CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

7110.10N CHG 3

4/16/01

SUBJ: FLIGHT SERVICES

1. **PURPOSE.** This change transmits revised pages to Order 7110.10N, Flight Services.

2. **DISTRIBUTION.** This change is distributed to selected offices in Washington headquarters, regional offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, and air traffic field offices and facilities.

3. **EFFECTIVE DATE.** July 12, 2001.

4. **EXPLANATION OF CHANGES.** See the Explanation of Changes attachment.

5. **DISPOSITION OF TRANSMITTAL.** Retain this transmittal until superseded by a new basic order.

6. **PAGE CONTROL CHART.** See the Page Control Chart attachment.

Maureen Woods

Bill G. Peacock
Director of Air Traffic
Date: 4-16-01

EXPLANATION OF CHANGES

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

a. 6-1-1. COMMUNICATIONS SERVICE

Replace all references to "GTE" with "AIS". Replace "GTE" phone numbers with the following "AIS" phone numbers:

3. AIS HELPDESK 800-804-1310

4. AIS EMERGENCY OUTAGE HOTLINE 703-818-5551

b. 9-1-3. DISTRIBUTION

Replace all references to "GTE" with "AIS". Replace "GTE" phone numbers with the following "AIS" phone numbers:

1. AIS HELPDESK 800-804-1310.

2. AIS EMERGENCY OUTAGE HOTLINE 703-818-5551

c. 9-2-15. PIREP FORMAT

Removes the clause "followed by a space" from subparagraph b.1.

d. Under LABS examples, remove the "/B" entry. This is an automatic feature of the AIS, and reference is no longer required.

e. Replace all references to "Leased A & B Service" or "LABS" with "Aeronautical Information System" or "AIS".

f. Editorial/format changes were made where necessary. Revision bars were not used due to the insignificant nature of the changes. (ATA-10)

PAGE CONTROL CHART

7110.10N CHG 3

July 12, 2001

REMOVE PAGES	DATED	INSERT PAGES	DATED
1-1-1	2/24/00	1-1-1	7/12/01
1-2-1	2/24/00	1-2-1	7/12/01
2-2-1	2/24/00	2-2-1	2/24/00
2-2-2	2/24/00	2-2-2	7/12/01
4-2-1 and 4-2-2	2/24/00	4-2-1 and 4-2-2	7/12/01
4-2-3	2/24/00	4-2-3	7/12/01
4-2-4	2/24/00	4-2-4	2/24/00
6-1-1	2/24/00	6-1-1	7/12/01
6-1-2	2/24/00	6-1-2	2/24/00
6-2-3	8/10/00	6-2-3	8/10/00
6-2-4	2/24/00	6-2-4	7/12/01
6-3-1 and 6-3-2	2/24/00	6-3-1 and 6-3-2	7/12/01
6-3-3	2/24/00	6-3-3	7/12/01
6-3-4	2/24/00	6-3-4	2/24/00
6-3-7	2/24/00	6-3-7	2/24/00
6-3-8	2/24/00	6-3-8	7/12/01
6-4-1 thru 6-4-7	2/24/00	6-4-1 thru 6-4-7	7/12/01
6-5-1 and 6-5-2	2/24/00	6-5-1 and 6-5-2	7/12/01
6-5-3	1//25/01	6-5-3	7/12/01
7-1-1 thru 7-1-4	2/24/00	7-1-1 thru 7-1-4	7/12/01
7-1-7 thru 7-1-9	2/24/00	7-1-7 thru 7-1-9	7/12/01
7-2-1	2/24/00	7-2-1	2/24/00
7-2-2	2/24/00	7-2-2	7/12/01
7-3-1 and 7-3-2	2/24/00	7-3-1 and 7-3-2	7/12/01
7-4-1 thru 7-4-3	2/24/00	7-4-1 thru 7-4-3	7/12/01
7-5-1 and 7-5-2	2/24/00	7-5-1 and 7-5-2	7/12/01
8-2-1 and 8-2-2	2/24/00	8-2-1 and 8-2-2	7/12/01
8-3-1 and 8-3-2	2/24/00	8-3-1 and 8-3-2	7/12/01
8-4-1 and 8-4-2	2/24/00	8-4-1 and 8-4-2	7/12/01
9-1-1	2/24/00	9-1-1	7/12/01
9-2-1	2/24/00	9-2-1	7/12/01
9-2-2	2/24/00	9-2-2	2/24/00
9-2-3	1/25/01	9-2-3	7/12/01
9-2-4	1/25/01	9-2-4	1/25/01
9-10-1	2/24/00	9-10-1	7/12/01
9-11-1	2/24/00	9-11-1	2/24/00
9-11-2	2/24/00	9-11-2	7/12/01
10-1-1	2/24/00	10-1-1	2/24/00
10-1-2	2/24/00	10-1-2	7/12/01
10-1-3	2/24/00	10-1-3	7/12/01

14-1-13	8/10/00	14-1-13	8/10/00
14-1-14	2/24/00	14-1-14	7/12/01
PCG-1	1/25/01	PCG-1 and PCG-2	7/12/01
PCG A-1 thru PCG A-10	1/25/01	PCG A-1 thru PCG A-10	7/12/01
PCG A-11	2/24/00	PCG A-11	7/12/01
PCG A-12	1/25/01	PCG A-12	7/12/01
PCG A-13 and PCG A-14	1/25/01	PCG A-13 thru PCG A-15	7/12/01
PCG C-3 and PCG C-4	1/25/01	PCG C-3 and PCG C-4	7/12/01
PCG C-5 and PCG C-6	2/24/00	PCG C-5 and PCG C-6	7/12/01
PCG C-7	2/24/00	PCG C-7	7/12/01
PCG C-8	1/25/01	PCG C-8	7/12/01
PCG G-1	1/25/01	PCG G-1	7/12/01
PCG G-2	2/24/00	PCG G-2	7/12/01
PCG P-1 thru PCG P-4	2/24/00	PCG P-1 thru PCG P-4	7/12/01
PCG R-3 thru PCG R-7	2/24/00	PCG R-3 thru PCG R-7	7/12/01
PCG S-1 thru PCG S-6	2/24/00	PCG S-1 thru PCG S-7	7/12/01
PCG T-5 and PCG T-6	1/25/01	PCG T-5 and PCG T-6	7/12/01
PCG U-1	2/24/00	PCG U-1	7/12/01
PCG W-1	1/25/01	PCG W-1	7/12/01

Chapter 1. INTRODUCTION

Section 1. GENERAL

1-1-1. PURPOSE

This order prescribes procedures and phraseology for use by air traffic personnel providing flight services. Flight service specialists are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations that are not covered.

1-1-2. DISTRIBUTION

This order is distributed to selected offices in Washington headquarters, regional offices, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, all air traffic field facilities, international aviation field offices, and interested aviation public.

1-1-3. CANCELLATION

Order 7110.10M, Flight Services, effective February 26, 1998, is canceled.

1-1-4. EXPLANATION OF CHANGES

Changes incorporated into this basic order as well as changes submitted in the future are found in the explanation of changes page(s). It is advisable to retain these page(s) throughout the duration of the basic order. If further information is desired, direct questions through the appropriate facility/region staff to ATP-300.

1-1-5. EFFECTIVE DATE

a. This order is effective February 24, 2000.

b. This order and its changes are scheduled to be published to coincide with AIRAC dates. The effective dates will be:

Publication Schedule		
Basic or Change	Cutoff Date for Submission	Effective Date of Publication
Change 1	2/24/00	8/10/00
Change 2	8/10/00	1/25/01
Change 3	1/25/01	7/12/01
7110.10P	7/12/01	2/21/02

c. Facilities shall notify regional distribution officers if orders or changes are not received at least 30 days prior to effective dates.

1-1-6. RECOMMENDATION FOR PROCEDURAL CHANGES

a. Submit recommended changes directly to the facility management.

b. Procedural changes will not be made to this order until software for Model 1 Full Capacity (M1FC) and AIS has been adapted to accomplish the revised procedures.

1-1-7. SUBSCRIPTION INFORMATION

This publication may be purchased from the U.S. Government Printing Office. Address subscription inquiries to:

Superintendent of Documents
Government Printing Office
Washington, DC 20402
Telephone: (202) 512-1800
Internet: http://www.access.gpo.gov/su_docs

FAA Air Traffic Publications are also available on the FAA's web site at http://www.faa.gov/ATpubs/

Section 2. TERMS OF REFERENCE

1-2-1. WORD MEANINGS

As used in this manual, the words listed below have the following meanings:

a. "Shall" or an action verb in the imperative sense means a procedure is mandatory.

b. "Should" means a procedure is recommended.

c. "May" or "need not" means a procedure is optional.

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

e. Singular words include the plural.

f. Plural words include the singular.

g. "Aircraft" means the airframe, crew members, or both.

h. "Altitude" means indicated altitude mean sea level (MSL), flight level (FL), or both.

i. "Miles" means nautical miles unless otherwise specified and means statute miles in conjunction with visibility.

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

1-2-2. NOTES

Statements of fact or of an explanatory nature and relating to the use of directive material have been identified and worded as "Notes."

1-2-3. 7110.10 CHANGES

a. Each reprinted, revised, or additional page will show the change number and the effective date of the change.

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

1-2-4. ABBREVIATIONS

Abbreviations authorized for use in the application of the procedures in this order are those contained in FAAO 7340.1, *Contractions*.

NOTE-
In this order, the abbreviation M1 identifies Model 1 Full Capacity procedures. AIS identifies AIS procedures.

1-2-5. EXAMPLES

Any illustration used which serves to explain subject material is identified as an "Example."

1-2-6. PHRASEOLOGY

Phraseology depicted in this order is mandatory.

NOTE-
Exceptions to this para are referenced in para 5-1-1, and para 14-1-2 Note.

Section 2. TRANSCRIBED WEATHER BROADCASTS (TWEB)

2-2-1. GENERAL

a. This transcribed broadcast service provides continuous aeronautical and meteorological information on L/MF and VOR facilities.

b. At TWEB equipment (FAA 5210) locations controlling two or more VOR's, the one used least for ground-to-air communications, preferably the nearest VOR, may be used as a TWEB outlet simultaneously with the NDB facility. Where this is accomplished, capability to manually override the broadcast shall be provided for emergency communications.

2-2-2. CONTENT

The sequence, source, and content of transcribed broadcast material shall be:

a. *Introduction.*

PHRASEOLOGY-
TRANSCRIBED AVIATION WEATHER BROADCAST PREPARED AT (time) ZULU.

b. *Synopsis.* Prepared by selected Weather Service Forecast Offices (WSFO's) and stored in the Weather Message Switching Center (WMSC).

c. *Adverse Conditions.* Extracted from WST, WS, WA, CWA, and AWW.

PHRASEOLOGY-
WEATHER ADVISORIES ARE IN EFFECT FOR (adverse conditions) OVER (geographical area).

d. *TWEB Route Forecasts.* Include valid time of forecasts prepared by WSFO's and stored in WMSC.

PHRASEOLOGY-
ROUTE FORECAST/S VALID UNTIL (time) ZULU.

e. *Winds Aloft Forecast.* Broadcast winds aloft forecast for the location nearest to the TWEB. The broadcast should include the levels from 3,000 to 12,000 feet, but shall always include at least two forecast levels above the surface.

PHRASEOLOGY-
WINDS ALOFT FORECAST VALID UNTIL (time) ZULU. (Altitude).

(Altitude) (direction) AT (speed).

(Altitude) (direction) AT (speed).

(Altitude) (direction) AT (speed).

f. *Radar Reports (RAREP's).* Use local or pertinent RAREP's. If the facility has access to real time weather radar equipment, summarize observed data using the RAREP's to determine precipitation type, intensity, movement, and height.

g. *Surface Weather Reports.* Record surface reports as described in para 2-1-6. Broadcast surface reports for the parent station and not more than 25 weather reporting points.

1. Broadcast local reports first, then the remainder of the reports beginning with the first station east of true north and continuing clockwise around the TWEB location.

2. Announce the location name of a surface report once.

(a) Surface weather broadcast introduction:

PHRASEOLOGY-
AVIATION WEATHER, (4 digits of time), ZULU OBSERVATIONS.

(b) Special weather reports:

PHRASEOLOGY-
(Location name) SPECIAL REPORT (last 2 digits of time) OBSERVATION, (weather report).

h. *Density Altitude.* Include temperature and the statement "CHECK DENSITY ALTITUDE" as part of the surface weather broadcast for any station with a field elevation of 2,000 feet MSL or above that meets the following criteria: (See TBL 2-2-1.)

