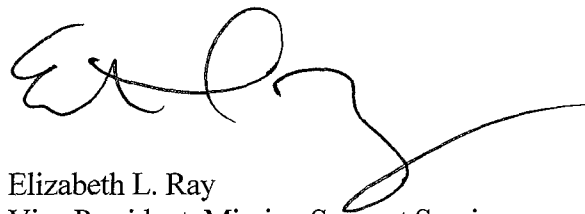


CHANGE**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION****Air Traffic Organization Policy****JO 7110.10U
CHG 2****Effective Date:**
March 10, 2011**SUBJ:** Flight Services

- 1. Purpose of This Change.** This change transmits revised pages to Federal Aviation Administration Order JO 7110.10U, Flight Services, and the Briefing Guide.
- 2. Audience.** This change applies to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and to all air traffic field facilities, international aviation field offices, and the interested aviation public.
- 3. Where Can I Find This Change?** This change is available on the FAA Web site at http://faa.gov/air_traffic/publications and http://employees.faa.gov/tools_resources/orders_notices/.
- 4. Explanation of Policy Change.** See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures. The Briefing Guide lists only new or modified material, along with background.
- 5. Distribution.** This change is distributed to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and to all air traffic field facilities, international aviation field offices, and the interested aviation public..
- 6. Disposition of Transmittal.** Retain this transmittal until superseded by a new basic order.
- 7. Page Control Chart.** See the page control chart attachment.



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

Date: January 7, 2011

Distribution: ZAT-793; ZAT-464;
ZAT-423 (External)

Initiated By: AJV-0
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Flight Services Explanation of Changes

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

a. 3-2-2 CONDUCT OF ABBREVIATED BRIEFING

This change adds the VNR statement to an abbreviated briefing, if applicable. This change cancels and incorporates N JO 7110.537, Conduct of Abbreviated Briefing, effective September 13, 2010.

b. 4-2-6 FLIGHT PROGRESS STRIPS (FAA FORMS 7230-21 AND 7233-5)

This change allows for multiple flights by the same aircraft to be recorded on the same strip. This change cancels and incorporates N JO 7110.530, Flight Progress Strips, effective May 21, 2010.

c. 6-3-1 DOMESTIC IFR FLIGHT PLANS

References to MIFC, AISR, and OASIS are deleted. Editorial changes for clarification and concept of operations.

d. 6-3-3 IFR FLIGHT PLAN CONTROL MESSAGES; 6-4-1 FLIGHT PLAN ACTIVATION; 6-4-2 DEPARTURE REPORT MESSAGE; 6-4-5 SUSPENDING FLIGHT NOTIFICATION MESSAGES; 6-4-8 MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT; 6-4-9 CHANGE IN ETA; 6-4-10 FLIGHT PLAN CLOSURE; 6-5-6 MESSAGE HANDLING; 6-7-1 LAW ENFORCEMENT ALERT MESSAGES; 6-7-3 FSDPS RESPONSIBLES

References to MIFC, AISR, and OASIS are deleted. Editorial changes made in compliance with the plain language initiative.

e. 6-6-3 FORWARDING DVFR INFORMATION; 6-6-5 ADDRESSING DVFR FLIGHT PLAN MESSAGES

This change removes the Alaska exception to para 6-6-3, adds the Alaska NORAD address, removes references to MIFC and OASIS, edited for concept of operations for contract FSS, adds Alaska restrictions to para 6-6-3a9(c) and 6-6-3a9(d) emphasizes in para 6-6-3a9(e) to show NORIV as a non-transmitted remark and not to transmit NORIV to NORAD nor an FSS, and removes NORIV from an Example: Paragraph 6-6-3b is transferred, with editorial changes, from paragraph 6-6-5 so that all instruction regarding forwarding DVFR information is in the same paragraph. This change cancels and incorporates N JO 7110.523, Forwarding DVFR Information, effective April 15, 2010.

f. Additional editorial/format changes were made where necessary. Revision bars were not used because of the insignificant nature of these changes.

PAGE CONTROL CHART

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PCG P-2	2/11/10	PCG P-2	3/10/11
PCG P-3	8/26/10	PCG P-3	8/26/10
PCG P-4 and P-5	8/26/10	PCG P-4 and P-5	3/10/11
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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/runway closure NOTAMs, air traffic delays, etc. Weather advisories (WS, WA, WST, CWA, and AWW) must 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."

NOTE—

NOTAMs in this category may be provided as part of item 8.

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 niner and one one thousand feet. 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-Rflight 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—

If AUTO appears after the date/time element and is presented as a singular report, follow the location announcement with the word "AUTOMATED."

5. En Route Forecast. Summarize from appropriate data applicable to the proposed flight; for example, area forecasts, TAFs, prognosis charts, weather advisories, etc. Provide the information in a logical order; for example, 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.

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 adverse conditions when it would be logical and advantageous to do so.

9. ATC Delays. Inform the pilot of ATC delays and/or flow control advisories 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 JO 7930.2, Para 5–3–7o, NOTAM (D) NAVAID.

(e) Military NOTAMs.

REFERENCE—

FAAO JO 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. If applicable, include the statement “VFR flight not recommended” in accordance with subpara 3–2–1b2. Pilot briefers must 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. 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 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 so, provide the information pertinent to the route of flight 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.

TBL4-2-2
Contacts & Inflight Briefings

CB	This is used to log general information in the DD file without adding to the traffic count. Current partial is by-passed.
IB DG,,N1234, "Remarks"	ACFT contact, DVFR General, ACID in current partial by-passed.
IB IG,,,ALSTG	ACFT contact, IFR General, Remarks.
IB IGL,B,N1,VNR	ACFT contact, IFR General ICAO, Briefing, ACID in current partial by-passed, Remarks.
IB VM,B,, "Remarks"	ACFT contact, VFR Military, Briefing.
IB VG,A,, "Remarks"	ACFT contact, VFR General, Airport Advisory.
IB ,,N1,Remarks	This is used to log additional radio contacts.

b. OASIS. Aircraft contacts and inflight briefings are logged and stored in the history files for accountability.

NOTE-
ACID and Flight Rules are required to log an inflight briefing or aircraft contact.

c. In the REMARKS block, locally approved contractions and identifiers may be used for frequently used terms not listed in either FAAO JO 7340.2, Contractions or FAAO JO 7350.8, Location Identifiers.

d. If the inflight position is recorded, you may limit entries in the REMARKS to those necessary for your use.

4-2-6. FLIGHT PROGRESS STRIPS (FAA FORMS 7230-21 AND 7233-5)

a. When officially used to record inflight data, use flight progress strips to record:

- 1. Aircraft contacts.
- 2. ATC clearances.
- 3. Pilot briefings on airborne aircraft.
- 4. Other operationally significant items.

b. Use a flight progress strip for each aircraft, and record all contacts with that aircraft on the same strip. If supplemental strips are needed for additional writing space, keep the original and supplemental strips together.

NOTE-
Multiple flights by the same aircraft may be recorded on a single strip when situational awareness and strip bay efficiency are improved.

4-2-7. FLIGHT PROGRESS STRIPS AND ENTRY DATA

- a. Flight progress strip. (See FIG 4-2-2.)
- b. Flight progress strip entry. (See FIG 4-2-3.)

FIG 4-2-2
Flight Progress Strip

				1	2	3	10	12	13				14	
				4	5			11						
				6	7	8	9							

FIG 4-2-3
Strip Entry 1

N123E	210/R	150	1V	1615	AVFP	
				55	O/CRP	PB DFW S C I
MFE	CRP			1740	Q LNDG SAT AWX ✓	VNR
AUS	1610/1820/2110					

AA FORM 7230-21 (4-75)

FIG 4-2-4
Strip Entry 2

N3456Y	BE35		V →	1941	O/SAT E 1+00 ✓	REQ UA
				55	32E SAT OVC65	PB PPSN - HOW
LFT	/	/				

A FORM 7230-21 (4-75)

FIG 4-2-5
Flight Progress Strip

ADDRESS				13	14
TEXT OF FLIGHT NOTIFICATION MESSAGE					
10	11	12			

Flight progress strip Item and Information.
(See [TBL 4-2-3](#).)

Chapter 5. Emergency Services

Section 1. General

5-1-1. EMERGENCY DETERMINATION

a. Because of the infinite variety of possible emergency situations, specific procedures cannot be prescribed. However, when it is believed that an emergency exists or is imminent, take a course of action which appears to be most appropriate under the circumstances, and which most nearly conforms to the instructions in this manual.

b. An emergency can be either a DISTRESS or URGENCY condition, as defined in the Pilot/Controller Glossary.

NOTE—

A pilot who encounters a DISTRESS condition may declare an emergency by beginning the initial communication with the word MAYDAY, preferably repeated three times. For an URGENCY condition, the word PAN-PAN may be used in the same manner.

c. If the words MAYDAY or PAN-PAN are not used and there is doubt that a situation constitutes an emergency or potential emergency, handle it as though it is an emergency.

d. Consider an aircraft emergency exists and inform the appropriate control facility and the DF net control (See FAAO JO 7210.3, para 6-3-3, DF Net Control Position Operation), if not the same, when:

1. An emergency is declared by any of the following:

(a) The pilot.

(b) Facility personnel.

(c) Officials responsible for the operation of the aircraft.

2. Reports indicate that the aircraft's operating efficiency is so impaired that a forced landing may be/is necessary.

3. Reports indicate the crew has abandoned the aircraft or is about to do so.

4. Intercept or escort services are requested.

5. The need for ground rescue appears likely.

6. An Emergency Locator Transmitter (ELT) signal is heard or reported.

REFERENCE—

Subpara 5-1-2 and para 5-2-8

5-1-2. RESPONSIBILITY

a. If in communication with an aircraft in distress, handle the emergency and coordinate and direct the activities of assisting facilities. Transfer this responsibility to another facility only when better handling of the emergency will result.

b. Upon receipt of information about an aircraft in distress, forward detailed data to the appropriate control facility in whose area the emergency exists.

NOTE—

Notifying the appropriate control facility about a VFR aircraft emergency allows provision of IFR separation if considered necessary.

c. The ARTCC is responsible for consolidation of all pertinent ELT signal information. Notify the ARTCC of all heard or reported ELT signals.

5-1-3. OBTAINING INFORMATION

Obtain enough information to handle the emergency intelligently. Base decisions about the type of assistance needed on information and requests received from the pilot. 14 CFR Part 91 authorizes the pilot to determine a course of action.

5-1-4. COORDINATION

a. Request necessary assistance from other facilities as soon as possible, particularly if radar or DF service is available.

b. Coordinate efforts to the extent possible to assist any aircraft believed overdue, lost, or in emergency status.

5-1-5. PROVIDING ASSISTANCE

a. Provide maximum assistance to aircraft in distress. If the aircraft is transponder equipped and not on an IFR flight plan, request the pilot to squawk code 7700.

PHRASEOLOGY–

REQUEST YOU SQUAWK SEVEN SEVEN ZERO ZERO.

b. Enlist the service of available radar and DF facilities.

5-1-6. RECORDING INFORMATION

Record all actions taken in the provision of emergency assistance.

5-1-7. SAFE ALTITUDES FOR ORIENTATIONS

a. Providing a safe altitude, during an orientation,

is advisory in nature.

b. Safe altitude computations, once the aircraft position is known, are as follows:

1. Locate the maximum elevation figure on the appropriate VFR sectional chart.

2. To the maximum elevation figure,

(a) add 1,000 feet over nonmountainous terrain, or

(b) add 2,000 feet over mountainous terrain.

3. The mountainous/nonmountainous areas are found in Title 14 CFR, Part 95.

Section 3. IFR Flight Plan Handling

6-3-1. DOMESTIC IFR FLIGHT PLANS

IFR flight plans should consist of items 1 through 17 of FAA Form 7233-1 or electronic equivalent. Items 1 through 11 must be transmitted to the ARTCC as part of the IFR flight plan proposal. Items 12 through 17 must be retained by the FSS or in the operational system and be available upon request.

NOTE—

1. *Part-time FSSs shall forward items 1 through 17 in accordance with para 6-1-4.*

2. *Procedures for automatic assignment of RNAV routes are contained in paragraph 6-2-3, Flight Plans with Area Navigation (RNAV) Routes in Domestic U.S. Airspace.*

6-3-2. NOTIFYING ARTCC

Transmit flight plans and flight plan amendments to the ARTCC within whose control area IFR flight is proposed to begin. AISR facilities use FAAO JO 7350.8, Location Identifiers, or the appropriate aeronautical charts to determine the ARTCC to which each transmission shall be made. Transmit flight plans (if necessary) and flight plan amendments via interphone to the flight data position (error referral position) or departure sector when the aircraft's proposed departure time is less than 15 minutes from transmittal time. Advise the ARTCC's departure sector or error referral position, via interphone, when a message is received indicating ineligibility or a response is not received via data terminal within 10 minutes. Transmit flight plans as follows:

a. When multiple (two or more) flight plans are received from the same aircraft, or for flight plans which propose alternating VFR and IFR, stopover, or terminal area delay, the station receiving the flight plans transmits separate flight plans to the appropriate ARTCCs for each IFR portion or segment.

b. Transmit flight plans specifying special use airspace delays (MOAs, Warning Areas, Restricted Areas, ATC Assigned Airspace) as in subpara 6-3-2a except when letters of agreement specify otherwise.

c. Aerial refueling delays, or any other en route delays not covered in subparas 6-3-2a or b and not involving a change of altitude stratum, do not require

separate messages. Delay information shall be filed within the route of flight. If a change of altitude stratum is indicated, transmit separate messages as in subparas 6-3-2a or b.

d. When a composite, stopover, or terminal area delay flight plan is revised:

1. Before departure, transmit the information to the original addressees plus any new addressees.

2. After departure, transmit the information to all new addresses who are affected by the change.

e. **AISR.** When a flight is to depart after 0500 hours local time on the day following the filing of the flight plan, do not transmit the flight plan to the ARTCC until after 0000 hours local time.

NOTE—

In the event of a time zone difference between the station and the associated ARTCC, use the ARTCC's local time in determining transmission time.

f. Address all IFR flight plan messages to the ARTCC serving the point of departure and all concerned oceanic and nonconterminous ATS units, except FAA ATCTs.

NOTE—

The ARTCC within whose control area IFR flight is proposed to begin will forward the proposed tower en route flight plan data to the appropriate departure terminal facility.

g. For flights inbound to the conterminous U.S. from Alaska or Hawaii, address only the first conterminous U.S. ARTCC; e.g., for a proposed flight from Sitka to Houston, address PAZAZQZX, CZVRZQZX, and KZSEZQZX.

REFERENCE—

FAAO JO 7110.65, Para 2-2-2, Forwarding Information.

6-3-3. IFR FLIGHT PLAN CONTROL MESSAGES

Transmit all proposed IFR flight plan messages to the ARTCC within whose control area IFR flight is proposed to begin.

a. **Communications Functions.** Flight plan data messages must be addressed to the computer only. All other types of messages for ARTCC attention must be addressed to the Flight Data position only. Acknowledgements for all numbered messages will

be received from the computer or the Flight Data position indicating receipt by the ARTCC, but not necessarily computer acceptance. (See [TBL 6-3-1](#).)

b. Format.

1. Adhere to a fixed order of data. Do not exceed the stated maximum number of characters or elements allowed for each field in messages addressed to an ARTCC computer. Flight plans filed containing more than the stated character maximums should be sent using the ARTCC flight data address.

2. For manual entry into Service B, one space character must be entered at the end of each data field. The first data field of a message need not be preceded by a space. The last data field of a message need not be followed by a space.

TBL 6-3-1

ARTCC ID & Computer Flight Data

<i>ARTCC</i>	<i>ID</i>	<i>Computer</i>	<i>Flight Data</i>
Albuquerque	ZAB	KZABZQZX	KZABZRZX
Atlanta	ZTL	KZTLZQZX	KZTLZRZX
Anchorage	ZAN	PAZAZQZX	PAZAZRZX
Boston	ZBW	KZBWZQZX	KZBWZRZX
Chicago	ZAU	KZAUZQZX	KZAUZRZX
Cleveland	ZOB	KZOBZQZX	KZOBZRZX
Denver	ZDV	KZDVZQZX	KZDVZRZX
Fort Worth	ZFW	KZFWZQZX	KZFWZRZX
Honolulu	ZHN	PHZHZQZX	PHZHZRZX
Houston	ZHU	KZHUZQZX	KZHUZRZX
Indianapolis	ZID	KZIDZQZX	KZIDZRZX
Jacksonville	ZJX	KZJXZQZX	KZJXRZX
Kansas City	ZKC	KZKCZQZX	KZKCZRZX
Los Angeles	ZLA	KZLAZQZX	KZLAZRZX
Memphis	ZME	KZMEZQZX	KZMEZRZX
Miami	ZMA	KZMAZQZX	KZMAZRZX
Minneapolis	ZMP	KZMPZQZX	KZMPZRZX
New York	ZNY	KZNYZQZX	KZNYZRZX
Oakland	ZOA	KZOAZQZX	KZOAZRZX
Salt Lake	ZLC	KZLCZQZX	KZLCZRZX
San Juan	ZLU	TJZSZQZX	TJZSZRZX
Seattle	ZSE	KZSEZQZX	KZSEZRZX
Washington	ZDC	KZDCZQZX	KZDCZRZX

3. Each field of data is composed of one or more elements. Discrete elements of information within a field are separated by delimiters, generally slashes (oblique strokes) or periods.

4. Messages addressed using an ARTCC flight data address (see [TBL 6-3-1](#)) are not processed by the ARTCC computer. Response and/or interpretation of these messages are dependent on flight data

personnel action. The prime consideration of these types of messages must be the readability of the transmitted data.

5. All domestic flight data processing computers have the capability to return acknowledgments to the source and, depending on local adaption, return error messages and accept amendments. Notify the appropriate ARTCC Data Systems Specialist or Primary A position when it is suspected that a flight plan has been erroneously rejected by the computer.

6. IFR flight plans specifying stopovers or terminal area delays require separate messages be sent to the appropriate ARTCCs for each segment. Unless otherwise covered by a letter of agreement, treat flight plans proposing special use airspace delays in the same manner. Separate messages are also required for any other en route delays if a change of altitude stratum is proposed at the delay point. See subpara [6-3-3c14\(h\)\(1\)\[b\]](#) for delays not involving a change of altitude stratum.

7. Some fields contain the necessary functions to operate the computer data terminal adapters and are designated by alpha characters. Do not separate these fields with spaces.

c. For EAS FDP acceptance, the complete message contents, the order of data, the number of characters allowed within any data field or element, and any associated operational procedures or restrictions are as follows (as used here, “field” refers to EAS FDP field):

NOTE—

Detailed operating instructions for processing IFR Flight Plans are contained in the operational system instructions.

1. Start of Message Code (Field A). (New Line Key)

2. Preamble Line (Field B). Consists of originator, priority, and addressee(s).

3. Originator Line (Field C). Consists of a six-digit date-time group and the eight-character originator identifier.

4. End of Line Function (Field E). Same as subpara [6-3-3c1](#).

5. Source Identification (Field 00). Nine or ten characters required followed by a space character in the following order:

(a) The three-character address of the originating facility.

(b) Four characters (digits) to indicate the time (in UTC) the flight plan was composed by the originator.

(c) Three characters (digits) representing the number of the message; e.g., 021. It is recommended that numbering systems be restarted with 001 at the beginning of each day (0000Z).

NOTE—

There are no spaces between characters in subparagraphs 6–3–35(a), (b), and (c).

6. Message Type (Field 01). The letters FP followed by a space character.

7. Aircraft Identification (Field 02). Consists of two-to-seven alphanumeric characters followed by a space character. The first character of the identification must be a letter.

(a) Phrases such as Flynet, Snow Time, etc., which do not identify specific aircraft but are supplemental data defining a special mission or function, must be contained in remarks (Field 11).

(b) For foreign aircraft identifications with a numeric as the first character, insert an X as the first character and explain in the remarks section.

8. Aircraft Data (Field 03). Consists of two-to-nine characters followed by a space character. Aircraft data within the field may vary from one-to-three elements consisting of:

(a) Number of aircraft (when more than one) and/or the heavy aircraft indicator. For heavy aircraft the indicator is “H/”. This element contains a maximum of two characters followed by a slash.

EXAMPLE—

2/F15

3H/B52

10/F18

(b) Type of Aircraft. This element is mandatory and contains two-to-four characters consisting of the authorized aircraft designator as contained in FAAO JO 7340.2, Contractions. Enter military designators of aircraft, omitting prefixes and suffixes pertaining to aircraft mission or model.

(c) Equipment Suffix. This element is optional and consists of a slash (/) followed by one letter which is one of the approved designators identifying transponder and/or navigation gear.

9. Airspeed (Field 05). Consists of two-to-four characters followed by a space character. This field must indicate the filed true airspeed in knots or Mach number.

EXAMPLE—

350

M075

10. Departure Point or Coordination Fix (Field 06). Consists of two-to-twelve characters followed by a space character. This field contains the departure point or fix at which an aircraft will pick up IFR. It must be a fix, not an airway. For proposed departures, it must match the first element in the route of flight; and for IFR pickups, it must match either the first element in the route of flight or the third element if the ./ or VFR is used as the second element.

11. Proposed Departure Time (Field 07). Consists of five or seven characters followed by a space character. This field contains the letter “P” followed by a four or six digit time group in UTC.

12. Requested Altitude (Field 09). Consists of two-to-seven characters followed by a space character. Altitudes or flight levels, as appropriate, must be expressed in hundreds of feet, but without leading zeros. The letters “OTP” must be entered in this field to indicate a requested altitude of VFR conditions-on-top. If a VFR conditions-on-top altitude is provided, it must be entered as “OTP/XXX” where “XXX” is a VFR altitude. Blocked altitudes are indicated by entering the lower altitude of the requested block, the letter “B”, and the higher altitude of the block; for example, 80B100, 240B270, with no spaces.

13. End of Line (New Line Key) (Field E). The first occurrence of Field E must always follow Field 09 of the message. Any time a subsequent end of line becomes necessary, if used within Field 10, it must be preceded by the appropriate element separator (not a space). If used within Field 11, Field E may be entered at any point within the remarks sequence.

