

g. On a single flight to be conducted under both IFR/VFR flight rules, confirm whether the VFR portion is by flight plan and, if so, with whom the pilot will close. File two separate flight plans.

h. If a pilot indicates the flight will penetrate Class A airspace, advise the pilot of the Class A requirements.

i. When a pilot files to an airport served by a part-time FSS and the ETA is during the period the facility is closed, ask the pilot to close with the

associated AFSS/FSS, identified in FAAO JO 7350.8, Location Identifiers and the Airport/Facility Directory.

**j.** Upon request, inform pilots filing IFR flight plans of the appropriate and most effective means of obtaining IFR departure clearances.

**k.** When a pilot files a DVFR flight plan, advise the pilot to activate with Flight Service. Also advise the pilot that a discrete beacon code will be assigned upon activation.

**NOTE—**

**1.** A discrete beacon code may be assigned when the flight plan is filed, as necessary. If the pilot wants to file a DVFR flight plan that departs outside the facility's flight plan area, provide the applicable toll-free number for the departure FSS.

**2.** Discrete beacon codes are assigned to facilities in accordance with FAAO 7110.66, National Beacon Code Allocation Plan.

### 6-1-3. FLIGHT PLAN DATA

Handle flight plan data as follows:

**a.** AISR.

**1.** Record flight plan data received from an operations office on FAA Form 7233-1 or a flight progress strip. The operations office must obtain complete information on the flight, but need forward to the FAA only those items necessary for control or VFR flight plan purposes.

**2.** Accept military flight plan proposals, cancellations, and closures from any source including collect telephone calls.

**3.** Pass the FAA Form 7233-1 to the appropriate operating position for delivery of the flight notification message.

**b.** M1FC/OASIS.

**1.** Record flight plan data on domestic or ICAO flight plan mask or dialog box as appropriate. Flight plan data received from an operations office may be limited to only those items necessary for control or VFR flight plan purposes, provided the operations office obtains complete information on the flight.

**2.** Accept military flight plan proposals, cancellations, and closures from any source, including collect telephone calls.

**3.** Transmit flight notification messages as follows:

**(a)** M1FC. From a flight plan mask in order for M1FC to place the message in the aircraft data file and provide automatic log and tally.

**(b)** OASIS. From a flight plan dialog box in order for OASIS to place the message in the history file and provide automatic log and tally.

**NOTE—**

Part-time operations offices must provide complete information in the event it is needed for SAR purposes.

### 6-1-4. PART-TIME FSS CLOSURE ACTION

Part-time facilities shall forward the following information to the designated guard AFSS/FSS.

**a.** Inbound flights – all information.

**b.** Outbound flights – VFR and IFR flight plan data when proposed departure time and/or ETA is within the period from 1 hour prior to closing until 1 hour after opening.

**c.** All other pertinent information; e.g., NOTAM, pending outages.

### 6-1-5. TELEPHONE REQUESTS FOR ATC CLEARANCES

When a telephone request for an ATC clearance is received, positively verify the departure location by airport name or location identifier, and the city name and state.

**NOTE—**

**1.** With telephone calls being received from larger geographic areas, verification of the departure location may prevent a critical safety situation involving similar or identical airport or city names possibly located in different states.

**2.** City refers to a city, town, village or publicly recognized place.

**3.** Refer to FAAO 7110.10, Para 4-3-7, ATC Clearances, Advisories, or Requests, for guidance on relaying ATC clearances.

## 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-**

Use FAA Form 7233-4, *International Flight Plan*, for international flights as well as flights in domestic U.S. airspace in which automatic assignment of RNAV routes is desired. See paragraph 6-2-3, *Flight Plans with Area Navigation (RNAV) Routes in Domestic U.S. Airspace*.

**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, Contractions 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.

**2. U.S. Military Aircraft.**

**(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)

**TBL 6-2-1**

**Military**

Abbreviation	Military Service
A	USAF
C	Coast Guard
E	Air Evacuation
G	Air/Army National Guard
L	LOGAIR (USAF contract)
R	Army
RCH	REACH (USAF Air Mobility Command)
S	Special Air Mission
VM	Marine Corps
VV	Navy

**(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 6-2-2**

**President and Family**

Service	President	Family
Air Force	AF1	EXEC1F
Marine	VM1	EXEC1F
Navy	VV1	EXEC1F
Army	RR1	EXEC1F
Coast Guard	C1	EXEC1F
Guard	G1	EXEC1F
Commercial	EXEC1	EXEC1F

**TBL 6-2-3**

**Vice President and Family**

Service	Vice President	Family
Air Force	AF2	EXEC2F
Marine	VM2	EXEC2F
Navy	VV2	EXEC2F
Army	RR2	EXEC2F
Coast Guard	C2	EXEC2F
Guard	G2	EXEC2F
Commercial	EXEC2	EXEC2F

**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**

**Canadian Military**

Abbreviation	Military Service
CFC	Canadian Forces
CTG	Canadian Coast Guard

**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 alphanumeric characters). 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.)

**TBL 6-2-5**  
**Suffix to Aircraft Type**

<i>Suffix</i>	<i>Aircraft Equipment Suffixes</i>
	<b>DME</b>
/A	Transponder with Mode C.
/B	Transponder with no Mode C.
/D	No transponder.
	<b>NO DME</b>
/T	Transponder with no Mode C.
/U	Transponder with Mode C.
/X	No transponder.
	<b>TACAN ONLY</b>
/M	No transponder.
/N	Transponder with no Mode C.
/P	Transponder with Mode C.
	<b>AREA NAVIGATION (RNAV)</b>
/C	LORAN, VOR/DME, or INS, transponder with no Mode C.
/I	LORAN, VOR/DME, or INS, transponder with Mode C.
/Y	LORAN, VOR/DME, or INS with no transponder.
	<b>ADVANCED RNAV With Transponder and Mode C</b> (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.)
/E	Flight Management System (FMS) with DME/DME and IRU position updating.
/F	FMS with DME/DME position updating.

/G	Global Navigation Satellite System (GNSS), including GPS or WAAS, with en route and terminal capability.
/R	Required Navigational Performance. The aircraft meets the RNP type prescribed for the route segment(s), route(s) and/or area concerned.
	<b>Reduced Vertical Separation Minimum (RVSM).</b> Prior to conducting RVSM operations within the U.S., the operator must obtain authorization from the FAA or from the responsible authority, as appropriate.
/J	/E with RVSM
/K	/F with RVSM
/L	/G with RVSM.
/Q	/R with RVSM.
/W	RVSM.

**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.*

**REFERENCE—**

*FAAO JO 7110.65, Para 2-3-8 and TBL 2-3-10, Aircraft Equipment Suffixes.*

**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 alphanumeric 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-*

notes, as appropriate, to facilitate computer acceptance. Local procedures should be applied to these special situations.

**2. NRS waypoints consist of five alphanumeric characters, which include the ICAO Flight Information Region (FIR) identifier, followed by the letter corresponding to the FIR subset (ARTCC area for the contiguous U.S.), the latitude increment in single digit or group form, and the longitude increment.**

**EXAMPLE—**  
“KD34U”

**i. Item 9. Destination.** Enter two-to-twelve alphanumeric and/or slant characters for name or identifier of the destination airport or point over which the flight plan is to be cancelled.

**j. Item 10. Estimated Time Enroute.** Enter in hours and minutes the total elapsed time between departure and destination in four-digit format, i.e., 0215.

**k. Item 11. Remarks.** Information necessary for ATC or to assist search and rescue operations, plus any other data appropriate to the flight; e.g., the abbreviations FAA or DOT. Enter names of experimental or amateur-built aircraft (Veri-EZ, Long-EZ, Mustang, Delta Dart). For RM: field only – Use 1–80 characters beginning with \*, #, \$, or %. (See TBL 6–2–6.)

**TBL 6–2–6**

*	transmit remarks to all centers.
#	transmit remarks to departure centers only.
\$	transmit remarks only to those addresses in the CP field of the flight notification message.
%	for remarks not to be transmitted.

**l. Item 12. Fuel on Board.** Enter in hours and minutes in four-digit format; e.g., 0330.

**m. Item 13. Alternate Airport/s.** Enter the location identifier if specified by the pilot.

**n. Item 14. Pilot’s Name, Telephone Number, Aircraft’s Home Base.** Self-explanatory. For military pilots, obtain the name and telephone of BASOPS.

**NOTE—**

*Pilot’s name not required if BASOPS’ name is provided.*

**o. Item 15. Number Aboard.** Self-explanatory.

**p. Item 16. Color of Aircraft.** Use authorized contractions when available. (See TBL 6–2–7.)

**TBL 6–2–7**  
**Code and Color**

Code	Color	Code	Color
A	Amber	B	Blue
BE	Beige	BK	Black
BR	Brown	G	Green
GD	Gold	GY	Gray
M	Maroon	O	Orange
OD	Olive Drab	P	Purple
PK	Pink	R	Red
S	Silver	T	Tan
TQ	Turquoise	V	Violet
W	White	Y	Yellow

**NOTE—**

**1. For ICAO flight plans, see Appendix A.**

**2. Local procedures may be developed for use on the reverse side of FAA Form 7233–1.**

## **6–2–2. OUTBOUNDS DEPARTING FROM OUTSIDE FLIGHT PLAN AREA**

Accept flight plans regardless of departure point. Forward VFR flight plan proposals for aircraft proposing to depart from outside the facility’s flight plan area to the tie-in FSS/AFSS for the departure point in the following format:

- a. Type of Flight.**
- b. Aircraft Identification.**
- c. Aircraft Type.**
- d. Departure Point.**
- e. Destination.**
- f. Proposed Departure Time/ETE.**
- g. Remarks.**

**EXAMPLE—**

*AISR*

*FF KDAYFYX*

*DTG KLOUYFYX*

*VFR N1234 BE9L DAY LOU P1330/0130*

*MIFC*

*FR:PV AI:N1234 AT:C150 TS:90 DD:DSM TM:P1800*

*AE:65 RT:DSM..OMA..LNK*

*AD:LNK TE:0300 RM:\$FP KIKKYFYX*

*FB:0330 AA: PD:JOE PILOT*

HB:DSM NB: CR:R/W TL:  
OP:  
CP:KFODYFYX  
TA:2100

**NOTE—**

1. MIFC will autoaddress the CP field, automatically extract the required items from the flight plan mask and transmit a flight proposal to the departure tie-in AFSS/FSS.

*MIFC will automatically fill in the originator of the flight plan in the RM field when the flight plan is transmitted.*

2. For civil flight movement messages with remarks, precede the remarks with a dollar symbol (\$).

3. OASIS will autoaddress the Closure Points field, automatically extract the required items from the flight plan, insert the originator of the flight plan into the Remarks field, and transmit a flight proposal to the departure tie-in AFSS/FSS at a time determined by the facility parameter.

### 6-2-3. FLIGHT PLANS WITH AREA NAVIGATION (RNAV) ROUTES IN DOMESTIC U.S. AIRSPACE

Use FAA Form 7233-4, International Flight Plan, for pilots filing flight plans in domestic U.S. airspace if automatic assignment of any of the following RNAV routes are desired: RNAV Standard Instrument Departure (SID); RNAV Standard Terminal Arrival Route (STAR); and/or RNAV Point-to-Point (PTP). For these flight plans, adhere to the following guidelines:

a. Item 10, Equipment. Enter “Z” in the equipment field in addition to other entries pertaining to radio communication, navigation and approach aids.

**EXAMPLE—**

SDGIWZ/S

b. Item 18, Other Information.

1. If the aircraft is RNAV 1 or RNAV 2 capable, enter “NAV/RNV” followed by the appropriate RNAV accuracy value:

(a) RNAV 1 SID, enter “D1”.

(b) RNAV 1 STAR, enter “A1”.

(c) En route RNAV, enter “E2”.

**EXAMPLE—**

NAV/RNVD1

NAV/RNVA1  
NAV/RNVE2  
NAV/RNVD1A1  
NAV/RNVD1E2A1

**NOTE—**

The “D,” “E,” and “A” characters may appear in any order following “NAV/RNV.”

2. If the aircraft is RNAV PTP capable but not RNAV 1 and/or RNAV 2 capable, enter “RMK/PTP” and “NAV/RNVE99”.

**EXAMPLE—**

RMK/PTP NAV/RNVE99

**NOTE—**

*Procedures contained in paragraph 6-2-3 do not apply to flights whose route remains entirely within Alaska domestic airspace.*

### 6-2-4. ENTRY OF MILITARY IFR MULTILEG STOPOVER FLIGHT PLAN

a. Complete all FP fields down through time en route or remarks for the first leg. Use MI in the flight rules field. This will hold the flight plan on the proposed list for flight notification.

b. All subsequent legs shall be preceded by a slant and recorded in the route field after the first leg: DESTINATION, ETE, AIRSPEED, P-TIME, ALTITUDE, ROUTE, and remarks for each leg.

c. After all legs have been recorded properly, the FP should autoaddress the ARTCC of the first leg departure point in the OP: field and all destination BASOPS stations in the CP: field. GI will send the first leg to the appropriate ARTCC and place the flight plan on the proposed list.

**EXAMPLE—**

MIFC

FR:MI AI:BAT21 AT:F16/R TS:450 DD:DBQ TM:P1700  
AE:280

RT:DBQ..TNU..OFF/FOE 0+15 450 P1800 270  
OFF..FOE

AD:OFF TE:0030 RM:\*REMARKS \$VT012115

FB:0230 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL: OP:ZCG

CP:KOFFYXYX KFOEYXYX

TA:1730

d. To send the second leg of the flight plan to the appropriate ARTCC, the original flight plan needs to be altered.

1. Display the flight plan (FPC).

2. Change the MI to I. It is not necessary to hold this leg for flight notification.

3. Make the necessary changes to indicate the next leg of the flight plan.

**EXAMPLE–**

MIFC

FR:I AI:BAT21 AT:F16/R TS:450 DD:OFF TM:P1800  
AE:270

RT:OFF..FOE

AD:FOE TE:0015 RM:\*REMARKS

FB: AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL: OP:ZCP

CP:

TA:1815

**NOTE–**

If there is an additional leg, it must be taken from the original flight plan.

e. After all legs have been sent to their appropriate ARTCC, construct a flight notification message.

1. Retrieve the original flight plan from the proposal list.

2. Edit each leg preceded by a slant to indicate the destination, ETE and pertinent remarks.

3. Delete all other information and restore to the proposal list (STPM) and await activation.

**EXAMPLE–**

MIFC

FR:MI AI:BAT21 AT:F16/R TS:450 DD:DBQ TM:P1700  
AE:280

RT:DBQ..TNU..OFF/FOE 0+15

AD:OFF TE:0030 RM:\*REMARKS \$VTO12115

FB:0230 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL:

OP:ZCG

CP:KOFFYXYX KFOEYXYX

TA:

**NOTE–**

OASIS. Transmit only the applicable inbound and outbound flight notification information to intermediate tie-in facilities. Remarks common to all flight segments shall be entered in the Remarks text box for transmission. These remarks shall include: departure point, all stops and destination.

**EXAMPLE–**

DEPD TCM LNDG EDW DMA JAX ADW

**NOTE–**

OASIS. Detailed instructions for the processing of Military IFR Multi-Leg Stopover Flight Plans are contained in the WINGS online help and the WINGS System Users Guide.

## 6–2–5. ENTRY OF MILITARY VFR STOPOVER FLIGHT PLAN

a. File a military VFR stopover flight plan in the same format as a military IFR stopover.

b. After the flight plan is filed on the proposal list, display the flight plan (FP ACID). Use the CX keyword to cancel the flight plan. The complete flight plan is then on file for search and rescue.

**EXAMPLE–**

MIFC

FR:MV AI:G2034 AT:UH1/U TS:90 DD:FOD TM:P1800  
AE:055

RT:FOD..DSM..OFF/MLC 3+10 90 P2100 045  
OFF..MLC/SZL

2+10 90 P0100 055 MLC..SZL

AD:OFF TE:0200 RM:\$VTO10600

FB:0400 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:O/D TL:

OP:

CP:KOFFYXYX KMLCYFYX KSZLYXYX

TA:2000

c. After the flight plan is cancelled, use the FPC keyword to display the flight plan on the screen. Change the RT field to show only the destination, ETE, and any pertinent remarks for all remaining legs. File the revised version onto the proposal list to await activation.

**EXAMPLE–**

MIFC

FR:MV AI:G2034 AT:UH1/U TS:90 DD:FOD TM:P1800  
AE:055

RT:FOD..DSM..OFF/MLC 3+10/SZL 2+10

AD:OFF TE:0200 RM:\$VTO10600

FB:0400 AA: PD:ON FILE BASOPS

HB:DBQ NB:1 CR:OD TL:

OP:

CP:KOFFYXYX KMLCYFYX KSZLYXYX

TA:2000

**NOTE–**

OASIS. Transmit only the applicable inbound and outbound flight notification information to intermediate tie-in facilities. Remarks common to all flight segments shall be entered in the Remarks text box for transmission. These remarks shall include: departure point, all stops and destination.