Density Altitude

Field Elevation	*Temperature (C)*
2,000-2,999	29 degrees or higher
3,000-3,999	27 degrees or higher
4,000-4,999	24 degrees or higher
5,000-5,999	21 degrees or higher
6,000-6,999	18 degrees or higher
7,000-higher	16 degrees or higher

TBL 2-2-1

i. *PIREP's.* Summarize PIREP's and, if the weather conditions meet soliciting requirements, append a request for PIREP's.

1. Summary.

PHRASEOLOGY-
PILOT WEATHER REPORTS SUMMARY (text).

2. Request for PIREP's, if applicable. (See para 9-2-5.)

PHRASEOLOGY-
PILOT WEATHER REPORTS ARE REQUESTED (location, area) FOR (cloud tops, icing, turbulence, etc.). CONTACT FLIGHT WATCH OR A FLIGHT SERVICE STATION.

NOTE-
Delete reference to FLIGHT WATCH when not available at the time of broadcast.

j. *ALNOT Alert Announcement*, if applicable.

PHRASEOLOGY-
OVERDUE AIRCRAFT ALERT, (time) ZULU (aircraft identification), (color), (type), DEPARTED (airport) VIA (route), (destination). LAST KNOWN POSITION (state last known position). THIS AIRCRAFT IS OVERDUE. ALL AIRCRAFT ARE REQUESTED TO MONITOR ONE TWO ONE POINT FIVE FOR E-L-T SIGNAL. INFORM THE NEAREST F-A-A FACILITY OF ANY INFORMATION REGARDING THIS AIRCRAFT.

k. *Closing statement.*

PHRASEOLOGY-
FOR NOTAM'S, MILITARY TRAINING ACTIVITY, OR OTHER SERVICES, CONTACT A FLIGHT SERVICE STATION.

2-2-3. TESTING TWEB EQUIPMENT

When TWEB equipment is to be tested, broadcast an advisory to this effect. Care shall be exercised to ensure no obsolete information is broadcast during a testing period.

2-2-4. SERVICE MAY BE SUSPENDED

TWEB service may be suspended:

a. For routine maintenance only during periods when weather conditions within 100 miles of the broadcast outlet are equal to or better than a ceiling of 3,000 feet and visibility of 5 miles.

b. When the equipment fails. If a malfunction occurs in the recording or control unit but the tape transport unit remains operative, continue broadcasting current data. Remove data as it becomes obsolete.

2-2-5. MONITORING

a. At TWEB equipment locations, listen to at least one complete TWEB cycle each hour. Check for completeness, accuracy, speech rate, and proper enunciation. Correct any noted irregularities.

b. If practical:

1. The control facility shall monitor the transmissions through local outlet.

2. The AFSS/FSS associated with a remote outlet shall monitor the transmissions for a sufficient period each hour to assure voice quality and clarity.

c. Promptly correct or inform the TWEB facility of any irregularities.

Section 2. DATA RECORDING

4-2-1. TYPES OF DATA RECORDED

a. M1FC entry for:

1. Flight plans and related messages.
2. Logging pilot briefings and aircraft contacts.
3. Service A/B messages.

b. AIS/manual functions strip marking.

4-2-2. METHODS OF RECORDING DATA

a. In M1FC facilities entries are made directly into the computer.

NOTE-
Inflight positions may use locally approved written procedures to record data during heavy traffic periods, however, aircraft contact information should be logged in the computer system as soon as practical.

b. AIS facilities use FAA Form 7230-21 or FAA Form 7233-5 to record flight progress data or inflight pilot briefs. Flight notification messages may be used as substitutes for strips.

c. Use control/clearance symbols, abbreviations, location identifiers, and contractions for recording position reports, traffic clearances, and other data, where appropriate, in M1FC entries and on flight progress strips. When recording data, you may use:

1. Plain language markings to supplement data when it will aid in understanding the recorded information.

2. Locally approved contractions and identifiers for frequently used terms and local fixes not listed in either FAAO 7340.1, Contractions or FAAO 7350.6, Location Identifiers. Use only within your facility, not on data or interphone circuits. All locally approved contractions and identifiers shall be placed in facility files for record and reference purposes.

3. Plain sheets of paper to record information when the use of flight progress strips is not feasible.

4. Blank paper to record lengthy ATC clearances or in the case of numerous contacts with the same aircraft; e.g., orientation or emergencies.

d. To prevent misinterpretation of data hand printed on flight progress strips, use the standard hand-printed characters shown in FIG 4-2-1.

Hand-Printed Characters Chart

Typed	Hand Printed
A	A
B	B
C	C
D	D
E	E
F	F
G	G
H	H
I	I
J	J
K	K
L	L
M	M
N	N
O	O
P	P
Q	Q
R	R
S	S
T	T
U	U
V	V
W	W
X	X
Y	Y
Z	Z
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	Ø

FIG 4-2-1

NOTE-
A slant line crossing through the numeral zero and an underline of the letter "S" on handwritten portions of flight

progress strips are required only when there is reason to believe the lack of these markings could lead to a misunderstanding. A slant line through the numeral zero is required on all weather data.

e. To correct or update data, draw a horizontal line through it and write the correct information adjacent to it.

f. Do not erase any item.

4-2-3. IFR/VFR/DVFR FLIGHT PLAN RECORDING

a. Use FAA Form 7233-1 to record flight plans in an AIS facility, and forward information on flight plan modifications, cancellations, activations, and closures to the appropriate position for handling.

b. M1FC VFR/DVFR Flight Plan. The following commands are normally used in the performance of VFR/DVFR flight plan functions.

1. Flight Plan Filing. (See TBL 4-2-1.)

Flight Plan Filing

Command	*Result*
FP	Displays blank domestic flight plan mask.
(Fill in mask)	Enter flight plan elements as required.
GI	Transmits flight plan.

TBL 4-2-1

2. Flight Plan Modification. (See TBL 4-2-2.)

Flight Plan Modification

Command	*Result*
FP ACID	Displays flight plan by ACID.
(Modify data)	Flight plan elements as required using TAB key.
STPM	Existing flight plan replaced by modified flight plan on proposed list.
STIM	Existing flight plan replaced by modified flight plan on inbound list.

TBL 4-2-2

3. Cancel Flight Plan. (See TBL 4-2-3.)

Cancel Flight Plan

Command	*Result*
FP ACID	Displays flight plan by ACID.
CX	Flight plan cancelled.
CX (remarks)	Flight plan cancelled with remarks.

TBL 4-2-3

NOTE-
A cancelled flight plan is one that has not been activated.

4. Flight Plan Activation. (See TBL 4-2-4.)

Flight Plan Activation

Command	*Result*
FP ACID	Displays flight plan by ACID.
(Change P Time to D Time)	Prepares Flight plan for transmission.
GI	Flight notification is transmitted.

TBL 4-2-4

5. Flight Plan Closure. When closing a VFR flight plan, obtain departure point and destination, if not already known. (See TBL 4-2-5.)

Flight Plan Closure

Command	*Result*
CL ACID	Flight plan closed.
CL ACID, (remarks)	Flight plan closed with remarks.

TBL 4-2-5

c. M1FC IFR Flight Plans. The following commands are normally used in the performance of IFR flight plan functions.

1. Flight Plan Filing. (See TBL 4-2-6.)

Flight Plan Filing

Command	*Result*
FP	Displays blank domestic flight plan mask.
(Fill in mask)	Enter flight plan elements as required.
GI	Transmits flight plan with route validation.
GI RO	Transmits flight plan by-passing route validation.

TBL 4-2-6

2. Flight Plan Modification. (See TBL 4-2-7.)

Flight Plan Modification

Command	*Result*
FP ACID	Displays flight plan by ACID.
(Modify data)	Modify flight plan elements as required using TAB key.
STPM	Existing flight plan replaced by modified flight plan on proposed list.

TBL 4-2-7

3. Cancel Flight Plan. (See TBL 4-2-8.)

Cancel Flight Plan

Command	*Result*
FP ACID	Displays flight plan by ACID.
CX	Flight plan cancelled.
CX (remarks)	Flight plan cancelled with remarks.

TBL 4-2-8

4-2-4. PILOT WEATHER REPORTS

a. PIREP's are formatted for input into M1FC by the use of "Display PIREP entry format (WY)" keyword. The following commands are required to transmit PIREP's via the PIREP mask. (See TBL 4-2-9.)

PIREP Entry

Command	*Result*
WY	Displays the PIREP entry format mask.
Formulate PIREP using either the free form area of the mask, or the mask, but not both.	
GI(s)	(1) Transmits to the AWP's. (2) Generates P alert flag at all terminals enabled for P alerts within FSDPS family.

TBL 4-2-9

b. In an AIS facility, use FAA Form 7110-2 or material deemed appropriate.

4-2-5. LOGGING AIRCRAFT CONTACTS AND INFLIGHT BRIEFINGS INTO M1FC

a. Aircraft contacts and inflight briefings are logged and stored on the DD file for accountability.

b. Required elements:

1. Inflight Briefing (IB).
2. Type of Flight (TOF).
3. Type of Service (TOS).
4. ACID.
5. Remarks.

EXAMPLE-
IB (TOF),(TOS),(ACID), REMARKS.

NOTE-
If current partial exists, ACID is optional.
(See TBL 4-2-10.)

Type of Flight

TOF	*(TYPE OF FLIGHT)*
IC	IFR AIR CARRIER
IG	IFR GENERAL
IM	IFR MILITARY
IT	IFR AIR TAXI
VC	VFR AIR CARRIER
VG	VFR GENERAL
VM	VFR MILITARY
VT	VFR AIR TAXI
Example: "IGI" = IFR General ICAO.	
For DVFR, replace "V" with "D."	
For ICAO, add "I" to TOF.	
TOS (TYPE OF SERVICE)	
A	ACFT contact & airport advisory
AB	ACFT contact, airport advisory & briefing
B	ACFT contact & briefing
BLANK	ACFT contact

TBL 4-2-10

(See TBL 4-2-11.)

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 IGI,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.

TBL 4-2-11

c. In the REMARKS block, locally approved contractions and identifiers may be used for frequently used terms not listed in either FAAO 7340.1, Contractions or FAAO 7350.7, 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 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.