14. Route of Flight (Field 10). The route of flight consists of departure point or pickup point (PUP), the route of flight, and normally a destination followed by a space character

(a) Field 10 is a fixed sequence field and must begin with a fix; for example, fix, airway, fix, airway etc. The last element may be a fix or one of the route elements VFR, DVFR, or XXX (incomplete route

indicator). An element is separated from another element by a period character.

(b) When consecutive fix elements or route elements are filed, the fixed sequence format is maintained by inserting two period characters between the filed Field 10 elements; for example, fix..fix or airway..airway.

(c) When a pilot files an airway..airway combination, obtain the point of transition and insert it in the transmitted flight plan; for example, SGF.J105..J24. STL.J24. The foregoing does not apply if the first encountered fix happens to be the next filed junction point within the route.

NOTE—

Airway..airway combinations in the route of flight require a defined junction (either five-character alphanumeric, LOCID, or pre-defined fix-radial-distance).

(d) The slash character (/) is used to file a latitude/longitude fix or in describing an ETE.

(e) The maximum number of filed field elements for computer-addressed flight plans is 40. Double period insertions do not count against the 40-element limitation. Transmit flight plans filed exceeding the route element limitation to the ARTCC, not its computer.

(f) Fix Descriptions. A fix must be filed in one of the following ways:

(1) Fix Name. Domestic, Canadian, and International identifiers of two-to-five alphanumeric characters.

(2) Fix Radial Distance (FRD). Consists of eight-to-eleven alphanumeric characters in the following sequence: Two-to-five characters identifying a navigational aid, three characters of azimuth expressed in degrees magnetic, and three characters of distance expressed in nautical miles from the navigational aid. Zeros preceding a significant character must be entered before the azimuth and distance components as required to assure the transmission of three characters for each.

(3) Latitude/Longitude. Consists of nine-to-twelve characters entered as follows: The latitude must appear as the first component as four numbers (trailing zeros required) followed by an optional letter “N” or “S”. If the optional letter is omitted, north is understood. Latitude must be separated from

longitude with a slash (/) element separator. Longitude must appear as the second component as four or five digits (trailing zeros required, leading zero optional) followed by an optional letter “W” or “E”. If the optional letter is omitted, west is understood.

(4) Navigation Reference System (NRS) Waypoints. 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”

(g) Route Descriptions. A route must be filed in one of the following ways:

(1) Airway. The official airway designator must be filed.

(2) Coded Routes. Coded routes are a shorthand method of describing a route segment or segments which may have an altitude profile described, an adapted airspeed within the route, reentry or loop routes as an option, or a time delay at a fix within the route as an option. Some of the principal uses of coded routes are as follows:

[a] Instrument Departures (DP). DP, if used, must be filed by the computer code designator as the second element of Field 10 and be followed by the transition or exit fix.

[b] Standard Terminal Arrivals (STAR). STAR, if used, must be filed by the computer code designator as the next to last element of Field 10 and immediately follow the entry or transition fix.

[c] Published Radials. Published radials (for example, within a preferred route) are considered airways. Do not file unpublished radials.

EXAMPLE—
.JFK053..DPK017
.RBV020

[d] Military Routes. Certain military routes (for example, Military Training Routes (MTR) and Air Refueling Tracks/Anchors), are considered coded routes. The route designator must be preceded and followed by the entry and exit fixes in terms of fix/radial/distance (FRD), and reentry information

may be suffixed to certain military coded routes as follows:

[1] The entry and exit fix must be associated with a fix on the route, and the entry fix must be prior to the exit fix on the route.

EXAMPLE–
TNP355025..IR252
PKE107012

[2] Routes having reentries for a single Strategic Training Range (STR) site must contain the entry of alternate entry fix in terms of FRD, the route designator followed immediately by a plus sign (+), either the letter “R” (1st STR site) or “S” (2nd STR site), and a digit indicating the number of reentries.

EXAMPLE–
(FRD) IR240+R2 (FRD)
(FRD) IR240+S3 (FRD)

[3] Routes having reentries for two STR sites must contain the entry/alternate fix in terms of FRD, the route designator followed immediately by a plus sign (+), the letter “R,” and a digit indicating the number of reentries on the first STR site, immediately followed by second plus sign (+), the letter “S,” and a digit indicating the number of reentries on the second STR site.

EXAMPLE–
(FRD) IR240+R2+S3 (FRD)

[4] STR routes must be entered and exited at the respective primary fix. Alternate STR routes must be entered/exited at the alternate entry/exit fix. The routes must be identified by an individual name.

EXAMPLE–
(FRD) IR240+R2 (FRD) (Primary)
(FRD) IR240A+R2 (FRD) (Alternate)

[e] North American Routes (NAR). NAR routes are numerically coded over existing airways and route systems from and to specific coastal fixes serving the North Atlantic.

EXAMPLE–
.NA9
.NA50

[f] Stereo Routes. A stereo route must specify a prestored stereo tag. An FP message may be entered with a stereo tag as the only Field 10 entry, which causes the Field 10 data stored for the stereo tag to be substituted for the stereo tag and processed as the filed Field 10. Additionally, the filed departure

point (Field 06) must agree with the stored departure point.

[g] Incomplete Route Indicator (XXX). When XXX, the incomplete route indicator, appears in Field 10, the element preceding the XXX element must be a fix.

[h] Visual Flight Rules (VFR) or Defense Visual Flight Rules (DVFR) element. When VFR or DVFR is the second element of Field 10, the filed fix following VFR or DVFR must be internal to the ARTCC’s area to whom the flight plan was initially submitted. When VFR or DVFR is other than the second element in Field 10, the element preceding the VFR or DVFR must be a filed fix.

(h) Fix Suffix.

(1) En Route Delay Suffix consists of an element separator (/), followed by the letter D, followed by the hours and minutes separated by a plus sign (+). Must be appended to a fix.

EXAMPLE–
.STL/D1+30
.PKE107012/D2+05

Use of this suffix is limited to the following cases:

[a] Aerial Refueling Tracks and Anchors. The suffix is appended to the entry fix.

EXAMPLE–
.ICT248055/D0+30.AR330

[b] En route delays not involving a change of altitude stratum and not involving a stopover, terminal area delay, or special use airspace delay unless specifically covered by a letter of agreement with the receiving ARTCC.

(2) Estimated Time En Route (ETE) Suffix. Consists of an element separator (/) and four digits appended to the destination. Leading zeros are required, and the time en route is expressed in hours and minutes.

EXAMPLE–
.STL/0105

(i) A period is not required after the last element of Field 10. If remarks (Field 11) are present, a space is required after the last element of Field 10. If remarks are not present, no space is required and Field F (End of Message) should be the next entry.

15. Remarks (Field 11). Consists of the appropriate remarks code character and the remarks. Remarks are considered mandatory or optional and

should be limited to those pertinent to air traffic control. Spaces are permitted within the remarks field to separate words or contractions.

(a) Mandatory Remarks. These remarks must be transmitted in Field 11 whenever a pilot files the information on the flight plan. A mandatory remark is required whenever there is a modification to the flight plan by the specialist.

(1) If it is necessary to make modifications to the filed route of flight for the purpose of achieving computer acceptance of the input due, for example, to correct a fix or an airway identification, “FRC,” meaning “Full Route Clearance Necessary,” or “FRC/(fix),” will be added to the remarks. “FRC” or “FRC/(fix)” must always be the first item of intra-center remarks. When “FRC” or “FRC/(fix)” appears on a flight progress strip, the controller issuing the ATC clearance to the aircraft must issue a full route clearance to the specified fix, or if no fix is specified, for the entire route. “FRC” or “FRC/(fix)” must always be first in Remarks (Field 11).

NOTE—
INPUT OPERATORS ARE LIMITED TO MAKING ONLY THOSE CHANGES REQUIRED FOR COMPUTER ACCEPTANCE. Modifications, such as those to conform with traffic flows and preferred/recommended routings, must only be made by the pilot or his/her operations office or the controller responsible for initiating the clearance to the aircraft.

(2) When a pilot files an FAA-assigned three-letter company designator, the authorized radiotelephony call sign must be included in the remarks field.

(b) Optional Remarks. These remarks must be transmitted when pertinent to air traffic control and can revert to mandatory status for some military flight plans.

(1) In the case of applicable military flights, NOPAR must be the first item in Remarks (Field 11).

(2) Remarks for military flight plans filing an IR route must contain the IR route designator, entry time prefaced by the letter E, exit time prefaced by the letter X, and MARSA when applicable. Remarks for flight plans filing a terminal area delay must contain the airport identifier at which the delay will occur, followed by the letter D, followed by the

duration of the delay in hours plus minutes, followed by the destination airport. These should be the initial items in the remarks field, unless subpara 6-3-3c15(a)(1) or (2) applies, and should be in order of occurrence.

16. End of Message Function (Field F). Consists of enter function.

d. Additional Messages. The following messages are eligible for input to ARTCC computers via Service B, in addition to the Flight Plan (FP) message:

1. Remove Strip (RS). The purpose of the RS message input is to advise the computer that data on a particular flight is no longer valid and in effect cancels the flight plan and removes it from computer storage.

(a) Eligibility. RS messages may be entered only for flight plans which:

(1) Are proposed flights.

(2) Have been previously entered by the same source entering the RS message.

(3) The flight plan is inactive; e.g., a departure strip must not yet have been printed. Otherwise, the following rejection message is returned: “REJECT—NOT YOUR CONTROL.”

(b) Format. Fields 01 (Message type) and 02 (Aircraft Identification) are required.

EXAMPLE—
RS SWA138

2. Amendment Message (AM). The purpose of the AM message is to change data previously stored in the ARTCC computer.

(a) Eligibility. Same as for the Remove Strip (RS) message (above).

(b) Format. AM messages sent to the ARTCC computer must follow a specific format. First, the field to be amended must be identified, then the amended information given. The ARTCC computer recognizes the following fields by either number or name: (See TBL 6-3-2)

TBL 6-3-2

Field Number and Name

<i>Field</i>	<i>Field Number</i>	<i>Field Name</i>
Aircraft Identification	02	AID

Aircraft Type	03	TYP
Speed	05	SPD
Departure/Coordination Pt.	06	FIX
Proposed Time	07	TIM
Altitude	09	RAL
Route of Flight	10	RTE
Remarks	11	RMK

(c) Restrictions.

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

NOTE—

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

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

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

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

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

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

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

[e] When amended route data are merged with filed data, it replaces all data between the departure point and the first nonamended element remaining in the field. The last element of the amended data must match the first element of the remaining nonamended data, otherwise the following

rejection message is returned: “REJECT—(last element) CANNOT MERGE.”

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

EXAMPLE—

ARTCC—Generated Error Message:

Message Type	Aircraft Identification	Field to be Revised	New Field Data	Field to be Revised	New Field Data
AM	TWA179	07	P0800	08	350
AM	UAL466	07	0300		
AM	AAL4355	10	ORD.J60 .DEN		

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

NOTE—

These procedures may not apply to all operational systems.

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

NOTE—

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

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

EXAMPLE—

ARTCC—Generated Error Message:

Sending Facility	MSG Type	MSG NR	Field in Error	Data in Error	Reason
DCA	Error	123	08	9A	FORMAT
CM Format:					
Field 00	MSG Type		Correct Data		
DCA 1820123	CM		090		

(c) When a CM message in response to an error message results in any change to a pilot-filed

Field 06 (Departure Point) or Field 10 (Route of Flight) once the flight plan has been accepted, an AM message must be sent to add a field 11 intra-ARTCC remark. In remarks, insert “FRC PILOT FILED (original data).”

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

TBL 6-3-3
Computer Flight Data Input

COMPUTER FLIGHT DATA INPUT CHART			
Field	Element	Example	Requirements
A	Start of Message (SOM code)	New Line Key	Required for SOM recognition.
B	Preamble Line	FF KZFWZQZ X	Provides priority, and addressee.
C	Originator	DTG KMLCYFY X	Required for ending the message header.
D	End of Line	(New Line Key)	EOL.
E	End of Message	(Enter Function)	End of Message.

6-3-4. COORDINATE RNAV ROUTES

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

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

EXAMPLE-

(1)	(2)	(3)	(4)	(4)	(5)
MIA	SRQ	3407/10615	3407/11546	TNP	LAX

- 1. Departure airport.
- 2. Departure fix.
- 3. Intermediate fixes defined by latitude/longitude coordinates.
- 4. Arrival fix for the destination airport in terms of both the latitude/longitude coordinates and the fix identifier.
- 5. Destination airport.

Section 4. Flight Plan Handling

6-4-1. FLIGHT PLAN ACTIVATION

a. Handle departure reports as a routine radio contact in accordance with para 4-3-5, Routine Radio Contacts. If a departure report has not been received within a predetermined time, but not less than 1 hour of the proposed departure time, and specific arrangements have not been made to activate the flight plan, cancel and store in the history file.

b. The FSS history file is used for statistical and historical purposes. Movement messages, pilot briefings, and aircraft contacts are stored in the history files automatically and retained for 15 days.

c. When a pilot reports an actual departure time of more than 2 hours prior to the current clock time, request an updated ETE based on the aircraft's present position. Amend the ETE in the existing flight plan and activate the flight plan using the current time as the time of departure and inform the pilot of the new ETA.

6-4-2. DEPARTURE REPORT MESSAGE

When a pilot activates a flight plan with other than the facility holding the flight plan, transmit a numbered message to the departure tie-in facility.

EXAMPLE-
 FF KRCAYXYX
 DTG KHONYFYX
 HON001 RCA
 N98765 D1645 RCA ALW

NOTE-
If the facility has access to a shared database, activate the flight plan in accordance with locally established procedures.

6-4-3. ACKNOWLEDGING NUMBERED MESSAGES

Acknowledge a numbered message as soon as practicable after receipt. Prefix the acknowledgement with the letter R followed by a space and then the 3-digit message number.

EXAMPLE-
 AISR
 FF KMMVYFYX

*DTG KRNOYFYX
 R 001*

6-4-4. FLIGHT NOTIFICATION MESSAGE

a. When a departure report is received, or the pilot requests an assumed departure, transmit a flight notification message to the destination tie-in facility as specified in FAA Order JO 7350.8, Location Identifiers. Telephone or interphone, when available, may be used for flights of 30 minutes or less. The flight notification message must contain the following information:

1. Type of flight plan (VFR or IFR).
2. Aircraft identification.
3. Aircraft type.
4. Departure point.
5. Destination.
6. ETA (If more than 24 hours, may use DTG).
7. Remarks, preceded by a \$ sign (as appropriate).

EXAMPLE-
 FF KBOIYFYX
 DTG KCDCYFYX
 VFR N2346F AC11/U PVU BOI 1348 \$ASMDDEP

NOTE-
 1. *The operational system will automatically format the required items and transmit the flight notification message when activated.*

b. When the proposed flight plan is received from another FSS, BASOPS, or DUAT vendor and the departure facility has only partial flight plan data, add a remark indicating the Service B address of the facility holding the complete flight plan. Operational systems will automatically add this to the "Remarks" section of the flight plan.

EXAMPLE-
 FF KBOIYFYX
 DTG KCDCYFYX
 VFR N12345 C182/U PVU BOI 1958 \$FP KIADXCLX

c. If the pilot elects to close the flight plan with a facility other than the designated tie-in facility, send the flight notification message with remarks to both tie-in facilities; for example, FIRIV FAI. The

designated tie-in facility must assume both destination and search and rescue responsibility.

EXAMPLE–

FF PAENYFYX PAFAYFYX
DTG KJNUYFYX
VFR N2346F AC11 JNU FAI 1303
\$FIRIV ENA

NOTE–

The operational system will auto address to the tie-in facility. Because the pilot elected to FIRIV with ENA (a facility other than the tie-in facility), the message must also be manually addressed to ENA.

d. The facility with which the pilot elects to close the flight plan must forward a numbered closure message to the designated tie-in facility.

e. On civil flight plans, if the pilot advises of stopover points, show these in remarks.

EXAMPLE–

FF KBOIFYX
DTG KCDCYFYX
VFR N12345 C182/U PVU BOI 1958 \$LNDG
TWF

f. On military flight plans, in remarks use coded data pertinent to services, passengers, or cargo. In the absence of remarks, enter the letter N (meaning none) in the remarks field.

REFERENCE–

DOD Flight Information Publication, General Planning Document.

1. Flight notification messages with remarks generate an alert alarm at designated workstations.

2. When landing at a civil airport, if there are no remarks with the flight notification message, it is placed on the Inbound List with no alerts for notification purposes.

3. When landing at a military airport, all flight notification messages generate an alert.

EXAMPLE–

FF KRCAYYX
DTG KRIUYFYX
IFR DECAL01 T43/R SMF RCA 0135
\$AP3NP3S

FF KBOIFYX
DTG KCDCYFYX

VFR R54321 2/UH1/U SLC BOI 1943 \$N

g. Address military stopover flight notification messages to and obtain acknowledgements from the destination tie-in facility serving all destinations.

1. For the first leg, transmit the items in subparas 6-4-4a and 6-4-4f.

2. For each subsequent leg, transmit the destination, ETE, and remarks applicable to that leg only, prior to (/). Remarks pertaining to the entire flight are entered in the “Remarks” section of the original flight plan and are transmitted to all addressees.

3. Separate stopover legs by inserting a slant (/) at the end of each leg except the last. Begin each leg on a new line.

EXAMPLE–

FF KANDYFYX KGNVYFYX KMIAFYX
DTG KDCAFYX
IFR VV12345 P3 ADW CHS 1300/
NIP 01+30 A5 BALL DPI0 AP5 S/
MIA 02+30 NO DE-ICING EQUIPMENT

4. For composite flights, specify type flight plan as the first item of each leg.

5. When en route delays are involved, include delay time in ETE.

h. Apply military flight plan procedures to all civil aircraft landing at military bases.

NOTE–

It is the civil pilot's responsibility to obtain permission (from military authorities) to land at a military base.

i. Apply civil flight plan procedure to civil aircraft departing military bases and en route to civil airports.

6-4-5. SUSPENDING FLIGHT NOTIFICATION MESSAGES

a. Suspend the flight notification message or proposal message until acknowledgment is received from the addressee, then store in the history file.

b. If an acknowledgment is not received within the following time period, use the telephone or interphone to assure delivery.

c. When an acknowledgment for a message is required and has not been received in accordance with the procedure described above, retransmit the complete message to the addressee.

d. Messages awaiting acknowledgment are suspended on the Suspense List. It contains a list of all

numbered Service B messages and those messages transmitted from the flight plan mask not acknowledged by all the addressees.

1. The message identification is the aircraft identification for flight notifications and/or the message number for all other message types.

2. Acknowledgments received via NADIN must be automatically processed if they are in the proper format.

3. Improperly formatted acknowledgments will be directed to a list for manual processing and will generate an alert at designated workstations for editing.

4. The Suspense List will display the aircraft identification and message numbers in chronological order of transmission times and the addressees for each message with an indication of those that have not acknowledged.

5. If a transmission has not been acknowledged by all addressees within 30 minutes, an alert will be generated by the operating system.

6. Upon receipt of a Suspense alert, retransmit the message to addressees who have not acknowledged the message.

7. When an acknowledgment message is received from any other source, such as interphone/telephone or facility guarding for the addressee, the specialist must manually acknowledge the message.

6-4-6. ACKNOWLEDGING FLIGHT NOTIFICATION MESSAGES

Acknowledge a flight notification message or proposal as soon as practical after receipt. Prefix the acknowledgment with the letter R followed by a space and then the full aircraft identification.

EXAMPLE—

AISR

FF KRCAYXX

DTG KRIUYFYX

R DECAL01

NOTE—

MIFC and OASIS will automatically acknowledge flight notification messages which are received in or have been edited into the correct format.

6-4-7. ACTION BY ADDRESSEES

In addition to acknowledging receipt of the flight notification message, addressees must take the following actions:

a. Military IFR flights.

1. Notify BASOPS, if applicable, of the inbound flight.

2. Upon request, deliver flight plan amendments to the ARTCC.

3. File the flight notification message in the operational system history files or with the daily traffic.

4. Forward the actual departure time to the destination the tie-in facility for the next destination.

b. Military VFR flights.

1. Notify BASOPS, if applicable, of the inbound flight.

2. Suspend the message, awaiting closure/cancellation/departure and assume destination station responsibility.

3. Forward the departure time to the destination tie-in facility, and assume departure station responsibility.

4. All flight notification messages are suspended on the Inbound List. An entry on the list will remain there until the flight plan is closed. Thirty minutes after the ETA, if the flight plan has not been closed, it is considered overdue and will generate an Inbound alert at designated workstations.

c. If no information is received (e.g., departure time, revised ETA) indicating that the flight is still active prior to the void time, note this on the flight notification message and file.

6-4-8. MAJOR FLIGHT PLAN CHANGES FROM EN ROUTE AIRCRAFT

a. Change of Destination.

1. When a civil aircraft on a VFR flight plan or a military aircraft on any flight plan changes destination, obtain, as a minimum, the following information if not already known:

(a) Type of flight plan.

(b) Aircraft identification.

(c) Aircraft type.

- (d) Departure point.
- (e) Old destination.
- (f) Present position.
- (g) Altitude and route.
- (h) New destination.
- (i) Estimated time en route.

2. Transmit a revised flight notification message to the departure, original, and new destination tie-in facilities containing the type of flight, aircraft identification, aircraft type, departure point, new destination, new ETA, and in Remarks, aircraft position and time, the words ORIG DESTN followed by the identifier of the original destination.

EXAMPLE–

VFR Change of Destination:

FF KBOIFYX KSEAYFYX
DTG KDCYFYX
VFR N98789 C182/U PVU GEG 2230 \$0VR
SLC 1900 ORIG DESTN BOI

IFR Change of Destination:

FF KRCAYYX KTIKYYX KRIUYFYX
DTG KDCYFYX
IFR DECAL01 T43/R SMF TIK 0230 \$AP3NP3S OVR
SLC 2330 ORIG DESTN RCA

b. Change from IFR to VFR. When a civil aircraft changes from an IFR to a VFR flight plan, obtain all flight plan information and send a flight notification message to the destination tie-in facility. Include the type of flight plan, aircraft identification and type, departure point, destination, ETA, and pertinent remarks.

EXAMPLE–

FF KABQYFYX
DTG KOAKYFYX
VFR N87690 C182/U SFO ELP 2100 \$CNLD
IFR OVER BFL

NOTE–

Obtaining the name of the original flight plan source may provide additional information if the aircraft becomes overdue.

c. Military Change from IFR to VFR or VFR to IFR. When a military aircraft changes from IFR to VFR, or VFR to IFR, or requests that other

significant information be forwarded, transmit this information to the destination station.