**EXAMPLE–**

DEPD TCM LNDG EDW DMA JAX ADW

**NOTE–**

OASIS. Detailed instructions for the processing of Military VFR Stopover Flight Plans are contained in the WINGS online help and the WINGS System Users Guide.



# Chapter 13. Phraseology

## Section 1. General

### 13-1-1. PURPOSE

This chapter prescribes standardized procedures and phraseologies to be used by flight service personnel when communicating weather and aeronautical information in broadcast, radiotelephone, and interphone communications. Where position or procedure-specific phraseology is required, reference is to be made to the relevant chapter of this order.

### 13-1-2. PHRASEOLOGY

The annotation PHRASEOLOGY denotes the prescribed words and/or phrases to be used in communications.

**NOTE—**

*Specialists may, after first using the prescribed phraseology for a specific procedure, rephrase the message to ensure the content is understood. Good judgment shall be exercised when using nonstandard phraseology.*

### 13-1-3. WORDS AND PHRASES

Use the words or phrases in broadcast, radiotelephone, and interphone communications as contained in the Pilot/Controller Glossary.

### 13-1-4. ANNOUNCING MISSING ITEMS

With the exception of RVR, announce the word “missing” when any item or component of a weather report is not reported, or in place of unreadable or obviously incorrect items or portions of weather reports. When appropriate, instead of speaking the name of several locations with missing reports, announce: “Other scheduled reports missing.”

**NOTE—**

*On occasion, a parameter from an automated observation may be reported as missing in the body of the report but is available as a manually reported parameter in the remarks section. When the report is spoken, include the manually reported element in its proper sequence within the report.*

### 13-1-5. ICAO PHONETICS

Use the ICAO pronunciation of numbers and, as necessary, individual letters for clarity. The ICAO radiotelephony alphabet and pronunciation guide are contained in TBL 13-1-1.

*TBL 13-1-1*

**ICAO Pronunciation**

Character	Word	Pronunciation
0	Zero	ZEE-RO
1	One	WUN
2	Two	TOO
3	Three	TREE
4	Four	<b>FOW-ER</b>
5	Five	FIFE
6	Six	SIX
7	Seven	<b>SEV-EN</b>
8	Eight	AIT
9	Nine	<b>NIN-ER</b>
A	Alfa	<b>AL-FAH</b>
B	Bravo	<b>BRAH-VOH</b>
C	Charlie	<b>CHAR-LEE</b>
D	Delta	<b>DELL-TAH</b>
E	Echo	<b>ECK-OH</b>
F	Foxtrot	<b>FOKS-TROT</b>
G	Golf	GOLF
H	Hotel	<b>HOH-TELL</b>
I	India	<b>IN-DEE-AH</b>
J	Juliett	<b>JEW-LEE-ETT</b>
K	Kilo	<b>KEY-LOH</b>
L	Lima	<b>LEE-MAH</b>
M	Mike	MIKE
N	November	<b>NO-VEM-BER</b>
O	Oscar	<b>OSS-CAR</b>
P	Papa	<b>PAH-PAH</b>
Q	Quebec	<b>KEH-BECK</b>
R	Romeo	<b>ROW-ME-OH</b>
S	Sierra	<b>SEE-AIR-AH</b>
T	Tango	<b>TANG-GO</b>
U	Uniform	<b>YOU-NEE-FORM</b>
V	Victor	<b>VIK-TAH</b>
W	Whiskey	<b>WISS-KEY</b>
X	X-ray	<b>ECKS-RAY</b>
Y	Yankee	<b>YANG-KEY</b>
Z	Zulu	<b>ZOO-LOO</b>

**NOTE—**

*Syllables to be emphasized in pronunciation are in bold face.*

### 13-1-6. RELAY OF ATC COMMUNICATIONS

Prefix a clearance, information, or a request for information which will be relayed from a control facility to an aircraft with the appropriate phrase “A-T-C clears,” “A-T-C advises,” or “A-T-C requests.”

### 13-1-7. EXPEDITIOUS COMPLIANCE

a. Use the word “immediately” only when expeditious compliance is required to avoid an imminent situation.

b. Use the word “expedite” only when prompt compliance is required to avoid the development of an imminent situation.

c. In either case, and if time permits, include the reason for this action.

### 13-1-8. WEATHER PHRASEOLOGY

Use the following phraseology and procedures for stating surface weather observations and for information similarly encoded in other aviation weather products and forecasts.

#### a. Location.

1. Announce the geographic name (not the identifier) once for communications.

**EXAMPLE–**  
“Paducah.”

2. When the location name is duplicated within 500 miles, follow the location name with the state name.

**EXAMPLE–**  
“Columbus, Ohio.”

3. When weather reports originate at more than one airport at the same geographical location, identify the airport.

**EXAMPLE–**  
“Anchorage, Anchorage Merrill.”  
“Chicago O’Hare.”

4. Where it is considered necessary and is requested by the military base commander, broadcast military observations by stating the location, the name of the airport if different, and the controlling military branch.

#### **EXAMPLE–**

“Andrews Air Force Base.”  
“Elmendorf, Elmendorf Air Force Base.”  
“Fort Riley, Marshall Army Air Field.”  
“Norfolk Naval Air Station.”

b. If AUTO appears after the date/time element, follow location announcement with the phrase AUTOMATED.

**PHRASEOLOGY–**  
(Location) AUTOMATED.

c. If a special report is the most recent observation available, follow the location with the words SPECIAL REPORT, (last two digits of the time) OBSERVATION. Use data from the record report to fill in the items not included in the special observation, such as temperature and dew point.

d. If the weather data is not available, state the location and the word MISSING.

e. Wind Direction and Speed. Announce surface wind direction and speed by stating the word WIND followed by the separate digits of the wind direction to the nearest 10 degrees and the separate digits of the speed. A “G” between two wind speed values is announced as GUSTS. State local wind as it appears in the report. Announce the variability of wind at the end of the wind group. (See TBL 13-1-2.)

**TBL 13-1-2**

**Wind Direction and Speed**

Wind	Phraseology
00000KT	WIND CALM.
26012KT	WIND TWO SIX ZERO AT ONE TWO.
29012KT 260V320	WIND TWO NINER ZERO AT ONE TWO WIND VARIABLE BETWEEN TWO SIX ZERO AND THREE TWO ZERO.
30008KT	WIND THREE ZERO ZERO AT EIGHT.
36012G20KT	WIND THREE SIX ZERO AT ONE TWO GUSTS TWO ZERO.
VRB04KT	WIND VARIABLE AT FOUR.

#### f. Visibility.

1. State the word VISIBILITY followed by the visibility values in miles and/or fractions of miles, except announce values indicated by the figure 0 as ZERO. Announce the separate digits of whole numbers as applicable. (See TBL 13-1-3.)

**TBL 13-1-3**  
**Visibility**

<i>Contraction</i>	<i>Phraseology</i>
0SM	Visibility zero.
$\frac{1}{16}$ SM	Visibility one sixteenth.
$\frac{1}{8}$ SM	Visibility one eighth.
$M\frac{1}{4}$ SM	Visibility less than one quarter.
$\frac{3}{4}$ SM	Visibility three quarters.
$1\frac{1}{2}$ SM	Visibility one and one-half.
8SM	Visibility eight.
25SM	Visibility two five.

**NOTE—**

When visibility is less than 3 miles and variable, this information is reported in the remarks.

2. When stating AUTOB visibility values, announce the visibility in accordance with the reportable categories depicted in TBL 13-1-4 and TBL 13-1-5.

**TBL 13-1-4**  
**Visibility Reading**

<i>Reading</i>	<i>Visibility Values</i>
0	less than $\frac{15}{16}$
1	$1 - 1\frac{7}{8}$
2	$2 - 2\frac{7}{8}$
3	$3 - 3\frac{1}{2}$
4	$3\frac{1}{2} - 4\frac{1}{2}$
5	$4\frac{1}{2} - 5\frac{1}{2}$
6	$5\frac{1}{2} - 6\frac{1}{2}$
7	$6\frac{1}{2} - 7\frac{1}{2}$
8	above $7\frac{1}{2}$

**TBL 13-1-5**  
**Visibility Reading**

<i>Reading</i>	<i>Phraseology</i>
BV0	“Visibility less than fifteen sixteenths.”
BV3	“Visibility three to three and one-half.”
BV8	“Visibility more than seven and one-half.”

3. If an AUTOB visibility report consisting of three values is encountered, it is decoded as depicted below.

**EXAMPLE—**

“BV786”

6 = minimum visibility during past 10 minutes.

7 = present visibility.

8 = maximum visibility during past 10 minutes.

**g. RVR/RVV.**

1. Provide RVR/RVV information by stating the runway, “visual range” or “visibility value,” as

appropriate, and the indicated value. The abbreviations “R-V-R” or “R-V-V” may be spoken in lieu of “visual range” or “visibility value.” When the indicated values are separated by a V, preface the values with the words VARIABLE BETWEEN, followed by the first value, the word AND, then the second value. (See TBL 13-1-6.)

**TBL 13-1-6**  
**RVR/RVV**

<i>RVR/RVV</i>	<i>Phraseology</i>
R36VV11/2	“Runway three six, R-V-V one and one-half.”
R05LVV1V2	“Runway five left, R-V-V variable between one and two.”
R18/2000V3000FT	“Runway one eight, R-V-R variable between two thousand and three thousand. Or Runway one eight visual range variable between two thousand and three thousand.”
R26R/2400FT	“Runway two six right visual range two thousand four hundred.”

2. When there is a requirement to issue an RVR or RVV value and a visibility condition greater or less than the reportable values of the equipment is indicated, state the condition as MORE THAN or LESS THAN the appropriate minimum or maximum readable value. (See TBL 13-1-7.)

**TBL 13-1-7**  
**RVR/RVV**

<i>RVR/RVV</i>	<i>Phraseology</i>
R16/M0600FT	“Runway one six runway visual range less than six hundred. Or Runway one six R-V-R less than six hundred.”
R36L/M0600V2500FT	“Runway three six left, R-V-R variable between less than six hundred and two thousand five hundred. Or Runway three six left visual range variable between less than six hundred and two thousand five hundred.”
R36/P6000FT	“Runway three six R-V-R more than six thousand. Or Runway three six visual range more than six thousand.”

**h. Weather Elements** TBL 13-1-8 depicts sample phraseology for weather element contractions. Intensity refers to precipitation, not descriptors. Proximity is spoken after the phenomenon to which it refers. Descriptors are spoken ahead of weather phenomenon with the exception of “showers” which is spoken after the precipitation. TBL 13-1-9 contains a complete list of weather elements and appropriate phraseology.

**i. Ceiling and Sky Coverage.**

**1.** State sky coverage in the same order as reported on the weather observation. Announce ceiling as follows: (See TBL 13-1-10.)

**TBL 13-1-8**  
**Examples of Combining Intensity, Descriptors and Weather Phenomenon.**

<i>Contractions</i>	<i>Phraseology</i>
BLSN	BLOWING SNOW
-FZRAPL	LIGHT FREEZING RAIN, ICE PELLETS
FZRA	FREEZING RAIN
FZDZ	FREEZING DRIZZLE
MIFG	SHALLOW FOG
-SHRA	LIGHT RAIN SHOWERS
SHRA	RAIN SHOWERS
SHSN	SNOW SHOWERS
TSRA	THUNDERSTORM, RAIN
+TSRA	THUNDERSTORM, HEAVY RAIN (SHOWERS) <sup>1</sup>
+TSRAGR	THUNDERSTORM, HEAVY RAIN, HAIL
VCSH	SHOWERS IN THE VICINITY

<sup>1</sup>Since thunderstorms imply showery precipitation, “showers” may be used to describe precipitation that accompany thunderstorms.

**TBL 13-1-9**  
**Weather Elements**

<b>INTENSITY or PROXIMITY 1</b>		<b>DESCRIPTOR 2</b>		<b>PRECIPITATION 3</b>		<b>OBSCURATION 4</b>		<b>OTHER 5</b>	
-	Light	<b>MI</b>	Shallow	<b>DZ</b>	Drizzle	<b>BR</b>	Mist	<b>PO</b>	Well-Developed Dust/Sand Whirls
		<b>BC</b>	Patchy	<b>RA</b>	Rain	<b>FG</b>	Fog	<b>SQ</b>	Squalls
	Moderate (No Qualifier)	<b>DR</b>	Low Drifting	<b>SN</b>	Snow	<b>FU</b>	Smoke	<b>FC</b> <b>+FC</b>	Funnel Cloud, Tornado or Waterspout
		<b>BL</b>	Blowing	<b>SG</b>	Snow Grains	<b>DU</b>	Dust	<b>SS</b>	Sandstorm
+	Heavy	<b>SH</b>	Showers	<b>IC</b>	Ice Crystals	<b>SA</b>	Sand	<b>DS</b>	Duststorm
		<b>TS</b>	Thunderstorm	<b>PL</b>	Ice Pellets	<b>HZ</b>	Haze		
<b>VC</b>	In the Vicinity	<b>FZ</b>	Freezing	<b>GR</b>	Hail	<b>PY</b>	Spray		
		<b>PR</b>	Partial	<b>GS</b>	Small Hail or Snow Pellets ( < 1/4”)	<b>VA</b>	Volcanic Ash		
				<b>UP</b>	*Unknown Precipitation				

**\* Automated stations only.**

**TBL 13-1-10**  
**Ceiling and Sky Coverage**

<i>Designator</i>	<i>Phraseology</i>
BKN000 <sup>1</sup>	SKY PARTIALLY OBSCURED
BKN000 <sup>2</sup>	CEILING LESS THAN FIVE ZERO BROKEN
FEW000 <sup>1</sup>	SKY PARTIALLY OBSCURED
FEW000 <sup>2</sup>	FEW CLOUDS AT LESS THAN FIVE ZERO
(lowest layer aloft) BKN/OVC	(precede with) CEILING
SCT000 <sup>1</sup>	SKY PARTIALLY OBSCURED
SCT000 <sup>2</sup>	LESS THAN FIVE ZERO SCATTERED
VV	INDEFINITE CEILING
<sup>1</sup> Surface-based obscurations. Requires remarks, i.e. RMK FG SCT000, FU BKN000, etc.	
<sup>2</sup> No remark means the layer is aloft.	

2. State cloud heights in tens, hundreds and/or thousands of feet. (See TBL 13-1-11.)

**TBL 13-1-11**  
**Cloud Heights**

<i>Number</i>	<i>Phraseology</i>
000 <sup>1</sup>	ZERO
003	THREE HUNDRED
018	ONE THOUSAND EIGHT HUNDRED
200	TWO ZERO THOUSAND
<sup>1</sup> Spoken as zero only when used with VV.	

**NOTE-**

1. When the ceiling is less than 3,000 feet and variable, the variable limits will be reported in the remarks.

2. When communicating weather information on the TIBS broadcast or telephone, specialist may announce cloud heights in either group form or in hundreds or thousands of feet, such as seventeen thousand or one seven thousand.

3. Announce sky conditions as indicated below. (See TBL 13-1-12.)

**TBL 13-1-12**  
**Sky Conditions**

<i>Contraction</i>	<i>Phraseology</i>
BKN	(height) BROKEN
CLR <sup>1</sup>	CLEAR BELOW ONE TWO THOUSAND
FEW	FEW CLOUDS AT (height)
OVC	(height) OVERCAST
SCT	(height) SCATTERED
SKC	CLEAR
<sup>1</sup> Automated weather reports.	

4. The following are examples of broadcast phraseology of sky and ceiling conditions: (See TBL 13-1-13.)

**TBL 13-1-13**  
**Sky and Ceiling Conditions**

<i>Condition</i>	<i>Phraseology</i>
BKN000 BKN010 BKN050 RMK FG BKN000	SKY PARTIALLY OBSCURED, CEILING ONE THOUSAND BROKEN, FIVE THOUSAND BROKEN. FOG OBSCURING FIVE TO SEVEN EIGHTS OF THE SKY.
BKN010	CEILING ONE THOUSAND BROKEN.
SCT000 SCT020 OVC035 RMK FG SCT000	SKY PARTIALLY OBSCURED, TWO THOUSAND SCATTERED, CEILING THREE THOUSAND FIVE HUNDRED OVERCAST. FOG OBSCURING THREE TO FOUR EIGHTS OF THE SKY.
SCT020 OVC250	TWO THOUSAND SCATTERED, CEILING TWO FIVE THOUSAND OVERCAST.
VV000	INDEFINITE CEILING ZERO.
VV012	INDEFINITE CEILING ONE THOUSAND TWO HUNDRED.

j. Announce surface temperature and dew point by stating the words TEMPERATURE or DEWPOINT, as appropriate, followed by the temperature in degrees Celsius. Temperatures below zero are announced by prefixing the word MINUS before the values. (See TBL 13-1-14.)