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

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

FLIGHT PROGRESS STRIP

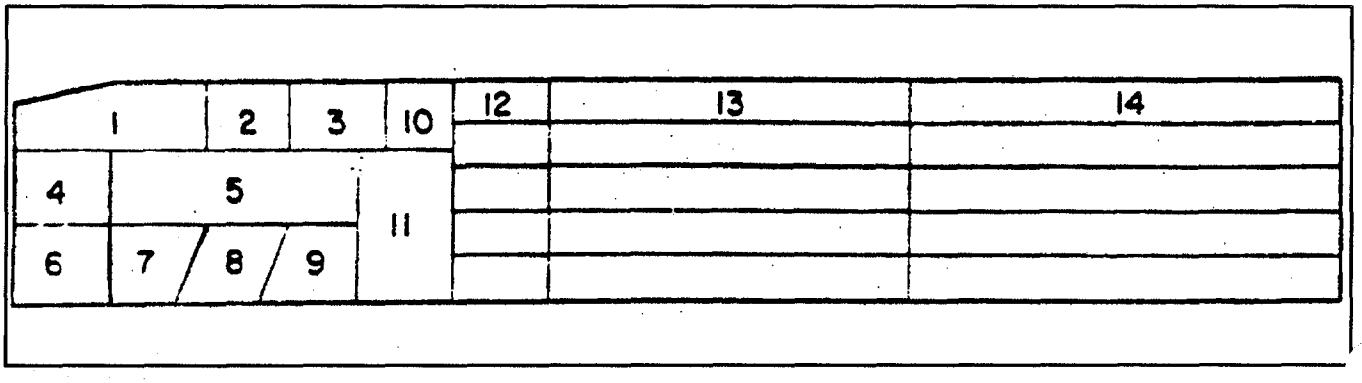

FIG 4-2-2

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

STRIP ENTRY 1

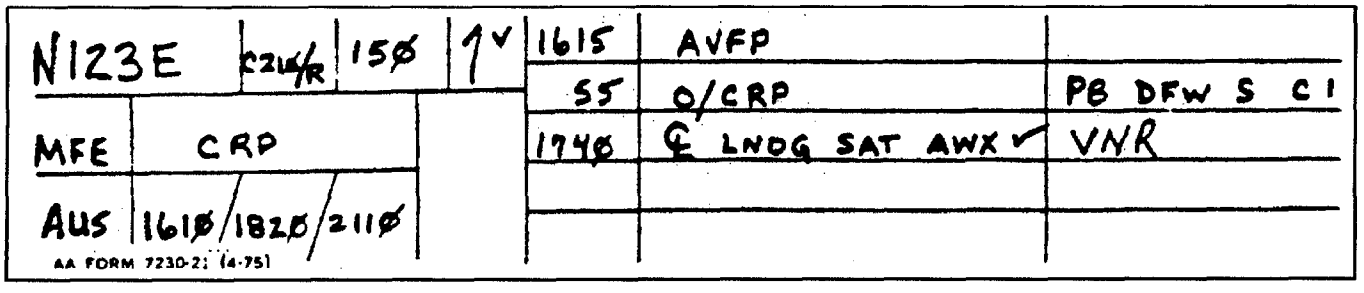

FIG 4-2-3

STRIP ENTRY 2

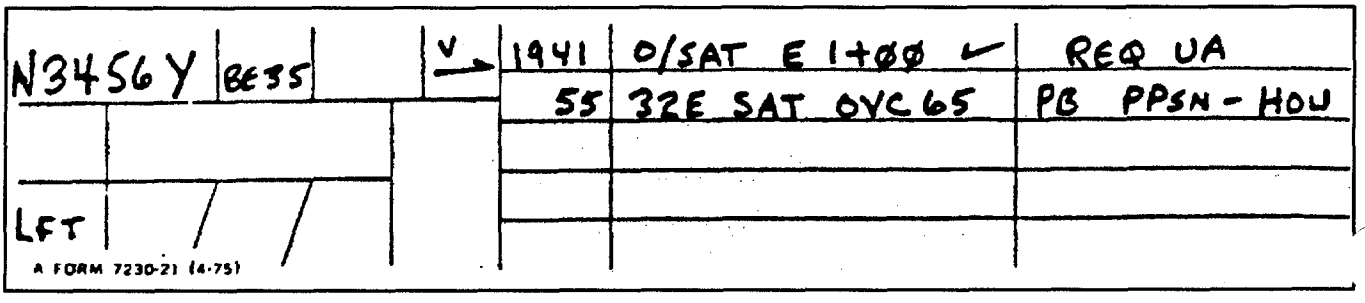

FIG 4-2-4

Chapter 6. FLIGHT DATA

Section 1. GENERAL

6-1-1. COMMUNICATIONS SERVICE

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

a. Circuit interruption notifications should be as follows:

1. AFSS. Notify their FSDPS and appropriate telco servicing company of all outages.

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

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

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

c. AIS and NADIN telephone numbers are as follows:

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

2. NADIN/SALT LAKE CITY (KSLCYTYX) (801) 320-2171/2172.

3. AIS HELPDESK 800-804-1310.

4. AIS EMERGENCY OUTAGE HOTLINE 703-818-5551.

6-1-2. FLIGHT PLANS

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

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

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

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

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

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

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

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

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

i. When a pilot files to an airport served by a part-time FSS and the ETA is during the period the facility is closed, ask the pilot to close with the associated AFSS/FSS, identified in FAAO 7350.6 and the Airport/Facility Directory.

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

6-1-3. FLIGHT PLAN DATA

Handle flight plan data as follows:

a. AIS.

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

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

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

b. M1FC.

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

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

3. Transmit flight notification messages from a flight plan mask in order for M1FC to place the message in the aircraft data file and provide automatic log and tally.

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

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

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

a. Inbound flights - all information.

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

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

operating to and from airports within the U.S., unless authorized by the controlling authority.

REFERENCE-
FAAO 7110.65, Air Traffic Control, Para 2-3-7 and TBL 2-3-3.

d. *Item 4.* True Airspeed (TAS Knots) (M1FC- TS: field). Enter two-to-four digits for TAS in knots; M followed by three digits for Mach number; or SC for "speed classified."

e. *Item 5.* Departure Point (M1FC- DD: field). Enter two-to-twelve alphanumeric and slant characters for name or identifier of the departure airport or point over which the flight plan is activated.

NOTE-
Names may be used when there is no identifier available and they do not exceed 12 characters with no spaces. Unless a geographic point is converted to latitude/longitude or fix-radial-distance (FRD), the M1FC computer will not be able to provide weather/NOTAM information and the route override function must be used to transmit or modify the flight plan.

f. *Item 6.* Departure Time (M1FC- TM: field). Enter departure time in UTC. Prefix this time with a P in the TM: field for proposals or a D for departures. If the departure time is assumed, indicate this in the Remarks field.

g. *Item 7.* Cruising Altitude (M1FC- AE: field). Proposed altitude or flight level using two-to-seven characters; e.g., 80 or 080, OTP, OTP/125, VFR, ABV/060.

h. *Item 8.* Route of Flight (M1FC- RT: field). Enter identifiers for airways or jet routes to clearly indicate the proposed flight path. For direct flight, use names or identifiers of navigation aids and geographical points or coordinates. If more than one airway or jet route is to be flown, clearly indicate the transition points.

NOTE-
On some direct flights beyond the departure center's airspace, it may be necessary to include a fix in the adjacent center's airspace or latitude/longitude coordinates, as appropriate, to facilitate computer acceptance. Local procedures should be applied to these special situations.

i. *Item 9.* Destination (M1FC- DD: field). Enter two-to-twelve alphanumeric and/or slant characters for name or identifier of the destination airport or point over which the flight plan is to be cancelled.

j. *Item 10.* Estimated Time En Route (M1FC- TE: field). Enter in hours and minutes the total elapsed time between departure and destination; e.g., 0430 or 4+30. For IFR proposals, ETE must be in four-digit format; i.e. 0215.

k. *Item 11.* Remarks (M1FC- RM: field). Information necessary for ATC or to assist search and rescue operations, plus any other data appropriate to the flight; e.g., the abbreviations FAA or DOT. Enter names of experimental or homebuilt aircraft (Veri-EZ, Long-EZ, Mustang, Delta Dart). For RM: field only - Use 1-80 characters beginning with *, #, $, or %. (See TBL 6-2-4.)

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

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NOTE-
Civil aircraft with authorized company identification are required to file the full authorized radio call in remarks.

l. *Item 12.* Fuel on Board (M1FC- FB: field). Enter in hours and minutes; e.g., 0330 or 3+30.

m. *Item 13.* Alternate Airport/s (M1FC- AA: field). Enter the location identifier if specified by the pilot. For AA: field only. Use three-to-seven alphanumeric characters. For two alternate airports, enter identifiers consecutively; e.g., BJCFNL.

n. *Item 14.* Pilot's Name, Telephone Number, Aircraft's Home Base (M1FC- PD: field). Self-explanatory. For military pilots, obtain the name and telephone of BASOPS.

NOTE-
Pilot's name not required if BASOPS' name is provided.

o. *Item 15.* Number Aboard (M1FC- NB: field). Self-explanatory.

p. *Item 16.* Color of Aircraft. (M1FC- CR: field). Use authorized contractions when available. (See TBL 6-2-5.)

Code and Color

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

TBL 6-2-5

NOTE-
1. For ICAO flight plans, see Appendix B.

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

6-2-2. OUTBOUNDS DEPARTING FROM OUTSIDE FLIGHT PLAN AREA

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

a. Type of Flight.

b. Aircraft Identification.

c. Aircraft Type.

d. Departure Point.

e. Destination.

f. Proposed Departure Time/ETE.

g. Remarks.

EXAMPLE-
AIS
FF KDAYYFYX
DTG KBWGYFYX
VFR N1234 BE90 DAY LOU P1330/0130

M1FC
FR:PV AI:N1234 AT:C150 TS:90 DD:DSM TM:P1800
AE:65 RT:DSM..OMA..LNK
AD:LNK TE:0300 RM:$FP KIKKYFYX
FB:0330 AA: PD:JOE PILOT
HB:DSM NB: CR:R/W TL:
OP:
CP:KFODYFYX
TA:2100

NOTE-
1. *M1FC will autoaddress the CP field, automatically extract the required items from the flight plan mask and transmit a flight proposal to the departure tie-in AFSS/FSS.*

M1FC will automatically fill in the originator of the flight plan in the RM field when the flight plan is transmitted.

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

6-2-3. ALASKA SPECIAL INSTRUCTIONS

All flight plans, departures (including intermediate departures) or arrivals, on an FAA aircraft, will be given normal distribution plus PANCYAYI whether VFR or IFR.

EXAMPLE-
AIS
FF PANCYAYI
DTG PAENYFYX
N123 D1345

AIS
FF PANCYAYI
DTG PAENYFYX
N123 ENA A1345 ANC

6-2-4. M1FC ENTRY OF MILITARY IFR MULTI-LEG STOPOVER FLIGHT PLAN

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

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

Section 3. IFR FLIGHT PLAN HANDLING

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 FSS's shall forward items 1 through 15 in accordance with para 6-1-4.

b. M1FC. 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.
19. **TA** Estimated Time of Arrival.

c. M1FC. 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.

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. AIS facilities use FAAO 7350.7, *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 ARTCC's for each IFR portion or segment.

b. Transmit flight plans specifying special use airspace delays (MOA's, 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. AIS. 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 ATCT's.

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

6-3-3. IFR FLIGHT PLAN CONTROL MESSAGES

(Pacific: Pacific Supplement.)

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 shall be addressed to the computer only. All other types of messages for ARTCC attention shall 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.)

ARTCC ID & Computer Flight Data

ARTCC	*ID*	*Computer*	*Flight Data*
Albuquerque	ZAB	KZABZQZX	KZABZRZX
Atlanta	ZTL	KZTLZQZX	KZTLZRZX
Boston	ZBW	KZBWZQZX	KZBWZRZX
Chicago	ZAU	KZAUZQZX	KZAUZRZX
Cleveland	ZOB	KZOBZQZX	KZOBZRZX
Denver	ZDV	KZDVZQZX	KZDVZRZX
Fort Worth	ZFW	KZFWZQZX	KZFWZRZX
Houston	ZHU	KZHUZQZX	KZHUZRZX
Indianapolis	ZID	KZIDZQZX	KZIDZRZX
Jacksonville	ZJX	KZJXZQZX	KZJXZRZX
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
Seattle	ZSE	KZSEZQZX	KZSEZRZX
Washington	ZDC	KZDCZQZX	KZDCZRZX

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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. AIS. One space character must be entered at the end of each data field. The following clarifications are presented:

(a) The first data field of a message need not be preceded by a space.

(b) The last data field of a message need not be followed by a space.

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 (KZRZX) are not processed by the HOST computer. Response and/or interpretation of these messages are dependent on flight data personnel action. The prime consideration of these types of messages, shall be the readability of the transmitted data. The second, third, and fourth character of the address shall be the same as the ARTCC flight data address.

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 ARTCC's 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 HOST computer 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 HOST field and /xx refers to M1FC field):

1. Start of Message Code (Field A). No entry requirement for AIS equipment. (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 AFSS/FSS or the three-character identifier of the originating airline office.

(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 subparas 6-3-3c5(a), (b), and (c).

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

7. Aircraft Identification (Field 02/AI:). Consists of two-to-seven 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, shall be contained in remarks (Field 11/RM:).

(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/AT:). 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 TCAS/heavy aircraft indicator. The indicator for TCAS is T; for heavy aircraft the indicator is H; for both TCAS and heavy the indicator is B. This element contains a maximum of two characters followed by a slash.

EXAMPLE-
2/F15
3H/B52
10/F18
B/B747
T/DC9

(b) Type of Aircraft. This element is mandatory and contains two-to-four characters consisting of the authorized aircraft designator as contained in FAAO 7340.1. 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/TS:). Consists of two-to-four characters followed by a space character. This field shall indicate the filed true airspeed in knots or Mach number.

EXAMPLE-
350
M075

10. Departure Point or Coordination Fix (Field 06/DD:). 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/TM:). 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/AE:). Consists of two-to-seven characters followed by a space character. Altitudes or flight levels, as appropriate, shall be expressed in hundreds of feet, but without leading zeros. The letters OTP shall be entered in this field to

indicate a requested altitude of VFR conditions-on-top. Blocked altitudes are indicated by entering the lower altitude of the requested block, the letter B, and the higher altitude of the block; e.g., 80B100, 240B270, with no intervening spaces.