EXAMPLE–

FF KTIKYYX
DTG KDENYFYX
DECAL01 CHGD TO VFR RON

6-4-9. CHANGE IN ETA

When an aircraft wants to change its estimated time en route (ETE), obtain a new estimated time of arrival (ETA) and forward the information to the destination tie-in facility as a numbered message. The destination tie-in facility must acknowledge and, thereafter, use the new ETA as the standard for any necessary follow-up action; for example, QALQ message.

EXAMPLE–

FF KENAYFYX
DTG KSEAYFYX
SEA001 ENA
N34567 E2140

NOTE–

If the facility has access to a shared database, access the flight plan and make the change in accordance with locally established procedures.

REFERENCE–

FAA0 7210.3, Para. 13-1-3.c. Flight Plan Area.

6-4-10. FLIGHT PLAN CLOSURE

Do not transmit arrival reports except under unusual circumstances or in the following cases:

a. Transmit arrival or other information involving FAA or Canadian MOT aircraft by a numbered message to any facility requested by the pilot.

EXAMPLE–

FF KDCAFYX
DTG KHHRYFYX
HHR002 DCA
N2 A0839 (Remarks, as appropriate)

b. For U.S. military aircraft, transmit arrival reports to the departure station only when:

1. Requested by BASOPS.
2. Special military flights arrive.

c. When a pilot closes a flight plan with a station that has not received a flight notification message, obtain as a minimum, the departure point, the flight

planned destination point, and the station with which the flight plan was filed.

1. If the station receiving the closure is the tie-in station for the planned destination, transmit a numbered arrival message to the departure station with the remark FPNO and the departure point and destination identifiers. The departure station must relay the arrival information to the station holding the flight plan notification message in the active file.

EXAMPLE–

*FF KDCAYFYX
DTG KMIVYFYX
MIV001 DCA
N8567 A1745 FPNO PHF NMK*

2. If the station receiving the closure message is not the destination tie-in station, transmit a numbered closure message to the destination tie-in

station, including the aircraft identification, the closure time, the departure point, and destination. Remarks are optional.

EXAMPLE–

*FF KHUFYFYX
DTG KDAYYFYX
DAY003
N11ND C1217 LOU IND LNDD CMH*

6-4-11. MILITARY FLIGHTS TO/FROM U.S.

a. To U.S. If REQ ARR is in remarks, suspend the flight plan until arrival information is received from BASOPS and forward to the departure location.

b. From U.S. If requested by BASOPS, include REQ ARR in remarks section of ICAO flight plan. Terminate suspense action only after receipt of an arrival message and delivery to BASOPS.

Section 5. Military Operations

6-5-1. MILITARY TRAINING ACTIVITY

a. Military Training Routes (MTR).

1. Unless otherwise covered in a letter of agreement, the tie-in AFSS/FSS/ARTCC/BASOPS for an MTR-scheduling activity shall transmit an unnumbered NADIN message. Use the assigned group code KAWPYFYX and for Alaska, use KFSSYFAK KAWPYFYX. Transmit as a single message whenever possible.

EXAMPLE-

AISR
FF ADDRESSES
DTG KDCAYFYX
IR104 1400-1440 60 AND BELOW
IR104 021530-021625 60 AND BELOW

M1FC

ORIGIN:FOD PRECEDENCE:FF TIME: ACK:N
ADDR: ADDRESSES
TEXT: IR505 1400-1600 60 AND BELOW

2. Multiple activities should be combined chronologically by use time(s) and transmitted (not more than 24 hours in advance) as a single message using only the format shown in the example below.

EXAMPLE-

AISR
FF ADDRESSES
DTG KDCAYFYX
VR066 1330-1440 100 AND BELOW
IR104 1400-1440 60 AND BELOW
IR104 1545-1630 50 AND BELOW
VR066 1600-1655 30 AND BELOW

M1FC

ORIGIN:FOD PRECEDENCE:FF TIME: ACK:N
ADDR: ADDRESSES
TEXT: IR505 1440-1640 60 AND BELOW
IR507 1700-1800 60 AND BELOW

NOTE-

Slow-speed, low-altitude training routes are not to be transmitted, briefed on, or posted. The contraction VLAR is not an approved contraction.

b. Military Operations Area (MOA).

1. Transmit MOA messages only when the use times are other than what has already been published or otherwise covered in a letter of agreement. The

controlling agency (usually an ARTCC) shall transmit an unnumbered NADIN message. Use the assigned group code KAWPYFYX and for Alaska, use KFSSYFAK KAWPYFYX. Use only approved MOA names as depicted in FAAO 7400.8 (DO NOT USE ABBREVIATIONS).

EXAMPLE-

AISR
FF ADDRESSES
DTG KZKCZRZX
BISON MOA 1345-1550 ALT 025B180

2. Activity schedules should be combined and listed chronologically by use time(s) and transmitted (not more than 24 hours in advance) as a single NADIN message using only the format shown in the following example:

EXAMPLE-

AISR
FF ADDRESSES
DTG KZKCZRZX
BISON MOA 1345-1550 ALT 025B180
BISON MOA 1600-1645 ALT 060B180
HILLTOP MOA 1600-1715 ALT 100B180
HOWARD MOA 1600-0200 ALT 090B180
REDHILLS MOA 1700-1800 ALT 080B100

c. A VR operation may be filed as a composite flight, IFR-VFR-IFR. Unless the BASOPS has the capability to do so, the tie-in AFSS/FSS shall transmit the IFR proposals in separate messages to the appropriate ARTCCs in accordance with paras 6-3-1, 6-3-2, 6-3-3, and 6-3-4.

d. Information received from either the AFSS/FSS/ARTCC/military scheduling activity or controlling agency that modifies an MTR and MOA schedule shall be transmitted by an unnumbered message via Service B as defined in subparas 6-5-1a and b.

e. Special Use Airspace (SUA).

1. M1FC. Properly formatted IRs, VRs, and MOAs are automatically placed on the list and the 0 queue. Messages are deleted from the list by automatic cancellation. The list is displayed by use of the following keywords: VM MO (ALL MOAs), or VM (MOA NAME) MO, IR, VM (STATE IDENT; i.e., VA) MO or VM IR, VM VR (ALL IRs or VRs), or VM 1756 VR (route specific). The route must be

a four-digit character. Three-digit routes must be preceded by a zero.

2. OASIS. Properly formatted IRs, VRs and MOAs are automatically stored and are displayed using the Briefing functions. Messages are deleted by automatic cancellation.

NOTE—

The above procedures do not preclude a specialist from exercising his/her own judgment in providing further assistance when there is the slightest doubt about the adequacy of data being furnished to alert a pilot to the existence of an MTR or MOA.

6-5-2. AERIAL REFUELING TRACKS

Upon notification from the ARTCC or a scheduling facility that a published refueling track will be activated and all or part of the activity will take place outside of restricted/warning areas or Class A airspace, the tie-in AFSS/FSS shall issue a NOTAM for the aerial refueling track.

6-5-3. SPECIAL MILITARY FLIGHTS

a. Advise the ARTCC of flight notification messages, progress reports, changes en route, and related messages concerning Presidential or Vice Presidential flights.

b. Alaska. In addition to the above, give advance notice to all RCCs along the route of flight. Telephone SARCC (907) 752-0227 or (907) 752-0128. Initiate communications search procedures if arrival is not received within 15 minutes after ETA and immediately notify ANRCC (Alaskan NORAD Region Control Center).

6-5-4. MILITARY FOREIGN FLIGHTS

Generally, all military foreign flights are required to clear through specified military bases. Pilots normally will not file flight plans directly with an AFSS/FSS unless BASOPS is not available. BASOPS with no Service B access will forward an ICAO-type flight plan message via their tie-in AFSS/FSS for relay through the AFTN. BASOPS should specify all addressees, both ATC and operational, in accordance with ICAO standards and military regulations.

6-5-5. USAF/USN UNDERGRADUATE PILOTS

To identify aircraft piloted by solo USAF/USN undergraduate student pilots (who may occasionally request revised clearances because they normally are restricted to flight in VFR conditions), the aircraft identification in the flight plan shall include the letter Z as a suffix. Do not use this suffix in ground-to-air communication.

NOTE—

USAF solo students who have passed an instrument certification check may penetrate cloud layers in climb or descent only. Requests for revised clearances to avoid clouds in level flight can still be expected. This does not change the requirement to use the letter Z as a suffix to the aircraft identification.

6-5-6. MESSAGE HANDLING

Accept and forward messages from any military authority that concern aircraft movement, national defense, safety of flight, or emergencies. This includes, but is not limited to, the following:

a. Flight Advisory Messages.

1. The FSS originating the advisory or receiving it from the originating BASOPS must determine the FSS nearest the aircraft's estimated position for VFR flights, or the appropriate ARTCC for IFR flights. Transmit a numbered message only to the facility identified. Include in the text, FLT ADVY, aircraft identification and type, and route of flight in that order. The last item must be the identifier of the originating BASOPS or FSS.

EXAMPLE—

FF KZIDZRZX
DTG KCOUYFYX
COU005 ZID
FLT ADVY A12345 T38 GVW J80 DAY
DAY WX BLO LNDG MIN. SUG PROCD CVG.
ADZ INTENTIONS DLVR 1625
GVW BASOPS

2. Inform the originator if unable to deliver the flight advisory within 15 minutes. Store the message in the history files.

b. Electronic Counter Measure (ECM) Alerts. Transmit a numbered message via Service B to tie-in stations serving the addressees. If acknowledgements are not received within 1 hour, deliver via telephone.

c. REACH and SAM Flight Messages. Forward to the airlift command post specified by the pilot if message contains request PASS TO AMC ACP.

d. UNIDENTIFIED FLYING OBJECT (UFO)/UNEXPLAINED PHENOMENA REPORTS.

1. Persons observing UFOs/Unexplained Phe-

nomena should contact an UFO/Unexplained Phenomena Reporting Data Collection Center, such as the National Institute for Discovery Science (NIDS), the National UFO Reporting Center, etc.

2. If concern is expressed that life or property might be endangered, also refer the individual to the local police department.

Section 6. IFR/DVFR ADIZ Flight Plans

6-6-1. AIRCRAFT MOVEMENT INFORMATION SERVICES (AMIS) WITHIN AN ADIZ-IFR

In addition to the normal handling of aircraft operating in accordance with IFR, ADIZ penetration information or position reports on IFR operations outside of controlled airspace shall be forwarded immediately to the appropriate ARTCC.

6-6-2. AMIS WITHIN AN ADIZ-DVFR

For security control of air traffic, specific information contained in flight plans filed by a pilot operating or proposing to operate in accordance with DVFR within an ADIZ shall be forwarded to NORAD.

NOTE-

Other offices, military and civil, as well as pilots, may file DVFR flight plans with an AFSS/FSS for forwarding to NORAD.

6-6-3. FORWARDING DVFR INFORMATION

a. Forward DVFR flight plan information to NORAD via the Service B NORAD address or by telephone.

NOTE-

1. *The following NORAD addresses are group addresses that include all appropriate NORAD sectors and law enforcement:*

KZAMZQZX – the contiguous 48 states and San Juan.

PHIRAO CZ – Hawaii.

PAEDY YXX – Alaska

2. *NORAD will not send an acknowledgement and must be manually acknowledged from the suspense list by the specialist. (NORAD Headquarters assumes responsibility for receipt.)*

b. DVFR flight plans must be entered into the operating system for processing following system instructions and include the following information:

1. Aircraft call sign.
2. Number and type of aircraft.
3. Altitude (within ADIZ).
4. True airspeed.
5. Time of departure.

(a) When the flight plan information is provided before the aircraft's departure, enter as a proposal. Depart the flight plan immediately upon receipt of the actual departure time.

(b) If arrangements cannot be made to obtain the actual departure time, forward the estimated time of departure (ETD).

6. Point of departure.

7. ETA.

8. Destination.

9. Remarks.

(a) DVFR discrete transponder code.

(b) True airspeed.

(c) Estimated point of penetration of the ADIZ (latitude/longitude or fix-radial-distance), except in Alaska.

(d) Estimated time of penetration of the ADIZ, except in Alaska.

(e) If no arrival report (NORIV) will be filed with an appropriate aeronautical facility, include the contraction "NORIV" as a nontransmitted remark. Do not pass "NORIV" to NORAD.

EXAMPLE-

1210 135 3442/09345 1446

NOTE-

On a proposed flight plan, a single "X" may replace the DVFR discrete transponder code, true airspeed, estimated point of penetration of the ADIZ, or the estimated time of penetration of the ADIZ.

EXAMPLE-

Missing true airspeed:

1210 X 3442/09345 1446

Missing estimated point of ADIZ penetration and time:

1210 135 XX

c. Forward DVFR flight plan information for aircraft operating into Canada using the same procedures in paragraph 6-6-3b, except add "DVFR" in remarks and transmit the information to the appropriate Canadian transborder tie-in facility.

6-6-4. STOPOVER DVFR FLIGHT PLANS

Accept stopover DVFR flight plans filed on those aircraft planning one or more landings (within an ADIZ) en route to the destination, provided the information in para 6-6-3 is furnished for each segment of flight. Remind the pilot that 14 CFR Part 99 requires departure times to be made good and that a written record should be retained of these times at each departure point.

Section 7. Law Enforcement Messages

6-7-1. LAW ENFORCEMENT ALERT MESSAGES (LEAM)

The El Paso Intelligence Center (EPIC) is an organization composed of 14 Federal agencies, including the FAA. The principal mission of EPIC is to facilitate the exchange of information and tactical intelligence on illicit narcotic trafficking and to support, through the intelligence process, Federal investigations concerning violation of Federal statutes as they apply to narcotics, aliens, currency, and weapons. EPIC issues two types of Law Enforcement Alert Messages (LEAM) that pertain to aircraft: Aircraft Lookout Alerts and Stolen Aircraft Alerts. Upon receipt of a LEAM from EPIC, take the following actions:

a. Aircraft Lookout Alerts.

1. Keep active for 7 days, unless otherwise specified, or until cancellation is received.

2. Do not disseminate Suspect Aircraft Lookouts outside of official government facilities. As this data is inherently sensitive, unauthorized disclosure of information could compromise an investigation, endanger lives, and could result in criminal prosecution or administrative action against the offender.

REFERENCE—

FAAO 1600.29, Para 7c(7), *Stolen Aircraft Alert Procedure*.

NOTE—

Paragraph 6-7-1a applies only to FSS facilities in Alaska. FSS facilities operating under contract of a Service Provider are not considered official government facilities and therefore will not receive Aircraft Lookout Alerts.

b. Stolen Aircraft Alerts.

1. Stolen Aircraft Alerts request recipients to watch for and report on the location and movement of an aircraft which has been reported stolen.

2. Keep active until included in a stolen aircraft summary or until cancelled.

3. Upon receipt, check records for any aircraft contact, beginning with the date the aircraft was reported stolen.

4. Relay any information available to the office listed on the alert.

c. Stolen Aircraft Summaries.

1. Stolen Aircraft Summaries should be used to displace and consolidate all the individual stolen aircraft alerts received in the interim.

2. Monthly summaries are sent as soon as possible after the end of the month. They include aircraft registration numbers, aircraft type, and the date/time stolen and/or recovered.

3. Biannual summaries are sent in January and July. They list only those aircraft stolen in the past 2 years.

d. All LEAM.

1. Distribute the Stolen Aircraft Alerts and Summaries, at the discretion of the Air Traffic Manager, to all parties, fixed base operators, airport managers, etc.

REFERENCE—

FAAO 1600.29, Para 7c(6), *Stolen Aircraft Alert Procedure*.

2. Check local records for the previous 24 hours.

3. Notify EPIC via Service B message (KDEAYYYX) or by telephone (1-888-873-3742 [USE EPIC], 1-915-760-2227 for the Air Watch Desk or 1-915-760-2200 for the General Watch Desk) of any contact within the past 24 hours. Also, notify your Regional duty officer for relay to the cognizant Transportation Security Administration Aviation Command Center.

4. Subsequent aircraft transactions shall be monitored and require the same notification as defined in subpara 6-7-1d3.

5. Take no action regarding the aircraft, crew, or passengers other than normal air traffic job related functions.

6. Cease all actions upon receipt of a cancellation or a summary if the latter does not include this aircraft's registration number.

6-7-2. INITIATING LEAMs


Any inquiries from airport managers, aircraft owners, or law enforcement entities to initiate an alert message shall be directed to EPIC. EPIC is interfaced with the National Crime Information Center, which gives them access to any stolen aircraft report entered

by law enforcement agencies. FAA facilities shall not volunteer to relay this information to EPIC. Assistance shall be limited to providing EPIC phone number(s) as specified in subpara 6-7-1d3 or advising the inquiring party to go through normal law enforcement channels.

Appendix A. ICAO FLIGHT PLANS

- 1.** ICAO Model Flight Plan Form.
- 2.** Instructions for the Completion of the Flight Plan Form.
- 3.** Instructions for the Transmission of a Filed Flight Plan (FPL) Message.
- 4.** Instructions for the Transmission of a Supplementary Flight Plan (SPL) Message.
- 5.** Example of Completed Flight Plan Form.
- 6.** ICAO Model Flight Plan, Reverse Side.
- 7.** ICAO Model Repetitive Flight Plan (RPL) Listing Form.
- 8.** Example of a Completed Repetitive Flight Plan (RPL) Listing Form.

1. ICAO Model Flight Plan Form

 Department of Transportation Federal Aviation Administration		<i>International Flight Plan</i>	
PRIORITY << ≡ FF →		ADDRESSEE(S) <div></div> <div></div> <div></div> << ≡	
FILING TIME <div></div>		ORIGINATOR <div></div> << ≡	
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR <div></div>			
3 MESSAGE << ≡ (FPL		7. AIRCRAFT IDENTIFICATION - <div></div>	
9. NUMBER - <div></div>		8 FLIGHT RULES - <div></div>	
13 DEPARTURE AERODROME - <div></div>		TYPE OF FLIGHT <div></div> << ≡	
15 CRUISING SPEED - <div></div>		10 EQUIPMENT - <div></div> << ≡	
16. DESTINATION AERODROME - <div></div>		WAKE TURBULENCE CAT. / <div></div>	
18 OTHER INFORMATION - <div></div>		TYPE OF AIRCRAFT <div></div>	
19		TIME <div></div> << ≡	
20		ROUTE <div></div>	
21		LEVEL <div></div>	
22		ROUTE <div></div>	
23		ROUTE <div></div>	
24		ROUTE <div></div>	
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5. Example of Completed Flight Plan Form

Department of Transportation Federal Aviation Administration		International Flight Plan	
PRIORITY FF		ADDRESSEE(S) EHAZQEX EBURZQZX EDDYZQZX LFFFZQZX LFRRZQZX LFBBZQZX LECMZQZX LPFCZQZX	
FILING TIME 1 9 0 8 3 6		ORIGINATOR E H A M Z P Z X	
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR			
3 MESSAGE FPL	7. AIRCRAFT IDENTIFICATION A C F 4 0 2	8 FLIGHT RULES I	TYPE OF FLIGHT N
9. NUMBER -	TYPE OF AIRCRAFT E A 3 0	WAKE TURBULENCE CAT. I H	10 EQUIPMENT S / C
13 DEPARTURE AERODROME E H A M	TIME 0 9 4 0		
15 CRUISING SPEED 0 8 3 0	LEVEL F 2 9 0	ROUTE LEK 2B LEK UA6 XMM/MO78F330	
UA6 PON URION CHW UA5 NTS DCT 4611N00412W			
DCT STG UA5 FTM FATIMIA			
16. DESTINATION AERODROME L P P T	TOTAL EET HR. MIN. 0 2 3 0	ALTN AERODROME L P P R	2ND, ALTN AERODROME
18 OTHER INFORMATION REG / FBVGA SEL / EJFL EET / LPPC0158			
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)			
19 RENSE ENDURANCE HR. MIN. E / 0 3 4 5	PERSONS ON BOARD P / 3 0 0	EMERGENCY RADIO UHF VHF ELBA R / U V E	
SURVIVAL EQUIPMENT DINGHIES S / X POLAR DESERT MARITIME JUNGLE J / L LIGHT FLOURES UHF VHF X X			
AIRCRAFT COLOUR AND MARKINGS NUMBER CAPACITY COVER COLOUR D / 1 1 3 3 0 C YELLOW			
REMARKS X /			
PILOT-IN-COMMAND C / DENKE			
FILED BY AIR CHARTER INT.	ACCEPTED BY	ADDITIONAL INFORMATION	

FAA Form 7233-4 (5-93) Supersedes Previous Edition

6. ICAO Model Flight Plan, Reverse Side

Pre-Flight Pilot Checklist				
Aircraft Identification			Time of Briefing	
WEATHER (Destination) (Alternate)	<input type="checkbox"/> Present	Remarks	Report Weather Conditions Aloft	
	<input type="checkbox"/> Forecast		Report immediately weather conditions encountered - particularly cloud tops, upper cloud layers, thunderstorms, ice, turbulence, winds and temperature.	
			Position	Altitude
WEATHER (En Route)	<input type="checkbox"/> Present			
	<input type="checkbox"/> Forecast			
	<input type="checkbox"/> PIREPS			
WINDS ALOFT	<input type="checkbox"/> Best Crzg Alt.			
NAV AID & COMM STATUS	<input type="checkbox"/> Designator			
	<input type="checkbox"/> En Route			
AIRPORT CONDITIONS	<input type="checkbox"/> Destination			
	<input type="checkbox"/> Alternate			
ADIZ	<input type="checkbox"/> Airspace Restrictions			
Civil Aircraft Pilots				
FAR Part 91 states that each person operating a civil aircraft of U.S. registry over the high seas shall comply with annex 2 to the Convention of International Civil Aviation, International Standards - Rules of the Air. Annex 2 requires the submission of a flight plan containing items 1-19 prior to operating any flight across international waters. Failure to file could result in a civil penalty not to exceed \$1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended).				
<i>Check data as soon as practicable after entering foreign airspace, as our international data may be inaccurate or incomplete.</i>				
Agency Display Of Estimated Burden For International Flight Plan				
This public report burden for this collection of information is estimated to average <u>2.5</u> minutes per response.				
If you wish to comment on the accuracy of the estimate or make suggestions for reducing this burden, please direct your comments to OMB and the FAA at the following addresses.				
Office of Management and Budget Paperwork Reduction Project 2120-0026 Washington, DC 20503		- and -	U.S. Department of Transportation Federal Aviation Administration Terminal and Flight Services Operations and Procedures, ATO-120 800 Independence Avenue, SW Washington DC 20591	
Please DO NOT RETURN your form to either of these addresses				

7. ICAO Model Repetitive Flight Plan (RPL) Listing Form

REPETITIVE FLIGHT PLAN LISTING

[illegible]

7.1 Instructions for the completion of the repetitive flight plan (RPL) listings form

7.2 General

List only flight plans that will operate in accordance with IFR. (Flight rules I in FPL format).