**TBL 13-1-14**  
**Temperature/Dewpoint**

Reading	Phraseology
02/M01	“Temperature two, dew point minus one.”
04/02	“Temperature four, dew point two.”
18/13	“Temperature one eight, dew point one three.”

**k. Altimeter Setting.**

1. State the word **ALTIMETER** followed by the four digits of the altimeter setting. (See TBL 13-1-15.)

**TBL 13-1-15**  
**Altimeter Setting**

Altimeter Setting	Phraseology
A2989	“Altimeter two niner eight niner.”
A3001	“Altimeter three zero zero one.”
A3025	“Altimeter three zero two five.”

2. Identify the source of all altimeter settings when issued, if not given as part of an identified surface observation. Provide the time of the report if more than one hour old.

**PHRASEOLOGY–**

(airport name) (time of report if more than one hour old) **ALTIMETER** (setting).

3. If a request for the altimeter setting in **MILLIBARS** is received, announce the separate digits of the millibar equivalent value, using the millibar conversion chart, followed by the word **MILLIBARS**. If the millibar setting is not a whole number, always round down. (See TBL 13-1-16.)

**REFERENCE–**

FAAO JO 7110.10, subpara 4-3-5f.

**TBL 13-1-16**  
**Millibar Conversion**

Millibar Conversion	Phraseology
956.3	“Altimeter niner five six millibars.”
1002.0	“Altimeter one zero zero two millibars.”
1058.9	“Altimeter one zero five eight millibars.”

4. When altimeter is in excess of 31.00:

(a) Advise all aircraft.

**PHRASEOLOGY–**

“**ALTIMETER IN EXCESS OF THREE ONE ZERO ZERO. HIGH PRESSURE ALTIMETER PROCEDURES ARE IN EFFECT.**”

(b) Advise VFR aircraft to set altimeter to 31.00 en route.

**PHRASEOLOGY–**

“**RECOMMEND YOU SET ALTIMETER THREE ONE ZERO ZERO EN ROUTE.**”

**13-1-9. WEATHER REMARKS**

Announce pertinent remarks from surface weather observations in accordance with FAAO JO 7340.2, Contractions, and as shown in the following tables. Do not state additive data or other information intended for NWS analysis or processing that does not contribute to the description of the conditions occurring at the station.

a. **SKY AND CEILING.** (See TBL 13-1-17.)

**TBL 13-1-17**  
**Sky and Ceiling**

Contraction	Phraseology
CIG 005V010	“Ceiling variable between five hundred and one thousand.”
CIG 020 RY11	“Ceiling two thousand at runway one one.”
CB N MOV E	“Cumulonimbus north moving east.”
CBMAM DSNT S	“Cumulonimbus mammatus distant south.”
CLDS TPG MT SW	“Clouds topping mountain southwest.”
CONTRAILS N FL420	“Condensation trails north at flight level four two zero.”
FRQ LTCIC VC	“Frequent lightning in cloud in the vicinity.”
LWR CLDS NE	“Lower clouds northeast.”
OCNL LTGICCG NW	“Occasional lightning in cloud and cloud to ground northwest.”
RDGS OBSCD W-N	“Ridges obscured west through north.”

b. **Obscuring Phenomena.** (See TBL 13-1-18.)

**TBL 13-1-18**  
**Obscuring Phenomena**

<i>Contraction</i>	<i>Phraseology</i>
BLSN SCT000	“Blowing snow obscuring three to four–eights of the sky.”
DU BKN000	“Dust obscuring five to seven–eights of the sky.”
FG FU FEW000	“Fog and smoke obscuring one to two–eights of the sky.”
FU SCT020	“Smoke layer two thousand scattered.”
SN BKN000	“Snow obscuring five to seven–eights of the sky.”

**c. Visibility. (See TBL 13-1-19.)**

**TBL 13-1-19**  
**Visibility**

<i>Contraction</i>	<i>Phraseology</i>
SFC VIS 1/2	“Surface visibility one–half.”
SFC VIS 15 TWRINC	“Surface visibility one five, tower in clouds.”
TWR VIS 3/4	“Tower visibility three–quarters.”
VIS S 1 W 1/4	“Visibility south one, west one–quarter.”
VIS 1V3	“Visibility variable between one and three.”

**d. Weather and obstruction to visibility.**  
(See TBL 13-1-20.)

**TBL 13-1-20**  
**Weather and Obstruction**

<i>Contraction</i>	<i>Phraseology</i>
BCFG S	“Patchy fog south.”
DUST DEVILS NW	“Dust devils northwest.”
FG DSIPTG	“Fog dissipating.”
FU DRFTG OVR FLD	“Smoke drifting over field.”
FUOCTY	“Smoke over city.”
GR 2	“Hailstones two inches in diameter.”
INTMT –RA	“Intermittent light rain.”
OCNL LTG DSNT NW	“Occasional lightning distant northwest.”
OCNL SHRA	“Occasional moderate rain showers.”
–RA OCNLY +RA	“Light rain occasionally heavy.”
RAB30	“Rain began at three zero.”
SNB15E40	“Snow began at one five, ended at four zero.”
SNINCR 5/10	“Snow increase five inches during past hour, ten inches on the ground.”
TS OHD MOV E	“Thunderstorm overhead, moving east.”
FRQ LTGCG TS W MOV E	“Frequent lightning cloud to ground, thunderstorm west moving east.”
UNCONFIRMED TORNADO 15W OKC MOV NE 2015	“Unconfirmed tornado one five west of Oklahoma City, moving northeast sighted at two zero one five zulu.”
WET SN	“Wet snow.”

**e. Wind. (See TBL 13-1-21.)**

**TBL 13-1-21**  
**Wind**

<i>Contraction</i>	<i>Phraseology</i>
PK WND 33048/22	“Peak wind three three zero at four eight occurred at two two past the hour.”
WSHFT 30	“Wind shifted at three zero.”

**f. Pressure. (See TBL 13-1-22.)**

**TBL 13-1-22**  
**Pressure**

<i>Contraction</i>	<i>Phraseology</i>
PRESFR	“Pressure falling rapidly.”
PRESRR	“Pressure rising rapidly.”

**g. Freezing Level Data. (See TBL 13-1-23.)**

**TBL 13-1-23**  
**Freezing Level Data**

<i>Contraction</i>	<i>Explanation</i>
RADAT 87045	Relative humidity 87 percent, only crossing of zero degrees Celsius isotherm was four thousand five hundred M-S-L.
RADAT 87L024105	Relative humidity 87 percent at the lowest crossing of zero degrees Celsius. Two crossings occurred at two thousand four hundred and one zero thousand five hundred M-S-L.
RADAT MISG	The sounding terminated below the first crossing of the zero degree Celsius isotherm. Temperatures were all above freezing.
RADAT ZERO	The entire sounding was below zero degrees Celsius.

**h. Icing Data. (See TBL 13-1-24.)**

**TBL 13-1-24**  
**Icing Data**

<i>Contraction</i>	<i>Explanation</i>
RAICG 12 MSL	Icing at one thousand two hundred M-S-L.
RAICG 24 MSL SNW	Icing at two thousand four hundred M-S-L in snow.

**i. Maintenance Data. (See TBL 13-1-25.)**

**TBL 13-1-25**  
**Maintenance Data**

<i>RVR/RVV</i>	<i>Phraseology</i>
PNO	“Precipitation amount not available.”
RVRNO	“R-V-R (or runway visual range) information not available.”
TSNO	“Thunderstorm/lightning information not available.”
VISNO	“Visibility sensor information not available.”

**13-1-10. WEATHER ADVISORIES**

**a.** When announcing weather advisories, include the complete advisory description including the product name and alphanumeric identification. Specify Eastern, Central, or Western section as applicable when stating WSTs.

**PHRASEOLOGY–**

**AIRMET**

**ALERT WEATHER WATCH, ONE ZERO SEVEN FOR SEVERE THUNDERSTORMS**  
**CONVECTIVE SIGMET TWO SEVEN EASTERN**  
**HOUSTON CENTER WEATHER ADVISORY ONE,**  
**ISSUANCE TWO**  
**SIGMET WHISKEY THREE**

**b.** Do not read the OUTLOOK section of WSTs when stating the advisory. Data contained in the OUTLOOK concerning convective activity location, movement, and intensity may be extracted for compilation in forecast summarizations.

**EXAMPLE–**

“Convective SIGMET one seven Eastern—from five zero south of St. Petersburg to three zero south of Columbus, line of thunderstorms three five miles wide moving east at one five knots. Maximum tops four seven thousand.”

**c. VNR.** When VFR flight is proposed and sky conditions or visibilities are present or forecast, surface based or aloft that, in your judgment, would make visual flight doubtful, include one of the following statements:

**PHRASEOLOGY–**

**V-F-R FLIGHT NOT RECOMMENDED** (location if applicable) **DUE TO** (conditions).  
or  
**V-F-R NOT RECOMMENDED.**

## 13-1-11. RADAR

Use the following phraseology and procedures for communicating radar products:

### a. RAREPs.

1. Location. Announce the geographic name (not the identifier) once for communications and twice for broadcasts.

#### EXAMPLE–

“Lake Charles radar report.”

“Memphis, Memphis radar report.”

#### NOTE–

Special weather radar reports are not issued.

2. When broadcasting reports, announce the last two digits of the observation time followed by the word OBSERVATION.

#### EXAMPLE–

“Oklahoma City, Oklahoma City radar report, three five observation.”

3. State the type of echo pattern or configuration as follows: (See TBL 13-1-26.)

**TBL 13-1-26**  
**Echo Pattern**

Contraction	Meaning
AREA	Area
CELL	Single cell
FINE LN	Fine line
LN	Line
LYR	Layer
SPRL BAND AREA	Spiral band area

4. State the coverage of echoes in tenths.

#### EXAMPLE–

“Eight tenths.”

5. State the type in accordance with TBL 13-1-27, intensity in accordance with TBL 13-1-28, and intensity trend of the weather in accordance with TBL 13-1-29.

**TBL 13-1-27**

#### Type

Symbol	Meaning
A	Hail
PL	Ice pellets
L	Drizzle
R	Rain
RW	Rain showers
S	Snow
SW	Snow showers
T	Thunderstorm
ZL	Freezing drizzle
ZR	Freezing rain
Note: Symbols used in RAREPs have not been changed to METAR symbology.	

**TBL 13-1-28**

#### Intensity

Symbol	Intensity
–	Light
(none)	Moderate
+	Heavy
++	Heavy
X	Extreme
XX	Extreme
U	Unknown

**TBL 13-1-29**

#### Intensity Trend

Symbol	Trend
–	Decreasing
+	Increasing
NC	No change
NEW	New echo
Note: No intensity or trend is assigned for nonliquid precipitation.	

6. Describe the area covered by stating the azimuth and range of the points defining the echo pattern. (See TBL 13-1-30.)

**TBL 13-1-30**

#### Echo Pattern

Coded	Phraseology
86/40 160/60 262/115	“FROM FOUR ZERO EAST TO SIX ZERO SOUTHEAST TO ONE ONE FIVE WEST OF (radar site location).”

7. State the dimensions of the echo pattern in nautical miles using separate digits. The symbol W means WIDE, and D indicates DIAMETER.

8. State the pattern movement referencing the direction to which the echoes are moving and the speed using separate digits. The patterns are decoded L for LINE, C for CELL, and A for AREA. (See TBL 13-1-31.)

**TBL 13-1-31**  
**Direction of Movement**

<i>Coded</i>	<i>Phraseology</i>
C3640	“CELLS MOVING SOUTH AT FOUR ZERO.”
L2325	“LINE MOVING NORTHEAST AT TWO FIVE.”

9. State the height of the tops in hundreds and/or thousands of feet, and their location by azimuth and distance where indicated. (See TBL 13-1-32.)

**TBL 13-1-32**  
**Heights-Tops**

<i>Coded</i>	<i>Phraseology</i>
MT350 AT 270/20	“MAX TOP THREE FIVE THOUSAND, TWO ZERO MILES WEST OF (radar site location).”

10. State any remarks after decoding from contractions.

11. Do not announce the letters and numbers comprising the digital radar codes at the end of the radar reports.

12. Do not announce those portions of RAREPs containing information on the location of a hurricane eye. These reports begin with the identifying words eye or center.

13. Following is an example of a RAREP as it appears and as it is broadcast.

**EXAMPLE-**

OKC 1935 LN 8TRW++/+ 86/40 164/60 199/115 15W  
L2425 MT 570 159/65

AUTO

^MO1 NO2 ON3 PM34 QM3 RL2 SL9

“Oklahoma City, Oklahoma City, radar report. Three five observation. A line of eight-tenths coverage thunderstorms with heavy rainshowers increasing in intensity extending from four zero east to six zero south southeast

to one one five south southwest of Oklahoma City. One five miles wide. Line moving northeast at two five. Max top five seven thousand, six five southeast of Oklahoma City.”

**NOTE-**

All weather radar reports are automated with a scheduled issuance time of H+35. Do not state the word “automated.”

b. Radar displays. When stating precipitation intensity from a radar display (such as NEXRAD), use the following four categories as appropriate:

1. Light: (Equates to radar return levels of less than 30 dBZ.)

2. Moderate: (Equates to radar return levels of 30 to 40 dBZ.)

3. Heavy: (Equates to radar return levels of greater than 40 to 50 dBZ.)

4. Extreme: (Equates to radar return levels of greater than 50 dBZ.)

## 13-1-12. WINDS AND TEMPERATURES ALOFT FORECAST (FD)

When announcing the FD use the following phraseology and procedures:

a. State the altitude, then announce wind direction and speed by the separate digits of the wind direction to the 10-degree multiple, the word AT, and the separate digits of the speed.

b. When the forecast speed is less than 5 knots, the coded group is 9900 and read, LIGHT AND VARIABLE.

c. Encoded wind speed 100 to 199 knots have 50 added to the direction code and 100 subtracted from the speed.

d. If wind speed is forecast at 200 knots or greater, the wind group is coded as 199 knots; i.e., 7799 is decoded 270 degrees at 199 knots or greater.

e. A six-digit group includes forecast temperature. Provide temperatures on request only, stating the word TEMPERATURE followed by the word MINUS, as appropriate, and the separate digits. (See TBL 13-1-33.)

**TBL 13-1-33**  
**Altitude**

<i>Coded</i>	<i>Phraseology</i>
2707	“(altitude), two seven zero at seven.”
7799	“(altitude), two seven zero at one niner niner or greater.”
850552	“(altitude), three five zero at one zero five, temperature minus five two.”
9900+00	“(altitude), light and variable, temperature zero.”

### 13-1-13. NUMBER USAGE

State numbers as follows:

- a. Serial numbers. The separate digits.  
(See TBL 13-1-34.)

**TBL 13-1-34**  
**Serial Numbers**

<i>Number</i>	<i>Phraseology</i>
11,495	“One one four niner five.”
20,069	“Two zero zero six niner.”

- b. Altitudes or flight levels.

1. Altitudes. The separate digits of the thousands plus the hundreds. (See TBL 13-1-35.)

**TBL 13-1-35**  
**Altitudes**

<i>Altitude</i>	<i>Phraseology</i>
5,000	“Five thousand.”
10,000	“One zero thousand.”
11,500	“One one thousand five hundred.”

2. Altitudes may be restated in group form for added clarity if the specialist chooses.  
(See TBL 14-1-36.)

**TBL 13-1-36**  
**Altitudes – continued**

<i>Altitude</i>	<i>Phraseology</i>
10,000	“Ten thousand.”
11,500	“Eleven thousand five hundred.”

3. Flight levels. The words flight level followed by the separate digits of the flight level.  
(See TBL 13-1-37.)

**TBL 13-1-37**  
**Flight Levels**

<i>Flight Level</i>	<i>Phraseology</i>
180	“Flight level one eight zero.”
270	“Flight level two seven zero.”

4. MDA/DH Altitudes. The words minimum descent altitude or decision height followed by separate digits of the MDA/DH altitude. (See TBL 13-1-38.)

**TBL 13-1-38**  
**MDA/DH Altitude**

<i>Altitude</i>	<i>Phraseology</i>
486	“Decision height, four eight six.”
1,320	“Minimum descent altitude, one three two zero.”

- c. Time.

1. General time information. The four separate digits of the hour and minutes in terms of Coordinated Universal Time (UTC). (See TBL 13-1-39.)

**TBL 13-1-39**  
**Coordinated Universal Time**

<i>Time</i>	<i>Phraseology</i>
0115 (UTC)	“Zero one one five.”
1315 (UTC)	“One three one five.”

2. Upon request. The four separate digits of the hours and minutes in terms of UTC followed by the local time equivalent; or the local time equivalent only. Local time may be based on the 24-hour clock system. (See TBL 13-1-40.)

**TBL 13-1-40**  
**Coordinated Universal Time**

<i>Time</i>	<i>Phraseology</i>
2:30 p.m. or 2230 (UTC), 2:30 p.m. or 2230 (UTC), 1430 PST	“Two thirty P-M. local.” “Two two three zero, two thirty P-M. local.” “Two two three zero, one four three zero Pacific or local.”