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

14. Route of Flight (Field 10/RT). 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/RT: is a fixed sequence field and must begin with a fix; e.g., 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/RT: elements; e.g., 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; e.g., 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.

(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 shall 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 shall appear as the first component as four numbers (trailing zeros required) with an optional letter N or S appended. If the optional letter is omitted, north is understood. Latitude shall be separated from longitude with a slash (/) element separator. Longitude shall appear as the second component as four or five digits (trailing zeros required, leading zero optional) with an optional letter W or E appended. If the optional letter is omitted, west is understood.

(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 Departure's (DP's). DP's, if used, must be filed by the computer code designator as the second element of Field 10/RT and followed by the transition or exit fix.

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

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

EXAMPLE-
.JFK053..DPK017
.RBV020

[d] Military Routes. Certain military routes (e.g., Military Training Routes (MTR) and Air

Field Number and Name

Field	*Field Number*	*Field Name*
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

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(c) Restrictions.

3. If Field 02/AI: is to be amended, no other field may be amended in the same message. If Field 02/AI: 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/AI: 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.

4. Field 07/TM: Amendments. An attempt to amend Field 07/TM: 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."

5. Amendment to Fields 06/DD:, 07/TM:, and 10/RT: Where Fields 06/DD:, 07/TM:, and 10/RT: are amended with a single AM message, the following rules apply:

(a) The amended Field 06/DD: replaces the previously stored coordination fix (Field 06/DD:).

(b) The amended Field 07/TM:, with appropriate letter prefix, replaces the previously stored coordination time (Field 07/TM:).

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

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

(e) When amended route data is 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."

6. Amendment to Field 10/RT: Only. Except as permitted above, a Field 10/RT: 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-

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		

7. Correction Message (CM). When the host 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.

(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 shall be transmitted in the form of a CM message within the time parameters adapted for your ARTCC. ARTCC-Generated Error Message:

EXAMPLE-

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/DD: (Departure Point) or Field 10/RT: (Route of Flight) once the flight plan has been accepted, an AM message shall be sent to add a field 11/RM: 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.)

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 KZFWZQZX	Provides priority, and addressee.
C	Originator	DTG KMLCYFYX	Required for ending the message header.
D	End of Line	(New Line Key)	EOL.
E	End of Message	(Enter Function)	End of Message.

TBL 6-3-3

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

b. AFSS. Handle departure reports as a routine radio contact in accordance with para 4-3-5. If a departure report has not been received or the pilot has not amended the P time, a VFR flight plan will remain on the proposed list until 2 hours past the proposed time. At this time it is automatically removed from the list and entered on the Aircraft Data File (DD).

c. The AFSS Aircraft Data File (DD) is used for statistical and historical purposes. Movement messages, pilot briefs, and aircraft contacts are placed on the list automatically and are retained for the number of hours specified in the Aircraft Drop Interval (ADDI) parameter.

d. When a pilot reports a departure time that is more than 2 hours prior to the current clock time, request an updated ETE based on the aircraft's present position. M1FC facilities amend the ETE in the existing flight plan, and activate the flight plan using the current time as the time of departure (M1FC will automatically calculate the updated ETA) and inform the pilot of any changes.

6-4-2. DEPARTURE REPORT MESSAGE

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

EXAMPLE-
AIS
FF KRNOYFYX
DTG KHONYFYX
HON001 RNO
N98765 D1645 WMC ALW

M1FC
ORIGIN:MMV PRECEDENCE:FF TIME: ACK:Y
ADDR:RNO
TEXT:N98765 D1645 WMC ALW

NOTE-
Origin may be left blank as M1FC will insert the origin station's address.

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-
AIS
FF KMMVYFYX
4DTG 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 (FSS or BASOPS) as specified in FAAO 7350.6. Telephone or interphone, when available, may be used for flights of 30 minutes or less. The flight notification message shall 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-
AIS
FF KBOIYFYX
DTG KCDCYFYX
VFR N2346F AC21/U PVU BOI 1348 $ASMD
DEP

M1FC
FR:V AI:N2346F AT:AC21/U TS:130 DD:PVU TM:D1203
AE:85
RT:PVU..SLC..TWF..BOI
AD:BOI TE:0145 RM:$ASMD DEP
FB: AA: PD:
NB: CR: OP:
CP:KBOIYFYX TA:1348

NOTE-
M1FC will automatically extract the required items from the flight plan mask and transmit the flight notification message when a departure time is placed in the TM: field and the GI keyword is entered.

b. When the proposed flight plan is received from another AFSS/FSS, BASOPS, or DUAT vendor, and the departure station has only partial flight plan data, add a remark indicating the Service B address of the station holding the complete flight plan.

NOTE-
M1FC will automatically add this to the RM: field of the flight plan mask when it receives the proposal from another facility.

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

M1FC
FR:V AI:N1234 AT:C182/U TS:130 DD:PVU
TM:D1813 AE:85
RT:PVU..BOI
AD:BOI TE:0145 RM:$FP KIADXCLX
FB: AA: PD:
NB: CR: OP:
CP: KBOIYFYX TA:1958

c. If the pilot elects to close the flight plan with a station other than the AFSS/FSS designated as the tie-in facility by FAAO 7350.6, send the flight notification message with remarks to both stations; e.g., FIRIV PNM. The designated tie-in AFSS/FSS shall assume both destination and search and rescue responsibility.

EXAMPLE-
AIS
FF KGFKYFYX KPNMYFYX
DTG KDCAYFYX
VFR N2346F AC21 FDK PMB 1303
$FIRIV PNM

M1FC
FR:V AI:N2346F AT:C172 TS:110 DD:FOD TM:P1800
AE:095
RT:FOD..OMA
AD:OMA TE:0050 RM:$FIRIV FOD
FB:0200 AA: PD:JOE PILOT
NB:2 CR:R/W OP:
CP:KOLUYFYX KFODYFYX TA:1850

NOTE-
M1FC will autoaddress to the tie-in AFSS/FSS. Because the pilot elected to FIRIV with FOD, the message must also be manually addressed to FOD.

d. The station with which the pilot elects to close the flight plan shall forward a numbered closure message to the designated tie-in AFSS/FSS.

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

EXAMPLE-
AIS
FF KBOIYFYX
DTG KCDCYFYX
VFR N12345 C182/U PVU BOI 1958 $LNDG
TWF

M1FC
FR:V AI:N1234 AT:C182/U TS:130 DD:PVU
TM:P1813 AE:85
RT:PVU..SLC..TWF..BOI
AD:BOI TE:0145 RM:$LNDG TWF
FB: AA: PD:
NB: CR: OP:
CP:KBOIYFYX TA:1958

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 activate a flag upon receipt in the M1FC computers at selected terminals.

2. When landing at a civil airport, if there are no remarks with the flight notification message, it is placed directly on the I list with no flag alert for notification purposes.

3. When landing at a military airport, all flight notification messages generate an "N" flag.

EXAMPLE-
AIS
FF KRCAYXYX
DTG KRIUYFYX
IFR DECAL01 T43/R SMF RCA 0135
$AP3NP3S

M1FC
FR:MI AI:DECAL1 AT:T43/R TS:400 DD:SMF TM:D2205
AE:330
RT:SMF..FMG..SLC..DEN..RCA
AD:RCA TE:0330 RM:$AP3NP3 S
FB: AA: PD:
NB: CR: OP:ZCO
CP:KRCAYXYX TA:0135

AIS
FF KBOIYFYX
DTG KCDCYFYX
VFR R54321 2/UH1/U SLC BOI 1943 $N

M1FC
FR:MV AI:R54321 AT:2/UH1/U TS:100 DD:SLC
TM:D1813 AE:45
RT:SLC..TWF..BOI
AD:BOI TE:0130 RM:$N
FB: AA: PD:
NB: CR: OP:
CP:KBOIYFYX TA:1943

g. Address military stopover flight notification messages to and obtain acknowledgements from the destination tie-in AFSS/FSS or BASOPS 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 (/). AIS facilities: enter remarks, applicable to the entire flight, after the final leg. M1FC facilities: remarks pertaining to the entire mission should be in the RM: field.

3. Transmit the void time as the last item on a separate line using date/time group.

NOTE-
Provision of void time information is the responsibility of the pilot.

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

EXAMPLE-
AIS
FF KCHSYFYX KJAXYFYX KMIAYFYX
DTG KBDRYFYX
FR VV12345 P3 ADW CHS 1300/
NZC 01+30 A5 BALL DP10 AP5 S/
MIA 02+30 NO DE-ICING EQUIPMENT
VT011830

M1FC
FR:MI AI:BAT21 AT:F16/R TS:450 DD:DBQ
TM:D1700 AE:280
RT:DBQ..TNU..OFF/FOE 0+15/MLC 0+45
*AD:OFF TE:0030 RM:*REMARKS $VT012115*
FB:0230 AA: PD:ON FILE BASOPS
NB:1 CR:OD OP:ZCG
CP:KOFFYXYX KFOEYXYX KMLCYFYX TA:1730

NOTE-
M1FC will autoaddress the CP: field, automatically extract the required items from the flight plan mask, and transmit a flight notification message to the destination BASOPS. MV is used in the FR field when sending a military VFR flight notification.

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

6. 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.

j. When a pilot reports a departure time that is more than 2 hours prior to the current clock time, request an updated ETE based on the aircraft's present position. M1FC facilities amend the ETE in the existing flight plan, and activate the flight plan using the current time as the time of departure (M1FC will automatically calculate the updated ETA) and inform the pilot of any changes.

6-4-5. SUSPENSING FLIGHT NOTIFICATION MESSAGES

a. Suspense the flight notification message or proposal message until acknowledgment is received from the addressee, then file in the completed file.

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

1. Thirty minutes after departure if ETE is between 30 minutes and 2 hours.

2. One hour before ETA if ETE is 2 hours or more.

3. Thirty minutes after departure if RONVIP information is contained in remarks of a military flight notification.

c. When an acknowledgment for a message is required and has not been received in accordance with the procedure described above, M1FC facilities retransmit the complete message to the addressee. AIS facilities transmit the signal QSLQ and the complete aircraft identification to the addressee.

d. M1FC. Messages awaiting acknowledgment are suspensed on the Suspense List (S). It contains a list of all numbered Service B messages (except those numbered messages sent internally to other facilities in the same FSDPS family) 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 shall be automatically processed if they are in the proper format.

3. Improperly formatted acknowledgments will be directed to the Service B edit queue (B flag).

4. The S list will display the aircraft identification and message numbers in chronological order of transmission times (first transmitted being at the top) and the addressees for each message with an asterisk appearing next to those that have not acknowledged.

5. If a transmission has not been acknowledged by all addressees within 30 minutes, an asterisk will automatically appear immediately preceding the message identification in the S list and an S flag is automatically displayed on the terminals enabled for Edit and Review Service B Communications (ERS) function.

6. When an S flag is displayed, use the ERS keyword to display the S list in the edit mode. Use the RT keyword to retransmit the message to addressees who have not acknowledged the message.

EXAMPLE-
M1FC
RT N12345 (ACID as it appears on the S list)
RT 003 (MSG Number as it appears on the S list)

7. When an acknowledgment message is received from any other source, such as interphone/telephone or facility guarding for the addressee, the specialist shall display the Edit and Review Suspense List (ERS) and use the AK keyword to acknowledge the message.

EXAMPLE-
M1FC
AK DECAL01,KRCAYXYX

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-
AIS
FF KRCAYXYX
DTG KRIUYFYX
R DECAL01

NOTE-
M1FC 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 shall 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 DD file or with the daily traffic.

4. Forward the actual departure time to the destination BASOPS or the tie-in AFSS/FSS for the next destination.

b. Military VFR flights.

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

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

3. Forward the departure time to the destination BASOPS or the tie-in AFSS/FSS, and assume departure station responsibility.

4. M1FC. All flight notification messages are suspended on the Inbound List (I list). An entry on the I list will remain there until the flight plan is closed. Thirty minutes after the ETA (default value), if the flight plan has not been closed, it will automatically be placed in the Inbound Overdue Queue (I flag).

NOTE-
To display a flight plan on the I list, enter the keyword FP (ACID). To place a flight plan on the I list, use the keyword STI, use STIM to amend a flight plan.

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:

(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.