It is assumed that all aircraft are operating as scheduled flights (Type of flight S in FPL format), otherwise notify in O (Remarks).

It is assumed that all aircraft operating on RPL's are equipped with 4096-code transponders with modes A and C. Otherwise, notify Q (Remarks).

List flight plans in alphabetical order of the location indicator of the departure aerodrome.

List flight plans for each departure – aerodrome in chronological order of estimated off-block times.

Adhere closely to the data conventions as indicated for the Flight Plan Form unless otherwise specifically indicated in 7.5.

Insert all clock times in 4 figures UTC.

Insert all estimated elapsed times in 4 figures (hours and minutes).

Insert data on a separate line for each segment of operations with one or more stops; i.e., from any departure aerodrome to the next destination aerodrome even through call sign or flight number is the same for multiple segments.

Clearly identify additions and deletions in accordance with Item H at 7.4. Subsequent listings shall list the corrected and added data, and deleted flight plans shall be omitted.

Number pages by indicating number of pages and total number of pages in submission.

Utilize more than one line for any RPL where the space provided for items O and Q on one line is not sufficient.

7.3 A flight shall be cancelled as follows:

- a. indicate a minus sign in item H followed by all other items of the cancelled flight;
- b. insert a subsequent entry denoted by a plus sign in item H and the date of the last flight in item J, with all other items of the cancelled flight unchanged.

7.4 Modification to a flight shall be made as follows:

- a. carry out the cancellation as indicated in 7.2; and
- b. insert a third entry giving the new flight plan(s) with the appropriate items modified as necessary, including the new validity dates in items I and J.

Note.— All entries related to the same flight will be inserted in succession in the order specified above.

7.5 Instructions for insertion of RPL data

Complete Items A to Q as indicated hereunder.

ITEM A: OPERATOR

INSERT Name of operator.

ITEM B: ADDRESSEE(S)

INSERT Name of agency(ies) designated by States to administer RPL's for FIR's or areas of responsibility concerned with the route of flight.

ITEM C: DEPARTURE AERODROME(S)

INSERT Location indicator(s) of departure aerodrome(s).

ITEM D: DATE

INSERT On each page of submission the date (year, month, day) in a 6-figure group that the listing was submitted.

ITEM E: SERIAL NUMBER

INSERT Serial number of submission (2 numerics) indicating last two digits of year, a dash, and the sequential number of the submission for the year indicated (start with numeral 1 each new year).

ITEM F: PAGE OF

INSERT Page number and total number of pages submitted.

ITEM G: SUPPLEMENTARY DATA AT

INSERT Name of contact where information normally provided under Item 19 of the FPL is kept readily available and can be supplied without delay.

ITEM H: ENTRY TYPE

INSERT A minus sign (–) for each flight plan that is to be deleted from the listing.

INSERT A plus sign (+) for each initial listing and, in the case of subsequent submissions, for each flight plan not listed in the previous submission.

Note – No information is required under this item for any flight plan which is unchanged from the previous submission.

ITEM I: VALID FROM

INSERT First date (year, month, day) upon which the flight is scheduled to operate.

ITEM J: VALID UNTIL

INSERT Last date (year, month, day) upon which the flight is scheduled to operate as listed, or UFN if the duration is unknown

ITEM K: DAYS OF OPERATION

INSERT Number corresponding to the day of the week in the appropriate column;
Monday = 1 through Sunday = 7.

INSERT 0 for each day of non-operation in the appropriate column.

ITEM L: AIRCRAFT IDENTIFICATION (Item 7 of the ICAO flight plan)

INSERT Aircraft identification to be used for the flight.

ITEM M: TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY (Item 9 of the ICAO flight plan)

INSERT Appropriate ICAO designator as specified in ICAO Doc 8643 – Aircraft Type Designators.

INSERT H, M or L indicator as appropriate:

- H – HEAVY to indicate an aircraft type with a maximum certificated take-off mass of 136,000 kg or more,
- M – MEDIUM to indicate an aircraft type with a maximum certificated take-off mass of less than 136,000 kg but more than 7,000 kg,
- L – LIGHT to indicate an aircraft type with a maximum certificated take-off mass of 7,000 kg or less.

ITEM N: DEPARTURE AERODROME AND TIME (Item 13 of the ICAO flight plan)

INSERT Location indicator of the departure aerodrome.

INSERT The off-block time, i.e., the estimated time that the aircraft will commence movement associated with departure.

ITEM O: ROUTE (Item 15 of the ICAO flight plan)**a. Cruising Speed**

INSERT The true airspeed for the first or whole cruising portion of the flight in accordance with Item 15(a) of the ICAO flight plan.

b. Cruising level

INSERT The planned cruising level for the first or whole portion of the route in accordance with Item 15(b) of the ICAO flight plan.

c. Route

INSERT The entire route in accordance with Item 15(c) of the ICAO flight plan.

**ITEM P: DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME
(Item 16 of the ICAO flight plan)**

INSERT Location indicator of the destination aerodrome.

INSERT The total estimated elapsed time.

ITEM Q: REMARKS

INSERT Items of information as required by the appropriate ATS authority, items normally notified in Item 18 of the ICAO flight plan and any other information pertinent to the flight of concern to ATS.

REPETITIVE FLIGHT PLAN LISTING

ICAO FLIGHT PLANS

PILOT/CONTROLLER GLOSSARY

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:

CONFIDENCE MANEUVER
LANDING DISTANCE AVAILABLE (LDA)
LINE UP AND WAIT (LUAW)
PROMINENT OBSTACLE
TAKEOFF DISTANCE AVAILABLE (TODA)
TAKEOFF RUN AVAILABLE (TORA)
TARMAC DELAY
TARMAC DELAY AIRCRAFT
TARMAC DELAY REQUEST
THREE-HOUR TARMAC RULE

b. Terms Modified:

AIRCRAFT CLASSES
AREA NAVIGATION (RNAV)
CT MESSAGE
NORDO
NOTICES TO AIRMEN
TARGET RESOLUTION

c. Terms Deleted:

AREA NAVIGATION (RNAV) [ICAO]
POSITION AND HOLD

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

AIR TRAFFIC— Aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas.

(See ICAO term AIR TRAFFIC.)

AIR TRAFFIC [ICAO]— All aircraft in flight or operating on the maneuvering area of an aerodrome.

AIR TRAFFIC CLEARANCE— An authorization by air traffic control for the purpose of preventing collision between known aircraft, for an aircraft to proceed under specified traffic conditions within controlled airspace. The pilot-in-command of an aircraft may not deviate from the provisions of a visual flight rules (VFR) or instrument flight rules (IFR) air traffic clearance except in an emergency or unless an amended clearance has been obtained. Additionally, the pilot may request a different clearance from that which has been issued by air traffic control (ATC) if information available to the pilot makes another course of action more practicable or if aircraft equipment limitations or company procedures forbid compliance with the clearance issued. Pilots may also request clarification or amendment, as appropriate, any time a clearance is not fully understood, or considered unacceptable because of safety of flight. Controllers should, in such instances and to the extent of operational practicality and safety, honor the pilot's request. 14 CFR Part 91.3(a) states: "The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft." **THE PILOT IS RESPONSIBLE TO REQUEST AN AMENDED CLEARANCE** if ATC issues a clearance that would cause a pilot to deviate from a rule or regulation, or in the pilot's opinion, would place the aircraft in jeopardy.

(See ATC INSTRUCTIONS.)

(See ICAO term AIR TRAFFIC CONTROL CLEARANCE.)

AIR TRAFFIC CONTROL— A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.

(See ICAO term AIR TRAFFIC CONTROL SERVICE.)

AIR TRAFFIC CONTROL CLEARANCE [ICAO]— Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Note 1: For convenience, the term air traffic control clearance is frequently abbreviated to clearance when used in appropriate contexts.

Note 2: The abbreviated term clearance may be prefixed by the words taxi, takeoff, departure, en route, approach or landing to indicate the particular portion of flight to which the air traffic control clearance relates.

AIR TRAFFIC CONTROL SERVICE—

(See AIR TRAFFIC CONTROL.)

AIR TRAFFIC CONTROL SERVICE [ICAO]— A service provided for the purpose of:

a. Preventing collisions:

1. Between aircraft; and

2. On the maneuvering area between aircraft and obstructions.

b. Expediting and maintaining an orderly flow of air traffic.

AIR TRAFFIC CONTROL SPECIALIST— A person authorized to provide air traffic control service.

(See AIR TRAFFIC CONTROL.)

(See FLIGHT SERVICE STATION.)

(See ICAO term CONTROLLER.)

AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER (ATCSCC) — An Air Traffic Tactical Operations facility responsible for monitoring and managing the flow of air traffic throughout the NAS, producing a safe, orderly, and expeditious flow of traffic while minimizing delays. The following functions are located at the ATCSCC:

a. Central Altitude Reservation Function (CARF). Responsible for coordinating, planning, and approving special user requirements under the Altitude Reservation (ALTRV) concept.

(See ALTITUDE RESERVATION.)

b. Airport Reservation Office (ARO). Responsible for approving IFR flights at designated high density traffic airports (John F. Kennedy, LaGuardia, and Ronald Reagan Washington National) during specified hours.

(Refer to 14 CFR Part 93.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

c. U.S. Notice to Airmen (NOTAM) Office. Responsible for collecting, maintaining, and distributing NOTAMs for the U.S. civilian and military, as well as international aviation communities.

(See NOTICE TO AIRMEN.)

d. Weather Unit. Monitor all aspects of weather for the U.S. that might affect aviation including cloud cover, visibility, winds, precipitation, thunderstorms, icing, turbulence, and more. Provide forecasts based on observations and on discussions with meteorologists from various National Weather Service offices, FAA facilities, airlines, and private weather services.

AIR TRAFFIC SERVICE– A generic term meaning:

- a. Flight Information Service.**
- b. Alerting Service.**
- c. Air Traffic Advisory Service.**
- d. Air Traffic Control Service:**
 - 1. Area Control Service,**
 - 2. Approach Control Service, or**
 - 3. Airport Control Service.**

AIR TRAFFIC SERVICE (ATS) ROUTES – The term “ATS Route” is a generic term that includes “VOR Federal airways,” “colored Federal airways,” “jet routes,” and “RNAV routes.” The term “ATS route” does not replace these more familiar route names, but serves only as an overall title when listing the types of routes that comprise the United States route structure.

AIRBORNE– An aircraft is considered airborne when all parts of the aircraft are off the ground.

AIRBORNE DELAY– Amount of delay to be encountered in airborne holding.

AIRCRAFT– Device(s) that are used or intended to be used for flight in the air, and when used in air traffic control terminology, may include the flight crew.

(See ICAO term AIRCRAFT.)

AIRCRAFT [ICAO]– Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface.

AIRCRAFT APPROACH CATEGORY– A grouping of aircraft based on a speed of 1.3 times the stall speed in the landing configuration at maximum gross landing weight. An aircraft must fit in only one

category. If it is necessary to maneuver at speeds in excess of the upper limit of a speed range for a category, the minimums for the category for that speed must be used. For example, an aircraft which falls in Category A, but is circling to land at a speed in excess of 91 knots, must use the approach Category B minimums when circling to land. The categories are as follows:

- a. Category A–** Speed less than 91 knots.
 - b. Category B–** Speed 91 knots or more but less than 121 knots.
 - c. Category C–** Speed 121 knots or more but less than 141 knots.
 - d. Category D–** Speed 141 knots or more but less than 166 knots.
 - e. Category E–** Speed 166 knots or more.
- (Refer to 14 CFR Part 97.)

AIRCRAFT CLASSES– For the purposes of Wake Turbulence Separation Minima, ATC classifies aircraft as Heavy, Large, and Small as follows:

- a. Heavy–** Aircraft capable of takeoff weights of 300,000 pounds or more whether or not they are operating at this weight during a particular phase of flight.
 - b. Large–** Aircraft of more than 41,000 pounds, maximum certificated takeoff weight, up to but not including 300,000 pounds.
 - c. Small–** Aircraft of 41,000 pounds or less maximum certificated takeoff weight.
- (Refer to AIM.)

AIRCRAFT CONFLICT– Predicted conflict, within URET, of two aircraft, or between aircraft and airspace. A Red alert is used for conflicts when the predicted minimum separation is 5 nautical miles or less. A Yellow alert is used when the predicted minimum separation is between 5 and approximately 12 nautical miles. A Blue alert is used for conflicts between an aircraft and predefined airspace.

(See USER REQUEST EVALUATION TOOL.)

AIRCRAFT LIST (ACL)– A view available with URET that lists aircraft currently in or predicted to be in a particular sector’s airspace. The view contains textual flight data information in line format and may be sorted into various orders based on the specific needs of the sector team.

(See USER REQUEST EVALUATION TOOL.)

AMVER–

(See AUTOMATED MUTUAL-ASSISTANCE VESSEL RESCUE SYSTEM.)

APB–

(See AUTOMATED PROBLEM DETECTION BOUNDARY.)

APD–

(See AUTOMATED PROBLEM DETECTION.)

APDIA–

(See AUTOMATED PROBLEM DETECTION INHIBITED AREA.)

APPROACH CLEARANCE– Authorization by ATC for a pilot to conduct an instrument approach. The type of instrument approach for which a clearance and other pertinent information is provided in the approach clearance when required.

(See CLEARED APPROACH.)

(See INSTRUMENT APPROACH PROCEDURE.)

(Refer to AIM.)

(Refer to 14 CFR Part 91.)

APPROACH CONTROL FACILITY– A terminal ATC facility that provides approach control service in a terminal area.

(See APPROACH CONTROL SERVICE.)

(See RADAR APPROACH CONTROL FACILITY.)

APPROACH CONTROL SERVICE– Air traffic control service provided by an approach control facility for arriving and departing VFR/IFR aircraft and, on occasion, en route aircraft. At some airports not served by an approach control facility, the ARTCC provides limited approach control service.

(See ICAO term APPROACH CONTROL SERVICE.)

(Refer to AIM.)

APPROACH CONTROL SERVICE [ICAO]– Air traffic control service for arriving or departing controlled flights.

APPROACH GATE– An imaginary point used within ATC as a basis for vectoring aircraft to the final approach course. The gate will be established along the final approach course 1 mile from the final approach fix on the side away from the airport and will be no closer than 5 miles from the landing threshold.

APPROACH LIGHT SYSTEM–

(See AIRPORT LIGHTING.)

APPROACH SEQUENCE– The order in which aircraft are positioned while on approach or awaiting approach clearance.

(See LANDING SEQUENCE.)

(See ICAO term APPROACH SEQUENCE.)

APPROACH SEQUENCE [ICAO]– The order in which two or more aircraft are cleared to approach to land at the aerodrome.

APPROACH SPEED– The recommended speed contained in aircraft manuals used by pilots when making an approach to landing. This speed will vary for different segments of an approach as well as for aircraft weight and configuration.

APPROPRIATE ATS AUTHORITY [ICAO]– The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned. In the United States, the “appropriate ATS authority” is the Program Director for Air Traffic Planning and Procedures, ATP-1.

APPROPRIATE AUTHORITY–

a. Regarding flight over the high seas: the relevant authority is the State of Registry.

b. Regarding flight over other than the high seas: the relevant authority is the State having sovereignty over the territory being overflown.

APPROPRIATE OBSTACLE CLEARANCE

MINIMUM ALTITUDE– Any of the following:

(See MINIMUM EN ROUTE IFR ALTITUDE.)

(See MINIMUM IFR ALTITUDE.)

(See MINIMUM OBSTRUCTION CLEARANCE ALTITUDE.)

(See MINIMUM VECTORING ALTITUDE.)

APPROPRIATE TERRAIN CLEARANCE

MINIMUM ALTITUDE– Any of the following:

(See MINIMUM EN ROUTE IFR ALTITUDE.)

(See MINIMUM IFR ALTITUDE.)

(See MINIMUM OBSTRUCTION CLEARANCE ALTITUDE.)

(See MINIMUM VECTORING ALTITUDE.)

APRON– A defined area on an airport or heliport intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance. With regard to seaplanes, a ramp is used for access to the apron from the water.

(See ICAO term APRON.)

APRON [ICAO]– A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, refueling, parking or maintenance.

ARC– The track over the ground of an aircraft flying at a constant distance from a navigational aid by reference to distance measuring equipment (DME).

AREA CONTROL CENTER [ICAO]– An air traffic control facility primarily responsible for ATC services being provided IFR aircraft during the en route phase of flight. The U.S. equivalent facility is an air route traffic control center (ARTCC).

AREA NAVIGATION (RNAV)– A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground– or space–based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note: Area navigation includes performance–based navigation as well as other operations that do not meet the definition of performance–based navigation.

AREA NAVIGATION (RNAV) APPROACH CONFIGURATION:

a. STANDARD T– An RNAV approach whose design allows direct flight to any one of three initial approach fixes (IAF) and eliminates the need for procedure turns. The standard design is to align the procedure on the extended centerline with the missed approach point (MAP) at the runway threshold, the final approach fix (FAF), and the initial approach/intermediate fix (IAF/IF). The other two IAFs will be established perpendicular to the IF.

b. MODIFIED T– An RNAV approach design for single or multiple runways where terrain or operational constraints do not allow for the standard T. The “T” may be modified by increasing or decreasing the angle from the corner IAF(s) to the IF or by eliminating one or both corner IAFs.

c. STANDARD I– An RNAV approach design for a single runway with both corner IAFs eliminated. Course reversal or radar vectoring may be required at busy terminals with multiple runways.

d. TERMINAL ARRIVAL AREA (TAA)– The TAA is controlled airspace established in conjunction with the Standard or Modified T and I RNAV approach configurations. In the standard TAA, there

are three areas: straight-in, left base, and right base. The arc boundaries of the three areas of the TAA are published portions of the approach and allow aircraft to transition from the en route structure direct to the nearest IAF. TAAs will also eliminate or reduce feeder routes, departure extensions, and procedure turns or course reversal.

1. STRAIGHT-IN AREA– A 30NM arc centered on the IF bounded by a straight line extending through the IF perpendicular to the intermediate course.

2. LEFT BASE AREA– A 30NM arc centered on the right corner IAF. The area shares a boundary with the straight-in area except that it extends out for 30NM from the IAF and is bounded on the other side by a line extending from the IF through the FAF to the arc.

3. RIGHT BASE AREA– A 30NM arc centered on the left corner IAF. The area shares a boundary with the straight-in area except that it extends out for 30NM from the IAF and is bounded on the other side by a line extending from the IF through the FAF to the arc.

ARINC– An acronym for Aeronautical Radio, Inc., a corporation largely owned by a group of airlines. ARINC is licensed by the FCC as an aeronautical station and contracted by the FAA to provide communications support for air traffic control and meteorological services in portions of international airspace.

ARMY AVIATION FLIGHT INFORMATION BULLETIN– A bulletin that provides air operation data covering Army, National Guard, and Army Reserve aviation activities.

ARO–

(See AIRPORT RESERVATION OFFICE.)

ARRESTING SYSTEM– A safety device consisting of two major components, namely, engaging or catching devices and energy absorption devices for the purpose of arresting both tailhook and/or nontailhook-equipped aircraft. It is used to prevent aircraft from overrunning runways when the aircraft cannot be stopped after landing or during aborted takeoff. Arresting systems have various names; e.g., arresting gear, hook device, wire barrier cable.

(See ABORT.)

(Refer to AIM.)

ARRIVAL AIRCRAFT INTERVAL– An internally generated program in hundredths of minutes based upon the AAR. AAI is the desired optimum interval between successive arrival aircraft over the vertex.

ARRIVAL CENTER– The ARTCC having jurisdiction for the impacted airport.

ARRIVAL DELAY– A parameter which specifies a period of time in which no aircraft will be metered for arrival at the specified airport.

ARRIVAL SECTOR– An operational control sector containing one or more meter fixes.

ARRIVAL SECTOR ADVISORY LIST– An ordered list of data on arrivals displayed at the PVD/MDM of the sector which controls the meter fix.

ARRIVAL SEQUENCING PROGRAM– The automated program designed to assist in sequencing aircraft destined for the same airport.

ARRIVAL TIME– The time an aircraft touches down on arrival.

ARSR–
(See AIR ROUTE SURVEILLANCE RADAR.)

ARTCC–
(See AIR ROUTE TRAFFIC CONTROL CENTER.)

ARTS–
(See AUTOMATED RADAR TERMINAL SYSTEMS.)

ASDA–
(See ACCELERATE-STOP DISTANCE AVAILABLE.)

ASDA [ICAO]–
(See ICAO Term ACCELERATE-STOP DISTANCE AVAILABLE.)

ASDE–
(See AIRPORT SURFACE DETECTION EQUIPMENT.)

ASF–
(See AIRPORT STREAM FILTER.)

ASLAR–
(See AIRCRAFT SURGE LAUNCH AND RECOVERY.)

ASP–
(See ARRIVAL SEQUENCING PROGRAM.)

ASR–
(See AIRPORT SURVEILLANCE RADAR.)

ASR APPROACH–
(See SURVEILLANCE APPROACH.)

ASSOCIATED– A radar target displaying a data block with flight identification and altitude information.
(See UNASSOCIATED.)

ATC–
(See AIR TRAFFIC CONTROL.)

ATC ADVISES– Used to prefix a message of noncontrol information when it is relayed to an aircraft by other than an air traffic controller.
(See ADVISORY.)

ATC ASSIGNED AIRSPACE– Airspace of defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other IFR air traffic.
(See SPECIAL USE AIRSPACE.)

ATC CLEARANCE–
(See AIR TRAFFIC CLEARANCE.)

ATC CLEARS– Used to prefix an ATC clearance when it is relayed to an aircraft by other than an air traffic controller.