3. Time check. The word “time” followed by the four separate digits of the hour and minutes, and nearest quarter minute. Fractions of a quarter minute less than 8 seconds are stated as the preceding quarter minute; fractions of a quarter minute of 8 seconds or more are stated as the succeeding quarter minute.  
(See TBL 13-1-41.)

**TBL 13-1-41**  
**Time Check**

Time	Phraseology
1415:06	“Time, one four one five.”
1415:10	“Time, one four one five and one-quarter.”

**4.** Abbreviated time. The separate digits of the minutes only. (See TBL 13-1-42.)

**TBL 13-1-42**  
**Abbreviated Time**

Time	Phraseology
1415	“One five.”
1420	“Two zero.”

**NOTE—**

Change to the next minute is made at the minute plus 30 seconds.

**d.** Field elevation. The words field elevation followed by the separate digits of the elevation. (See TBL 13-1-43.)

**TBL 13-1-43**  
**Field Elevation**

Elevation	Phraseology
17 feet	“Field elevation, one seven.”
187 feet	“Field elevation, one eight seven.”
2,817 feet	“Field elevation, two eight one seven.”

**e.** The number 0, is stated as zero except where it appears in group form.

**EXAMPLE—**

“Field elevation One Six Zero.”

“Cessna Two One Six Zero Seven.”

“Boeing Seven – Oh – Seven.”

**f.** Heading. The word heading followed by the three separate digits of the number of degrees, but omit the word degrees. Use heading 360 degrees to indicate a north heading. (See TBL 13-1-44.)

**TBL 13-1-44**  
**Heading/Degrees**

Heading	Phraseology
5 degrees	“Heading, zero zero five.”
30 degrees	“Heading, zero three zero.”
360 degrees	“Heading, three six zero.”

**g.** Radar beacon codes. The word squawk followed by the separate digits of the four-digit code. (See TBL 13-1-45.)

**TBL 13-1-45**  
**Radar Beacon**

Code	Phraseology
1000	“Squawk one zero zero zero.”
2100	“Squawk two one zero zero.”

**h.** Runways. The word runway followed by the separate digits of the runway designation. For a parallel runway, state the word left, right, or center if the letter L, R, or C is included in the designation. (See TBL 13-1-46.)

**TBL 13-1-46**  
**Runway Designation**

Designation	Phraseology
03	“Runway three.”
8L	“Runway eight left.”
27R	“Runway two seven right.”

**i.** Frequencies.

**1.** The separate digits of the frequency, inserting the word point where the decimal occurs. When the frequency is in the L/MF or HF band, include the word kilohertz. (See TBL 13-1-47.)

**TBL 13-1-47**  
**Frequencies**

Frequency	Phraseology
302 kHz	“Three zero two kilohertz.”
5631 kHz	“Five six three one kilohertz.”
126.55 MHz	“One two six point five five.”
135.275 MHz	“One three five point two seven.”

**2.** Issue MLS/TACAN frequencies by stating the word CHANNEL followed by the assigned two-or three-digit channel number.

**EXAMPLE—**

“M-L-Schannel five three zero.”

“TACAN channel niner seven.”

**j.** Speeds.

**1.** The separate digits of the speed followed by the word knots. (See TBL 13-1-48.)

**TBL 13-1-48**  
**Speed**

Speed	Phraseology
95	“Niner five knots.”
185	“One eight five knots.”
250	“Two five zero knots.”

**2.** For Mach speeds, the word Mach, followed by the separate digits of the Mach number inserting the word point where the decimal occurs. (See TBL 13-1-49.)

**TBL 13-1-49****Speed**

<i>Mach Number</i>	<i>Phraseology</i>
0.64	"Mach point six four."
0.7	"Mach point seven."
1.5	"Mach one point five."

**k. Miles.** The separate digits of the mileage followed by the word mile(s). (See TBL 13-1-50.)

**TBL 13-1-50****Miles**

<i>Miles</i>	<i>Phraseology</i>
30	"Three zero miles."

**13-1-14. FACILITY IDENTIFICATION**

Identify facilities as follows:

**a. Airport traffic control towers:** State the name of the facility followed by the word tower. Where military and civil airports are located in the same general area and have similar names, state the name of the military service followed by the name of the military facility and the word tower.

**EXAMPLE-**

"Barksdale Tower."

"Columbus Tower."

"Navy Jacksonville Tower."

**b. Function within a terminal facility.** State the name of the facility followed by the name of the function.

**EXAMPLE-**

"Boston Departure."

"LaGuardia Clearance Delivery."

"O'Hare Ground."

**c. Approach control facilities, including TRACONS, RAPCONS, RATCFs, and ARACs.** State the name of the facility followed by the word approach. Where military and civil facilities are located in the same general area and have similar names, state the name of the military service followed by the name of the military facility and the word approach.

**EXAMPLE-**

"Denver Approach."

"Griffiss Approach."

"Navy Jacksonville Approach."

**d. Air route traffic control centers.** State the name of the facility followed by the word center.

**e. When calling or replying on an interphone line which connects only two facilities, you may omit the facility's name.**

**EXAMPLE-**

"Flight Data."

"Inflight, clearance request."

**f. FAA Automated Flight Service Stations/Flight Service Stations.**

**1. Inflight position.** State the name of the AFSS/FSS followed by the word radio, and position if appropriate.

**EXAMPLE-**

"Fairbanks Radio."

"Fort Dodge Radio, Inflight 2."

**2. Flight Watch position.** State the name of the associated ARTCC followed by the words FLIGHT WATCH.

**EXAMPLE-**

"Indianapolis Flight Watch."

**NOTE-**

*During transition to EFAS consolidation, nonconsolidated facilities will state the name of the parent AFSS facility followed by the words FLIGHT WATCH.*

**3. When calling or replying on interphone lines connecting more than one facility, state the name of the AFSS/FSS followed by the word radio.**

**EXAMPLE-**

"San Angelo Radio."

**4. When answering public access telephone lines, state the geographical name of the AFSS/FSS and the words Flight Service.**

**EXAMPLE-**

"Burlington Flight Service."

"Miami Flight Service."

**g. Radar facilities having ASR or PAR but not providing approach control service.** State the name of the facility followed by the letters G-C-A.

**EXAMPLE-**

"Chanute G-C-A."

"Corpus Christi G-C-A."

"Davison G-C-A."

**13-1-15. AIRCRAFT IDENTIFICATION**

**a. Civil.** State the aircraft type, the model, the manufacturer's name, or the prefix November followed by the numbers/letters of the aircraft registration.

**EXAMPLE–**

*“Bonanza One Two Three Four Tango.”*  
*“Douglas Three Zero Five Romeo.”*  
*“Jet Commander One Four Two Four.”*  
*“November One Two Three Four Golf.”*

**NOTE–**

*The prefix November denotes a U.S. aircraft registry.*

1. Air carrier and other civil aircraft having FAA authorized call signs. State the call sign, in accordance with FAAO JO 7340.2, Contractions, followed by the flight number in group form.

**EXAMPLE–**

*“American Five Twenty–One.”*  
*“Commuter Six Eleven.”*  
*“General Motors Thirty–Fifteen.”*  
*“Eastern Ten Zero Four.”*  
*“Delta One Hundred.”*

2. If aircraft identification becomes a problem, the call sign shall be restated after the flight number of the aircraft involved.

**EXAMPLE–**

*“American Five Twenty–One American.”*  
*“Commuter Six Eleven Commuter.”*  
*“General Motors Thirty–Seven General Motors.”*

**REFERENCE–**

FAAO JO 7210.3, Para 2–1–2, Facility Standard Operation Procedures Directive.

3. Air taxi and commercial operators not having FAA authorized call signs. State the prefix TANGO on initial contact, if used by the pilot, followed by the registration number. The prefix may be dropped in subsequent communications.

**EXAMPLE–**

*On initial contact.*  
*“Tango Mooney Five Five Five Two Quebec.”*  
*or*  
*“Tango November Five Five Five Two Quebec.”*  
*On subsequent contacts.*  
*“Mooney Five Two Quebec.”*  
*or*  
*“November Five Two Quebec.”*

**b. Lifeguard aircraft.**

1. Air carrier/taxi/ambulance. State the prefix, LIFEGUARD, if used by the pilot, followed by the call sign and flight number in group form.

**EXAMPLE–**

*“LIFEGUARD Delta Fifty–One.”*

**NOTE–**

*Usage of LIFEGUARD call sign indicates that operational priority is requested.*

2. Civilian airborne ambulance. State the word LIFEGUARD, followed by the numbers/letters of the registration number.

**EXAMPLE–**

*“LIFEGUARD Two Six Four Six X–Ray.”*

**c. U.S. Military. State one of the following:**

1. The service name followed by the word copter, when appropriate, and a maximum of the last five digits of the serial number.

**EXAMPLE–**

*“Air Guard Copter Two Six Three.”*  
*“Army Copter Three Two One Seven Six.”*  
*“Coast Guard Six One Three Two Seven.”*  
*“Navy Five Six Seven One Three.”*

2. If aircraft identification becomes a problem when the above procedures are used, the call sign shall be restated after the flight number of the aircraft involved.

**EXAMPLE–**

*“Army Copter Three Two One Seven Six Army Copter.”*  
*“Coast Guard Six One Three Two Seven Coast Guard.”*

3. Special military operations. State one of the following followed by a maximum of the last five digits of the serial number:

(a) Air evacuation flights. AIR EVAC, MARINE AIR EVAC, or NAVY AIR EVAC.

**EXAMPLE–**

*“AIR EVAC One Seven Six Five Two.”*

(b) Rescue flights. (Service name) RESCUE.

**EXAMPLE–**

*“Air Force RESCUE Six One Five Seven Niner.”*

(c) Air Mobility Command. REACH.

**EXAMPLE–**

*“REACH Seven Eight Five Six Two.”*

(d) Special Air Mission. U–S–SAM.

**EXAMPLE–**

*“U–S–SAM Niner One Five Six Two.”*

(e) USAF Contract Aircraft. LOGAIR.

**EXAMPLE–**

*“LOGAIR Seven Five Eight Two Six.”*

**4. Military tactical and training.**

(a) U.S. Air Force, Air National Guard, Military District of Washington priority aircraft, and

USAF civil disturbance aircraft. Pronounceable words of three, four, five, or six letters followed by a four-, three-, two-, or one-digit number.

**EXAMPLE–**

*“Okey One Five Seven.”*

*“Pokey Four.”*

*“Slug Two Zero.”*

**NOTE–**

*When the Z suffix described in para 6–5–5, USAF/USN Undergraduate Pilots, para, is added to identify aircraft piloted by USAF undergraduate pilots, the call sign will be limited to a combination of six characters. Do not use this suffix, however, in ground-to-air communication.*

(b) Navy or Marine fleet and training command aircraft. The service name and two letters or a digit and a letter (use letter phonetic equivalents) followed by two or three digits.

**EXAMPLE–**

*“Marine Four Charlie Two Three Six.”*

*“Navy Golf Alpha Two One.”*

(c) NORAD interceptors. An assigned double-letter two-digit flight number.

**EXAMPLE–**

*“Alpha Kilo One Five.”*

(d) Navy Fleet Support Missions. When handling Navy Fleet Support Mission aircraft, use the words Special Flight Number followed by the number as given by the pilot.

d. Foreign registry. State one of the following:

1. Civil. State the aircraft type, manufacturer’s name, or country of origin followed by the letters/numbers of the aircraft registration, or state the letters or digits of the aircraft registration or call sign.

**EXAMPLE–**

*“Stationair F–L–R–B.”*

*“C–F–L–R–B.”*

*“Canadian Foxtrot Lima Romeo Bravo.”*

**NOTE–**

*Letters may be spoken individually or phonetically.*

2. Air carrier. The abbreviated name of the operating company followed by:

(a) The letters or digits of the registration or call sign.

**EXAMPLE–**

*“Air France F–L–R–L–G.”*

**NOTE–**

*Letters may be spoken individually or phonetically in accordance with the format used by the pilot.*

(b) The flight number in group form, or separate digits may be used if that is the format used by the pilot.

**EXAMPLE–**

*“Scandinavian Six Eight.”*

*“Scandinavian Sixty–Eight.”*

3. Military, except Canada.

(a) State the name of the country and the military service followed by the separate digits or letters of the registration or call sign.

(b) Canadian Forces aircraft shall be identified by the word CANFORCE followed by the separate digits of the serial number.

(c) The Canadian Coast Guard shall be identified as Canadian Coast Guard followed by the separate digits of the serial number.

**EXAMPLE–**

*“Brazilian Air Force Five Three Two Seven Six.”*

*“Canforce Five Six Two Seven.”*

e. Presidential aircraft and Presidential family aircraft.

1. When the President is aboard a military aircraft, state the name of the military service followed by the word one.

**EXAMPLE–**

*“Air Force One.”*

*“Army One.”*

*“Marine One.”*

2. When the President is aboard a civil aircraft, state the words Executive One.

3. When a member of the President’s family is aboard any aircraft, if the U.S. Secret Service or the White House Staff determines it is necessary, state the words Executive One Foxtrot.

f. Vice Presidential aircraft.

1. When the Vice President is aboard a military aircraft, state the name of the military service followed by the word two.

**EXAMPLE–**

*“Air Force Two.”*

*“Army Two.”*

*“Marine Two.”*

2. When the Vice President is aboard a civil aircraft, state the words Executive Two.

3. When a member of the Vice President's family is aboard any aircraft, if the U.S. Secret Service or the White House Staff determines it is necessary, state the words Executive Two Foxtrot.

g. DOT and FAA flights. The following alpha-numeric identifiers radio call signs are for use in air/ground communications when the Secretary of Transportation, Deputy Secretary of Transportation, FAA Administrator, or FAA Deputy Administrator have a requirement to identify themselves:

1. Department of Transportation.

(a) Secretary:

(1) Identifier – DOT-1.

(2) Call Sign – Transport-1.

(b) Deputy Secretary:

(1) Identifier – DOT-2.

(2) Call Sign – Transport-2.

2. Federal Aviation Administration.

(a) Administrator:

(1) Identifier – FAA-1.

(2) Call Sign – Safe Air-1.

(b) Deputy Administrator:

(1) Identifier – FAA-2.

(2) Call Sign – Safe Air-2.

**PHRASEOLOGY–**

GRAND FORKS RADIO, TRANSPORT TWO, (message).  
MIAMI RADIO, SAFE AIR ONE, (message).

h. Other special flights.

1. Department of Energy flights. State the letters R-A-C (use phonetic alphabet equivalents) followed by the last four separate digits of the aircraft registration number.

**EXAMPLE–**

“Romeo Alfa Charlie One Six Five Three.”

2. Semiautomatic Flight Inspections. State the code name SAFI followed by the separate digits of the grid number as filed.

**EXAMPLE–**

“SAFI Five Two Seven.”

3. Flight Inspection of Navigational Aids. State the call sign Flight Check followed by the digits of the registration number.

**EXAMPLE–**

“FLIGHT CHECK Three Niner Six Five Four.”

4. USAF aircraft engaged in aerial sampling missions. State the call sign SAMP followed by the last three digits of the serial number.

**EXAMPLE–**

“SAMP Three One Six.”

5. United States governmental Departments or Agencies, with a demonstrated and approved need, have been granted special domestic/ICAO telephonies (call signs). These items are contained in FAA Order 7110.67, Special Aircraft Operations By Law Enforcement/Military or Governmental Organization.

i. Use a pilot's name in identification of an aircraft only in special or emergency situations.

## 13-1-16. AIRCRAFT TYPES

Describe aircraft as follows:

a. Military.

1. Military designator with number spoken in group form; or

2. Service and type; or

3. Type only if no confusion or misidentification is likely.

**EXAMPLE–**

“Air Force Bomber.”

“B-One.”

“Bomber.”

“F-Fifteen.”

“Fighter.” “Navy Fighter.”

b. Air Carrier.

1. Manufacturer's name or model.

2. Add the company name or other identifying features when confusion or misunderstanding is likely.

**EXAMPLE–**

“American M-D Eighty.”

“American Seven-Zero-Seven.”

“Boeing Seven-Oh-Seven.”

“L-Ten-Eleven.”

“Lockheed Ten Eleven.”

“United Seven Thirty-Seven.”

c. General Aviation and Air Taxi.

1. Manufacturer's model, name, or designator.

2. Add color when considered advantageous.

**EXAMPLE–**

“Airliner.”  
 “Blue and White King Air.”  
 “Cessna Four–Oh–One.”  
 “Cessna Three Ten.”  
 “Green Apache.”  
 “P–A Twenty–Two.”  
 “Tri–Pacer”

**13–1–17. AIRCRAFT EQUIPMENT CODES**

When communicating this information (aircraft equipment suffixes) state the aircraft type, the word slant, and the appropriate phonetic letter equivalent of the suffix.