NOTE-
If the flight plan mask is used to transmit the flight notification in lieu of the TB mask, the flight notification goes on the suspense list, acknowledgments are processed automatically, and flight plan and acknowledgments are placed in the DD file.

2. Transmit a revised flight notification message to the departure station, original, and new destination tie-in stations 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:

AIS
FF KBOIYFYX KSFFYFYX
DTG KCDCYFYX
VFR N98789 C182/U PVU GEG 2230 $0VR
SLC 1900 ORIG DESTN BOI

M1FC
FR:V AI:N9878 AT:C182/U TS:130 DD:PVU TM:D1900
AE:105
RT:SLC..TWF..MLD..LWS..GEG
AD:GEG TE:0330 RM:$OVR SLC 1900 ORIG
DESTN BOI
FB: AA: PD:
NB: CR: OP:
CP:KBOIYFYX KSFFYFYX TA:2230

IFR Change of Destination:

AIS
FF KRCAYXYX KTIKYXYX KRIUYFYX
DTG KCDCYFYX
IFR DECAL01 T43/R SMF TIK 0230 $AP3NP3S OVR SLC
2330 ORIG DESTN RCA

M1FC
FR:MI AI:DECAL1 AT:T43/R TS:400 DD:SMF TM:D2330
AE:310
RT:SMF..SLC..GJT..AMA..OKC
AD:TIK TE:0300 RM:$NP3 S OVR SLC 2330 ORIG DESTN
RCA
FB: AA: PD:
NB: CR: OP:
CP:KRCAYXYX KTIKYXYX KRIUYFYX TA:0230

NOTE-
On VFR flight plans, M1FC will transmit and file the flight plan with the TS: and AE: fields blank. On IFR flight plans, these fields must be completed. If the TS: and AE: are unknown, 2 or 3 zeros may be used instead.

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 then transmit a flight notification message to the destination tie-in station. Include the type of flight plan, aircraft identification and type, departure point, destination, ETA, and pertinent remarks.

EXAMPLE-
AIS
FF KELPYFYX
DTG KBFLYFYX
VFR N87690 C182/U SFO ELP 2100 $CNLD
IFR OVER BFL

M1FC
FR:V AI:N8769 AT:C182/U TS:130 DD:PVU
TM:D1940 AE:105
RT:SLC..TWF..MLD..LWS..GEG
AD:GEG TE:0330 RM:$CNLD IFR OVR TWF
FB: AA: PD:
NB: CR: OP:
CP:KSFFYFYX TA:2310

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-
AIS
FF KTIKYXYX
DTG KDENYFYX
DECAL01 CHGD TO VFR RON

M1FC
ORIGIN:DEN PRECEDENCE:FF TIME: ACK:N
ADDR:KTIKYXYX
TEXT:DECAL01 CHGD TO VFR RON

6-4-9. CHANGE IN ETA

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

EXAMPLE-
AIS
FF KSFFYFYX
DTG KBOIYFYX
BOI001 SFF
N34567 E2140

M1FC
ORIGIN:BOI PRECEDENCE:FF TIME: ACK:Y
ADDR:SFF
TEXT:N34567 E2140

NOTE-
M1FC will automatically acknowledge the message, change the ETA on the flight plan and inbound list, and store the message in the DD file without specialist intervention.

6-4-10. FLIGHT PLAN CLOSURE

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

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

EXAMPLE-
AIS
FF KDCAYFYX
DTG KHHRYFYX
HHR002 DCA
N2 A0839 (Remarks, as appropriate)

M1FC
ORIGIN:HHR PRECEDENCE:FF TIME: ACK:Y
ADDR:DCA
TEXT: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 an arrival message to the departure station with the remark FPNO and the departure point and destination identifiers. The departure station shall relay the arrival information to the station holding the flight notification message in the active file.

EXAMPLE-
AIS
FF KPHFYFYX
DTG KMIVYFYX
MIV001 PHF
N8567 A1745 FPNO PHF NMK

M1FC
ORIGIN:MIV PRECEDENCE:FF TIME: ACK:Y
ADDR:PHF
TEXT:N8576 A1745 FPNO PHF NMK

2. If the station receiving the closure message is not the destination tie-in station, transmit a closure message to the destination tie-in station, including the aircraft identification, the closure time, the departure point, and destination. Remarks are optional.

EXAMPLE-
AIS
FF KHUFYFYX
DTG KDAYYFYX
DAY003
N11ND C1217 LOU IND LNDD CMH

M1FC
ORIGIN:DAY PRECEDENCE:FF TIME: ACK:Y
ADDR:HUF
TEXT:N11ND C1217 LOU IND LNDD CMH

NOTE-
Closure and arrival messages do not process automatically; manual intervention is required.

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-
AIS
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-
AIS
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
ORIGN: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-
AIS
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-
AIS
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 ARTCC's 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. M1FC - Special Use Airspace (SUA). Properly formatted IR's, VR's, and MOA's 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 MOA's), or VM (MOA NAME) MO, IR, VM (STATE IDENT; i.e. VA) MO or VM IR, VM VR (ALL IR's or VR's), or VM 1756 VR (route specific). The route must be a four-digit character. Three-digit routes must be preceded by a zero.

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 RCC's 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 tie-in AFSS/FSS originating the advisory or receiving it from the originating BASOPS shall determine the AFSS/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 shall be the identifier of the originating BASOPS or AFSS/FSS.

EXAMPLE-
AIS
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

M1FC
ORIGIN:COU PRECEDENCE:FF TIME: ACK:Y
ADDR: KZIDZRZX
TEXT: A12345 FLT ADVY 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. File the message.

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. CIRVIS.

1. JANAP 146(E), Canadian-United States Communications Instructions for Reporting Vital Intelligence Sightings, is an unclassified, nonregistered publication, prepared by the U.S. Military Communications-Electronics Board in conjunction with Canada for joint U.S. and Canadian use. The Flight Information Publication (FLIP), Flight Information Handbook (FIH), Section B, containing extracts from JANAP 146(E), should be in all facilities.

2. Relay CIRVIS reports by the most expeditious means to the appropriate ARTCC.

e. Pacific - Delivery of CIRVIS/MERINT Messages.

1. Pacific area FAA facilities shall immediately pass the CIRVIS message to the appropriate ARTCC. Specific relay and/or delivery responsibilities are as follows:

(a) Hawaiian Island Facilities. Interphone to Honolulu ARTCC; transmit confirmation message addressed to the Air Defense Control Center (ADCC) and the Hawaiian Sea Frontier Operations Control Center.

(b) Samoa CAP/IS. Transmit message addressed to Honolulu ARTCC, the Air Defense Control Center (ADCC), and the Hawaiian Sea Frontier Operations Control Center.

EXAMPLE-
Report as filed by Samoa CAP/IS:
AIS
SS PHNLZOZX PHNCYXYX
232020 NSTUYFYX
CNTR PHNL. ADCC KUNIA. HAWSEAFRON
OPERATIONS CONTROL CENTER KUNIA.
CIRVIS REPORT PA818 SIGHTED
XXXXX XXXXX XXXXX (TEXT) XXXXX JONES
CAP/IS 232020

2. The Honolulu and Guam ARTCC's will forward the CIRVIS message immediately by interphone to the military commands designated by CINCPAC. These military addressees will be responsible for forwarding the information to other military services or higher headquarters as required.

3. CINCPAC has designated the following military commands as addressees for reports originating in the Pacific area and handled by FAA facilities:

(a) For reports originating in the Honolulu FIR:

(1) The Air Defense Control Center, Kunia (ADCC).

(2) The Hawaiian Sea Frontier Operations Control Center, Kunia.

(b) For reports originating in the Guam FIR:

(1) The Anderson Air Force Base Command Post, Guam.

(2) The COMNAVMARIANAS Operation.

4. The action required of the military commanders upon receipt of a sighting report is dictated to a large extent by whether the word CIRVIS appears as the first word of the report. This word indicates that the information may be of vital importance to the security of the United States and requires certain specific action on the part of various military commanders. For this reason, the word CIRVIS shall appear in sighting reports handled by FAA facilities ONLY WHEN SO DESIGNATED BY THE OBSERVER. Sighting reports received without this designation shall be accepted and forwarded verbatim to the addressee indicated above without an identifying prefix; e.g., "PA818 REPORTS SIGHTING VESSEL ..." All sighting reports, regardless if they are designated as CIRVIS, shall be assigned the priority prefix SS to ensure rapid handling. Because of the strategic location of Wake and Samoa, CINCPAC is also interested in reports from ground observers concerning questionable or suspicious actions on the part of unidentified aircraft or vessels in the vicinity of these islands. Such reports shall be given the same distribution as CIRVIS reports.

5. Sighting Reports (MERINT) that may be received by Pacific area FAA facilities, particularly at Wake and Samoa, shall be given the same distribution as described for CIRVIS reports. Instructions concerning MERINT reports are contained in Chapter III of JANAP 146(E).

6. All facilities shall maintain a copy of JANAP 146(E) in a suitable binder and keep it available for reference in the facility operations area.

f. 7602nd Air Intelligence Group (AFIS) - Conterminous U.S. only. To assist the 7602nd Air Intelligence Group in locating downed enemy aircraft during periods of hostilities, immediately forward all information about downed enemy aircraft to the appropriate ARTCC for relay to the NORAD Direction Center by the fastest means available.

Chapter 7. INTERNATIONAL OPERATIONS

Section 1. MESSAGES AND FORMATS

7-1-1. GENERAL

a. Title 14 of the U.S. Code of Federal Regulations (14 CFR) and the International Civil Aviation Organization (ICAO) require flight plans for all civil aircraft operation between the United States and foreign locations. U.S. Customs requirements, international flight plan information, and Air Defense Identification Zone (ADIZ) penetration requirements are listed in other publications; e.g., the FAA International Flight Information Manual (IFIM), the U.S. Customs Guide for Private Flyers, the Aeronautical Information Manual (AIM), CFR Part 91, and CFR Part 99. Designated airports of first landing are listed in the IFIM and The Airport/Facility Directory (AFD).

b. This chapter provides guidance to AIFSS, AFSS, FSS, and ARTCC facilities that transmit international flight movement messages. It incorporates relevant information from ICAO and 14 CFR documents. All personnel required to handle international messages shall be familiar with ICAO documents containing instructions for preparing and transmitting communications for the AFTN circuits. These documents should be retained at FAA facilities which handle international messages. FAA personnel shall not act as agents for any aircraft operating or dispatching company.

NOTE-
International telecommunications instructions are found in International Standards and Recommended Practices, ICAO Annex 10 - Aeronautical Telecommunications, Volume II, and Document 7946, Manual of Teletypewriter Operating Practices. DOC 4444-RAC 501, Rule of the Air and Air Traffic Services, lists various ATS movement messages. Location indicators are contained in ICAO Document 7910, and Designators for Aircraft Operating Agencies Aeronautical Authorities and Services are contained in ICAO DOC 8585. FAA policies concerning acceptance of messages for international transmission are contained in 14 CFR Part 189.

c. AFSS's and FSS's that transmit only occasional international messages or are unable to determine the correct addressing for all air traffic units concerned may refer the pilot to the proper gateway facility or address the message to the proper gateway facility for handling. The gateway stations and their areas of responsibilities are as follows:

1. New York AIFSS (ISP): Bermuda, Canada, North Atlantic, Europe, and Africa.

2. Miami AIFSS (MIA): Caribbean, South America, and Central America.

3. Kenai AIFSS (ENA): Alaska.

4. Oakland AIFSS (OAK): Pacific.

d. To ensure that the gateway facility understands your request, include T (transmit) instructions in the first line of text.

EXAMPLE-
AIS
FF KMIAYFYX
DTG KICTYFYX
MIA T ALL INTL ADDRESSEES
(Text)

M1

ORIGIN: PRECEDENCE.FF TIME: ACK:N
ADDR:KMIAYFYX
TEXT:MIA T ALL INTL ADDRESSEES
(TEXT)

7-1-2. AIR TRAFFIC SERVICE (ATS) MESSAGES

ATS as used in this section, as opposed to the meaning of the term within the FAA, is a generic term meaning and including: flight information, alerting, air traffic advisory, and air traffic control (ATC) services.

7-1-3. CATEGORIES OF MESSAGES

The following ATS messages, with their normal priority indicators, are authorized for transmission by any means; i.e., AFTN, NADIN, interphone, computer-to-computer, or via the aeronautical mobile service, as applicable.

a. Emergency Messages.