ATC INSTRUCTIONS– Directives issued by air traffic control for the purpose of requiring a pilot to take specific actions; e.g., “Turn left heading two five zero,” “Go around,” “Clear the runway.”
(Refer to 14 CFR Part 91.)

ATC PREFERRED ROUTE NOTIFICATION– URET notification to the appropriate controller of the need to determine if an ATC preferred route needs to be applied, based on destination airport.
(See ROUTE ACTION NOTIFICATION.)
(See USER REQUEST EVALUATION TOOL.)

ATC PREFERRED ROUTES– Preferred routes that are not automatically applied by Host.

ATC REQUESTS– Used to prefix an ATC request when it is relayed to an aircraft by other than an air traffic controller.

ATC SECURITY SERVICES – Communications and security tracking provided by an ATC facility in support of the DHS, the DOD, or other Federal security elements in the interest of national security. Such security services are only applicable within

designated areas. ATC security services do not include ATC basic radar services or flight following.

ATC SECURITY SERVICES POSITION – The position responsible for providing ATC security services as defined. This position does not provide ATC, IFR separation, or VFR flight following services, but is responsible for providing security services in an area comprising airspace assigned to one or more ATC operating sectors. This position may be combined with control positions.

ATC SECURITY TRACKING – The continuous tracking of aircraft movement by an ATC facility in support of the DHS, the DOD, or other security elements for national security using radar (i.e., radar tracking) or other means (e.g., manual tracking) without providing basic radar services (including traffic advisories) or other ATC services not defined in this section.

ATCAA–

(See ATC ASSIGNED AIRSPACE.)

ATCRBS–

(See RADAR.)

ATCSCC–

(See AIR TRAFFIC CONTROL SYSTEM
COMMAND CENTER.)

ATCT–

(See TOWER.)

ATD–

(See ALONG–TRACK DISTANCE.)

ATIS–

(See AUTOMATIC TERMINAL INFORMATION
SERVICE.)

ATIS [ICAO]–

(See ICAO Term AUTOMATIC TERMINAL
INFORMATION SERVICE.)

ATS ROUTE [ICAO]– A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services.

Note: The term “ATS Route” is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure, etc.

AUTOLAND APPROACH– An autoland approach is a precision instrument approach to touchdown and, in some cases, through the landing rollout. An autoland approach is performed by the aircraft autopilot which is receiving position information

and/or steering commands from onboard navigation equipment.

Note: Autoland and coupled approaches are flown in VFR and IFR. It is common for carriers to require their crews to fly coupled approaches and autoland approaches (if certified) when the weather conditions are less than approximately 4,000 RVR.

(See COUPLED APPROACH.)

AUTOMATED INFORMATION TRANSFER– A precoordinated process, specifically defined in facility directives, during which a transfer of altitude control and/or radar identification is accomplished without verbal coordination between controllers using information communicated in a full data block.

AUTOMATED MUTUAL-ASSISTANCE VESSEL RESCUE SYSTEM– A facility which can deliver, in a matter of minutes, a surface picture (SURPIC) of vessels in the area of a potential or actual search and rescue incident, including their predicted positions and their characteristics.

(See FAAO JO 7110.65, Para 10–6–4, INFLIGHT
CONTINGENCIES.)

AUTOMATED PROBLEM DETECTION (APD)– An Automation Processing capability that compares trajectories in order to predict conflicts.

AUTOMATED PROBLEM DETECTION BOUNDARY (APB)– The adapted distance beyond a facilities boundary defining the airspace within which URET performs conflict detection.

(See USER REQUEST EVALUATION TOOL.)

AUTOMATED PROBLEM DETECTION INHIBITED AREA (APDIA)– Airspace surrounding a terminal area within which APD is inhibited for all flights within that airspace.

AUTOMATED RADAR TERMINAL SYSTEMS (ARTS)– A generic term for several tracking systems included in the Terminal Automation Systems (TAS). ARTS plus a suffix roman numeral denotes a major modification to that system.

a. ARTS IIIA. The Radar Tracking and Beacon Tracking Level (RT&BTL) of the modular, programmable automated radar terminal system. ARTS IIIA detects, tracks, and predicts primary as well as secondary radar-derived aircraft targets. This more sophisticated computer-driven system upgrades the existing ARTS III system by providing improved tracking, continuous data recording, and fail-soft capabilities.

b. Common ARTS. Includes ARTS IIE, ARTS IIIE; and ARTS IIIE with ACD (see DTAS) which combines functionalities of the previous ARTS systems.

c. Programmable Indicator Data Processor (PIDP). The PIDP is a modification to the AN/TPX-42 interrogator system currently installed in fixed RAPCONs. The PIDP detects, tracks, and predicts secondary radar aircraft targets. These are displayed by means of computer-generated symbols and alphanumeric characters depicting flight identification, aircraft altitude, ground speed, and flight plan data. Although primary radar targets are not tracked, they are displayed coincident with the secondary radar targets as well as with the other symbols and alphanumerics. The system has the capability of interfacing with ARTCCs.

AUTOMATED WEATHER SYSTEM– Any of the automated weather sensor platforms that collect weather data at airports and disseminate the weather information via radio and/or landline. The systems currently consist of the Automated Surface Observing System (ASOS), Automated Weather Sensor System (AWSS) and Automated Weather Observation System (AWOS).

AUTOMATED UNICOM– Provides completely automated weather, radio check capability and airport advisory information on an Automated UNICOM system. These systems offer a variety of features, typically selectable by microphone clicks, on the UNICOM frequency. Availability will be published in the Airport/Facility Directory and approach charts.

AUTOMATIC ALTITUDE REPORT–
(See ALTITUDE READOUT.)

AUTOMATIC ALTITUDE REPORTING– That function of a transponder which responds to Mode C interrogations by transmitting the aircraft's altitude in 100-foot increments.

AUTOMATIC CARRIER LANDING SYSTEM– U.S. Navy final approach equipment consisting of precision tracking radar coupled to a computer data link to provide continuous information to the aircraft, monitoring capability to the pilot, and a backup approach system.

AUTOMATIC DEPENDENT SURVEILLANCE (ADS) [ICAO]– A surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position

fixing systems, including aircraft identification, four dimensional position and additional data as appropriate.

AUTOMATIC DEPENDENT SURVEILLANCE–BROADCAST (ADS-B)– A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter. The aircraft or vehicle periodically broadcasts its GPS-derived position and other information such as velocity over the data link, which is received by a ground-based transmitter/receiver (transceiver) for processing and display at an air traffic control facility.

(See GLOBAL POSITIONING SYSTEM.)

(See GROUND-BASED TRANSCEIVER.)

AUTOMATIC DEPENDENT SURVEILLANCE–CONTRACT (ADS-C)– A data link position reporting system, controlled by a ground station, that establishes contracts with an aircraft's avionics that occur automatically whenever specific events occur, or specific time intervals are reached.

AUTOMATIC DIRECTION FINDER– An aircraft radio navigation system which senses and indicates the direction to a L/MF nondirectional radio beacon (NDB) ground transmitter. Direction is indicated to the pilot as a magnetic bearing or as a relative bearing to the longitudinal axis of the aircraft depending on the type of indicator installed in the aircraft. In certain applications, such as military, ADF operations may be based on airborne and ground transmitters in the VHF/UHF frequency spectrum.

(See BEARING.)

(See NONDIRECTIONAL BEACON.)

AUTOMATIC FLIGHT INFORMATION SERVICE (AFIS) – ALASKA FSSs ONLY– The continuous broadcast of recorded non-control information at airports in Alaska where a FSS provides local airport advisory service. The AFIS broadcast automates the repetitive transmission of essential but routine information such as weather, wind, altimeter, favored runway, breaking action, airport NOTAMs, and other applicable information. The information is continuously broadcast over a discrete VHF radio frequency (usually the ASOS/AWSS/AWOS frequency.)

AUTOMATIC TERMINAL INFORMATION SERVICE– The continuous broadcast of recorded noncontrol information in selected terminal areas. Its purpose is to improve controller effectiveness and to

relieve frequency congestion by automating the repetitive transmission of essential but routine information; e.g., “Los Angeles information Alfa. One three zero zero Coordinated Universal Time. Weather, measured ceiling two thousand overcast, visibility three, haze, smoke, temperature seven one, dew point five seven, wind two five zero at five, altimeter two niner niner six. I-L-S Runway Two Five Left approach in use, Runway Two Five Right closed, advise you have Alfa.”

(See ICAO term AUTOMATIC TERMINAL INFORMATION SERVICE.)

(Refer to AIM.)

AUTOMATIC TERMINAL INFORMATION SERVICE [ICAO]– The provision of current, routine information to arriving and departing aircraft by means of continuous and repetitive broadcasts throughout the day or a specified portion of the day.

AUTOROTATION– A rotorcraft flight condition in which the lifting rotor is driven entirely by action of the air when the rotorcraft is in motion.

a. Autorotative Landing/Touchdown Autorotation. Used by a pilot to indicate that the landing will be made without applying power to the rotor.

b. Low Level Autorotation. Commences at an altitude well below the traffic pattern, usually below 100 feet AGL and is used primarily for tactical military training.

c. 180 degrees Autorotation. Initiated from a downwind heading and is commenced well inside the normal traffic pattern. “Go around” may not be possible during the latter part of this maneuver.

AVAILABLE LANDING DISTANCE (ALD)– The portion of a runway available for landing and roll-out for aircraft cleared for LAHSO. This distance is measured from the landing threshold to the hold-short point.

AVIATION WEATHER SERVICE– A service provided by the National Weather Service (NWS) and FAA which collects and disseminates pertinent weather information for pilots, aircraft operators, and ATC. Available aviation weather reports and forecasts are displayed at each NWS office and FAA FSS.

(See EN ROUTE FLIGHT ADVISORY SERVICE.)

(See TRANSCRIBED WEATHER BROADCAST.)

(See WEATHER ADVISORY.)

(Refer to AIM.)

AWW–

(See SEVERE WEATHER FORECAST ALERTS.)

AZIMUTH (MLS)– A magnetic bearing extending from an MLS navigation facility.

Note: Azimuth bearings are described as magnetic and are referred to as “azimuth” in radio telephone communications.

back onto an arrival or departure procedure to comply with all altitude and/or speed restrictions depicted on the procedure. This term may be used in lieu of repeating each remaining restriction that appears on the procedure.

COMPOSITE FLIGHT PLAN– A flight plan which specifies VFR operation for one portion of flight and IFR for another portion. It is used primarily in military operations.

(Refer to AIM.)

COMPOSITE ROUTE SYSTEM– An organized oceanic route structure, incorporating reduced lateral spacing between routes, in which composite separation is authorized.

COMPOSITE SEPARATION– A method of separating aircraft in a composite route system where, by management of route and altitude assignments, a combination of half the lateral minimum specified for the area concerned and half the vertical minimum is applied.

COMPULSORY REPORTING POINTS– Reporting points which must be reported to ATC. They are designated on aeronautical charts by solid triangles or filed in a flight plan as fixes selected to define direct routes. These points are geographical locations which are defined by navigation aids/fixes. Pilots should discontinue position reporting over compulsory reporting points when informed by ATC that their aircraft is in “radar contact.”

CONFIDENCE MANEUVER– A confidence maneuver consists of one or more turns, a climb or descent, or other maneuver to determine if the pilot in command (PIC) is able to receive and comply with ATC instructions.

CONFLICT ALERT– A function of certain air traffic control automated systems designed to alert radar controllers to existing or pending situations between tracked targets (known IFR or VFR aircraft) that require his/her immediate attention/action.

(See **MODE C INTRUDER ALERT**.)

CONFLICT RESOLUTION– The resolution of potential conflicts between aircraft that are radar identified and in communication with ATC by ensuring that radar targets do not touch. Pertinent

traffic advisories shall be issued when this procedure is applied.

Note: This procedure shall not be provided utilizing mosaic radar systems.

CONFORMANCE– The condition established when an aircraft’s actual position is within the conformance region constructed around that aircraft at its position, according to the trajectory associated with the aircraft’s Current Plan.

CONFORMANCE REGION– A volume, bounded laterally, vertically, and longitudinally, within which an aircraft must be at a given time in order to be in conformance with the Current Plan Trajectory for that aircraft. At a given time, the conformance region is determined by the simultaneous application of the lateral, vertical, and longitudinal conformance bounds for the aircraft at the position defined by time and aircraft’s trajectory.

CONSOLAN– A low frequency, long-distance NAVAID used principally for transoceanic navigations.

CONTACT–

a. Establish communication with (followed by the name of the facility and, if appropriate, the frequency to be used).

b. A flight condition wherein the pilot ascertains the attitude of his/her aircraft and navigates by visual reference to the surface.

(See **CONTACT APPROACH**.)

(See **RADAR CONTACT**.)

CONTACT APPROACH– An approach wherein an aircraft on an IFR flight plan, having an air traffic control authorization, operating clear of clouds with at least 1 mile flight visibility and a reasonable expectation of continuing to the destination airport in those conditions, may deviate from the instrument approach procedure and proceed to the destination airport by visual reference to the surface. This approach will only be authorized when requested by the pilot and the reported ground visibility at the destination airport is at least 1 statute mile.

(Refer to AIM.)

CONTAMINATED RUNWAY– A runway is considered contaminated whenever standing water, ice, snow, slush, frost in any form, heavy rubber, or other substances are present. A runway is contaminated with respect to rubber deposits or other friction-degrading substances when the average

friction value for any 500-foot segment of the runway within the ALD fails below the recommended minimum friction level and the average friction value in the adjacent 500-foot segments falls below the maintenance planning friction level.

CONTERMINOUS U.S.– The 48 adjoining States and the District of Columbia.

CONTINENTAL UNITED STATES– The 49 States located on the continent of North America and the District of Columbia.

CONTINUE– When used as a control instruction should be followed by another word or words clarifying what is expected of the pilot. Example: “continue taxi,” “continue descent,” “continue inbound,” etc.

CONTROL AREA [ICAO]– A controlled airspace extending upwards from a specified limit above the earth.

CONTROL SECTOR– An airspace area of defined horizontal and vertical dimensions for which a controller or group of controllers has air traffic control responsibility, normally within an air route traffic control center or an approach control facility. Sectors are established based on predominant traffic flows, altitude strata, and controller workload. Pilot-communications during operations within a sector are normally maintained on discrete frequencies assigned to the sector.

(See **DISCRETE FREQUENCY**.)

CONTROL SLASH– A radar beacon slash representing the actual position of the associated aircraft. Normally, the control slash is the one closest to the interrogating radar beacon site. When ARTCC radar is operating in narrowband (digitized) mode, the control slash is converted to a target symbol.

CONTROLLED AIRSPACE– An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.

a. Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace.

b. Controlled airspace is also that airspace within which all aircraft operators are subject to certain pilot qualifications, operating rules, and equipment requirements in 14 CFR Part 91 (for specific operating requirements, please refer to 14 CFR

Part 91). For IFR operations in any class of controlled airspace, a pilot must file an IFR flight plan and receive an appropriate ATC clearance. Each Class B, Class C, and Class D airspace area designated for an airport contains at least one primary airport around which the airspace is designated (for specific designations and descriptions of the airspace classes, please refer to 14 CFR Part 71).

c. Controlled airspace in the United States is designated as follows:

1. CLASS A– Generally, that airspace from 18,000 feet MSL up to and including FL 600, including the airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska. Unless otherwise authorized, all persons must operate their aircraft under IFR.

2. CLASS B– Generally, that airspace from the surface to 10,000 feet MSL surrounding the nation’s busiest airports in terms of airport operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored and consists of a surface area and two or more layers (some Class B airspace areas resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace. The cloud clearance requirement for VFR operations is “clear of clouds.”

3. CLASS C– Generally, that airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area with a 5 nautical mile (NM) radius, a circle with a 10NM radius that extends no lower than 1,200 feet up to 4,000 feet above the airport elevation and an outer area that is not charted. Each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace. VFR aircraft are only separated from IFR aircraft within the airspace.

(See **OUTER AREA**.)

4. CLASS D– Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or Class E airspace. Unless otherwise authorized, each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace. No separation services are provided to VFR aircraft.

5. CLASS E– Generally, if the airspace is not Class A, Class B, Class C, or Class D, and it is controlled airspace, it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also in this class are Federal airways, airspace beginning at either 700 or 1,200 feet AGL used to transition to/from the terminal or en route environment, en route domestic, and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska, up to, but not including 18,000 feet MSL, and the airspace above FL 600.

CONTROLLED AIRSPACE [ICAO]– An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.

Note: Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D, and E.

CONTROLLED TIME OF ARRIVAL– Arrival time assigned during a Traffic Management Program. This time may be modified due to adjustments or user options.

CONTROLLER–

(See AIR TRAFFIC CONTROL SPECIALIST.)

CONTROLLER [ICAO]– A person authorized to provide air traffic control services.

CONTROLLER PILOT DATA LINK COMMUNICATIONS (CPDLC)– A two-way digital very high frequency (VHF) air/ground communications system that conveys textual air traffic control messages between controllers and pilots.

CONVECTIVE SIGMET– A weather advisory concerning convective weather significant to the safety of all aircraft. Convective SIGMETs are issued for tornadoes, lines of thunderstorms, embedded thunderstorms of any intensity level, areas of thunderstorms greater than or equal to VIP level 4 with an area coverage of $\frac{4}{10}$ (40%) or more, and hail $\frac{3}{4}$ inch or greater.

(See AIRMET.)

(See AWW.)

(See CWA.)

(See SIGMET.)

(Refer to AIM.)

CONVECTIVE SIGNIFICANT METEOROLOGICAL INFORMATION–

(See CONVECTIVE SIGMET.)

COORDINATES– The intersection of lines of reference, usually expressed in degrees/minutes/seconds of latitude and longitude, used to determine position or location.

COORDINATION FIX– The fix in relation to which facilities will handoff, transfer control of an aircraft, or coordinate flight progress data. For terminal facilities, it may also serve as a clearance for arriving aircraft.

COPTER–

(See HELICOPTER.)

CORRECTION– An error has been made in the transmission and the correct version follows.

COUPLED APPROACH– A coupled approach is an instrument approach performed by the aircraft autopilot which is receiving position information and/or steering commands from onboard navigation equipment. In general, coupled nonprecision approaches must be discontinued and flown manually at altitudes lower than 50 feet below the minimum descent altitude, and coupled precision approaches must be flown manually below 50 feet AGL.

Note: Coupled and autoland approaches are flown in VFR and IFR. It is common for carriers to require

their crews to fly coupled approaches and autoland approaches (if certified) when the weather conditions are less than approximately 4,000 RVR.

(See AUTOLAND APPROACH.)

COURSE–

a. The intended direction of flight in the horizontal plane measured in degrees from north.

b. The ILS localizer signal pattern usually specified as the front course or the back course.

c. The intended track along a straight, curved, or segmented MLS path.

(See BEARING.)

(See INSTRUMENT LANDING SYSTEM.)

(See MICROWAVE LANDING SYSTEM.)

(See RADIAL.)

CPDLC–

(See CONTROLLER PILOT DATA LINK COMMUNICATIONS.)

CPL [ICAO]–

(See ICAO term CURRENT FLIGHT PLAN.)

CRITICAL ENGINE– The engine which, upon failure, would most adversely affect the performance or handling qualities of an aircraft.

***CROSS (FIX) AT (ALTITUDE)*–** Used by ATC when a specific altitude restriction at a specified fix is required.

***CROSS (FIX) AT OR ABOVE (ALTITUDE)*–** Used by ATC when an altitude restriction at a specified fix is required. It does not prohibit the aircraft from crossing the fix at a higher altitude than specified; however, the higher altitude may not be one that will violate a succeeding altitude restriction or altitude assignment.

(See ALTITUDE RESTRICTION.)

(Refer to AIM.)

***CROSS (FIX) AT OR BELOW (ALTITUDE)*–** Used by ATC when a maximum crossing altitude at a specific fix is required. It does not prohibit the aircraft from crossing the fix at a lower altitude; however, it must be at or above the minimum IFR altitude.

(See ALTITUDE RESTRICTION.)

(See MINIMUM IFR ALTITUDES.)

(Refer to 14 CFR Part 91.)

CROSSWIND–

a. When used concerning the traffic pattern, the word means “crosswind leg.”

(See TRAFFIC PATTERN.)

b. When used concerning wind conditions, the word means a wind not parallel to the runway or the path of an aircraft.

(See CROSSWIND COMPONENT.)

CROSSWIND COMPONENT– The wind component measured in knots at 90 degrees to the longitudinal axis of the runway.

***CRUISE*–** Used in an ATC clearance to authorize a pilot to conduct flight at any altitude from the minimum IFR altitude up to and including the altitude specified in the clearance. The pilot may level off at any intermediate altitude within this block of airspace. Climb/descent within the block is to be made at the discretion of the pilot. However, once the pilot starts descent and verbally reports leaving an altitude in the block, he/she may not return to that altitude without additional ATC clearance. Further, it is approval for the pilot to proceed to and make an approach at destination airport and can be used in conjunction with:

a. An airport clearance limit at locations with a standard/special instrument approach procedure. The CFRs require that if an instrument letdown to an airport is necessary, the pilot shall make the letdown in accordance with a standard/special instrument approach procedure for that airport, or

b. An airport clearance limit at locations that are within/below/outside controlled airspace and without a standard/special instrument approach procedure. Such a clearance is NOT AUTHORIZATION for the pilot to descend under IFR conditions below the applicable minimum IFR altitude nor does it imply that ATC is exercising control over aircraft in Class G airspace; however, it provides a means for the aircraft to proceed to destination airport, descend, and land in accordance with applicable CFRs governing VFR flight operations. Also, this provides search and rescue protection until such time as the IFR flight plan is closed.

(See INSTRUMENT APPROACH PROCEDURE.)

CRUISE CLIMB– A climb technique employed by aircraft, usually at a constant power setting, resulting in an increase of altitude as the aircraft weight decreases.

CRUISING ALTITUDE– An altitude or flight level maintained during en route level flight. This is a constant altitude and should not be confused with a cruise clearance.

(See ALTITUDE.)

(See ICAO term CRUISING LEVEL.)

CRUISING LEVEL–

(See CRUISING ALTITUDE.)

CRUISING LEVEL [ICAO]– A level maintained during a significant portion of a flight.