**EXAMPLE–**

“Boeing Seven–Oh–Seven slant Romeo.”  
 “D–C Six slant Tango.”  
 “F–Eight–E slant Papa.”  
 “F–Four–C slant November.”

**13–1–18. AIRWAYS AND ROUTES**

Describe airways, routes, or jet routes as follows:

- a. VOR/VORTAC/TACAN airways or jet routes. State the word Victor or the letter J followed by the number of the airway or route in group form. For RNAV routes, add the word romeo.

**EXAMPLE–**

“J Eight Thirty Romeo.”  
 “J Five Thirty–Three.”  
 “Offset one zero miles right of J Eight Thirty Romeo.”  
 “Victor Seven Ten Romeo.”  
 “Victor Twelve.”

- b. VOR/VORTAC/TACAN alternate airways. State the word Victor followed by the number of the airway in group form and the alternate direction.

**EXAMPLE–**

“Victor Twelve South.”

- c. L/MF airways. State the color of the airway followed by the number in group form.

**EXAMPLE–**

“Blue Eighty–One.”

- d. North American Route. State the words North American Route followed by the number of the route in group form.

**EXAMPLE–**

“North American Route Fifty.”

- e. MTRs. State the letters followed by the number of the route in group form.

**EXAMPLE–**

“I–R Five Thirty–One.”

**13–1–19. NAVAID TERMS**

- a. Announce NAVAIDs as follows in TBL 13–1–51:

**TBL 13–1–51**  
**NAVAID Terms**

<i>Contraction</i>	<i>Phraseology</i>
DME	D–M–E
ILS	I–L–S
LOM	Outer compass locator
MLS	M–L–S
NDB	Nondirectional Radio beacon
TACAN	TACK–AN
VOR	V–O–R
VORTAC	VOR– (as in vortex) TACK

- b. Describe radials, arcs, courses, bearings, and quadrants of NAVAIDs as follows:

1. VOR/VORTAC/TACAN/MLS NAVAIDs. State the name of the NAVAID followed by the separate digits of the radial/azimuth (omitting the word degrees) and the word radial/azimuth.

**EXAMPLE–**

“Appleton zero five zero radial.”  
 “Lindburg Runway Two Seven MLS two six zero azimuth.”

2. Arcs about VOR–DME/VORTAC/TACAN/MLS NAVAIDs. State the distance in miles from the NAVAID followed by the words “mile arc,” the direction from the NAVAID in terms of the eight principal points of the compass, the word of, and the name of the NAVAID.

**EXAMPLE–**

“Two zero mile arc southwest of O’Hare Runway Two Seven Left M–L–S.”

3. Quadrant within a radius of NAVAID. State direction from NAVAID in terms of the quadrant, such as NE, SE, SW, NW, followed by the distance in miles from the NAVAID.

**EXAMPLE–**

“Cleared to fly northeast quadrant of Philipsburg VORTAC within four zero mile radius.”

**REFERENCE–**

*Pilot/Controller Glossary, QUADRANT.*

4. Nondirectional beacons. State the course to or the bearing from the radio beacon, omitting the word degree, followed by the words course to or bearing from, the name of the radio beacon, and the words radio beacon.

**EXAMPLE–**

*“Three four zero bearing from Randolph Radio Beacon.”*

**13–1–20. NAVAID FIXES**

Describe fixes determined by reference to a radial/localizer/azimuth and distance from a VOR–DME/VORTAC/TACAN/ILS–DME or MLS as follows:

a. When a fix is not named, state the name of the NAVAID followed by a specified radial/localizer/azimuth, and state the distance in miles followed by the phrase mile fix.

**EXAMPLE–**

*“Appleton zero five zero radial three seven mile fix.”*

*“Reno localizer back course four mile fix.”*

*“Hobby Runway One Two M–L–S zero niner zero azimuth one two mile fix.”*

b. When a fix is named, state the name of the fix followed by the phrase D–M–E fix or waypoint, as appropriate.

**EXAMPLE–**

*“Shaum D–M–E Fix.”*

*“Shaum Waypoint.”*

c. Use specific terms to describe a fix. Do not use expressions such as passing Victor Twelve or passing J Eleven.

**13–1–21. RUNWAY CONDITIONS**

a. State factual information as reported by airport management concerning the condition of the runway surface and describing the accumulation of precipitation. Furnish quality of braking action as received from pilots or airport management to all aircraft as follows:

1. Describe the quality of braking action using the terms good, fair, poor, or nil. If the pilot or airport management reports braking action in other than the foregoing terms, ask them to categorize braking action in these terms.

2. Include the type of aircraft or vehicle (if known) from which the report is received.

**EXAMPLE–**

*“All runways covered by packed snow six inches deep.”*

*“Braking action poor reported by an F Twenty–Seven.”*

3. If the braking action report affects only a portion of a runway, obtain enough information from the pilot or airport management to describe braking action in terms easily understood by the pilot.

**EXAMPLE–**

*“Braking action poor first half of runway, reported by a Gulfstream Two.”*

*“Braking action poor beyond the intersection of Runway Two Seven, reported by a Boeing Seven Twenty–Seven.”*

**NOTE–**

*Descriptive terms, such as first/last half of the runway, should normally be used rather than landmark descriptions; e.g., opposite the fire station, south of a taxiway.*

b. State runway friction measurement readings/values as received from airport management to aircraft as follows:

1. At airports with friction measuring devices, provide runway friction reports, as received from airport management, to pilots on request. State the runway number followed by the MU number for each of the three runway zones, the time of the report in UTC, and a word describing the cause of the runway friction problem.

**EXAMPLE–**

*“Runway Two Seven, MU forty–two, forty–one, twenty–eight at one zero one eight ZULU, ice.”*

2. Issue the runway surface condition and/or the runway condition reading (RCR), if provided, to all USAF and ANG aircraft. Issue the RCR to other aircraft upon request.

**EXAMPLE–**

*“Ice on runway, R–C–R Zero Five, patchy.”*

**NOTE–**

*USAF has established RCR procedures for determining the average deceleration readings of runways under conditions of water, slush, ice, or snow. The use of RCR code is dependent upon a pilot’s having a “stopping capability chart” specifically applicable to his/her aircraft. USAF offices furnish RCR information at airports serving USAF and ANG aircraft.*

# PILOT/CONTROLLER GLOSSARY

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## 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:

FLY VISUAL TO AIRPORT

PUBLISHED INSTRUMENT APPROACH PROCEDURE VISUAL SEGMENT

VISUAL SEGMENT

b. Terms Modified:

AIRPORT RESERVATION OFFICE

ILS CATEGORIES

c. Editorial/format changes were made where necessary. Revision bars were not used due to the insignificant nature of the changes.



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 MARSAs apply 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 CONVECTIVE 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. LDIN– 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:

**a. Visual.**

**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, alternating white and green flashes indicate the location of the airport. At military airports, the beacons flash alternately white and green, but are

power or control. The standard overhead approach starts at a relatively high altitude over a runway (“high key”) followed by a continuous 180 degree turn to a high, wide position (“low key”) followed by a continuous 180 degree turn final. The standard straight-in pattern starts at a point that results in a straight-in approach with a high rate of descent to the runway. Flameout approaches terminate in the type approach requested by the pilot (normally fullstop).

**FLIGHT CHECK**– A call-sign prefix used by FAA aircraft engaged in flight inspection/certification of navigational aids and flight procedures. The word “recorded” may be added as a suffix; e.g., “Flight Check 320 recorded” to indicate that an automated flight inspection is in progress in terminal areas.

(See **FLIGHT INSPECTION**.)

(Refer to **AIM**.)

**FLIGHT FOLLOWING**–

(See **TRAFFIC ADVISORIES**.)

**FLIGHT INFORMATION REGION**– An airspace of defined dimensions within which Flight Information Service and Alerting Service are provided.

**a. Flight Information Service.** A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

**b. Alerting Service.** A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid and to assist such organizations as required.

**FLIGHT INFORMATION SERVICE**– A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

**FLIGHT INSPECTION**– Inflight investigation and evaluation of a navigational aid to determine whether it meets established tolerances.

(See **FLIGHT CHECK**.)

(See **NAVIGATIONAL AID**.)

**FLIGHT LEVEL**– A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level (FL) 250 represents a barometric altimeter indication of 25,000 feet; FL 255, an indication of 25,500 feet.

(See **ICAO term FLIGHT LEVEL**.)

**FLIGHT LEVEL [ICAO]**– A surface of constant atmospheric pressure which is related to a specific

pressure datum, 1013.2 hPa (1013.2 mb), and is separated from other such surfaces by specific pressure intervals.

Note 1: A pressure type altimeter calibrated in accordance with the standard atmosphere:

- a.** When set to a QNH altimeter setting, will indicate altitude;
- b.** When set to a QFE altimeter setting, will indicate height above the QFE reference datum; and
- c.** When set to a pressure of 1013.2 hPa (1013.2 mb), may be used to indicate flight levels.

Note 2: The terms ‘height’ and ‘altitude,’ used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

**FLIGHT LINE**– A term used to describe the precise movement of a civil photogrammetric aircraft along a predetermined course(s) at a predetermined altitude during the actual photographic run.

**FLIGHT MANAGEMENT SYSTEMS**– A computer system that uses a large data base to allow routes to be preprogrammed and fed into the system by means of a data loader. The system is constantly updated with respect to position accuracy by reference to conventional navigation aids. The sophisticated program and its associated data base insures that the most appropriate aids are automatically selected during the information update cycle.

**FLIGHT MANAGEMENT SYSTEM PROCEDURE**– An arrival, departure, or approach procedure developed for use by aircraft with a slant (/) E or slant (/) F equipment suffix.

**FLIGHT PATH**– A line, course, or track along which an aircraft is flying or intended to be flown.

(See **COURSE**.)

(See **TRACK**.)

**FLIGHT PLAN**– Specified information relating to the intended flight of an aircraft that is filed orally or in writing with an FSS or an ATC facility.

(See **FAST FILE**.)

(See **FILED**.)

(Refer to **AIM**.)

**FLIGHT PLAN AREA**– The geographical area assigned by regional air traffic divisions to a flight service station for the purpose of search and rescue for VFR aircraft, issuance of NOTAMs, pilot briefing, in-flight services, broadcast, emergency services, flight data processing, international operations, and aviation weather services. Three letter

identifiers are assigned to every flight service station and are annotated in AFDs and FAAO JO 7350.8, LOCATION IDENTIFIERS, as tie-in facilities.

(See FAST FILE.)

(See FILED.)

(Refer to AIM.)

**FLIGHT RECORDER**— A general term applied to any instrument or device that records information about the performance of an aircraft in flight or about conditions encountered in flight. Flight recorders may make records of airspeed, outside air temperature, vertical acceleration, engine RPM, manifold pressure, and other pertinent variables for a given flight.

(See ICAO term FLIGHT RECORDER.)

**FLIGHT RECORDER [ICAO]**— Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

**Note:** See Annex 6 Part I, for specifications relating to flight recorders.

**FLIGHT SERVICE STATION (FSS)** — An air traffic facility which provides pilot briefings, flight plan processing, en route radio communications, search and rescue services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notices to Airmen, broadcast aviation weather and aeronautical information, and notify Customs and Border Protection of transborder flights. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch) and Airport Advisory Service (AAS). In Alaska, designated FSSs also provide TWEB recordings and take weather observations.

**FLIGHT STANDARDS DISTRICT OFFICE**— An FAA field office serving an assigned geographical area and staffed with Flight Standards personnel who serve the aviation industry and the general public on matters relating to the certification and operation of air carrier and general aviation aircraft. Activities include general surveillance of operational safety, certification of airmen and aircraft, accident prevention, investigation, enforcement, etc.

**FLIGHT TEST**— A flight for the purpose of:

- a. Investigating the operation/flight characteristics of an aircraft or aircraft component.
- b. Evaluating an applicant for a pilot certificate or rating.

**FLIGHT VISIBILITY**—

(See VISIBILITY.)

**FLIGHT WATCH**— A shortened term for use in air-ground contacts to identify the flight service station providing En Route Flight Advisory Service; e.g., “Oakland Flight Watch.”

(See EN ROUTE FLIGHT ADVISORY SERVICE.)

**FLIP**—

(See DOD FLIP.)

**FLY HEADING (DEGREES)**— Informs the pilot of the heading he/she should fly. The pilot may have to turn to, or continue on, a specific compass direction in order to comply with the instructions. The pilot is expected to turn in the shorter direction to the heading unless otherwise instructed by ATC.

**FLY-BY WAYPOINT**— A fly-by waypoint requires the use of turn anticipation to avoid overshoot of the next flight segment.

**FLY-OVER WAYPOINT**— A fly-over waypoint precludes any turn until the waypoint is overflown and is followed by an intercept maneuver of the next flight segment.

**FLY VISUAL TO AIRPORT**—

(See PUBLISHED INSTRUMENT APPROACH PROCEDURE VISUAL SEGMENT.)

**FMA**—

(See FINAL MONITOR AID.)

**FMS**—

(See FLIGHT MANAGEMENT SYSTEM.)

**FMSP**—

(See FLIGHT MANAGEMENT SYSTEM PROCEDURE.)

**FORMATION FLIGHT**— More than one aircraft which, by prior arrangement between the pilots, operate as a single aircraft with regard to navigation and position reporting. Separation between aircraft within the formation is the responsibility of the flight leader and the pilots of the other aircraft in the flight. This includes transition periods when aircraft within the formation are maneuvering to attain separation from each other to effect individual control and during join-up and breakaway.

- a. A standard formation is one in which a proximity of no more than 1 mile laterally or longitudinally and within 100 feet vertically from the flight leader is maintained by each wingman.

**b.** Nonstandard formations are those operating under any of the following conditions:

**1.** When the flight leader has requested and ATC has approved other than standard formation dimensions.

**2.** When operating within an authorized altitude reservation (ALTRV) or under the provisions of a letter of agreement.

**3.** When the operations are conducted in airspace specifically designed for a special activity.

(See ALTITUDE RESERVATION.)

(Refer to 14 CFR Part 91.)

***FRC***–

(See REQUEST FULL ROUTE CLEARANCE.)

**FREEZE/FROZEN**– Terms used in referring to arrivals which have been assigned ACLTs and to the lists in which they are displayed.

**FREEZE CALCULATED LANDING TIME**– A dynamic parameter number of minutes prior to the meter fix calculated time of arrival for each aircraft when the TCLT is frozen and becomes an ACLT (i.e., the VTA is updated and consequently the TCLT is modified as appropriate until FCLT minutes prior to meter fix calculated time of arrival, at which time updating is suspended and an ACLT and a frozen meter fix crossing time (MFT) is assigned).

**FREEZE HORIZON**– The time or point at which an aircraft's STA becomes fixed and no longer fluctuates with each radar update. This setting insures a constant time for each aircraft, necessary for the metering controller to plan his/her delay technique. This setting can be either in distance from the meter fix or a prescribed flying time to the meter fix.

**FREEZE SPEED PARAMETER**– A speed adapted for each aircraft to determine fast and slow aircraft.

Fast aircraft freeze on parameter FCLT and slow aircraft freeze on parameter MLDI.

**FRICTION MEASUREMENT**– A measurement of the friction characteristics of the runway pavement surface using continuous self-watering friction measurement equipment in accordance with the specifications, procedures and schedules contained in AC 150/5320–12, Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces.

**FSDO**–

(See FLIGHT STANDARDS DISTRICT OFFICE.)

**FSPD**–

(See FREEZE SPEED PARAMETER.)

**FSS**–

(See FLIGHT SERVICE STATION.)

**FUEL DUMPING**– Airborne release of usable fuel. This does not include the dropping of fuel tanks.

(See JETTISONING OF EXTERNAL STORES.)

**FUEL REMAINING**– A phrase used by either pilots or controllers when relating to the fuel remaining on board until actual fuel exhaustion. When transmitting such information in response to either a controller question or pilot initiated cautionary advisory to air traffic control, pilots will state the APPROXIMATE NUMBER OF MINUTES the flight can continue with the fuel remaining. All reserve fuel **SHOULD BE INCLUDED** in the time stated, as should an allowance for established fuel gauge system error.

**FUEL SIPHONING**– Unintentional release of fuel caused by overflow, puncture, loose cap, etc.

**FUEL VENTING**–

(See FUEL SIPHONING.)



# I

**I SAY AGAIN**– The message will be repeated.

**IAF**–

(See INITIAL APPROACH FIX.)

**IAP**–

(See INSTRUMENT APPROACH PROCEDURE.)

**IAWP**– Initial Approach Waypoint

**ICAO**–

(See ICAO Term INTERNATIONAL CIVIL AVIATION ORGANIZATION.)

**ICING**– The accumulation of airframe ice.

Types of icing are:

**a. Rime Ice**– Rough, milky, opaque ice formed by the instantaneous freezing of small supercooled water droplets.

**b. Clear Ice**– A glossy, clear, or translucent ice formed by the relatively slow freezing or large supercooled water droplets.