1. Distress messages and distress traffic, including alerting (ALR) messages relating to distress (DETRESFA) phase-SS.

2. Urgency messages, including alerting messages relating to an alert (ALERFA) phase or to an uncertainty (INCERFA) phase-SS.

3. Other messages concerning known or suspected emergencies which do not fall under subparas 7-1-3a1 and 2 and radio communications failure (RCF) messages-FF or higher as required.

b. Movement and Control Messages.

1. Flight plan (FPL)-FF.

2. Amendment and coordination messages.

(a) Departure (DEP)-FF.

(b) Delay (DLA)-GG.

(c) Arrival (ARR)-GG.

(d) Boundary estimate (EST)-FF.*

(e) Modification (CHG)-FF.*

(f) Coordination (CDN)-FF.*

(g) Acceptance (ACP)-FF.*

3. Cancellation (CNL)-GG.*

4. Clearances, flow control (SPL, CHG, CDN)-FF or DD.*

5. Transfer of control (TCX)-FF.*

6. Requests (RQS)-FF.*

7. Position reports (AIREP)-FF.*

c. Flight Information Messages.

1. Traffic information-FF.*

2. Meteorological information (MET)-FF or GG.

3. Operation of aeronautical facilities and essential airport information (NOTAM)-GG.

** Normally exchanged between ATC units via voice circuits.*

d. Technical Messages. Four categories of these messages are specified for use on computer-to-computer circuits only. They will not be sent on AFTN or NADIN circuits.

7-1-4. SERVICE MESSAGES

a. NADIN will immediately generate a service message to an originator when incorrect code or routing indicators are detected.

EXAMPLE-
FF KZKCZQZX
031840 KSLCYTYX
SVC. ZKC121 QTA RPT
FF KZKCZQZX
031840 KSLCYTYX
SVC. ZKC122 QTA MSR

b. Assign the appropriate priority indicator to international service messages. When service messages refer to messages previously transmitted, assign the same priority prefix. Identify a service message by inserting SVC as the first item of the text.

EXAMPLE-
FF TJSJYFYX
DTG KSEAYFYX
SVC. RUMES 231015
(Text)

7-1-5. TRANSMISSION VIA NADIN

International messages are generally introduced on NADIN for relay to AFTN circuits.

a. M1FC facilities use the ICAO flight plan mask or TB mask. Addressee(s): Not to exceed 69 characters or seven addressees, each addressee separated by a space.

b. AIS facilities handle international messages on NADIN for relay to AFTN as follows:

1. Start of message. New Line Key.

2. Preamble (priority, space, addressee(s).

(a) Priority. Two-character precedence field.

(b) Addressee(s). Not to exceed 69 characters or seven addressees, each addressee separated by a space.

(c) End of Line (EOL) new line key.

(d) End of Text (EOT) (enter function).

7-1-6. TRANSMISSION OF ATS MESSAGES

a. Air traffic service messages are interchanged in the international air traffic control system in the following modes:

1. The preferred step-by-step mode wherein each ACC/ARTCC sends forward the full current (updated) flight plan information as the flight progresses.

2. The simultaneous mode wherein information extracted from the filed flight plan (FPL) is sent simultaneously to all ATS units along the route of flight. In this mode, only amendments to the FPL, plus

necessary control information, are forwarded from center to center as the flight progresses.

b. Prepare and transmit ATS messages as set forth in this Order. Address these messages as follows:

1. Include an eight-character addressee indicator for each addressee. There can be no more than one line (69 characters including separating spaces) of addressees. When more than the allowable number of addressees are required, two or more transmissions of the message (each with no more than the allowable number of addresses) must be made. The eight-letter combination addressee indicators are composed as follows:

(a) The four-letter ICAO location indicator; e.g., MPTO. Use only those listed in ICAO DOC 7910 (Location Indicators). Some ICAO eight-character addressees for Mexico and Canada are listed in FAAO 7350.6.

(b) A four-letter designator for the facility type/office, or if no designator has been assigned, affix YXYX for military, ZZZX for aircraft in flight, or YYYX for all other cases; e.g., MTPPYYYX. (See Note.)

REFERENCE-
ICAO DOC 8585, Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

NOTE-
The most frequently used and authorized designators are:
YAYX Government Civil Aviation Authority (FAA Regional Office or Headquarters).
YCYX Rescue Coordination Center (RCC).
YDYX Authority Supervising the Aerodrome.
YFYX Aeronautical Fixed Station (AFSS/FSS/IFSS/-IATSC).
YMYX Meteorological Office (NWS).
YNYX International NOTAM Office (NOF).
YTYX Telecommunications Authority.
YWYX Military Flight Operational Control Center (ACP).
YXYX Military Organization (BASOPS).
YYYX Organization not allocated a two-letter designator.
ZOZX Oceanic Air Traffic Control Center.
ZPZX Air Traffic Service Reporting Office.
ZQZX Computer Facility at ACC/ARTCC.
ZRZX ACC/ARTCC. (Center in charge of a FIR/UIR when the message is relevant to a VFR flight (AMIS)).
ZTZX Aerodrome Control Tower.
ZZZX Aircraft in flight.

(c) A one-letter designator will appear following an air carrier designator to indicate the department or division of the organization addressed.

2. Filing time. A six-digit date/time group indicating the time the message is filed with the AIFSS/AFSS/FSS for transmission.

c. Originator Indicator. Consists of an eight-letter sequence similar to an address indicator, identifying the place of origin and the organization originating the message.

d. Supplementary Address and Origin Information. When the four-letter designators YXYX, ZZZX, or YYYX are used, identify the aircraft operator or organization at the beginning of the text preceding the start-of-ATS data symbol (⟨- -), in the same order as in the addressee(s) and/or originator indicator(s). Where there is more than one such insertion, the last should be followed by the word "stop." Where there are one or more insertions in respect to addressee indicators plus an insertion in respect to the originator indicator, the word FROM is to appear before that relating to the originator.

e. When addressing flight plan messages or related amendments and flight plan cancellation messages to centers, use one of the four-letter designators as follows:

1. If message is relevant to IFR and:

(a) The ARTCC is computer-equipped (U.S. ARTCC's), use ZQZX.

(b) The center is not computer-equipped, use ZRZX.

(c) Relevant to oceanic operations, use ZOZX.

NOTE-
Some centers may request specific addressing different from above. ZTZX and ZPZX are used internationally, but are not used in internal U.S. application.

2. If message is VFR (AMIS), use ZRZX.

3. If SVC or administrative, use ZRZX.

7-1-7. ORIGINATING MESSAGES

a. Messages for ATS purposes may be originated with ATS units by aircraft in flight, or, through local arrangements, a pilot, the operator, or their designated representative.

b. Accept air-filed flight plans or changes in destination information from aircraft inbound from foreign locations and, if requested by the pilot, enter Customs notification service.

c. Do not accept round-robin flight plans to international locations.

d. Do not accept assumed departure flight plans when the destination is in a foreign country other than Canada.

e. Aircraft movement, control, and flight information messages for purposes other than ATS, such as operational control, shall be originated by the pilot, the operator, or their designated representative.

7-1-8. ADDRESSING MESSAGES

a. Addressing the flight plan is determined by the point of departure, the destination, and the FIR boundaries to be penetrated during the course of the flight.

b. Address IFR FPL messages to the ARTCC serving the airport of departure and to all ATS units (including oceanic) providing air traffic control service or concerned with flight along part or the whole of the route to be flown except FAA ATCT's and other conterminous U.S. ARTCC's.

NOTE-
Within the North Atlantic (NAT) Region, FPL's on turbojet aircraft transiting the control areas of Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic, Shanwick Oceanic and Sondrestrom (south of 70 degrees) within 90 nautical miles of the control area boundary, shall be addressed to the adjacent ACC to provide lateral separation. For all other aircraft, a 120 nautical mile proximity limit shall apply.

c. Transmit all IFR FPL's to ARTCC's not less than 1 hour prior to the proposed departure time. Do not hold FPL's until after departure time and transmit as a combined FPL and DEP. Separate FPL and DEP messages must be transmitted.

NOTE-
ICAO flight plans do not require an acknowledgment to the transmitting facility.

d. Address aircraft movement messages only to those ATS units responsible for the provision of relevant service, except when requested by the operator concerned, these messages, when transmitted via the AFTN, may also be routed, as specified by the operator or a representative to:

1. One addressee at the point of intended landing or point of departure.

2. Not more than two operational control units concerned.

e. The ARTCC serving the departure airport shall transmit the DEP message on IFR aircraft to all known recipients of the FPL message. Flights between conterminous U.S. and Canada (excluding Gander Oceanic), Alaska, Hawaii and Puerto Rico do not require DEP messages. Discontinuance of DEP messages affecting the route of flight can only be accomplished by ICAO Regional Air Navigation Agreement.

7-1-9. FLIGHT PLAN FORMS AND INSTRUCTIONS

a. Use the International Flight Plan, FAA Form 7233-4 (see Appendix B), ICAO Model Flight Plan Form displayed in DOC 4444, or M1FC FP MASK and apply the procedures set forth in this section for flight:

NOTE-
Exceptions apply for flights to Canada and Mexico, see Section 4 and Section 5, for procedures.

1. Originating within conterminous U.S. and Canada and destined nonstop to points beyond those areas.

2. Originating within or transiting Pacific Flight Information Regions (FIR's) and destined to or from FIR's beyond the Pacific Region including the North American (NAM) Region.

NOTE-
1. The NAM Region encompasses the conterminous U.S., Alaska, and Canada to the North Pole.

2. FAA Form 7233-1, or Military Form DD-175, and domestic procedures are used for flights in the conterminous U.S., Canada, and the Honolulu, Alaskan, and San Juan domestic control areas.

3. AIS facilities record on the flight plan form the time that a flight plan is filed. This time will constitute evidence of the pilot's intention to comply with Customs, Immigration, and Public Health requirements and will be made available upon request from these authorities.

7-1-10. ICAO ATS MESSAGE FORMAT

The following are examples of ICAO message types most likely to appear on AFTN/NADIN circuits. The number above the data corresponds to the field type numbers on the flight plan form (FAA Form 7233-4) and on the chart of Standard ATS Messages and Their Composition, Appendix B.

a. Departure Message (DEP). ARTCC's are the designated ATS unit responsible for originating and transmitting DEP messages on all IFR aircraft departing airports within their center boundaries. IFR flight plans must be transmitted to ARTCC's at least 1 hour

(c) Item 3, Time. Record time in hours and minutes UTC (four numerics). The time recorded must be the actual time of the aircraft at the position and not the time of origination or transmission of the report.

(d) Item 4, Flight level or altitude. Record flight level as F followed by three numerics when on standard pressure altimeter setting, such as F370. Record altitude in meters followed by M, or in feet followed by FT, when on QNH. Record ASC (level) when climbing, or DES (level) when descending to a new level after passing the significant point.

(e) Item 5, Next position and time over. Record the next reporting point and the estimated time over such reporting point, or record the estimated position that will be reached 1 hour later, according to the position reporting procedures in effect. Use the data conventions specified in subpara 7-1-13b1(b) Item 2, Position, for position. Record time in minutes past the hour (two numerics) or in hours and minutes UTC (four numerics) when necessary.

EXAMPLE-
PSNRP portion of AIREP prepared by De Ridder and addressed to Canadian Pacific Airlines (CPC) in Toronto and Mexico City:

AIS
FF CYYZCPCX MMMXXMZT
122105 KDRIYFYX
ARP CPC583 KBRO 2100 F370 MMTM28
KNEW RB
MMMM R
TO2103]

M1

ORIGIN:KDRIYFYX PRECEDENCE:FF TIME:
ACK:N
ADDR:CYYZCPCX MMMXXMZT
TEXT:ARP CPC583 KBRO 2100 F370 MMTM28
KNEW RB
MMMM R
TO2103

2. Section 2. When reported by the pilot:

(a) Item 6, Estimated Time of Arrival (ETA). Record ETA by the four-letter location indicator of the airport of first intended landing, or if no location indicator exists, the name of the airport followed by the estimated time of arrival at this aerodrome in hours and minutes UTC (four numerics).

(b) Item 7, Endurance. Record fuel in hours and minutes (four numerics).

3. Section 3. A full AIREP comprising a PSNRP, company information, and en route meteorological information.

(a) Item 8, Air temperature. Record PS (plus) or MS (minus), no space, followed by the temperature in degrees centigrade corrected for instrument error and airspeed, such as MS05.