CT MESSAGE– An EDCT time generated by the ATCSCC to regulate traffic at arrival airports. Normally, a CT message is automatically transferred from the traffic management system computer to the NAS en route computer and appears as an EDCT. In the event of a communication failure between the traffic management system computer and the NAS, the CT message can be manually entered by the TMC at the en route facility.

CTA–

(See CONTROLLED TIME OF ARRIVAL.)

(See ICAO term CONTROL AREA.)

CTAF–

(See COMMON TRAFFIC ADVISORY FREQUENCY.)

CTAS–

(See CENTER TRACON AUTOMATION SYSTEM.)

CTRD–

(See CERTIFIED TOWER RADAR DISPLAY.)

CURRENT FLIGHT PLAN [ICAO]– The flight plan, including changes, if any, brought about by subsequent clearances.

CURRENT PLAN– The ATC clearance the aircraft has received and is expected to fly.

CVFP APPROACH–

(See CHARTED VISUAL FLIGHT PROCEDURE APPROACH.)

CWA–

(See CENTER WEATHER ADVISORY and WEATHER ADVISORY.)

L

LAA–

(See LOCAL AIRPORT ADVISORY.)

LAAS–

(See LOW ALTITUDE ALERT SYSTEM.)

LAHSO– An acronym for “Land and Hold Short Operation.” These operations include landing and holding short of an intersecting runway, a taxiway, a predetermined point, or an approach/departure flightpath.

LAHSO-DRY– Land and hold short operations on runways that are dry.

LAHSO-WET– Land and hold short operations on runways that are wet (but not contaminated).

LAND AND HOLD SHORT OPERATIONS– Operations which include simultaneous takeoffs and landings and/or simultaneous landings when a landing aircraft is able and is instructed by the controller to hold-short of the intersecting runway/taxiway or designated hold-short point. Pilots are expected to promptly inform the controller if the hold short clearance cannot be accepted.

(See PARALLEL RUNWAYS.)

(Refer to AIM.)

LANDING AREA– Any locality either on land, water, or structures, including airports/heliports and intermediate landing fields, which is used, or intended to be used, for the landing and takeoff of aircraft whether or not facilities are provided for the shelter, servicing, or for receiving or discharging passengers or cargo.

(See ICAO term LANDING AREA.)

LANDING AREA [ICAO]– That part of a movement area intended for the landing or take-off of aircraft.

LANDING DIRECTION INDICATOR– A device which visually indicates the direction in which landings and takeoffs should be made.

(See TETRAHEDRON.)

(Refer to AIM.)

LANDING DISTANCE AVAILABLE (LDA)– The runway length declared available and suitable for a landing airplane.

(See ICAO term LANDING DISTANCE AVAILABLE.)

LANDING DISTANCE AVAILABLE [ICAO]– The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

LANDING MINIMUMS– The minimum visibility prescribed for landing a civil aircraft while using an instrument approach procedure. The minimum applies with other limitations set forth in 14 CFR Part 91 with respect to the Minimum Descent Altitude (MDA) or Decision Height (DH) prescribed in the instrument approach procedures as follows:

a. Straight-in landing minimums. A statement of MDA and visibility, or DH and visibility, required for a straight-in landing on a specified runway, or

b. Circling minimums. A statement of MDA and visibility required for the circle-to-land maneuver.

Note: Descent below the established MDA or DH is not authorized during an approach unless the aircraft is in a position from which a normal approach to the runway of intended landing can be made and adequate visual reference to required visual cues is maintained.

(See CIRCLE-TO-LAND MANEUVER.)

(See DECISION HEIGHT.)

(See INSTRUMENT APPROACH PROCEDURE.)

(See MINIMUM DESCENT ALTITUDE.)

(See STRAIGHT-IN LANDING.)

(See VISIBILITY.)

(Refer to 14 CFR Part 91.)

LANDING ROLL– The distance from the point of touchdown to the point where the aircraft can be brought to a stop or exit the runway.

LANDING SEQUENCE– The order in which aircraft are positioned for landing.

(See APPROACH SEQUENCE.)

LAST ASSIGNED ALTITUDE– The last altitude/flight level assigned by ATC and acknowledged by the pilot.

(See MAINTAIN.)

(Refer to 14 CFR Part 91.)

LATERAL NAVIGATION (LNAV)– A function of area navigation (RNAV) equipment which calculates, displays, and provides lateral guidance to a profile or path.

LATERAL SEPARATION– The lateral spacing of aircraft at the same altitude by requiring operation on different routes or in different geographical locations.
(See SEPARATION.)

LDA–

(See LOCALIZER TYPE DIRECTIONAL AID.)

(See LANDING DISTANCE AVAILABLE.)

(See ICAO Term LANDING DISTANCE AVAILABLE.)

LF–

(See LOW FREQUENCY.)

LIGHTED AIRPORT– An airport where runway and obstruction lighting is available.

(See AIRPORT LIGHTING.)

(Refer to AIM.)

LIGHT GUN– A handheld directional light signaling device which emits a brilliant narrow beam of white, green, or red light as selected by the tower controller. The color and type of light transmitted can be used to approve or disapprove anticipated pilot actions where radio communication is not available. The light gun is used for controlling traffic operating in the vicinity of the airport and on the airport movement area.

(Refer to AIM.)

LINE UP AND WAIT (LUAW)– Used by ATC to inform a pilot to taxi onto the departure runway to line up and wait. It is not authorization for takeoff. It is used when takeoff clearance cannot immediately be issued because of traffic or other reasons.

(See CLEARED FOR TAKEOFF.)

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

(See AIRPORT ADVISORY AREA.)

LOCAL TRAFFIC– Aircraft operating in the traffic pattern or within sight of the tower, or aircraft known to be departing or arriving from flight in local practice areas, or aircraft executing practice instrument approaches at the airport.

(See TRAFFIC PATTERN.)

LOCALIZER– The component of an ILS which provides course guidance to the runway.

(See INSTRUMENT LANDING SYSTEM.)

(See ICAO term LOCALIZER COURSE.)

(Refer to AIM.)

LOCALIZER COURSE [ICAO]– The locus of points, in any given horizontal plane, at which the DDM (difference in depth of modulation) is zero.

LOCALIZER OFFSET– An angular offset of the localizer from the runway extended centerline in a direction away from the no transgression zone (NTZ) that increases the normal operating zone (NOZ) width. An offset requires a 50 foot increase in DH and is not authorized for CAT II and CAT III approaches.

LOCALIZER TYPE DIRECTIONAL AID– A NAVAID used for nonprecision instrument approaches with utility and accuracy comparable to a localizer but which is not a part of a complete ILS and is not aligned with the runway.

(Refer to AIM.)

LOCALIZER USABLE DISTANCE– The maximum distance from the localizer transmitter at a specified altitude, as verified by flight inspection, at which reliable course information is continuously received.

(Refer to AIM.)

LOCATOR [ICAO]– An LM/MF NDB used as an aid to final approach.

Note: A locator usually has an average radius of rated coverage of between 18.5 and 46.3 km (10 and 25 NM).

LONG RANGE NAVIGATION–

(See LORAN.)

LONGITUDINAL SEPARATION– The longitudinal spacing of aircraft at the same altitude by a minimum distance expressed in units of time or miles.

(See SEPARATION.)

(Refer to AIM.)

LORAN– An electronic navigational system by which hyperbolic lines of position are determined by measuring the difference in the time of reception of synchronized pulse signals from two fixed transmitters. Loran A operates in the 1750-1950 kHz frequency band. Loran C and D operate in the 100-110 kHz frequency band.

(Refer to AIM.)

LOST COMMUNICATIONS– Loss of the ability to communicate by radio. Aircraft are sometimes

referred to as NORDO (No Radio). Standard pilot procedures are specified in 14 CFR Part 91. Radar controllers issue procedures for pilots to follow in the event of lost communications during a radar approach when weather reports indicate that an aircraft will likely encounter IFR weather conditions during the approach.

(Refer to 14 CFR Part 91.)

(Refer AIM.)

LOW ALTITUDE AIRWAY STRUCTURE– The network of airways serving aircraft operations up to but not including 18,000 feet MSL.

(See AIRWAY.)

(Refer to AIM.)

LOW ALTITUDE ALERT, CHECK YOUR ALTITUDE IMMEDIATELY–

(See SAFETY ALERT.)

LOW ALTITUDE ALERT SYSTEM– An automated function of the TPX-42 that alerts the controller when a Mode C transponder equipped aircraft on an IFR flight plan is below a

predetermined minimum safe altitude. If requested by the pilot, Low Altitude Alert System monitoring is also available to VFR Mode C transponder equipped aircraft.

LOW APPROACH– An approach over an airport or runway following an instrument approach or a VFR approach including the go-around maneuver where the pilot intentionally does not make contact with the runway.

(Refer to AIM.)

LOW FREQUENCY– The frequency band between 30 and 300 kHz.

(Refer to AIM.)

LPV– A type of approach with vertical guidance (APV) based on WAAS, published on RNAV (GPS) approach charts. This procedure takes advantage of the precise lateral guidance available from WAAS. The minima is published as a decision altitude (DA).

LUAW–

(See LINE UP AND WAIT.)

approach is not provided by ground-based precision or surveillance radar. Radar vectors to the final approach course may or may not be provided by ATC. Examples of nonradar approaches are VOR, NDB, TACAN, and ILS/MLS approaches.

(See FINAL APPROACH COURSE.)

(See FINAL APPROACH-IFR.)

(See INSTRUMENT APPROACH PROCEDURE.)

(See RADAR APPROACH.)

b. Nonradar Approach Control. An ATC facility providing approach control service without the use of radar.

(See APPROACH CONTROL FACILITY.)

(See APPROACH CONTROL SERVICE.)

c. Nonradar Arrival. An aircraft arriving at an airport without radar service or at an airport served by a radar facility and radar contact has not been established or has been terminated due to a lack of radar service to the airport.

(See RADAR ARRIVAL.)

(See RADAR SERVICE.)

d. Nonradar Route. A flight path or route over which the pilot is performing his/her own navigation. The pilot may be receiving radar separation, radar monitoring, or other ATC services while on a nonradar route.

(See RADAR ROUTE.)

e. Nonradar Separation. The spacing of aircraft in accordance with established minima without the use of radar; e.g., vertical, lateral, or longitudinal separation.

(See RADAR SEPARATION.)

(See ICAO term NONRADAR SEPARATION.)

NONRADAR SEPARATION [ICAO]– The separation used when aircraft position information is derived from sources other than radar.

NON-RESTRICTIVE ROUTING (NRR)– Portions of a proposed route of flight where a user can flight plan the most advantageous flight path with no requirement to make reference to ground-based NAVAIDs.

NOPAC–

(See NORTH PACIFIC.)

NORDO (No Radio)– Aircraft that cannot or do not communicate by radio when radio communication is required are referred to as “NORDO.”

(See LOST COMMUNICATIONS.)

NORMAL OPERATING ZONE (NOZ)– The NOZ is the operating zone within which aircraft flight remains during normal independent simultaneous parallel ILS approaches.

NORTH AMERICAN ROUTE– A numerically coded route preplanned over existing airway and route systems to and from specific coastal fixes serving the North Atlantic. North American Routes consist of the following:

a. Common Route/Portion. That segment of a North American Route between the inland navigation facility and the coastal fix.

b. Noncommon Route/Portion. That segment of a North American Route between the inland navigation facility and a designated North American terminal.

c. Inland Navigation Facility. A navigation aid on a North American Route at which the common route and/or the noncommon route begins or ends.

d. Coastal Fix. A navigation aid or intersection where an aircraft transitions between the domestic route structure and the oceanic route structure.

NORTH AMERICAN ROUTE PROGRAM (NRP)– The NRP is a set of rules and procedures which are designed to increase the flexibility of user flight planning within published guidelines.

NORTH MARK– A beacon data block sent by the host computer to be displayed by the ARTS on a 360 degree bearing at a locally selected radar azimuth and distance. The North Mark is used to ensure correct range/azimuth orientation during periods of CENRAP.

NORTH PACIFIC– An organized route system between the Alaskan west coast and Japan.

NOTAM–

(See NOTICE TO AIRMEN.)

NOTAM [ICAO]– A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

a. I Distribution– Distribution by means of telecommunication.

b. II Distribution– Distribution by means other than telecommunications.

NOTICE TO AIRMEN– A notice containing information (not known sufficiently in advance to publicize by other means) concerning the

establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

a. NOTAM(D)– A NOTAM given (in addition to local dissemination) distant dissemination beyond the area of responsibility of the Flight Service Station. These NOTAMs will be stored and available until canceled.

b. FDC NOTAM– A NOTAM regulatory in nature, transmitted by USNOF and given system wide dissemination.

(See ICAO term NOTAM.)

NOTICES TO AIRMEN PUBLICATION– A publication issued every 28 days, designed primarily for the pilot, which contains current NOTAM

information considered essential to the safety of flight as well as supplemental data to other aeronautical publications. The contraction NTAP is used in NOTAM text.

(See NOTICE TO AIRMEN.)

NRR–

(See NON-RESTRICTIVE ROUTING.)

NRS–

(See NAVIGATION REFERENCE SYSTEM.)

NTAP–

(See NOTICES TO AIRMEN PUBLICATION.)

NUMEROUS TARGETS VICINITY (LOCATION)– A traffic advisory issued by ATC to advise pilots that targets on the radar scope are too numerous to issue individually.

(See TRAFFIC ADVISORIES.)

P

P TIME–

(See PROPOSED DEPARTURE TIME.)

P-ACP–

(See PREARRANGED COORDINATION PROCEDURES.)

PAN-PAN– The international radio-telephony urgency signal. When repeated three times, indicates uncertainty or alert followed by the nature of the urgency.

(See MAYDAY.)

(Refer to AIM.)

PAR–

(See PRECISION APPROACH RADAR.)

PAR [ICAO]–

(See ICAO Term PRECISION APPROACH RADAR.)

PARALLEL ILS APPROACHES– Approaches to parallel runways by IFR aircraft which, when established inbound toward the airport on the adjacent final approach courses, are radar-separated by at least 2 miles.

(See FINAL APPROACH COURSE.)

(See SIMULTANEOUS ILS APPROACHES.)

PARALLEL MLS APPROACHES–

(See PARALLEL ILS APPROACHES.)

PARALLEL OFFSET ROUTE– A parallel track to the left or right of the designated or established airway/route. Normally associated with Area Navigation (RNAV) operations.

(See AREA NAVIGATION.)

PARALLEL RUNWAYS– Two or more runways at the same airport whose centerlines are parallel. In addition to runway number, parallel runways are designated as L (left) and R (right) or, if three parallel runways exist, L (left), C (center), and R (right).

PBCT–

(See PROPOSED BOUNDARY CROSSING TIME.)

PBN

(See ICAO Term PERFORMANCE–BASED NAVIGATION.)

PDC–

(See PRE–DEPARTURE CLEARANCE.)

PERFORMANCE–BASED NAVIGATION (PBN) [ICAO]– Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note: Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability, and functionality needed for the proposed operation in the context of a particular airspace concept.

PERMANENT ECHO– Radar signals reflected from fixed objects on the earth's surface; e.g., buildings, towers, terrain. Permanent echoes are distinguished from “ground clutter” by being definable locations rather than large areas. Under certain conditions they may be used to check radar alignment.

PHOTO RECONNAISSANCE– Military activity that requires locating individual photo targets and navigating to the targets at a preplanned angle and altitude. The activity normally requires a lateral route width of 16 NM and altitude range of 1,500 feet to 10,000 feet AGL.

PILOT BRIEFING– A service provided by the FSS to assist pilots in flight planning. Briefing items may include weather information, NOTAMS, military activities, flow control information, and other items as requested.

(Refer to AIM.)

PILOT IN COMMAND– The pilot responsible for the operation and safety of an aircraft during flight time.

(Refer to 14 CFR Part 91.)

PILOT WEATHER REPORT– A report of meteorological phenomena encountered by aircraft in flight.

(Refer to AIM.)

***PILOT'S DISCRETION*–** When used in conjunction with altitude assignments, means that ATC has offered the pilot the option of starting climb or descent whenever he/she wishes and conducting the climb or descent at any rate he/she wishes. He/she may temporarily level off at any intermediate

altitude. However, once he/she has vacated an altitude, he/she may not return to that altitude.

PIREP–

(See PILOT WEATHER REPORT.)

PITCH POINT– A fix/waypoint that serves as a transition point from a departure procedure or the low altitude ground-based navigation structure into the high altitude waypoint system.

PLANS DISPLAY– A display available in URET that provides detailed flight plan and predicted conflict information in textual format for requested Current Plans and all Trial Plans.

(See USER REQUEST EVALUATION TOOL.)

POFZ–

(See PRECISION OBSTACLE FREE ZONE.)

POINT OUT–

(See RADAR POINT OUT.)

POINT-TO-POINT (PTP)– A level of NRR service for aircraft that is based on traditional waypoints in their FMSs or RNAV equipage.

POLAR TRACK STRUCTURE– A system of organized routes between Iceland and Alaska which overlie Canadian MNPS Airspace.

POSITION REPORT– A report over a known location as transmitted by an aircraft to ATC.

(Refer to AIM.)

POSITION SYMBOL– A computer-generated indication shown on a radar display to indicate the mode of tracking.

POSITIVE CONTROL– The separation of all air traffic within designated airspace by air traffic control.

PRACTICE INSTRUMENT APPROACH– An instrument approach procedure conducted by a VFR or an IFR aircraft for the purpose of pilot training or proficiency demonstrations.

PRE-DEPARTURE CLEARANCE– An application with the Terminal Data Link System (TDLS) that provides clearance information to subscribers, through a service provider, in text to the cockpit or gate printer.

PREARRANGED COORDINATION– A standardized procedure which permits an air traffic controller to enter the airspace assigned to another air traffic controller without verbal coordination. The procedures are defined in a facility directive which ensures standard separation between aircraft.

PREARRANGED COORDINATION PROCEDURES– A facility's standardized procedure that describes the process by which one controller shall allow an aircraft to penetrate or transit another controller's airspace in a manner that assures standard separation without individual coordination for each aircraft.

PRECIPITATION– Any or all forms of water particles (rain, sleet, hail, or snow) that fall from the atmosphere and reach the surface.

PRECIPITATION RADAR WEATHER DESCRIPTIONS – Existing radar systems cannot detect turbulence. However, there is a direct correlation between the degree of turbulence and other weather features associated with thunderstorms and the weather radar precipitation intensity. Controllers will issue (where capable) precipitation intensity as observed by radar when using weather and radar processor (WARP) or NAS ground based digital radars with weather capabilities. When precipitation intensity information is not available, the intensity will be described as UNKNOWN. When intensity levels can be determined, they shall be described as:

a. LIGHT (< 30 dBZ)

b. MODERATE (30 to 40 dBZ)

c. HEAVY (> 40 to 50 dBZ)

d. EXTREME (> 50 dBZ)

(Refer to AC 00-45, Aviation Weather Services.)

PRECISION APPROACH–

(See PRECISION APPROACH PROCEDURE.)

PRECISION APPROACH PROCEDURE– A standard instrument approach procedure in which an electronic glideslope/glidepath is provided; e.g., ILS, MLS, and PAR.

(See INSTRUMENT LANDING SYSTEM.)

(See MICROWAVE LANDING SYSTEM.)

(See PRECISION APPROACH RADAR.)

PRECISION APPROACH RADAR– Radar equipment in some ATC facilities operated by the FAA and/or the military services at joint-use civil/military locations and separate military installations to detect and display azimuth, elevation, and range of aircraft on the final approach course to a runway. This equipment may be used to monitor certain nonradar approaches, but is primarily used to conduct a precision instrument approach (PAR) wherein the controller issues guidance instructions to the pilot based on the aircraft's position in relation to the final approach course (azimuth), the glidepath (elevation), and the distance (range) from the touchdown point on the runway as displayed on the radar scope.

Note: The abbreviation "PAR" is also used to denote preferential arrival routes in ARTCC computers.

(See GLIDEPATH.)

(See PAR.)

(See PREFERENTIAL ROUTES.)

(See ICAO term PRECISION APPROACH RADAR.)

(Refer to AIM.)

PRECISION APPROACH RADAR [ICAO]– Primary radar equipment used to determine the position of an aircraft during final approach, in terms of lateral and vertical deviations relative to a nominal approach path, and in range relative to touchdown.

Note: Precision approach radars are designed to enable pilots of aircraft to be given guidance by radio communication during the final stages of the approach to land.

PRECISION OBSTACLE FREE ZONE (POFZ)– An 800 foot wide by 200 foot long area centered on the runway centerline adjacent to the threshold designed to protect aircraft flying precision approaches from ground vehicles and other aircraft when ceiling is less than 250 feet or visibility is less than 3/4 statute mile (or runway visual range below 4,000 feet.)

PRECISION RUNWAY MONITOR (PRM)– Provides air traffic controllers with high precision secondary surveillance data for aircraft on final approach to parallel runways that have extended centerlines separated by less than 4,300 feet. High resolution color monitoring displays (FMA) are required to present surveillance track data to controllers along with detailed maps depicting approaches and no transgression zone.

PREDICTIVE WIND SHEAR ALERT SYSTEM (PWS)– A self-contained system used onboard some aircraft to alert the flight crew to the presence of a potential wind shear. PWS systems typically monitor 3 miles ahead and 25 degrees left and right of the aircraft's heading at or below 1200' AGL. Departing flights may receive a wind shear alert after they start the takeoff roll and may elect to abort the takeoff. Aircraft on approach receiving an alert may elect to go around or perform a wind shear escape maneuver.

PREFERENTIAL ROUTES– Preferential routes (PDRs, PARs, and PDARs) are adapted in ARTCC computers to accomplish inter/intrafacility controller coordination and to assure that flight data is posted at the proper control positions. Locations having a need for these specific inbound and outbound routes normally publish such routes in local facility bulletins, and their use by pilots minimizes flight plan route amendments. When the workload or traffic situation permits, controllers normally provide radar vectors or assign requested routes to minimize circuitous routing. Preferential routes are usually confined to one ARTCC's area and are referred to by the following names or acronyms:

a. Preferential Departure Route (PDR). A specific departure route from an airport or terminal area to an en route point where there is no further need for flow control. It may be included in an Instrument Departure Procedure (DP) or a Preferred IFR Route.

b. Preferential Arrival Route (PAR). A specific arrival route from an appropriate en route point to an airport or terminal area. It may be included in a Standard Terminal Arrival (STAR) or a Preferred IFR Route. The abbreviation "PAR" is used primarily within the ARTCC and should not be confused with the abbreviation for Precision Approach Radar.

c. Preferential Departure and Arrival Route (PDAR). A route between two terminals which are within or immediately adjacent to one ARTCC's area. PDARs are not synonymous with Preferred IFR Routes but may be listed as such as they do accomplish essentially the same purpose.