**c. Mixed**– A mixture of clear ice and rime ice.

Intensity of icing:

**a. Trace**– Ice becomes perceptible. Rate of accumulation is slightly greater than the rate of sublimation. Deicing/anti-icing equipment is not utilized unless encountered for an extended period of time (over 1 hour).

**b. Light**– The rate of accumulation may create a problem if flight is prolonged in this environment (over 1 hour). Occasional use of deicing/anti-icing equipment removes/prevents accumulation. It does not present a problem if the deicing/anti-icing equipment is used.

**c. Moderate**– The rate of accumulation is such that even short encounters become potentially hazardous and use of deicing/anti-icing equipment or flight diversion is necessary.

**d. Severe**– The rate of accumulation is such that deicing/anti-icing equipment fails to reduce or control the hazard. Immediate flight diversion is necessary.

**IDENT**– A request for a pilot to activate the aircraft transponder identification feature. This will help the

controller to confirm an aircraft identity or to identify an aircraft.

(Refer to AIM.)

**IDENT FEATURE**– The special feature in the Air Traffic Control Radar Beacon System (ATCRBS) equipment. It is used to immediately distinguish one displayed beacon target from other beacon targets.

(See IDENT.)

**IF**–

(See INTERMEDIATE FIX.)

**IFIM**–

(See INTERNATIONAL FLIGHT INFORMATION MANUAL.)

**IF NO TRANSMISSION RECEIVED FOR (TIME)**– Used by ATC in radar approaches to prefix procedures which should be followed by the pilot in event of lost communications.

(See LOST COMMUNICATIONS.)

**IFR**–

(See INSTRUMENT FLIGHT RULES.)

**IFR AIRCRAFT**– An aircraft conducting flight in accordance with instrument flight rules.

**IFR CONDITIONS**– Weather conditions below the minimum for flight under visual flight rules.

(See INSTRUMENT METEOROLOGICAL CONDITIONS.)

**IFR DEPARTURE PROCEDURE**–

(See IFR TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES.)

(Refer to AIM.)

**IFR FLIGHT**–

(See IFR AIRCRAFT.)

**IFR LANDING MINIMUMS**–

(See LANDING MINIMUMS.)

**IFR MILITARY TRAINING ROUTES (IR)**– Routes used by the Department of Defense and associated Reserve and Air Guard units for the purpose of conducting low-altitude navigation and tactical training in both IFR and VFR weather conditions below 10,000 feet MSL at airspeeds in excess of 250 knots IAS.

**IFR TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES**– Title 14 Code of Federal

Regulations Part 91, prescribes standard takeoff rules for certain civil users. At some airports, obstructions or other factors require the establishment of nonstandard takeoff minimums, departure procedures, or both to assist pilots in avoiding obstacles during climb to the minimum en route altitude. Those airports are listed in FAA/DOD Instrument Approach Procedures (IAPs) Charts under a section entitled "IFR Takeoff Minimums and Departure Procedures." The FAA/DOD IAP chart legend illustrates the symbol used to alert the pilot to nonstandard takeoff minimums and departure procedures. When departing IFR from such airports or from any airports where there are no departure procedures, DPs, or ATC facilities available, pilots should advise ATC of any departure limitations. Controllers may query a pilot to determine acceptable departure directions, turns, or headings after takeoff. Pilots should be familiar with the departure procedures and must assure that their aircraft can meet or exceed any specified climb gradients.

**IF/IAWP**– Intermediate Fix/Initial Approach Waypoint. The waypoint where the final approach course of a T approach meets the crossbar of the T. When designated (in conjunction with a TAA) this waypoint will be used as an IAWP when approaching the airport from certain directions, and as an IFWP when beginning the approach from another IAWP.

**IFWP**– Intermediate Fix Waypoint

**ILS**–

(See INSTRUMENT LANDING SYSTEM.)

**ILS CATEGORIES**– 1. ILS Category I. An ILS approach procedure which provides for approach to a height above touchdown of not less than 200 feet and with runway visual range of not less than 1,800 feet.– 2. ILS Category I Lower Than Standard. An ILS approach procedure which provides for approach to a height above touchdown of not less than 100 feet and with runway visual range of not less than 1,400 feet, HUD to DA and special authorization. 3. ILS Category II. An ILS approach procedure which provides for approach to a height above touchdown of not less than 100 feet and with runway visual range of not less than 1,200 feet (with autoland or HUD to touchdown and noted on authorization, RVR 1,000 feet).– 4. ILS Category II Reduced Lighting. An ILS approach procedure which provides for approach to a height above touchdown of not less than 100 feet

and with runway visual range of not less than 1,200 feet with autoland or HUD to touchdown and noted on authorization (no touchdown zone and centerline lighting are required).– 5. ILS Category III:

**a. IIIA.**–An ILS approach procedure which provides for approach without a decision height minimum and with runway visual range of not less than 700 feet.

**b. IIIB.**–An ILS approach procedure which provides for approach without a decision height minimum and with runway visual range of not less than 150 feet.

**c. IIIC.**–An ILS approach procedure which provides for approach without a decision height minimum and without runway visual range minimum.

**ILS PRM APPROACH**– An instrument landing system (ILS) approach conducted to parallel runways whose extended centerlines are separated by less than 4,300 feet and the parallel runways have a Precision Runway Monitoring (PRM) system that permits simultaneous independent ILS approaches.

**IM**–

(See INNER MARKER.)

**IMC**–

(See INSTRUMENT METEOROLOGICAL CONDITIONS.)

**IMMEDIATELY**–Used by ATC or pilots when such action compliance is required to avoid an imminent situation.

**INCERFA (Uncertainty Phase) [ICAO]**– A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

**INCREASE SPEED TO (SPEED)**–

(See SPEED ADJUSTMENT.)

**INERTIAL NAVIGATION SYSTEM**– An RNAV system which is a form of self-contained navigation.

(See Area Navigation/RNAV.)

**INFLIGHT REFUELING**–

(See AERIAL REFUELING.)

**INFLIGHT WEATHER ADVISORY**–

(See WEATHER ADVISORY.)

**INFORMATION REQUEST**– A request originated by an FSS for information concerning an overdue VFR aircraft.

**INITIAL APPROACH FIX**– The fixes depicted on instrument approach procedure charts that identify the beginning of the initial approach segment(s).

(See FIX.)

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

**INITIAL APPROACH SEGMENT**–

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

**INITIAL APPROACH SEGMENT [ICAO]**– That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point.

**INLAND NAVIGATION FACILITY**– A navigation aid on a North American Route at which the common route and/or the noncommon route begins or ends.

**INNER MARKER**– A marker beacon used with an ILS (CAT II) precision approach located between the middle marker and the end of the ILS runway, transmitting a radiation pattern keyed at six dots per second and indicating to the pilot, both aurally and visually, that he/she is at the designated decision height (DH), normally 100 feet above the touchdown zone elevation, on the ILS CAT II approach. It also marks progress during a CAT III approach.

(See INSTRUMENT LANDING SYSTEM.)

(Refer to AIM.)

**INNER MARKER BEACON**–

(See INNER MARKER.)

**INREQ**–

(See INFORMATION REQUEST.)

**INS**–

(See INERTIAL NAVIGATION SYSTEM.)

**INSTRUMENT APPROACH**–

(See INSTRUMENT APPROACH PROCEDURE.)

**INSTRUMENT APPROACH PROCEDURE**– A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may

be made visually. It is prescribed and approved for a specific airport by competent authority.

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

(Refer to 14 CFR Part 91.)

(Refer to AIM.)

**a.** U.S. civil standard instrument approach procedures are approved by the FAA as prescribed under 14 CFR Part 97 and are available for public use.

**b.** U.S. military standard instrument approach procedures are approved and published by the Department of Defense.

**c.** Special instrument approach procedures are approved by the FAA for individual operators but are not published in 14 CFR Part 97 for public use.

(See ICAO term INSTRUMENT APPROACH PROCEDURE.)

**INSTRUMENT APPROACH PROCEDURE [ICAO]**– A series of predetermined maneuvers by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply.

**INSTRUMENT APPROACH PROCEDURES CHARTS**–

(See AERONAUTICAL CHART.)

**INSTRUMENT DEPARTURE PROCEDURE (DP)**– A preplanned instrument flight rule (IFR) departure procedure published for pilot use, in graphic or textual format, that provides obstruction clearance from the terminal area to the appropriate en route structure. There are two types of DP, Obstacle Departure Procedure (ODP), printed either textually or graphically, and, Standard Instrument Departure (SID), which is always printed graphically.

(See IFR TAKEOFF MINIMUMS AND DEPARTURE PROCEDURES.)

(See OBSTACLE DEPARTURE PROCEDURES.)

(See STANDARD INSTRUMENT DEPARTURES.)

(Refer to AIM.)

**INSTRUMENT DEPARTURE PROCEDURE (DP) CHARTS**–

(See AERONAUTICAL CHART.)

**INSTRUMENT FLIGHT RULES**— Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

(See INSTRUMENT METEOROLOGICAL CONDITIONS.)

(See VISUAL FLIGHT RULES.)

(See VISUAL METEOROLOGICAL CONDITIONS.)

(See ICAO term INSTRUMENT FLIGHT RULES.)

(Refer to AIM.)

**INSTRUMENT FLIGHT RULES [ICAO]**— A set of rules governing the conduct of flight under instrument meteorological conditions.

**INSTRUMENT LANDING SYSTEM**— A precision instrument approach system which normally consists of the following electronic components and visual aids:

**a. Localizer.**

(See LOCALIZER.)

**b. Glideslope.**

(See GLIDESLOPE.)

**c. Outer Marker.**

(See OUTER MARKER.)

**d. Middle Marker.**

(See MIDDLE MARKER.)

**e. Approach Lights.**

(See AIRPORT LIGHTING.)

(Refer to 14 CFR Part 91.)

(Refer to AIM.)

**INSTRUMENT METEOROLOGICAL CONDITIONS**— Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions.

(See INSTRUMENT FLIGHT RULES.)

(See VISUAL FLIGHT RULES.)

(See VISUAL METEOROLOGICAL CONDITIONS.)

**INSTRUMENT RUNWAY**— A runway equipped with electronic and visual navigation aids for which a precision or nonprecision approach procedure having straight-in landing minimums has been approved.

(See ICAO term INSTRUMENT RUNWAY.)

**INSTRUMENT RUNWAY [ICAO]**— One of the following types of runways intended for the operation of aircraft using instrument approach procedures:

**a. Nonprecision Approach Runway**—An instrument runway served by visual aids and a nonvisual aid providing at least directional guidance adequate for a straight-in approach.

**b. Precision Approach Runway, Category I**—An instrument runway served by ILS and visual aids intended for operations down to 60 m (200 feet) decision height and down to an RVR of the order of 800 m.

**c. Precision Approach Runway, Category II**—An instrument runway served by ILS and visual aids intended for operations down to 30 m (100 feet) decision height and down to an RVR of the order of 400 m.

**d. Precision Approach Runway, Category III**—An instrument runway served by ILS to and along the surface of the runway and:

**1.** Intended for operations down to an RVR of the order of 200 m (no decision height being applicable) using visual aids during the final phase of landing;

**2.** Intended for operations down to an RVR of the order of 50 m (no decision height being applicable) using visual aids for taxiing;

**3.** Intended for operations without reliance on visual reference for landing or taxiing.

**Note 1:** See Annex 10 Volume I, Part I, Chapter 3, for related ILS specifications.

**Note 2:** Visual aids need not necessarily be matched to the scale of nonvisual aids provided. The criterion for the selection of visual aids is the conditions in which operations are intended to be conducted.

**INTEGRITY**— The ability of a system to provide timely warnings to users when the system should not be used for navigation.

**INTERMEDIATE APPROACH SEGMENT**—  
(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

**INTERMEDIATE APPROACH SEGMENT [ICAO]**— That segment of an instrument approach procedure between either the intermediate approach fix and the final approach fix or point, or between the end of a reversal, race track or dead reckoning track

procedure and the final approach fix or point, as appropriate.

**INTERMEDIATE FIX**– The fix that identifies the beginning of the intermediate approach segment of an instrument approach procedure. The fix is not normally identified on the instrument approach chart as an intermediate fix (IF).

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

**INTERMEDIATE LANDING**– On the rare occasion that this option is requested, it should be approved. The departure center, however, must advise the ATCSCC so that the appropriate delay is carried over and assigned at the intermediate airport. An intermediate landing airport within the arrival center will not be accepted without coordination with and the approval of the ATCSCC.

**INTERNATIONAL AIRPORT**– Relating to international flight, it means:

**a.** An airport of entry which has been designated by the Secretary of Treasury or Commissioner of Customs as an international airport for customs service.

**b.** A landing rights airport at which specific permission to land must be obtained from customs authorities in advance of contemplated use.

**c.** Airports designated under the Convention on International Civil Aviation as an airport for use by international commercial air transport and/or international general aviation.

(See ICAO term INTERNATIONAL AIRPORT.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

(Refer to IFIM.)

**INTERNATIONAL AIRPORT [ICAO]**– Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

**INTERNATIONAL CIVIL AVIATION ORGANIZATION [ICAO]**– A specialized agency of the United Nations whose objective is to develop the principles and techniques of international air

navigation and to foster planning and development of international civil air transport.

**a.** Regions include:

1. African-Indian Ocean Region
2. Caribbean Region
3. European Region
4. Middle East/Asia Region
5. North American Region
6. North Atlantic Region
7. Pacific Region
8. South American Region

**INTERNATIONAL FLIGHT INFORMATION MANUAL**– A publication designed primarily as a pilot's preflight planning guide for flights into foreign airspace and for flights returning to the U.S. from foreign locations.

**INTERROGATOR**– The ground-based surveillance radar beacon transmitter-receiver, which normally scans in synchronism with a primary radar, transmitting discrete radio signals which repetitiously request all transponders on the mode being used to reply. The replies received are mixed with the primary radar returns and displayed on the same plan position indicator (radar scope). Also, applied to the airborne element of the TACAN/DME system.

(See TRANSPONDER.)

(Refer to AIM.)

**INTERSECTING RUNWAYS**– Two or more runways which cross or meet within their lengths.

(See INTERSECTION.)

**INTERSECTION**–

**a.** A point defined by any combination of courses, radials, or bearings of two or more navigational aids.

**b.** Used to describe the point where two runways, a runway and a taxiway, or two taxiways cross or meet.

**INTERSECTION DEPARTURE**– A departure from any runway intersection except the end of the runway.

(See INTERSECTION.)

**INTERSECTION TAKEOFF**–

(See INTERSECTION DEPARTURE.)

**IR**–

(See IFR MILITARY TRAINING ROUTES.)



PTS–

(See POLAR TRACK STRUCTURE.)

**PUBLISHED INSTRUMENT APPROACH PROCEDURE VISUAL SEGMENT**– A segment on an IAP chart annotated as “Fly Visual to Airport” or “Fly Visual.” A dashed arrow will indicate the visual flight path on the profile and plan view with an

associated note on the approximate heading and distance. The visual segment should be flown as a dead reckoning course while maintaining visual conditions.

**PUBLISHED ROUTE**– A route for which an IFR altitude has been established and published; e.g., Federal Airways, Jet Routes, Area Navigation Routes, Specified Direct Routes.



2. **Mid-RVR**– The RVR readout values obtained from RVR equipment located midfield of the runway.

3. **Rollout RVR**– The RVR readout values obtained from RVR equipment located nearest the rollout end of the runway.

(See ICAO term FLIGHT VISIBILITY.)

(See ICAO term GROUND VISIBILITY.)

(See ICAO term RUNWAY VISUAL RANGE.)

(See ICAO term VISIBILITY.)

**VISIBILITY [ICAO]**– The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night.

a. **Flight Visibility**–The visibility forward from the cockpit of an aircraft in flight.

b. **Ground Visibility**–The visibility at an aerodrome as reported by an accredited observer.

c. **Runway Visual Range [RVR]**–The range over which the pilot of an aircraft on the centerline of a runway can see the runway surface markings or the lights delineating the runway or identifying its centerline.

**VISUAL APPROACH**– An approach conducted on an instrument flight rules (IFR) flight plan which authorizes the pilot to proceed visually and clear of clouds to the airport. The pilot must, at all times, have either the airport or the preceding aircraft in sight. This approach must be authorized and under the control of the appropriate air traffic control facility. Reported weather at the airport must be ceiling at or above 1,000 feet and visibility of 3 miles or greater.

(See ICAO term VISUAL APPROACH.)

**VISUAL APPROACH [ICAO]**– An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain.

**VISUAL APPROACH SLOPE INDICATOR**–

(See AIRPORT LIGHTING.)