(b) Item 9, Spot wind or mean wind and position. Spot wind is used whenever practical and normally refers to the position given in subpara 7-1-13b1(b) Item 2, Position. When a spot wind is given for any other location, record its position. Whenever it is not practical to record spot wind, record the mean wind between two fixes, followed by the word "mean," and the position of the midpoint between the two fixes. Record wind direction in degrees true (three numerics) and wind speed in knots (two or three numerics), separated by an oblique stroke, such as 345/55. Record the direction of variable winds of a given strength as VRB, such as VRB/10. Record light and variable winds or calm as LV. If wind position is required, record latitude and longitude to the nearest whole degree, using the data convention specified in Item 2, such as 22N180W.

EXAMPLE-
AIREP comprised of PSNRP and aircraft operator information.
AIS
FF CYYZCPCX MMMXXMZT
122105 KDRIYFYX
ARP CPC583 KBRO 2100 F370 MMTM28
MMMX 2248 FUEL 0324
KNEW RB
MMMX R
TO2103

M1

ORIGIN:KDRIYFYX PRECEDENCE:FF TIME:
ACK:N
ADDR:CYYZCPCX MMMXXMZT
TEXT:ARP CPC583 KBRO 2100 F370 MMTM28
MMMX 2248 FUEL 0324
KNEW RB
MMMX R
TO2103

(c) Item 10, Turbulence (TURB). Record severe turbulence as TURB SEV and moderate turbulence as TURB MOD. If turbulence is experienced in cloud, add INC (in cloud). If in subsonic flight, report severe turbulence as soon as possible after occurrence. This requires AIREP SPECIAL. Record and report

moderate turbulence only if encountered within last 10 minutes prior to reaching position in subpara 7-1-13b1(b) Item 2, Position. If in transonic or supersonic flight, report severe or moderate turbulence as soon as possible after occurrence. This requires AIREP SPECIAL.

(d) Item 11, Icing. Record severe icing as ICE SEV, moderate icing as ICE MOD. Report severe icing as soon as possible after occurrence. This requires AIREP SPECIAL. Record and report moderate icing only if encountered within last 10 minutes prior to reaching position in subpara 7-1-13b1(b) Item 2, Position.

(e) Item 12, Supplementary Information. Record data which in the opinion of the pilot-in-command are of aeronautical interest.

(1) Present Weather. Rain (RA), Snow (SN), Freezing rain (FZRA), Funnel cloud (FA) (waterspout or tornado), Thunderstorm (TS) on or near flight path, Front (FRONT).

(2) Clouds. If heights of cloud bases and/or tops can be accurately ascertained, amount of clouds scattered (SCT) if clear intervals predominate, broken (BKN) if cloud masses predominate, or continuous (CNS) type of clouds only if cumulonimbus (CB), and an indication of the bases (BASE) and/or the tops (TOP) together with the respective height indication F (number) or (number) or (number) M/ or (number) FT.

(3) Turbulence and Icing. Moderate turbulence (TURB MOD) if in subsonic flight, or moderate aircraft icing (ICE MOD) observed prior to the last 10 minutes.

(4) D-Value. Reading or radio altimeter minus reading of pressure altimeter set to 1013.2 mb and corrected for calibration and position error; record differences as PS (plus) or MS (minus), no space, followed by the number of meters or feet.

EXAMPLE-
Full AIREP:

AIS
FF CYYZCPCX MMMXXMZT KMIAYMYX
162215 TJSJYFYX
ARP CPC583 2709N05415W 2212 F330
23N056W 59 0035 FUEL 0324 M534 310/60
MEAN 2543N05532W TURB MOD ICE MOD SCT
CB TOP F280
TJSJ RB
TO2214

M1
ORIGIN:TJSJYFYX PRECEDENCE:FF TIME:
ACK:N
ADDR:CYYZCPCX MMMXXMZT KMIAYMYX
TEXT:ARP CPC583 2709N05415W 2212 F330
23N056W 59 0035 FUEL 0324 M534 310/60
MEAN 2543N05532W TURB MOD ICE MOD SCT
CB TOP F280
TJSJ RB
TO2214

NOTE-
Transmit to the WMO office serving the FIR where the report is made.

(5) Operationally Significant Weather Radar Echoes (echo or echo line). True bearing of center of echo or line and distance from aircraft in nautical miles; if appropriate, indicate weather intensifying or weakening and whether no gaps, some gaps, or frequent gaps are observed.

(6) Significant differences between conditions encountered and those forecast for the flight, such as forecast thunderstorms not observed or freezing rain not forecast.

(7) If the position of the phenomenon reported is not the same as the position given under subpara 7-1-13b1(b) Item 2, Position, report it after the phenomenon.

7-1-14. AIREP SPECIALS (ARS)

a. Turbulence. TURB SEV encountered while in subsonic flight is reported as soon as possible after occurrence and requires AIREP SPECIAL. TURB MOD is reported only if encountered within 10 minutes prior to reaching reporting position. If in transonic or supersonic flight, TURB MOD and SEV is reported as soon as possible and requires AIREP SPECIAL.

b. Icing. ICE SEV is reported as soon as possible after occurrence and requires AIREP SPECIAL. ICE MOD is reported only if encountered within last 10 minutes prior to reaching reporting position.

EXAMPLE-
AIS
FF KMIAYMYX
211538 TJSJYFYX
ARS PAA101 5045N02015W 1536 F310 ASC F350 51N030W 21 FUEL 0900 ICE SEV

M1
ORIGIN:TJSJYFYX PRECEDENCE:FF TIME:
ACK:N
ADDR:KMIAYMYX
TEXT: ARS PAA101 5045N02015W 1536 F310 ASC F350 51N030W 21 FUEL 0900 ICE SEV

7-1-15. ARTCC RELAY OF VFR MESSAGES

ARTCC AIS operators shall relay all international VFR flight movement messages to the adjacent AIFSS/AFSS/FSS unless that facility is also an addressee.

NOTE-
If an overseas unit erroneously routes a VFR movement message to an ARTCC, the automatic NADIN switch will not divert it to an AIFSS, AFSS or FSS.

Section 2. CUSTOMS NOTIFICATION AND ADIZ REQUIREMENTS

7-2-1. FLIGHT PLAN/CUSTOMS REQUIREMENTS

Specific flight plan, Customs, and other requirements of individual countries are listed in the FAA International Flight Information Manual, IFIM.

7-2-2. INBOUND PRIVATE AIRCRAFT: CUSTOMS REQUIREMENTS

a. All private aircraft entering U.S. Airspace from a foreign port must provide at least 1 hour advance notice to Customs at the point of first intended landing. Pilots participating in the General Aviation Telephonic Entry (GATE) program are responsible for notifying Customs within the time frame specified by that program. Private aircraft arriving from the following location shall furnish a notice of intended arrival to Customs at the nearest designated airport to point of crossing for the first landing in the U.S.

1. Via the U.S./Mexican border or the Pacific Coast from a foreign place in the Western Hemisphere south of 33 degrees north latitude.

2. From the Gulf of Mexico and Atlantic Coasts from a place in the Western Hemisphere south of 30 degrees north latitude from any place in Mexico.

3. From the U.S. Virgin Islands.

4. From Puerto Rico, which if from Puerto Rico, are conducting VFR flight.

b. This notice must be given at least 1 hour before crossing the U.S. coastline or border. The advance notice of arrival shall include the following:

1. Aircraft registration number.

2. Name of aircraft commander.

3. Number of U.S. citizen passengers.

4. Number of alien passengers.

5. Place of last departure.

6. Estimated time and location of crossing U.S. border/coastline.

7. Estimated time of arrival.

8. Name of intended U.S. airport of first landing.

c. This notice may be furnished directly to Customs by telephone, radio, or other means, or may be furnished through the FAA to Customs.

REFERENCE-
U.S. Customs Guide for Private Flyers.

d. When Customs flight notification service is requested, as indicated by inclusion of ADCUS in remarks, deliver the complete message to the associated Customs office as soon as practical. Relay additional or amended information to Customs in order to properly comply with Customs requirements; e.g., when actual arrival time varies from ETA by more than 15 minutes.

1. Provide the service only for those airports where availability is advertised in the AFD or when requested by GATE participants on flight notification messages. Pilots are responsible for making their own Customs arrangements for other airports.

2. Notify only the Customs office which, in turn, is responsible for notifying other inspection agencies concerned.

e. Prefiled Customs notification requests for flights returning to the U.S. shall be delivered to Customs not earlier than 23 hours in advance.

f. When an airborne aircraft identifies an airport of first intended landing that is not one of the designated airports, and the pilot is not a GATE participant, advise the pilot that this airport is not a designated airport of first landing.

PHRASEOLOGY-
ARE YOU A GATE PARTICIPANT?

And if appropriate

BE ADVISED THAT YOUR DESTINATION IS NOT A U.S. CUSTOMS DESIGNATED FIRST LANDING AIRPORT. WHAT ARE YOUR INTENTIONS?

NOTE-
If a pilot insists on landing at a nondesignated airport, pass this information to nearest U.S. Customs office.

g. When a flight notification message containing ADCUS in remarks identifies a nondesignated airport of first intended landing, and the pilot is not a GATE participant, notify the message originator to advise the pilot that the filed destination is not a designated airport.

PHRASEOLOGY-
ADVISE (aircraft identification) THAT THE FILED DESTINATION IS NOT A U.S. CUSTOMS DESIGNATED FIRST LANDING AIRPORT.

NOTE-
The FAA role in this program is advisory only. Any appearance of action of enforcing compliance shall be avoided. Any questions should be directed to the U.S. Customs Service.

h. AIS Facilities. Record the time of receipt of Customs requests. This time will constitute evidence of the pilot's intention to comply with Customs, Immigration, and Public Health requirements and will be made available upon request from these authorities.

7-2-3. INBOUND PRIVATE AIRCRAFT: ADIZ REQUIREMENTS

a. Unless otherwise authorized by ATC, no person may operate an aircraft into, within, or across an ADIZ unless that person has filed a flight plan with an appropriate aeronautical facility.

b. Unless otherwise authorized by ATC, no person may operate an aircraft into, within, or across an ADIZ unless that aircraft is equipped with a coded radar beacon transponder and automatic pressure altitude reporting equipment having altitude reporting capability that automatically replies to interrogations by transmitting pressure altitude information in 100-foot increments.

NOTE-
This paragraph does not apply to the operation of an aircraft which was not originally certificated with an engine-driven electrical system and which has not subsequently been certified with such a system installed; e.g., a balloon or glider.

c. Pilots of aircraft entering the United States through an ADIZ are required to comply with the provisions of 14 CFR Sections 99.17 and 99.19.

d. Forward information on DVFR aircraft inbound to the U.S. to the appropriate ARTCC facility via NADIN or interphone. Forward actual departure times by interphone. Forward the following information:

1. Aircraft call sign.
2. Number of aircraft.
3. Type of aircraft.
4. Altitude.
5. True airspeed.
6. Time of departure.
7. Point of departure.
8. Route of flight.
9. Destination.
10. Remarks. Estimated time and point of penetration of ADIZ, position reports, revisions to position reports for penetration point, other information deemed necessary for the security control of air traffic.

NOTE-
Further information on ADIZ requirements are contained in 14 CFR Part 99.

Section 3. ALERTING SERVICE

7-3-1. GENERAL

a. Alerting service shall be provided:

1. For all aircraft provided with air traffic control service.

2. Insofar as practical, to all other aircraft having filed a flight plan or otherwise known to an air traffic service.

3. To any aircraft known or believed to be the subject of unlawful interference.

b. Additional information related to ICAO Search and Rescue procedures can be found in ICAO ANNEX 11, Chapter 5, Alerting Service.

c. Apply domestic SAR procedures for the U.S. portion of the flight.

7-3-2. ALERTING PHASES.

a. Air traffic services units shall notify rescue coordination centers immediately when an aircraft is considered to be in a state of emergency in accordance with the following:

1. Uncertainty phase when:

(a) No communication has been received from an aircraft within a period of 30 minutes after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with such aircraft was first made, whichever is the earlier.

(b) An aircraft fails to arrive within 30 minutes of the estimated time of arrival last notified to or estimated by air traffic services units, whichever is later, except when no doubt exists as to the safety of the aircraft and its occupants.

2. Alert phase when:

(a) Following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failed to reveal any news of the aircraft.