(See PREFERRED IFR ROUTES.)

PREFERRED IFR ROUTES– Routes established between busier airports to increase system efficiency and capacity. They normally extend through one or more ARTCC areas and are designed to achieve balanced traffic flows among high density terminals. IFR clearances are issued on the basis of these routes except when severe weather avoidance procedures or

other factors dictate otherwise. Preferred IFR Routes are listed in the Airport/Facility Directory. If a flight is planned to or from an area having such routes but the departure or arrival point is not listed in the Airport/Facility Directory, pilots may use that part of a Preferred IFR Route which is appropriate for the departure or arrival point that is listed. Preferred IFR Routes are correlated with DPs and STARs and may be defined by airways, jet routes, direct routes between NAVAIDs, Waypoints, NAVAID radials/DME, or any combinations thereof.

(See CENTER'S AREA.)

(See INSTRUMENT DEPARTURE PROCEDURE.)

(See PREFERENTIAL ROUTES.)

(See STANDARD TERMINAL ARRIVAL.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

(Refer to NOTICES TO AIRMEN PUBLICATION.)

PRE-FLIGHT PILOT BRIEFING–

(See PILOT BRIEFING.)

PREVAILING VISIBILITY–

(See VISIBILITY.)

PRIMARY RADAR TARGET– An analog or digital target, exclusive of a secondary radar target, presented on a radar display.

PRM–

(See ILS PRM APPROACH and PRECISION RUNWAY MONITOR.)

PROCEDURE TURN– The maneuver prescribed when it is necessary to reverse direction to establish an aircraft on the intermediate approach segment or final approach course. The outbound course, direction of turn, distance within which the turn must be completed, and minimum altitude are specified in the procedure. However, unless otherwise restricted, the point at which the turn may be commenced and the type and rate of turn are left to the discretion of the pilot.

(See ICAO term PROCEDURE TURN.)

PROCEDURE TURN [ICAO]– A maneuver in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1: Procedure turns are designated “left” or “right” according to the direction of the initial turn.

Note 2: Procedure turns may be designated as being made either in level flight or while

descending, according to the circumstances of each individual approach procedure.

PROCEDURE TURN INBOUND– That point of a procedure turn maneuver where course reversal has been completed and an aircraft is established inbound on the intermediate approach segment or final approach course. A report of “procedure turn inbound” is normally used by ATC as a position report for separation purposes.

(See FINAL APPROACH COURSE.)

(See PROCEDURE TURN.)

(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

PROFILE DESCENT– An uninterrupted descent (except where level flight is required for speed adjustment; e.g., 250 knots at 10,000 feet MSL) from cruising altitude/level to interception of a glideslope or to a minimum altitude specified for the initial or intermediate approach segment of a nonprecision instrument approach. The profile descent normally terminates at the approach gate or where the glideslope or other appropriate minimum altitude is intercepted.

PROGRESS REPORT–

(See POSITION REPORT.)

PROGRESSIVE TAXI– Precise taxi instructions given to a pilot unfamiliar with the airport or issued in stages as the aircraft proceeds along the taxi route.

PROHIBITED AREA–

(See SPECIAL USE AIRSPACE.)

(See ICAO term PROHIBITED AREA.)

PROHIBITED AREA [ICAO]– An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

PROMINENT OBSTACLE– An obstacle that meets one or more of the following conditions:

a. An obstacle which stands out beyond the adjacent surface of surrounding terrain and immediately projects a noticeable hazard to aircraft in flight.

b. An obstacle, not characterized as low and close in, whose height is no less than 300 feet above the departure end of takeoff runway (DER) elevation, is within 10NM from the DER, and that penetrates that airport/heliport's diverse departure obstacle clearance surface (OCS).

c. An obstacle beyond 10NM from an airport/heliport that requires an obstacle departure procedure (ODP) to ensure obstacle avoidance.

(See OBSTACLE.)

(See OBSTRUCTION.)

PROPOSED BOUNDARY CROSSING TIME– Each center has a PBCT parameter for each internal airport. Proposed internal flight plans are transmitted to the adjacent center if the flight time along the proposed route from the departure airport to the center boundary is less than or equal to the value of PBCT or if airport adaptation specifies transmission regardless of PBCT.

PROPOSED DEPARTURE TIME– The time that the aircraft expects to become airborne.

PROTECTED AIRSPACE– The airspace on either side of an oceanic route/track that is equal to one-half the lateral separation minimum except where reduction of protected airspace has been authorized.

PT–

(See PROCEDURE TURN.)

PTP–

(See POINT-TO-POINT.)

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.

PWS–

(See PREDICTIVE WIND SHEAR ALERT SYSTEM.)

REPORT– Used to instruct pilots to advise ATC of specified information; e.g., “Report passing Hamilton VOR.”

REPORTING POINT– A geographical location in relation to which the position of an aircraft is reported.

(See COMPULSORY REPORTING POINTS.)

(See ICAO term REPORTING POINT.)

(Refer to AIM.)

REPORTING POINT [ICAO]– A specified geographical location in relation to which the position of an aircraft can be reported.

REQUEST FULL ROUTE CLEARANCE– Used by pilots to request that the entire route of flight be read verbatim in an ATC clearance. Such request should be made to preclude receiving an ATC clearance based on the original filed flight plan when a filed IFR flight plan has been revised by the pilot, company, or operations prior to departure.

REQUIRED NAVIGATION PERFORMANCE (RNP)– A statement of the navigational performance necessary for operation within a defined airspace. The following terms are commonly associated with RNP:

a. Required Navigation Performance Level or Type (RNP-X). A value, in nautical miles (NM), from the intended horizontal position within which an aircraft would be at least 95-percent of the total flying time.

b. Required Navigation Performance (RNP) Airspace. A generic term designating airspace, route (s), leg (s), operation (s), or procedure (s) where minimum required navigational performance (RNP) have been established.

c. Actual Navigation Performance (ANP). A measure of the current estimated navigational performance. Also referred to as Estimated Position Error (EPE).

d. Estimated Position Error (EPE). A measure of the current estimated navigational performance. Also referred to as Actual Navigation Performance (ANP).

e. Lateral Navigation (LNAV). A function of area navigation (RNAV) equipment which calculates, displays, and provides lateral guidance to a profile or path.

f. Vertical Navigation (VNAV). A function of area navigation (RNAV) equipment which calculates, displays, and provides vertical guidance to a profile or path.

RESCUE COORDINATION CENTER– A search and rescue (SAR) facility equipped and manned to coordinate and control SAR operations in an area designated by the SAR plan. The U.S. Coast Guard and the U.S. Air Force have responsibility for the operation of RCCs.

(See ICAO term RESCUE CO-ORDINATION CENTRE.)

RESCUE CO-ORDINATION CENTRE [ICAO]– A unit responsible for promoting efficient organization of search and rescue service and for coordinating the conduct of search and rescue operations within a search and rescue region.

RESOLUTION ADVISORY–A display indication given to the pilot by the traffic alert and collision avoidance systems (TCAS II) recommending a maneuver to increase vertical separation relative to an intruding aircraft. Positive, negative, and vertical speed limit (VSL) advisories constitute the resolution advisories. A resolution advisory is also classified as corrective or preventive

RESTRICTED AREA–

(See SPECIAL USE AIRSPACE.)

(See ICAO term RESTRICTED AREA.)

RESTRICTED AREA [ICAO]– An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

RESUME NORMAL SPEED– Used by ATC to advise a pilot that previously issued speed control restrictions are deleted. An instruction to “resume normal speed” does not delete speed restrictions that are applicable to published procedures of upcoming segments of flight, unless specifically stated by ATC. This does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117.

RESUME OWN NAVIGATION– Used by ATC to advise a pilot to resume his/her own navigational responsibility. It is issued after completion of a radar

vector or when radar contact is lost while the aircraft is being radar vectored.

(See RADAR CONTACT LOST.)

(See RADAR SERVICE TERMINATED.)

RMI–

(See RADIO MAGNETIC INDICATOR.)

RNAV–

(See AREA NAVIGATION (RNAV).)

RNAV APPROACH– An instrument approach procedure which relies on aircraft area navigation equipment for navigational guidance.

(See AREA NAVIGATION (RNAV).)

(See INSTRUMENT APPROACH PROCEDURE.)

ROAD RECONNAISSANCE– Military activity requiring navigation along roads, railroads, and rivers. Reconnaissance route/route segments are seldom along a straight line and normally require a lateral route width of 10 NM to 30 NM and an altitude range of 500 feet to 10,000 feet AGL.

ROGER– I have received all of your last transmission. It should not be used to answer a question requiring a yes or a no answer.

(See AFFIRMATIVE.)

(See NEGATIVE.)

ROLLOUT RVR–

(See VISIBILITY.)

ROUTE– A defined path, consisting of one or more courses in a horizontal plane, which aircraft traverse over the surface of the earth.

(See AIRWAY.)

(See JET ROUTE.)

(See PUBLISHED ROUTE.)

(See UNPUBLISHED ROUTE.)

ROUTE ACTION NOTIFICATION– URET notification that a PAR/PDR/PDAR has been applied to the flight plan.

(See ATC PREFERRED ROUTE NOTIFICATION.)

(See USER REQUEST EVALUATION TOOL.)

ROUTE SEGMENT– As used in Air Traffic Control, a part of a route that can be defined by two

navigational fixes, two NAVAIDs, or a fix and a NAVAID.

(See FIX.)

(See ROUTE.)

(See ICAO term ROUTE SEGMENT.)

ROUTE SEGMENT [ICAO]– A portion of a route to be flown, as defined by two consecutive significant points specified in a flight plan.

RSA–

(See RUNWAY SAFETY AREA.)

RTR–

(See REMOTE TRANSMITTER/RECEIVER.)

RUNWAY– A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees; e.g., Runway 1, Runway 25.

(See PARALLEL RUNWAYS.)

(See ICAO term RUNWAY.)

RUNWAY [ICAO]– A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

RUNWAY CENTERLINE LIGHTING–

(See AIRPORT LIGHTING.)

RUNWAY CONDITION READING– Numerical decelerometer readings relayed by air traffic controllers at USAF and certain civil bases for use by the pilot in determining runway braking action. These readings are routinely relayed only to USAF and Air National Guard Aircraft.

(See BRAKING ACTION.)

RUNWAY END IDENTIFIER LIGHTS–

(See AIRPORT LIGHTING.)

RUNWAY GRADIENT– The average slope, measured in percent, between two ends or points on a runway. Runway gradient is depicted on Government aerodrome sketches when total runway gradient exceeds 0.3%.

RUNWAY HEADING– The magnetic direction that corresponds with the runway centerline extended, not the painted runway number. When cleared to “fly or maintain runway heading,” pilots are expected to fly or maintain the heading that corresponds with the extended centerline of the departure runway. Drift correction shall not be applied; e.g., Runway 4, actual magnetic heading of the runway centerline 044, fly 044.

RUNWAY IN USE/ACTIVE RUNWAY/DUTY RUNWAY– Any runway or runways currently being used for takeoff or landing. When multiple runways are used, they are all considered active runways. In the metering sense, a selectable adapted item which specifies the landing runway configuration or direction of traffic flow. The adapted optimum flight plan from each transition fix to the vertex is determined by the runway configuration for arrival metering processing purposes.

RUNWAY LIGHTS–

(See AIRPORT LIGHTING.)

RUNWAY MARKINGS–

(See AIRPORT MARKING AIDS.)

RUNWAY OVERRUN– In military aviation exclusively, a stabilized or paved area beyond the end of a runway, of the same width as the runway plus shoulders, centered on the extended runway centerline.

RUNWAY PROFILE DESCENT– An instrument flight rules (IFR) air traffic control arrival procedure to a runway published for pilot use in graphic and/or textual form and may be associated with a STAR. Runway Profile Descents provide routing and may depict crossing altitudes, speed restrictions, and headings to be flown from the en route structure to the point where the pilot will receive clearance for and execute an instrument approach procedure. A Runway Profile Descent may apply to more than one runway if so stated on the chart.

(Refer to AIM.)

RUNWAY SAFETY AREA– A defined surface surrounding the runway prepared, or suitable, for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. The dimensions of the RSA vary and can be determined by using the criteria contained within AC 150/5300-13, Airport Design, Chapter 3. Figure 3–1 in AC 150/5300-13 depicts the RSA. The design standards dictate that the RSA shall be:

- a.** Cleared, graded, and have no potentially hazardous ruts, humps, depressions, or other surface variations;
- b.** Drained by grading or storm sewers to prevent water accumulation;

- c.** Capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft; and,

- d.** Free of objects, except for objects that need to be located in the runway safety area because of their function. These objects shall be constructed on low impact resistant supports (frangible mounted structures) to the lowest practical height with the frangible point no higher than 3 inches above grade.

(Refer to AC 150/5300-13, Airport Design, Chapter 3.)

RUNWAY TRANSITION–

- a.** Conventional STARs/SIDs. The portion of a STAR/SID that serves a particular runway or runways at an airport.

- b.** RNAV STARs/SIDs. Defines a path(s) from the common route to the final point(s) on a STAR. For a SID, the common route that serves a particular runway or runways at an airport.

RUNWAY USE PROGRAM– A noise abatement runway selection plan designed to enhance noise abatement efforts with regard to airport communities for arriving and departing aircraft. These plans are developed into runway use programs and apply to all turbojet aircraft 12,500 pounds or heavier; turbojet aircraft less than 12,500 pounds are included only if the airport proprietor determines that the aircraft creates a noise problem. Runway use programs are coordinated with FAA offices, and safety criteria used in these programs are developed by the Office of Flight Operations. Runway use programs are administered by the Air Traffic Service as “Formal” or “Informal” programs.

- a.** Formal Runway Use Program– An approved noise abatement program which is defined and acknowledged in a Letter of Understanding between Flight Operations, Air Traffic Service, the airport proprietor, and the users. Once established, participation in the program is mandatory for aircraft operators and pilots as provided for in 14 CFR Section 91.129.

- b.** Informal Runway Use Program– An approved noise abatement program which does not require a Letter of Understanding, and participation in the program is voluntary for aircraft operators/pilots.

RUNWAY VISIBILITY VALUE–
(See VISIBILITY.)

RUNWAY VISUAL RANGE–
(See VISIBILITY.)

T

TACAN–

(See TACTICAL AIR NAVIGATION.)

TACAN-ONLY AIRCRAFT– An aircraft, normally military, possessing TACAN with DME but no VOR navigational system capability. Clearances must specify TACAN or VORTAC fixes and approaches.

TACTICAL AIR NAVIGATION– An ultra-high frequency electronic rho-theta air navigation aid which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.

(See VORTAC.)

(Refer to AIM.)

TAILWIND– Any wind more than 90 degrees to the longitudinal axis of the runway. The magnetic direction of the runway shall be used as the basis for determining the longitudinal axis.

TAKEOFF AREA–

(See LANDING AREA.)

TAKEOFF DISTANCE AVAILABLE (TODA)– The takeoff run available plus the length of any remaining runway or clearway beyond the far end of the takeoff run available.

(See ICAO term TAKEOFF DISTANCE AVAILABLE.)

TAKEOFF DISTANCE AVAILABLE [ICAO]– The length of the takeoff run available plus the length of the clearway, if provided.

TAKEOFF RUN AVAILABLE (TORA) – The runway length declared available and suitable for the ground run of an airplane taking off.

(See ICAO term TAKEOFF RUN AVAILABLE.)

TAKEOFF RUN AVAILABLE [ICAO]– The length of runway declared available and suitable for the ground run of an aeroplane take-off.

TARGET– The indication shown on an analog display resulting from a primary radar return or a radar beacon reply.

(See ASSOCIATED.)

(See DIGITAL TARGET.)

(See DIGITIZED RADAR TARGET.)

(See PRIMARY RADAR TARGET.)

(See RADAR.)

(See SECONDARY RADAR TARGET.)

(See TARGET SYMBOL.)

(See ICAO term TARGET.)

(See UNASSOCIATED.)

TARGET [ICAO]– In radar:

a. Generally, any discrete object which reflects or retransmits energy back to the radar equipment.

b. Specifically, an object of radar search or surveillance.

TARGET RESOLUTION– A process to ensure that correlated radar targets do not touch. Target resolution must be applied as follows:

a. Between the edges of two primary targets or the edges of the ASR-9/11 primary target symbol.

b. Between the end of the beacon control slash and the edge of a primary target.

c. Between the ends of two beacon control slashes.

Note 1: Mandatory traffic advisories and safety alerts must be issued when this procedure is used.

Note 2: This procedure must not be used when utilizing mosaic radar systems or multi-sensor mode.

TARGET SYMBOL– A computer-generated indication shown on a radar display resulting from a primary radar return or a radar beacon reply.

TARMAC DELAY– The holding of an aircraft on the ground either before departure or after landing with no opportunity for its passengers to deplane.

TARMAC DELAY AIRCRAFT– An aircraft whose pilot-in-command has requested to taxi to the ramp, gate, or alternate deplaning area to comply with the Three-hour Tarmac Rule.

TARMAC DELAY REQUEST– A request by the pilot-in-command to taxi to the ramp, gate, or alternate deplaning location to comply with the Three-hour Tarmac Rule.

TAS–

(See TERMINAL AUTOMATION SYSTEMS.)

TAWS–

(See TERRAIN AWARENESS WARNING SYSTEM.)

TAXI– The movement of an airplane under its own power on the surface of an airport (14 CFR Section 135.100 [Note]). Also, it describes the surface movement of helicopters equipped with wheels.

(See AIR TAXI.)

(See HOVER TAXI.)

(Refer to 14 CFR Section 135.100.)

(Refer to AIM.)

TAXI PATTERNS– Patterns established to illustrate the desired flow of ground traffic for the different runways or airport areas available for use.

TCAS–

(See TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM.)

TCH–

(See THRESHOLD CROSSING HEIGHT.)

TCLT–

(See TENTATIVE CALCULATED LANDING TIME.)

TDLS–

(See TERMINAL DATA LINK SYSTEM.)

TDZE–

(See TOUCHDOWN ZONE ELEVATION.)

TELEPHONE INFORMATION BRIEFING SERVICE– A continuous telephone recording of meteorological and/or aeronautical information.

(Refer to AIM.)

TENTATIVE CALCULATED LANDING TIME– A projected time calculated for adapted vertex for each arrival aircraft based upon runway configuration, airport acceptance rate, airport arrival delay period, and other metered arrival aircraft. This time is either the VTA of the aircraft or the TCLT/ACLT of the previous aircraft plus the AAI, whichever is later. This time will be updated in response to an aircraft's progress and its current relationship to other arrivals.

TERMINAL AREA– A general term used to describe airspace in which approach control service or airport traffic control service is provided.

TERMINAL AREA FACILITY– A facility providing air traffic control service for arriving and departing IFR, VFR, Special VFR, and on occasion en route aircraft.

(See APPROACH CONTROL FACILITY.)

(See TOWER.)

TERMINAL AUTOMATION SYSTEMS (TAS)– TAS is used to identify the numerous automated tracking systems including ARTS IIE, ARTS IIIA, ARTS IIIE, STARS, and MEARTS.

TERMINAL DATA LINK SYSTEM (TDLS)– A system that provides Digital Automatic Terminal Information Service (D-ATIS) both on a specified radio frequency and also, for subscribers, in a text message via data link to the cockpit or to a gate printer. TDLS also provides Pre-departure Clearances (PDC), at selected airports, to subscribers, through a service provider, in text to the cockpit or to a gate printer. In addition, TDLS will emulate the Flight Data Input/Output (FDIO) information within the control tower.

TERMINAL RADAR SERVICE AREA– Airspace surrounding designated airports wherein ATC provides radar vectoring, sequencing, and separation on a full-time basis for all IFR and participating VFR aircraft. The AIM contains an explanation of TRSA. TRSAs are depicted on VFR aeronautical charts. Pilot participation is urged but is not mandatory.

TERMINAL VFR RADAR SERVICE– A national program instituted to extend the terminal radar services provided instrument flight rules (IFR) aircraft to visual flight rules (VFR) aircraft. The program is divided into four types service referred to as basic radar service, terminal radar service area (TRSA) service, Class B service and Class C service. The type of service provided at a particular location is contained in the Airport/Facility Directory.

a. Basic Radar Service– These services are provided for VFR aircraft by all commissioned terminal radar facilities. Basic radar service includes safety alerts, traffic advisories, limited radar vectoring when requested by the pilot, and sequencing at locations where procedures have been established for this purpose and/or when covered by a letter of agreement. The purpose of this service is to adjust the flow of arriving IFR and VFR aircraft into the traffic pattern in a safe and orderly manner and to provide traffic advisories to departing VFR aircraft.

b. TRSA Service– This service provides, in addition to basic radar service, sequencing of all IFR and participating VFR aircraft to the primary airport and separation between all participating VFR aircraft. The purpose of this service is to provide separation between all participating VFR aircraft and all IFR aircraft operating within the area defined as a TRSA.

c. Class C Service– This service provides, in addition to basic radar service, approved separation between IFR and VFR aircraft, and sequencing of VFR aircraft, and sequencing of VFR arrivals to the primary airport.

d. Class B Service– This service provides, in addition to basic radar service, approved separation of aircraft based on IFR, VFR, and/or weight, and sequencing of VFR arrivals to the primary airport(s).

(See CONTROLLED AIRSPACE.)

(See TERMINAL RADAR SERVICE AREA.)

(Refer to AIM.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

TERMINAL-VERY HIGH FREQUENCY OMNI-DIRECTIONAL RANGE STATION– A very high frequency terminal omnirange station located on or near an airport and used as an approach aid.

(See NAVIGATIONAL AID.)

(See VOR.)

TERRAIN AWARENESS WARNING SYSTEM (TAWS)– An on-board, terrain proximity alerting system providing the aircrew ‘Low Altitude warnings’ to allow immediate pilot action.

TERRAIN FOLLOWING– The flight of a military aircraft maintaining a constant AGL altitude above the terrain or the highest obstruction. The altitude of the aircraft will constantly change with the varying terrain and/or obstruction.