**VISUAL CLIMB OVER AIRPORT (VCOA)**– A departure option for an IFR aircraft, operating in visual meteorological conditions equal to or greater than the specified visibility and ceiling, to visually conduct climbing turns over the airport to the published “climb-to” altitude from which to proceed

with the instrument portion of the departure. VCOA procedures are developed to avoid obstacles greater than 3 statute miles from the departure end of the runway as an alternative to complying with climb gradients greater than 200 feet per nautical mile. These procedures are published in the ‘Take-Off Minimums and (Obstacle) Departure Procedures’ section of the Terminal Procedures Publications.

(See AIM.)

**VISUAL DESCENT POINT**– A defined point on the final approach course of a nonprecision straight-in approach procedure from which normal descent from the MDA to the runway touchdown point may be commenced, provided the approach threshold of that runway, or approach lights, or other markings identifiable with the approach end of that runway are clearly visible to the pilot.

**VISUAL FLIGHT RULES**– Rules that govern the procedures for conducting flight under visual conditions. The term “VFR” is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

(See INSTRUMENT FLIGHT RULES.)

(See INSTRUMENT METEOROLOGICAL CONDITIONS.)

(See VISUAL METEOROLOGICAL CONDITIONS.)

(Refer to 14 CFR Part 91.)

(Refer to AIM.)

**VISUAL HOLDING**– The holding of aircraft at selected, prominent geographical fixes which can be easily recognized from the air.

(See HOLDING FIX.)

**VISUAL METEOROLOGICAL CONDITIONS**– Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima.

(See INSTRUMENT FLIGHT RULES.)

(See INSTRUMENT METEOROLOGICAL CONDITIONS.)

(See VISUAL FLIGHT RULES.)

**VISUAL SEGMENT**–

(See PUBLISHED INSTRUMENT APPROACH PROCEDURE VISUAL SEGMENT.)

**VISUAL SEPARATION**– A means employed by ATC to separate aircraft in terminal areas and en route airspace in the NAS. There are two ways to effect this separation:

a. The tower controller sees the aircraft involved and issues instructions, as necessary, to ensure that the aircraft avoid each other.

b. A pilot sees the other aircraft involved and upon instructions from the controller provides his/her own separation by maneuvering his/her aircraft as necessary to avoid it. This may involve following another aircraft or keeping it in sight until it is no longer a factor.

(See SEE AND AVOID.)

(Refer to 14 CFR Part 91.)

**VLF**–

(See VERY LOW FREQUENCY.)

**VMC**–

(See VISUAL METEOROLOGICAL CONDITIONS.)

**VOICE SWITCHING AND CONTROL SYSTEM**–

The VSCS is a computer controlled switching system that provides air traffic controllers with all voice circuits (air to ground and ground to ground) necessary for air traffic control.

(See VOICE SWITCHING AND CONTROL SYSTEM.)

(Refer to AIM.)

**VOR**– A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the National Airspace System. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature. Voice features may be used by ATC or FSS for transmitting instructions/information to pilots.

(See NAVIGATIONAL AID.)

(Refer to AIM.)

**VOR TEST SIGNAL**–

(See VOT.)

**VORTAC**– A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance measuring equipment (DME) at one site.

(See DISTANCE MEASURING EQUIPMENT.)

(See NAVIGATIONAL AID.)

(See TACAN.)

(See VOR.)

(Refer to AIM.)

**VORTICES**– Circular patterns of air created by the movement of an airfoil through the air when generating lift. As an airfoil moves through the atmosphere in sustained flight, an area of area of low pressure is created above it. The air flowing from the high pressure area to the low pressure area around and about the tips of the airfoil tends to roll up into two rapidly rotating vortices, cylindrical in shape. These vortices are the most predominant parts of aircraft wake turbulence and their rotational force is dependent upon the wing loading, gross weight, and speed of the generating aircraft. The vortices from medium to heavy aircraft can be of extremely high velocity and hazardous to smaller aircraft.

(See AIRCRAFT CLASSES.)

(See WAKE TURBULENCE.)

(Refer to AIM.)

**VOT**– A ground facility which emits a test signal to check VOR receiver accuracy. Some VOTs are available to the user while airborne, and others are limited to ground use only.

(See AIRPORT/FACILITY DIRECTORY.)

(Refer to 14 CFR Part 91.)

(Refer to AIM.)

**VR**–

(See VFR MILITARY TRAINING ROUTES.)

**VSCS**–

(See VOICE SWITCHING AND CONTROL SYSTEM.)

**VTA**–

(See VERTEX TIME OF ARRIVAL.)

**VTOL AIRCRAFT**–

(See VERTICAL TAKEOFF AND LANDING AIRCRAFT.)

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U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**JO 7110.10T CHG 3**  
**8/27/09**

# **BRIEFING GUIDE**

**U.S. DEPARTMENT OF TRANSPORTATION**  
**FEDERAL AVIATION ADMINISTRATION**

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**Distribution: ZAT-712, ZAT-423 (External)**

**Initiated By: AJR-0**  
**Vice President, System Operations Services**

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**1. PARAGRAPH NUMBER AND TITLE:** 1–3–2. DUTY PRIORITY and 4–1–1. INFLIGHT SERVICES

**2. BACKGROUND:** In 2005 when flight services outside of Alaska were contracted to a private vendor, the monitoring of NAVAIDS was classified as a realigned activity, therefore it is a function no longer provided by flight service stations (FSSs). FSSs in Alaska do not monitor NAVAIDS.

**3. CHANGE:****OLD****1–3–2. DUTY PRIORITY**

Title through a3

b. Emergency situations are those where life or property is in immediate danger. Inflight services are those provided to or affecting aircraft in flight or otherwise operating on the airport surface. This includes services to airborne aircraft, such as NAVAID monitoring and restoration, LAA, delivery of ATC clearances, advisories or requests, issuance of military flight advisory messages, EFAS, NOTAM, SAR communications searches, flight plan handling, transcribed or live broadcasts, weather observations, PIREPs, and pilot briefings. Preflight services are those which directly affect aircraft operations but which are provided prior to actual departure and usually by telephone. These include pilot briefings, recorded data, flight plan filing/processing, and aircraft operational reservations

**NEW****1–3–2. DUTY PRIORITY**

No Change

b. Emergency situations are those where life or property is in immediate danger. Inflight services are those provided to or affecting aircraft in flight or otherwise operating on the airport surface. This includes services to airborne aircraft, such as airport advisories, delivery of ATC clearances, advisories or requests, issuance of military flight advisory messages, EFAS, NOTAM, SAR communications searches, flight plan handling, transcribed or live broadcasts, weather observations, PIREPs, and pilot briefings. Preflight services are those which directly affect aircraft operations but which are provided prior to actual departure and usually by telephone. These include pilot briefings, recorded data, flight plan filing/processing, and aircraft operational reservations.

**OLD****4–1–1. INFLIGHT SERVICES**

Inflight services are those provided to or affecting aircraft inflight or otherwise operating on the airport surface. This includes services to airborne aircraft, such as NAVAID monitoring and restoration, LAA, delivery of ATC clearances, advisories or requests, issuance of military flight advisory messages, EFAS, NOTAM, SAR communications searches, flight plan handling, transcribed or live broadcast, weather observations, PIREPs, and pilot briefings.

**NEW****4–1–1. INFLIGHT SERVICES**

Inflight services are those provided to or affecting aircraft inflight or otherwise operating on the airport surface. This includes services to airborne aircraft, such as airport advisories, delivery of ATC clearances, advisories or requests, issuance of military flight advisory messages, EFAS, NOTAM, SAR communications searches, flight plan handling, transcribed or live broadcast, weather observations, PIREPs, and pilot briefings.

**1. PARAGRAPH NUMBER AND TITLE:** 3–2–1 CONDUCT OF A STANDARD BRIEFING

**2. BACKGROUND:** In 2002, providing information on the Special Flight Rules Area in Washington, DC and the associated Prohibited Areas during a pilot weather briefing changed from an upon request item to a mandatory briefing item. When the requirement became mandatory the old upon request guidance remained in place, creating confusion with respect to both mandatory and upon request items. Furthermore, to emphasize the importance of NOTAMs concerning the Prohibited Areas and the Special Flight Rules Area, sub-paragraph b8(a) is divided into b8(a) and b8(b). The remaining changes are: 1) deleting references to specific operating systems, such as Model 1 Full Capacity (M1FC) which is obsolete, and OASIS, which has its own system user's guide; 2) deleting references to local NOTAMs, which were discontinued in January 2008; 3) deleting references to non-automated Alaska facilities since all facilities now operate with OASIS; 4) reorganizing sub-paragraphs b8 and b12 for continuity and to remove redundant references to the Prohibited Areas in b12(a) Note 1; 5) remove the 100 NM restriction to pilot-requested special use airspace information in para b12(a); 6) the word

“incomplete” is changed to “updated periodically” in b12(a) because the SUA NOTAM databases are now essentially complete, but still subject to last minute changes; and 7) SUA NOTAMs issued under SUAE, SUAC and SUAW accountability locations are generally considered “upon request” briefing items, with the exception of Restricted Area, Aerial Refueling and Night Vision Goggle NOTAMs, because briefing tools used by FAA and others cannot tag these types of NOTAMs to a specific route of flight.

### 3. CHANGE:

<u>OLD</u>	<u>NEW</u>
<b>3-2-1 CONDUCT OF A STANDARD BRIEFING</b>	<b>3-2-1 CONDUCT OF A STANDARD BRIEFING</b>
<b>Title through b7</b>	No Change
8. <i>Notices to Airmen (NOTAM).</i>	8. <i>Notices to Airmen (NOTAM).</i> <b><u>Provide NOTAM information pertinent to the flight:</u></b>
(a) <u>Provide available NOTAM (L) (Flight Plan Area), NOTAM (D), and Prohibited Areas P-40, P-49, P-56, and the Special Flight Rules Area for Washington, DC, information pertinent to the flight.</u>	(a) NOTAM (D). <b><u>All NOTAMs (D), including Special Use Airspace (SUA) NOTAMs for Restricted Areas, Aerial Refueling, and Night Vision Goggles (NVG).</u></b>
Add	<b><u>NOTE—</u></b> <b><u>Other SUA NOTAMs (D), such as Military Operations Area (MOA), Military Training Route (MTR) and Warning Area NOTAMs, are considered “upon request” briefing items as indicated in paragraph 3-2-1b12(a).</u></b>
Add	(b) <b><u>Prohibited Areas P-40, P-49, P-56 and the Special Flight Rules Area (SFRA) for Washington, DC.</u></b>
(b) <u>For M1FC and OASIS facilities, provide Flight Data Center (FDC) NOTAM which are pertinent to the proposed flight and are not already carried in the Notices to Airmen publication.</u>	(c) Flight Data Center (FDC) NOTAMs not already carried in the Notices to Airmen publication.
<b><u>NOTE—</u></b> <b><u>OASIS separates Temporary Flight Restriction (TFR) NOTAM from other FDC and General FDC NOTAM in the Weather and Aeronautical Briefing Window under a separate tabbed page labeled TFR.</u></b>	Delete
(c) <u>For nonautomated Alaska FSS facilities, provide FDC NOTAM within 400 NM radius of your facility which are pertinent to the proposed flight and are not already carried in the Notices to Airmen publication.</u>	Delete
<b><u>NOTE—</u></b> <b><u>If approved by the Flight Services Operations Area Office, the area may be adjusted to meet user requirements.</u></b>	Delete
<b>b8(d) through b11</b>	No Change
12. <i>Upon Request</i>	12. <i>Upon Request.</i> <b><u>Provide any information requested by the pilot, including, but not limited to:</u></b>

(a) In addition to pertinent D NOTAM, provide information available to your position of operation on Special Use Airspace (SUA), SUA related airspace (i.e., Air Traffic Control Assigned Airspace (ATCAA)) and military training route (MTR) activity within your flight plan area plus an additional 100 NM extension. For all SUA and MTR data requests, advise the pilot that information may be incomplete and to contact the appropriate ATC facility for additional information while in flight.

**NOTE—**

1. Pertinent D NOTAM include: Restricted Areas, Refueling Tracks, Prohibited Areas P-40, P-49, P-56, and the Special Flight Rules Area for Washington, DC.

2. For air to ground positions utilize information obtained from Special Use Airspace/In-Flight Service Enhancement (SUA/ISE) and Model 1 Full Capacity/Operational and Supportability Implementation System (MIFC/OASIS). For all other positions utilize information obtained from MIFC/OASIS.

3. SUA and related airspace includes the following types of airspace: Alert Area, Military Operations Area (MOA), Prohibited Area, Restricted Area, Refueling Anchor, Warning Area and Air Traffic Control Assigned Airspace (ATCAA). MTR data includes the following types of airspace: IFR Training Routes (IR), VFR Training Routes (VR), Slow Training Routes (SR) and Aerial Refueling Tracks (AR).

(b) Review the appropriate aeronautical publications and inform the pilot of pertinent NOTAM, special notices, and other information about Prohibited Areas P-40, P-49, P-56, and the Special Flight Rules Area for Washington, DC, when pertinent to the flight.

(c) Provide approximate density altitude data.

(d) Provide information regarding such items as air traffic service and rules, customs/immigration procedures, ADIZ rules, SAR, Flight Watch, etc.

(e) Provide LORAN C NOTAM.

**REFERENCE—**

FAAO 7930.2, Para 5-3-7c, NOTAM (D) NAVAID.

(f) Provide military NOTAM.

**REFERENCE—**

FAAO 7930.2, Para 8-3-1, Military NOTAM Availability.

(g) Provide GPS Receiver Autonomous Integrity Monitoring (RAIM) Aeronautical Information. RAIM information shall be provided 1-hour before to 1-hour after the ETA, or a time frame requested by the pilot.

(a) Special Use Airspace, **except those listed in paragraph 3-2-1b8(a)**, SUA related airspace (i.e., Air Traffic Control Assigned Airspace (ATCAA)) and military training route (MTR) activity. For all SUA and MTR data requests, advise the pilot that information may be **updated periodically** and to contact the appropriate ATC facility for additional information while in flight.

Delete

Delete

**NOTE—**

**For the purpose of this paragraph,** SUA and related airspace includes the following types of airspace: Alert Area, Military Operations Area (MOA), Warning Area and Air Traffic Control Assigned Airspace (ATCAA). MTR data includes the following types of airspace: IFR Training Routes (IR), VFR Training Routes (VR), and Slow Training Routes (SR).

Delete

(b) Approximate density altitude data.

(c) Information regarding such items as air traffic service and rules, customs/immigration procedures, ADIZ rules, SAR, Flight Watch, etc.

(d) LORAN C NOTAMs.

**REFERENCE—**

FAAO 7930.2, Para 5-3-7d, NOTAM (D) NAVAID.

(e) Military NOTAMs.

**REFERENCE—**

FAAO 7930.2, Para 8-3-1, Military NOTAM Availability

(f) GPS Receiver Autonomous Integrity Monitoring (RAIM) Aeronautical Information. RAIM information shall be provided 1-hour before to 1-hour after the ETA, or a time frame requested by the pilot.

(h) Provide runway friction measurement NOTAMs.

(i) Provide Special FDC instrument approach procedure changes.

(g) Runway friction measurement NOTAMs.

(h) Special FDC instrument approach procedure changes.

### 1. PARAGRAPH NUMBER AND TITLE: 4-4-1. GENERAL

**2. BACKGROUND:** In Alaska, the Automatic Flight Information Service (AFIS) is now available and procedures here are added for guidance to flight service stations where AFIS and other Airport Advisory Services are provided.

Paragraph 4-4-1.h.4 contains instructions for the specialist when a pilot requests a special VFR clearance. This sub-paragraph pertains to the entire section, so it is removed and placed in a separate paragraph.

### 3. CHANGE:

#### OLD

#### 4-4-1 GENERAL

Title through h3

4. If the pilot requests special VFR clearance, provide the appropriate elements and follow the procedures in Section 5.

Add

Add

#### NEW

#### 4-4-1 GENERAL

No Change

i. If the pilot requests special VFR clearance, provide the appropriate elements and follow the procedures in **Chapter 4, Section 5, Special VFR Operations**.

**j. Automatic Flight Information Service (AFIS) is available, confirm receipt of the current AFIS information if the pilot does not initially state the appropriate AFIS code. Issue the current AFIS information to pilots who are unable to receive the AFIS.**

**EXAMPLE-**  
**“Verify you have information ALFA.”**

### 1. PARAGRAPH NUMBER AND TITLE: 6-1-5. TELEPHONE REQUESTS FOR ATC CLEARANCES

**2. BACKGROUND:** Over the last several years, there have been a number of situations where a flight service specialist received a call from a pilot located outside the geographical area that the specialist normally is responsible for due to increased use of cell phones and/or flight service stations covering larger geographical areas of the country. Many states have airports with city names that are the same as cities in other states. Often airports within the same state have similar sounding names. This situation has created a safety issue when a pilot calls for an ATC clearance and the flight service specialist or ATC assumes the aircraft plans to depart one airport when in fact it is another airport. If the flight plan was initially entered into the system with the wrong departure point due to miscommunication, or the flight plan was entered correctly but can't be found due to misunderstanding of the location, clearances have been created to accommodate the pilot assuming the flight plan was lost. The clearances were passed to the pilot who accepted the clearance, none the wiser, and departed from an airport different than the airport ATC was expecting. As a result of these types of errors, the FAA Office of Safety Investigations issued Safety Recommendation 05.372 to revise the Aeronautical Information Manual (AIM). In response, the AIM was updated to highly recommend to pilots that they clearly identify their departure airport. Since pilots are not bound by AIM recommendations, this proposal amends FAA Order JO 7110.10 to require flight service specialists to positively verify the departure location by airport name or location identifier, and the city name and state.