TETRAHEDRON– A device normally located on uncontrolled airports and used as a landing direction indicator. The small end of a tetrahedron points in the direction of landing. At controlled airports, the tetrahedron, if installed, should be disregarded because tower instructions supersede the indicator.

(See SEGMENTED CIRCLE.)

(Refer to AIM.)

TF–

(See TERRAIN FOLLOWING.)

THAT IS CORRECT– The understanding you have is right.

THREE-HOUR TARMAC RULE– Rule that relates to Department of Transportation (DOT) requirements placed on airlines when tarmac delays are anticipated to reach 3 hours.

360 OVERHEAD–

(See OVERHEAD MANEUVER.)

THRESHOLD– The beginning of that portion of the runway usable for landing.

(See AIRPORT LIGHTING.)

(See DISPLACED THRESHOLD.)

THRESHOLD CROSSING HEIGHT– The theoretical height above the runway threshold at which the aircraft’s glideslope antenna would be if the aircraft maintains the trajectory established by the mean ILS glideslope or MLS glidepath.

(See GLIDESLOPE.)

(See THRESHOLD.)

THRESHOLD LIGHTS–

(See AIRPORT LIGHTING.)

TIBS–

(See TELEPHONE INFORMATION BRIEFING SERVICE.)

TIME GROUP– Four digits representing the hour and minutes from the Coordinated Universal Time (UTC) clock. FAA uses UTC for all operations. The term “ZULU” may be used to denote UTC. The word “local” or the time zone equivalent shall be used to denote local when local time is given during radio and telephone communications. When written, a time zone designator is used to indicate local time; e.g. “0205M” (Mountain). The local time may be based on the 24-hour clock system. The day begins at 0000 and ends at 2359.

TIS-B–

(See TRAFFIC INFORMATION SERVICE–BROADCAST.)

TMA–

(See TRAFFIC MANAGEMENT ADVISOR.)

TMPA–

(See TRAFFIC MANAGEMENT PROGRAM ALERT.)

TMU–

(See TRAFFIC MANAGEMENT UNIT.)

TODA–

(See TAKEOFF DISTANCE AVAILABLE.)

(See ICAO term TAKEOFF DISTANCE AVAILABLE.)

TOI–

(See TRACK OF INTEREST.)

TORA–

(See TAKEOFF RUN AVAILABLE.)

(See ICAO term TAKEOFF RUN AVAILABLE.)

TORCHING– The burning of fuel at the end of an exhaust pipe or stack of a reciprocating aircraft engine, the result of an excessive richness in the fuel air mixture.

TOTAL ESTIMATED ELAPSED TIME [ICAO]–

For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

(See ICAO term ESTIMATED ELAPSED TIME.)

TOUCH-AND-GO– An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway.

TOUCH-AND-GO LANDING–

(See TOUCH-AND-GO.)

TOUCHDOWN–

a. The point at which an aircraft first makes contact with the landing surface.

b. Concerning a precision radar approach (PAR), it is the point where the glide path intercepts the landing surface.

(See ICAO term TOUCHDOWN.)

TOUCHDOWN [ICAO]– The point where the nominal glide path intercepts the runway.

Note: Touchdown as defined above is only a datum and is not necessarily the actual point at which the aircraft will touch the runway.

TOUCHDOWN RVR–

(See VISIBILITY.)

TOUCHDOWN ZONE– The first 3,000 feet of the runway beginning at the threshold. The area is used for determination of Touchdown Zone Elevation in the development of straight-in landing minimums for instrument approaches.

(See ICAO term TOUCHDOWN ZONE.)

TOUCHDOWN ZONE [ICAO]– The portion of a runway, beyond the threshold, where it is intended landing aircraft first contact the runway.

TOUCHDOWN ZONE ELEVATION– The highest elevation in the first 3,000 feet of the landing surface. TDZE is indicated on the instrument approach procedure chart when straight-in landing minimums are authorized.

(See TOUCHDOWN ZONE.)

TOUCHDOWN ZONE LIGHTING–

(See AIRPORT LIGHTING.)

TOWER– A terminal facility that uses air/ground communications, visual signaling, and other devices to provide ATC services to aircraft operating in the vicinity of an airport or on the movement area. Authorizes aircraft to land or takeoff at the airport controlled by the tower or to transit the Class D airspace area regardless of flight plan or weather conditions (IFR or VFR). A tower may also provide approach control services (radar or nonradar).

(See AIRPORT TRAFFIC CONTROL SERVICE.)

(See APPROACH CONTROL FACILITY.)

(See APPROACH CONTROL SERVICE.)

(See MOVEMENT AREA.)

(See TOWER EN ROUTE CONTROL SERVICE.)

(See ICAO term AERODROME CONTROL TOWER.)

(Refer to AIM.)

TOWER EN ROUTE CONTROL SERVICE– The control of IFR en route traffic within delegated airspace between two or more adjacent approach control facilities. This service is designed to expedite traffic and reduce control and pilot communication requirements.

TOWER TO TOWER–

(See TOWER EN ROUTE CONTROL SERVICE.)

TPX-42– A numeric beacon decoder equipment/system. It is designed to be added to terminal radar

systems for beacon decoding. It provides rapid target identification, reinforcement of the primary radar target, and altitude information from Mode C.

(See AUTOMATED RADAR TERMINAL SYSTEMS.)

(See TRANSPONDER.)

TRACEABLE PRESSURE STANDARD– The facility station pressure instrument, with certification/calibration traceable to the National Institute of Standards and Technology. Traceable pressure standards may be mercurial barometers, commissioned ASOS/AWSS or dual transducer AWOS, or portable pressure standards or DASI.

TRACK– The actual flight path of an aircraft over the surface of the earth.

(See COURSE.)

(See FLIGHT PATH.)

(See ROUTE.)

(See ICAO term TRACK.)

TRACK [ICAO]– The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (True, Magnetic, or Grid).

TRACK OF INTEREST (TOI)– Displayed data representing an airborne object that threatens or has the potential to threaten North America or National Security. Indicators may include, but are not limited to: noncompliance with air traffic control instructions or aviation regulations; extended loss of communications; unusual transmissions or unusual flight behavior; unauthorized intrusion into controlled airspace or an ADIZ; noncompliance with issued flight restrictions/security procedures; or unlawful interference with airborne flight crews, up to and including hijack. In certain circumstances, an object may become a TOI based on specific and credible intelligence pertaining to that particular aircraft/object, its passengers, or its cargo.

TRACK OF INTEREST RESOLUTION– A TOI will normally be considered resolved when: the aircraft/object is no longer airborne; the aircraft complies with air traffic control instructions, aviation regulations, and/or issued flight restrictions/security procedures; radio contact is re-established and authorized control of the aircraft is verified; the aircraft is intercepted and intent is verified to be nonthreatening/nonhostile; TOI was identified based on specific and credible intelligence that was later

determined to be invalid or unreliable; or displayed data is identified and characterized as invalid.

TRAFFIC–

a. A term used by a controller to transfer radar identification of an aircraft to another controller for the purpose of coordinating separation action. Traffic is normally issued:

1. In response to a handoff or point out,
2. In anticipation of a handoff or point out, or
3. In conjunction with a request for control of an aircraft.

b. A term used by ATC to refer to one or more aircraft.

TRAFFIC ADVISORIES– Advisories issued to alert pilots to other known or observed air traffic which may be in such proximity to the position or intended route of flight of their aircraft to warrant their attention. Such advisories may be based on:

- a.** Visual observation.
- b.** Observation of radar identified and nonidentified aircraft targets on an ATC radar display, or
- c.** Verbal reports from pilots or other facilities.

Note 1: The word "traffic" followed by additional information, if known, is used to provide such advisories; e.g., "Traffic, 2 o'clock, one zero miles, southbound, eight thousand."

Note 2: Traffic advisory service will be provided to the extent possible depending on higher priority duties of the controller or other limitations; e.g., radar limitations, volume of traffic, frequency congestion, or controller workload. Radar/nonradar traffic advisories do not relieve the pilot of his/her responsibility to see and avoid other aircraft. Pilots are cautioned that there are many times when the controller is not able to give traffic advisories concerning all traffic in the aircraft's proximity; in other words, when a pilot requests or is receiving traffic advisories, he/she should not assume that all traffic will be issued.

(Refer to AIM.)

TRAFFIC ALERT (*aircraft call sign*), **TURN** (*left/right*) **IMMEDIATELY**, (*climb/descend*) **AND MAINTAIN** (*altitude*).

(See SAFETY ALERT.)

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM– An airborne collision avoidance system based on radar beacon signals which operates independent of ground-based equipment. TCAS-I generates traffic advisories only. TCAS-II generates

traffic advisories, and resolution (collision avoidance) advisories in the vertical plane.

TRAFFIC INFORMATION–

(See TRAFFIC ADVISORIES.)

TRAFFIC INFORMATION SERVICE–BROADCAST (TIS–B)– The broadcast of ATC derived traffic information to ADS–B equipped (1090ES or UAT) aircraft. The source of this traffic information is derived from ground–based air traffic surveillance sensors, typically from radar targets. TIS–B service will be available throughout the NAS where there are both adequate surveillance coverage (radar) and adequate broadcast coverage from ADS–B ground stations. Loss of TIS–B will occur when an aircraft enters an area not covered by the GBT network. If this occurs in an area with adequate surveillance coverage (radar), nearby aircraft that remain within the adequate broadcast coverage (ADS–B) area will view the first aircraft. TIS–B may continue when an aircraft enters an area with inadequate surveillance coverage (radar); nearby aircraft that remain within the adequate broadcast coverage (ADS–B) area will not view the first aircraft.

TRAFFIC IN SIGHT– Used by pilots to inform a controller that previously issued traffic is in sight.

(See NEGATIVE CONTACT.)

(See TRAFFIC ADVISORIES.)

TRAFFIC MANAGEMENT ADVISOR (TMA)– A computerized tool which assists Traffic Management Coordinators to efficiently schedule arrival traffic to a metered airport, by calculating meter fix times and delays then sending that information to the sector controllers.

TRAFFIC MANAGEMENT PROGRAM ALERT– A term used in a Notice to Airmen (NOTAM) issued in conjunction with a special traffic management program to alert pilots to the existence of the program and to refer them to either the Notices to Airmen publication or a special traffic management program advisory message for program details. The contraction TMPA is used in NOTAM text.

TRAFFIC MANAGEMENT UNIT– The entity in ARTCCs and designated terminals directly involved in the active management of facility traffic. Usually under the direct supervision of an assistant manager for traffic management.

TRAFFIC NO FACTOR– Indicates that the traffic described in a previously issued traffic advisory is no factor.

TRAFFIC NO LONGER OBSERVED– Indicates that the traffic described in a previously issued traffic advisory is no longer depicted on radar, but may still be a factor.

TRAFFIC PATTERN– The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach.

a. Upwind Leg– A flight path parallel to the landing runway in the direction of landing.

b. Crosswind Leg– A flight path at right angles to the landing runway off its upwind end.

c. Downwind Leg– A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg.

d. Base Leg– A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline.

e. Final Approach. A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. An aircraft making a straight-in approach VFR is also considered to be on final approach.

(See STRAIGHT-IN APPROACH VFR.)

(See TAXI PATTERNS.)

(See ICAO term AERODROME TRAFFIC CIRCUIT.)

(Refer to 14 CFR Part 91.)

(Refer to AIM.)

TRAFFIC SITUATION DISPLAY (TSD)– TSD is a computer system that receives radar track data from all 20 CONUS ARTCCs, organizes this data into a mosaic display, and presents it on a computer screen. The display allows the traffic management coordinator multiple methods of selection and highlighting of individual aircraft or groups of aircraft. The user has the option of superimposing these aircraft positions over any number of background displays. These background options include ARTCC boundaries, any stratum of en route sector boundaries, fixes, airways, military and other special use airspace, airports, and geopolitical boundaries. By using the TSD, a

coordinator can monitor any number of traffic situations or the entire systemwide traffic flows.

TRAJECTORY– A URET representation of the path an aircraft is predicted to fly based upon a Current Plan or Trial Plan.

(See USER REQUEST EVALUATION TOOL.)

TRAJECTORY MODELING– The automated process of calculating a trajectory.

TRANSCRIBED WEATHER BROADCAST– A continuous recording of meteorological and aeronautical information that is broadcast on L/MF and VOR facilities for pilots. (Provided only in Alaska.)

(Refer to AIM.)

TRANSFER OF CONTROL– That action whereby the responsibility for the separation of an aircraft is transferred from one controller to another.

(See ICAO term TRANSFER OF CONTROL.)

TRANSFER OF CONTROL [ICAO]– Transfer of responsibility for providing air traffic control service.

TRANSFERRING CONTROLLER– A controller/facility transferring control of an aircraft to another controller/facility.

(See ICAO term TRANSFERRING UNIT/CONTROLLER.)

TRANSFERRING FACILITY–

(See TRANSFERRING CONTROLLER.)

TRANSFERRING UNIT/CONTROLLER [ICAO]– Air traffic control unit/air traffic controller in the process of transferring the responsibility for providing air traffic control service to an aircraft to the next air traffic control unit/air traffic controller along the route of flight.

Note: See definition of accepting unit/controller.

TRANSITION–

a. The general term that describes the change from one phase of flight or flight condition to another; e.g., transition from en route flight to the approach or transition from instrument flight to visual flight.

b. A published procedure (DP Transition) used to connect the basic DP to one of several en route airways/jet routes, or a published procedure (STAR Transition) used to connect one of several en route airways/jet routes to the basic STAR.

(Refer to DP/STAR Charts.)

TRANSITION POINT– A point at an adapted number of miles from the vertex at which an arrival aircraft would normally commence descent from its en route altitude. This is the first fix adapted on the arrival speed segments.

TRANSITION WAYPOINT– The waypoint that defines the beginning of a runway or en route transition on an RNAV SID or STAR.

TRANSITIONAL AIRSPACE– That portion of controlled airspace wherein aircraft change from one phase of flight or flight condition to another.

TRANSMISSOMETER– An apparatus used to determine visibility by measuring the transmission of light through the atmosphere. It is the measurement source for determining runway visual range (RVR) and runway visibility value (RVV).

(See VISIBILITY.)

TRANSMITTING IN THE BLIND– A transmission from one station to other stations in circumstances where two-way communication cannot be established, but where it is believed that the called stations may be able to receive the transmission.

TRANSPONDER– The airborne radar beacon receiver/transmitter portion of the Air Traffic Control Radar Beacon System (ATCRBS) which automatically receives radio signals from interrogators on the ground, and selectively replies with a specific reply pulse or pulse group only to those interrogations being received on the mode to which it is set to respond.

(See INTERROGATOR.)

(See ICAO term TRANSPONDER.)

(Refer to AIM.)

TRANSPONDER [ICAO]– A receiver/transmitter which will generate a reply signal upon proper interrogation; the interrogation and reply being on different frequencies.

TRANSPONDER CODES–

(See CODES.)

TRANSPONDER OBSERVED – Phraseology used to inform a VFR pilot the aircraft's assigned beacon code and position have been observed. Specifically, this term conveys to a VFR pilot the transponder reply has been observed and its position correlated for transit through the designated area.

TRIAL PLAN– A proposed amendment which utilizes automation to analyze and display potential

conflicts along the predicted trajectory of the selected aircraft.

TRSA–

(See TERMINAL RADAR SERVICE AREA.)

TSD–

(See TRAFFIC SITUATION DISPLAY.)

TURBOJET AIRCRAFT– An aircraft having a jet engine in which the energy of the jet operates a turbine which in turn operates the air compressor.

TURBOPROP AIRCRAFT– An aircraft having a jet engine in which the energy of the jet operates a turbine which drives the propeller.

TURN ANTICIPATION– (maneuver anticipation).

TVOR–

(See TERMINAL-VERY HIGH FREQUENCY
OMNIDIRECTIONAL RANGE STATION.)

TWEB–

(See TRANSCRIBED WEATHER BROADCAST.)

TWO-WAY RADIO COMMUNICATIONS FAILURE–

(See LOST COMMUNICATIONS.)

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BRIEFING GUIDE



**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Initiated By: AJV-0
Vice President, Mission Support Services

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1. PARAGRAPH NUMBER AND TITLE: 3–2–2 CONDUCT OF APPREVIATED BRIEFING

2. BACKGROUND: This change incorporates an interpretation issued by Flight Services Safety and Operations Support in November 2005 to require, when applicable, the issuance of a “VFR Flight Not Recommended” (VNR) statement when conducting an abbreviated briefing. FAA Order JO 7110.10U, paragraph 3–2–2a currently requires specialists to provide details regarding adverse conditions in accordance with subparagraph 3–2–1b1, but does not include the reference to VNR.

3. CHANGE:**OLD****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”:

NEW**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. **If applicable, include the statement “VFR flight not recommended” in accordance with subpara 3–2–1b2.** Pilot briefers must 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”:

1. PARAGRAPH NUMBER AND TITLE: 4–2–6. FLIGHT PROGRESS STRIPS (FAA FORMS 7230–21 AND 7233–5)

2. BACKGROUND: Before the automation of flight service stations, flight progress strips were used to count traffic. Each flight by an aircraft required a separate strip for accurate counting. With automation, aircraft contacted/inflight contacts are automatically counted by the operational systems. The facilities that still use strips now do so to improve position management and increase situational awareness.

3. CHANGE:**OLD****4–2–6 FLIGHT PROGRESS STRIPS (FAA FORMS 7230–21 AND 7233–5)**

Title thru a

b. Use one flight progress strip for each flight, and record all contacts with that flight on the same strip. If supplemental strips are needed for additional writing space, keep the original and supplemental strips together and consider them as one strip.

Add

NEW**4–2–6 FLIGHT PROGRESS STRIPS (FAA FORMS 7230–21 AND 7233–5)**

No Change

b. Use a flight progress strip for each aircraft and record all contacts with that aircraft on the same strip. If supplemental strips are needed for additional writing space, keep the original and supplemental strips together

NOTE–

Multiple flights by the same aircraft may be recorded on a single strip when situational awareness and strip bay efficiency are improved.

1. PARAGRAPH NUMBER AND TITLE: 6–3–1. DOMESTIC IFR FLIGHT PLANS

2. BACKGROUND: Since 2007, flight services in the contiguous United States, Hawaii, and Puerto Rico have transitioned to a new operational system and concept of operations. The transition reinforced a need to remove references in FAA Order JO 7110.10 to specific operational systems.

3. CHANGE: References to MIFC, AISR, and OASIS are deleted. Editorial changes made in compliance with the plain language initiative.

OLD**6–3–1. DOMESTIC IFR FLIGHT PLANS**

a. IFR flight plans should consist of items 1 through 15 of FAA Form 7233–1. Items 1 through 11 shall be transmitted to the ARTCC as part of the IFR flight plan proposal. Items 12 through 15 shall be retained in the FSS and be available upon request.

NOTE–

Part-time FSSs shall forward items 1 through 15 in accordance with para 6–1–4.

Add

NEW**6–3–1. DOMESTIC IFR FLIGHT PLANS**

IFR flight plans should consist of items 1 through 17 of FAA Form 7233–1 or electronic equivalent. Items 1 through 11 must be transmitted to the ARTCC as part of the IFR flight plan proposal. Items 12 through 17 must be retained by the FSS or in the operational system and be available upon request.

NOTE–

1. *Part-time FSSs shall forward items 1 through 17 in accordance with para 6–1–4.*

2. *Procedures for automatic assignment of RNAV routes are contained in paragraph 6–2–3, Flight Plans with Area Navigation (RNAV) Routes in Domestic U.S. Airspace.*

b. MIFC. IFR flight plans should consist of the following fields:

1. FR Type of Flight
2. AI Aircraft Identification.
3. AT Number and Type of Aircraft.
4. TS True Airspeed or Mach Number.
5. DD Departure Point.
6. TM Departure Time.
7. AE Requested Altitude.
8. RT Route of Flight.
9. AD Destination.
10. TE Time En Route.
11. RM Remarks.
12. FB Fuel on Board.
13. AA Alternate Destination.
14. PD Pilot Data.
15. NB Number of Persons on Board.
16. CR Color of Aircraft.
17. OP ARTCC Address.
18. CP Addresses/Closure Point.

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<u>19. TA Estimated Time of Arrival.</u>	Delete
<u>NOTE–</u>	Delete
<u>OASIS. IFR flight plans should consist of the same fields as shown for MIFC. Flight plan items are entered into labeled text boxes in the Flight Plan dialog box.</u>	
<u>c. MIFC. Items 1 through 11 shall be transmitted to the ARTCC as part of the IFR flight plan proposal. Items 12 through 19 shall be retained by the FSDPS and be available upon request.</u>	Delete
<u>NOTE–</u>	Delete
<u>OASIS. Items 1 through 11 shall be transmitted to the ARTCC as part of the IFR flight plan proposal. Items 12 through 19 will be retained in a history file and be available upon request.</u>	

1. PARAGRAPH NUMBER AND TITLE: 6–6–5. ADDRESSING DVFR FLIGHT PLAN MESSAGES

2. BACKGROUND: Since 2007, flight services in the contiguous United States, Hawaii, and Puerto Rico have transitioned to a new automation system and concept of operations. During the same time period, Alaska flight services have undergone automation system changes requiring procedural changes to the handling of DVFR flight plans.

3. CHANGE:

<u>OLD</u>	<u>NEW</u>
<u>6–6–5. ADDRESSING DVFR FLIGHT PLAN MESSAGES</u>	Delete
<u>Forward DVFR flight plan information (Reference para 6–6–3) as follows:</u>	Delete
<u>a. Contiguous U.S. ADIZ. Forward DVFR flight plan information to NORAD.</u>	Delete
<u>b. Alaskan ADIZ. Alaska ADIZ procedures are contained in a Letter of Agreement with the affected facility.</u>	Delete
<u>c. Hawaiian ADIZ. Forward all DVFR flight plan information to NORAD.</u>	Delete
<u>1. MIFC – Enter “V” in the FR: field of the Flight Plan mask.</u>	Delete
<u>2. OASIS – Select “VFR” in the Flight Rules drop-down list of the Flight Plan dialog box.</u>	Delete
<u>d. Canada. Routing DVFR flight plan messages to Canada. Compose DVFR messages pertaining to aircraft operating on a DVFR flight into Canada using the same procedure as for DVFR messages in the contiguous 48 states, except add “DVFR” in remarks. In addition, address and route to the appropriate transborder tie-in station.</u>	Delete