**3. CHANGE:**

<u>OLD</u>	<u>NEW</u>
<b>6-1-5. TELEPHONE REQUESTS FOR ATC CLEARANCES</b>	<b>6-1-5. TELEPHONE REQUESTS FOR ATC CLEARANCES</b>
Add	<u>When a telephone request for an ATC clearance is received, positively verify the departure location by airport name or location identifier, and the city name and state.</u>
Add	<u><b>NOTE-</b></u> <u>1. With telephone calls being received from larger geographic areas, verification of the departure location may prevent a critical safety situation involving similar or identical airport or city names possibly located in different states.</u>
Add	<u>2. City refers to a city, town, village or publicly recognized place.</u>
Add	<u>3. Refer to FAAO JO 7110.10, Para 4-3-7, ATC Clearances, Advisories, or Requests, for guidance on relaying ATC clearances.</u>

**1. PARAGRAPH NUMBER AND TITLE:** 6-2-1. FLIGHT PLAN RECORDING**2. BACKGROUND:** Five changes are being made to this paragraph:

1) On June 29, 2008 all FAA ARTCC Host computer systems switched from Domestic Flight Plan (FAA Form 7233-1) processing to International Flight Plan (FAA Form 7233-4) processing for those pilots wishing to receive automated assignment of RNAV arrival and departure routes. This change adds a Note at the end of the first paragraph explaining when an international flight plan form will be used to file a flight plan in domestic U.S. airspace.

2) Tables 6-2-2 and 6-2-3 are added in conjunction with FAA Order JO 7110.65 para 2-3-5, Aircraft Identity. VC-25 flight management system (FMS) upgrades and subsequent implementation of future air navigation (FANS) procedures has driven the need to reevaluate the Air Force One (A1) and Air Force Two (A2) call signs. To use these services, the aircraft must register and file a call sign with at least three digits. Also, the call signs for the President's and Vice President's family member's aircraft are changed to EXEC1F and EXEC2F, respectively, regardless of branch of service. Previously, the call signs were AF1F, VM1F, etc.

3) Olive Drab "OD" is added as an official contraction to FAA Form 7233-1, Item 16, Color of Aircraft.

4) This change also deletes all references to Model 1 Full Capacity, which is no longer used; and OASIS, where operating instructions can be found in the OASIS System Users Guide.

5) "Homebuilt" is changed to "amateur-built" at the request of the Experimental Aircraft Association (EAA) per FAR 21.191(g).

**3. CHANGE:****OLD****6-2-1. FLIGHT PLAN RECORDING**

Record flight plans on FAA Form 7233-1, M1FC Domestic Flight Plan Mask, or in the OASIS Domestic Flight Plan dialog box. 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. Complete as follows:

**NOTE-**

OASIS. For detailed instructions on the Domestic Flight Plan dialog box, refer to the WINGS online help or the WINGS System Users Guide.

- a. *Item 1.* Type of flight plan.

a1 through a3(j)

b. *Item 2.* Aircraft Identification (M1FC- AI: field. OASIS - Aircraft ID text box). Enter as follows, but do not exceed seven alphanumeric characters:

b1

**EXAMPLE****NOTE-**

2. U.S. Military Aircraft. 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*)

*TBL 6-2-1*

Add

**NEW****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-**

**Use FAA Form 7233-4, International Flight Plan, for international flights as well as flights in domestic U.S. airspace in which automatic assignment of RNAV routes is desired. See paragraph 6-2-3, Flight Plans with Area Navigation (RNAV) Routes in Domestic U.S. Airspace.**

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

Delete

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

No Change

No Change

No Change

2. U.S. Military Aircraft.

(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*)

No Change

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

Add

**TBL 6-2-2**  
**President and Family**

<u>Service</u>	<u>President</u>	<u>Family</u>
<u>Air Force</u>	<u>AF1</u>	<u>EXEC1F</u>
<u>Marine</u>	<u>VM1</u>	<u>EXEC1F</u>
<u>Navy</u>	<u>VV1</u>	<u>EXEC1F</u>
<u>Army</u>	<u>RR1</u>	<u>EXEC1F</u>
<u>Coast Guard</u>	<u>C1</u>	<u>EXEC1F</u>
<u>Guard</u>	<u>G1</u>	<u>EXEC1F</u>
<u>Commercial</u>	<u>EXEC1</u>	<u>EXEC1F</u>

Add

**TBL 6-2-3**  
**Vice President and Family**

<u>Service</u>	<u>Vice President</u>	<u>Family</u>
<u>Air Force</u>	<u>AF2</u>	<u>EXEC2F</u>
<u>Marine</u>	<u>VM2</u>	<u>EXEC2F</u>
<u>Navy</u>	<u>VV2</u>	<u>EXEC2F</u>
<u>Army</u>	<u>RR2</u>	<u>EXEC2F</u>
<u>Coast Guard</u>	<u>C2</u>	<u>EXEC2F</u>
<u>Guard</u>	<u>G2</u>	<u>EXEC2F</u>
<u>Commercial</u>	<u>EXEC2</u>	<u>EXEC2F</u>

b3

**TBL 6-2-2**

c. *Item 3. Aircraft Type (M1FC- AT: field. OASIS – Aircraft Type text box).* Insert the name or abbreviation (two-to-four alphanumeric characters) of the manufacturer's or military designation. For homebuilt/experimental aircraft, use HXA, HXB, or HXC in accordance with the FAAO JO 7340.2, Contractions. Spell out aircraft type in Remarks.

**NOTE-**

OASIS. OASIS validates all aircraft types in accordance with FAAO JO 7340.2, Contractions. Nonstandard contractions will be rejected.

c1 through c2

**TBL 6-2-3****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.*

**REFERENCE-**

FAAO JO 7110.65, Para 2-3-7 and TBL 2-3-7, Aircraft Equipment Suffixes.

No Change

Renumber **TBL 6-2-4**

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.

Delete

No Change

Renumber **TBL 6-2-5**

No Change

**REFERENCE-**

FAAO JO 7110.65, Para 2-3-8 and TBL 2-3-10, Aircraft Equipment Suffixes.

d. *Item 4. True Airspeed (TAS Knots) (M1FC– TS: field. OASIS – Airspeed text box).* 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.*

1. M1FC– DD: field. Enter two–to–twelve alphanumeric and slant characters for name or identifier of the departure airport or point over which the flight plan is activated.

**NOTE–**

*Names may be used when there is no identifier available and they do not exceed 12 characters with no spaces. Unless a geographic point is converted to latitude/longitude or fix–radial–distance (FRD), the M1FC computer will not be able to provide weather/NOTAM information and the route override function must be used to transmit or modify the flight plan.*

2. OASIS – Departure text box. Enter the departure point as follows: 2–5 alphanumeric character LOCID, 8–11 character fix–radial–distance or 9–12 character latitude/longitude.

f. *Item 6. Departure Time.*

1. M1FC– TM: field. Enter departure time in UTC. Prefix this time with a P in the TM: field for proposals or a D for departures. If the departure time is assumed, indicate this in the Remarks field.

2. OASIS – ETD text box. Enter the proposed or actual time of departure as follows: {(DD)HHMM : DD = 01–31, HH = 00–23, MM = 00–59}.

**NOTE–**

*OASIS does not use prefixes (i.e., “P” or “D”) to determine a proposed or actual time of departure. This determination is made based on which button is used for filing.*

g. *Item 7. Cruising Altitude (M1FC– AE: field. OASIS – Enroute Altitude text box).* 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 (M1FC– RT: field. OASIS – Route text box.).* 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.

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 alphanumeric and slant characters for name or identifier of the departure airport or point over which the flight plan is activated.**

Delete

Delete

Delete

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

Delete

Delete

Delete

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–**

No Change

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 coordinates, as appropriate, to facilitate computer acceptance. Local procedures should be applied to these special situations.

2. NRS waypoints consist of five alphanumeric characters, which include the ICAO Flight Information Region (FIR) identifier, followed by the letter corresponding to the FIR subset (ARTCC area for the contiguous U.S.), the latitude increment in single digit or group form, and the longitude increment.

No Change

**EXAMPLE–**

No Change

**“KD34U”**

i. Item 9. Destination.

i. Item 9. Destination. **Enter two-to-twelve alphanumeric and/or slant characters for name or identifier of the destination airport or point over which the flight plan is to be cancelled.**

1. M1FC–AD: field. Enter two-to-twelve alphanumeric and/or slant characters for name or identifier of the destination airport or point over which the flight plan is to be cancelled.

Delete

2. OASIS – Destination text box. Enter the destination airport or point over which the flight plan is to be cancelled as follows: 2–5 alphanumeric character LOCID, 8–11 character fix–radial–distance or 9–12 character latitude/longitude.

Delete

j. Item 10. Estimated Time Enroute (M1FC–TE: field. OASIS – Time Enroute text box). Enter in hours and minutes the total elapsed time between departure and destination; e.g., 0430 or 4+30. For IFR proposals, ETE must be in four-digit format; i.e., 0215.

j. Item 10. Estimated Time Enroute. Enter in hours and minutes the total elapsed time between departure and destination in four-digit format, i.e., 0215.

**NOTE–**

Delete

OASIS facilities, enter the four digit enroute time in hours and minutes; hhmm: hh=00–99, mm=00–59.

k. Item 11. Remarks (M1FC–RM: field. OASIS – Remarks text box). Information necessary for ATC or to assist search and rescue operations, plus any other data appropriate to the flight; e.g., the abbreviations FAA or DOT. Enter names of experimental or homebuilt aircraft (Veri–EZ, Long–EZ, Mustang, Delta Dart). For RM: field only – Use 1–80 characters beginning with \*, #, \$, or %. (See TBL 6–2–4.)

k. Item 11. Remarks. Information necessary for ATC or to assist search and rescue operations, plus any other data appropriate to the flight; e.g., the abbreviations FAA or DOT. Enter names of experimental or **amateur-built** aircraft (Veri–EZ, Long–EZ, Mustang, Delta Dart). For RM: field only – Use 1–80 characters beginning with \*, #, \$, or %. (See TBL 6–2–**6**.)

TBL 6–2–4

TBL 6–2–**6****NOTE–**

Delete

1. OASIS automatically inserts the appropriate symbol according to the flight plan type (i.e., \$–VFR, \*–IFR).  
2. Civil aircraft with authorized company identification are required to file the full authorized radio call in remarks.

**1. Item 12. Fuel on Board (M1FC– FB: field. OASIS – Fuel Capacity text box).** Enter in hours and minutes; e.g., 0330 or 3+30.

**NOTE–**

OASIS facilities, enter the fuel capacity; hhmm: hh=00–99,mm=00–59.

m. Item 13. Alternate Airport/s.

**1. (M1FC– AA: field).** Enter the location identifier if specified by the pilot. For AA: field only. Use three–to–seven alphanumeric characters. For two alternate airports, enter identifiers consecutively; e.g., BJCFNL.

**2. OASIS – Alternate Airport text box.** Enter the location identifier of a single alternate airport in 3–4 alphanumeric characters. Additional alternate airports may be entered in the Remarks text box as nontransmitted information.

**n. Item 14. Pilot’s Name, Telephone Number, Aircraft’s Home Base (M1FC– PD: field. OASIS – Pilot Data text box).** Self–explanatory. For military pilots, obtain the name and telephone of BASOPS.

**NOTE–**

*Pilot’s name not required if BASOPS’ name is provided.*

**o. Item 15. Number Aboard (M1FC– NB: field. OASIS – Number On Board text box).** Self–explanatory.

**p. Item 16. Color of Aircraft. (M1FC– CR: field. OASIS – Aircraft Color text box).** Use authorized contractions when available. (See TBL 6–2–5.)

**1. Item 12. Fuel on Board.** Enter in hours and minutes in four–digit format; e.g., 0330.

Delete

m. Item 13. Alternate Airport/s. **Enter the location identifier if specified by the pilot.**

Delete

Delete

**n. Item 14. Pilot’s Name, Telephone Number, Aircraft’s Home Base.** Self–explanatory. For military pilots, obtain the name and telephone of BASOPS.

No Change

**o. Item 15. Number Aboard.** Self–explanatory.

**p. Item 16. Color of Aircraft.** Use authorized contractions when available. (See TBL 6–2–7.)

**TBL 6–2–5**

**Code and Color**

Code	Color		Code	Color
A	Amber		B	Blue
BE	Beige		BK	Black
BR	Brown		G	Green
GD	Gold		GY	Gray
M	Maroon		O	Orange
P	Purple		PK	Pink
R	Red		S	Silver
T	Tan		TQ	Turquoise
V	Violet		W	White
Y	Yellow			

**TBL 6–2–7**

**Code and Color**

Code	Color		Code	Color
A	Amber		B	Blue
BE	Beige		BK	Black
BR	Brown		G	Green
GD	Gold		GY	Gray
M	Maroon		O	Orange
<b><u>OD</u></b>	<b><u>Olive Drab</u></b>		P	Purple
PK	Pink		R	Red
S	Silver		T	Tan
TQ	Turquoise		V	Violet
W	White		Y	Yellow

**1. PARAGRAPH NUMBER AND TITLE:** 13-1-1. PURPOSE, 13-1-2. DUTIES, 13-1-3. MALFUNCTIONS, 13-1-4. AIRCRAFT REPORTED MALFUNCTIONS, 13-1-5. ADJUSTMENT TO NAVAIDS, 13-1-6. NAVAID FLIGHT CHECK, and 13-1-7. MONITORING OF NAVAIDS BY TECHNICAL OPERATIONS SERVICES PERSONNEL,

**2. BACKGROUND:** In 2005 when flight services outside of Alaska were contracted to a private vendor, the monitoring of NAVAIDS was classified as a realigned activity, therefore it is a function no longer provided by flight service stations (FSSs). FSSs in Alaska do not monitor NAVAIDS.

**3. CHANGE:**

**Chapter 13. NAVAID MONITORING**

Delete

**Section 1. GENERAL**

Delete

**13-1-1.PURPOSE**

Delete

**13-1-2.DUTIES**

Delete

**13-1-3 MALFUNCTIONS**

Delete

**13-1-4 AIRCRAFT REPORTED MALFUNCTIONS**

**4-1-6 AIRCRAFT REPORTED NAVAID MALFUNCTIONS**

**a1**

No Change

**2.** If the second aircraft reports normal operations, continue use and, if able, inform the first aircraft. Record the incident on FAA Form 7230-4.

**2.** If the second aircraft reports normal operations, if able, inform the first aircraft. Record the incident on FAA Form 7230-4.

**3.** If the second aircraft confirms the malfunction or, in the absence of a second aircraft report, take NAVAID restoral action.

**3.** If the second aircraft confirms the malfunction:

Add

**(a) Notify the appropriate IFR control facility or sector.**

Add

**(b) Notify Technical Operations personnel.**

Add

**(c) Take NOTAM action, if necessary.**

Add

**(d) Record the incident on FAA Form 7230-4.**

Add

**4. In the absence of a second aircraft report:**

Add

**(a) Notify Technical Operations and advise what time the initial aircraft reported the failure and when a second aircraft report might be obtained.**

Add

**(b) Record the incident on FAA Form 7230-4.**

**4.** If normal operation is reported after restoral action is taken, continue use, record the incident on FAA Form 7230-4, and notify appropriate maintenance personnel.

Delete

**5.** If continued malfunction is reported after restoral action is taken, request advice from maintenance personnel on whether the NAVAID should be shut down. In the absence of a second aircraft report, advise maintenance personnel of the time of the initial aircraft report and the estimated time a second aircraft report could be obtained.

Delete

**b1 through b2**

No Change

3. Forward this information to the local Traffic Management Unit (TMU) and local Maintenance Control Center (MCC) personnel.

c1 through c2

3. If the pilot reports loss of all WAAS service, report as a GPS anomaly using procedures in paragraph 13-1-4b.

**13-1-5.ADJUSTMENTS TO NAVAIDS**

**13-1-6 NAVAID FLIGHT CHECK**

**13-1-7. MONITORING OF NAVAIDS BY TECHNICAL OPERATIONS SERVICES PERSONNEL.**

3. Forward this information to the Traffic Management Unit (TMU) and **Technical Operations** personnel.

No Change

3. If the pilot reports loss of all WAAS service, report as a GPS anomaly using procedures in paragraph 4-1-6b.

Delete

**4-1-7 NAVAID FLIGHT CHECK**

Delete