(b) An aircraft has been cleared to land and fails to land within five minutes of the estimated time of landing and communication has not been reestablished with the aircraft.

(c) Information has been received which indicates that the operating efficiency of the aircraft has been impaired, but not to the extent that a forced landing is likely.

(d) An aircraft is known or believed to be the subject of unlawful interference.

3. Distress phase when:

(a) Following the alert phase further unsuccessful attempts to establish communication with the aircraft and more widespread unsuccessful inquiries point to the probability that the aircraft is in distress.

(b) The fuel on board is considered to be exhausted or thought to be insufficient to enable the aircraft to reach safety.

(c) Information is received which indicates that the operating efficiency of the aircraft has been impaired to the extent that a forced landing is likely.

(d) Information is received and it is reasonably certain that the aircraft is about to make or has made a forced landing.

b. In addition to the initial notification, the rescue coordination center shall, without delay, be furnished with:

1. Any useful additional information, especially on the development of the state of emergency through subsequent phases.

2. Information that the emergency situation no longer exists.

7-3-3. ALERTING MESSAGE CONTENTS

a. The notification shall contain as much of the following information as is available in the order listed:

NOTE-
For supplemental flight plan information transmit an RQS Message. This information is used in the transmission of the INCERFA.

EXAMPLE-
AIS
FF SVZMZRZX
231247 KMIAYFYX
(RQS-N1234-SVMI-KMIA

M1
ORIGIN: PRECEDENCE:FF TIME: ACK:N
ADDR:SVZMZRZX
TEXT:(RQS-N1234-SVMI-KMIA

1. INCERFA, ALERFA, DETRESFA, as appropriate to the phase of the emergency.

2. Agency and person calling.

3. Nature of the emergency.

4. Significant information from the flight plan.

5. Unit which made last contact, time, and frequency used.

6. Last position report and how determined.

7. Color and distinctive marks of aircraft.

8. Any action taken by reporting office.

9. Other pertinent remark.

EXAMPLE-
AIS (INCERFA)
SS MMMXYAYX
DTG KSANYFYX
(ALR-INCERFA/KSAN/OVERDUE
-N1234S-VG
-C172
-KRNO2000
-MMLP0130
-REQ ACK OR ARR ACFT OVERDUE YOUR STN)

M1 (INCERFA)
ORIGIN:SAN PRECEDENCE:SS TIME: ACK:N
ADDR:MMMXYAYX
TEXT:(ALR-INCERFA/KSANYFYX/OVERDUE
YOUR STATION
-N1234S-VG
-C172-SD/C
-KSAN2000
-N0160A105-DCT TIJ DCT
-MMLP2130 RMK/REQ ACK OR ARR)

AIS (ALERFA)
SS MMMXYAYX
TEXT:(ALR-ALERFA/KSAN/OVERDUE)
(text remains same except for remarks information).

M1 (ALERFA)
ORIGIN: PRECEDENCE:SS TIME: ACK:Y
ADDR:MMMXYAYX
TEXT:(ALR-ALERFA/KSANYFYX/OVERDUE
(text remains same except for remarks information).

AIS (DETRESFA)
SS MMMXYAYX
TEXT:(ALR-DETRESFA/KSAN/OVERDUE
(text remains same except for remarks information).

M1 (DETRESFA)
ORIGIN: PRECEDENCE:SS TIME: ACK:Y
ADDR:MMMXYAYX
TEXT:(ALR-DETRESFA/KSANYFYX/OVERDUE
(text remains same except for remarks information).

b. The cancellation of action initiated by the rescue coordination center is the responsibility of that center.

EXAMPLE-
AIS (CANCELLATION)
SS MMMXYAYX
020618 KMIAYFYX
(ALR-ALERFA/KMIAYFYX/CNL
N1234 LOCATED)

M1 (CANCELLATION)
ORIGIN: PRECEDENCE:SS TIME: ACK:YADDR:MMMXYAYX
TEXT:(ALR-ALERFA/KMIAYFYX/CNL
N1234 LOCATED

NOTE-
Transmit cancellation messages for INCERFA and DETRESFA using same format as above.

Section 4. CANADIAN MOVEMENT AND CONTROL MESSAGES (Transborder Flights Only)

7-4-1. GENERAL

Except as indicated in this section, handle transborder Canadian movement and control messages as described in Sections 1, 2, and 3.

7-4-2. INBOUNDS FROM CANADA

a. M1 will automatically acknowledge and suspense a VFR flight notification message if received in the proper format. Deliver VFR and IFR ADCUS and GATE to U.S. Customs. File IFR messages after delivery.

b. AIS facilities acknowledge receipt of flight notification messages as soon as practical by transmitting the letter R followed by the full aircraft identification; e.g., R N711VR. Suspense VFR flight notification messages until arrival or closure information is received. File IFR messages after delivery.

7-4-3. OUTBOUNDS TO CANADA

a. When Customs notification service is requested advise the pilot to contact Canada's New Private Aircraft Program for Customs (CANPASS) at 888-226-7277 and include ADCUS CANPASS in the remarks section of the flight plan. If the pilot has contacted CANPASS, place ADCUS CANPASS in the remarks section of the flight plan. Process outbound flight plans in accordance with Chapter 6 and subparas 7-4-3d and e.

b. Accept Customs notification requests from in-flight aircraft for relay via flight notification message only for airports of entry where Customs flight notification service is provided and when proposed ETA is during Customs service hours. Place ADCUS in the remark section of the flight notification message.

c. Upon notification of departure of VFR flights, transmit a flight notification message directly to the destination Canadian relay facility. Include ADCUS CANPASS in the remarks.

NOTE-
M1 will format and address a flight notification message to a Canadian destination airport if the proposed flight plan was filed in accordance with subparas 7-4-3d and 7-4-3e.

AIS facilities address messages to the destination relay facility listed in FAAO 7350.6. AIS facilities transmit flight notification messages for VFR flights in accordance with para 6-4-4. Flight notification messages included the type of flight plan as the first item of the notification message. ADCUS CANPASS or ADCUS is required in the remarks as appropriate.

EXAMPLE-
AIS
FF CZYZZFZX
DTG KBUFYFYX
VFR N711VR C182 BUF YYZ 1735
ADCUS CANPASS or ADCUS (if airfiled)

d. IFR Flight Plans

1. ADCUS CANPASS or ADCUS (if airfiled) Flight Plans. M1 facilities, insert an ampersand and the letter C (&C) as the first two entries in the OP field of the FP mask and use the four-letter Canadian location identifier for the destination airport in the AD: field.

EXAMPLE-
M1- AIRFILED
FR:I AI:N1234 AT:C421/R TS:280
DD:DSM TM:P1800 AE:200
RT:DSM..CYYZ
AD:CYYZ TE:0300 RM:$ADCUS
FB:0400 AA:
PD:JOE PILOT
HB:DSM NB:2 CR:R/W TL:
OP:
CP:
TA:2100

EXAMPLE-
M1 - CANPASS
FR:I AI:N1234 AT:C421/R TS:280 DD:DSM TM:P1800 AE:200
RT:DSM..CYYZ
AD:CYYZ TE:0300 RM:$ADCUS CANPASS
FB:0400 AA:
PD:JOE PILOT
HB:DSM NB:2 CR:R/W TL:
OP:&C
CP:CZYZZFZX
TA:2100

2. Send a flight notification message on airfile IFR aircraft that has requested Customs notification. Place ADCUS or ADCUS CANPASS (if prior notification) in the remarks section of the flight notification message.

e. VFR Flight Plans. ADCUS (if airfiled) and ADCUS CANPASS: M1 facilities, insert an ampersand and the letter C (&C) in the OP: field and use the four letter Canadian location identifier for the destination airport in the AD: field.

EXAMPLE-
M1- AIRFILED
FR:V AI:N1234 AT:C150 TS:90 DD:BUF
TM:D1800 AE:045 RT:BUF..CYYZ
AD:CYYZ TE:0030 RM:$ADCUS 2 FB:0330 AA:
PD:JOE PILOT
HB:DSM NB:2 CR:5/W TL:
OP:&C
CP:CZYZZFZX
TA:1830

M1-ADCUS CANPASS
FR:V AI:N1234 AT:C150 TS:90 DD:BUF
TM:P1800 AE:045 RT:BUF..CYYZ
AD:CYYZ TE:0030 RM:$ADCUS CANPASS
FB:0330 AA:
PD:JOE PILOT
HB:DSM NB:2 CR:5/W TL:
OP:&C
CP:CZYZZFZX
TA:1830

f. Refer to the Canada and North Atlantic IFR and VFR supplements to determine Customs hours of service, availability of Customs flight notification service (ADCUS), and the relay facility for infrequently used Airports of Entry not listed in FAAO 7350.6.

g. Suspense VFR messages until acknowledgment is received.

REFERENCE-
Para 8-5-2, Canadian Transborder.

1. If an acknowledgment is not received within 30 minutes after departure, M1 facilities retransmit the message. AIS facilities transmit the contraction REQ ACP (request acceptance) and the complete aircraft identification.

EXAMPLE-
AIS
FF CZYZZFZX
DTG KBUFYFYX
REQ ACP N711VR

2. If acknowledgment is not received within 1 hour after departure, use interphone or telephone to deliver. In any event, assure delivery prior to ETA.

3. Refer to Section B of the Canada and North Atlantic IFR Supplements for Canadian FSS and ACC telephone numbers.

h. When correcting or revising a message, retransmit the complete message preceded by the contraction CHG (change).

EXAMPLE-
AIS
FF CZYZZFZX
DTG KBUFYFYX
CHG VFR N711VR C182 BUF YYZ 1845 ADCUS

M1
ORIGIN: PRECEDENCE:FF TIME: ACK:Y
ADDR:CZYZZFZX
TEXT CHG VFR N711VR C182 BUF YYZ 1845
ADCUS

AIS
FF CZYZZFZX
DTG KBUFYFYX
CHG VFR N711VR C182 BUF YYZ 1845 ADCUS CANPASS

M1
ORIGIN: PRECEDENCE:FF TIME: ACK:Y
ADDR:CZYZZFZX
TEXT: CHG VFR N711VR C182 BUF YYZ 1845
ADCUS CANPASS

i. Do not transmit IFR flight notification messages except for military aircraft or Customs notification purposes.

NOTE-
Canada will not acknowledge receipt of these messages.

j. When available, use interphone or telephone for flights of 30 minutes or less.

7-4-4. OUTBOUNDS TO CANADA DEPARTING FROM OUTSIDE FLIGHT PLAN AREA

Accept flight plans regardless of departure point.

a. Forward VFR flight plan information for aircraft proposing to depart from outside the facility's flight plan area to the tie-in AFSS/FSS for the departure point in the following format:

1. Aircraft identification.
2. Aircraft type.
3. Departure point.
4. Destination.
5. Proposed departure time/ETE.
6. Remarks.

EXAMPLE-
AIS
FF KBUFYFYX
DTG KCLEYFYX
N711VR C182 BUF YYZ P1630/0030 ADCUS CANPASS

b. Forward IFR flight plan information for aircraft proposing to depart from outside the facility's flight plan area in accordance with para 6-3-1, Domestic IFR Flight Plans. If Customs flight notification service (ADCUS) is requested, advise the pilot to contact CANPASS at 888-226-7277; include ADCUS CANPASS information as an intrafacility remark, and transmit the proposal message to both the ARTCC and the tie-in AFSS/FSS as follows:

1. M1 facilities use procedures depicted in subpara 6-2-1a2(g) and note.

2. Enter the ARTCC computer address last.

EXAMPLE-
AIS
FF KAOOYFYX KZOBZQZX
DTG KDCAYFYX
DCA2010001 FP N1234P PA28/A 150 PIT P0200 150 PIT..CIP..DKK..BUF..YYZ/0130 ADCUS CANPASS

c. Identify the tie-in AFSS/FSS, and advise the pilot to report departure time directly to that facility.

NOTE-
While the report may be relayed through another facility, it is the pilot's responsibility to notify the tie-in AFSS/FSS of the departure time.

d. Upon receipt of the departure report, the tie-in AFSS/FSS is responsible for delivery of the flight notification message to Canada.

1. M1 facilities, enter the departure time in the TM: field of the proposed flight plan. Add &C to the OP: field. M1 will automatically transmit the flight notification message.

2. AIS facilities, transmit a flight notification message in accordance with para 6-4-4.

NOTE-
AIS facilities, if a departure report has not been received within 1 hour of the proposed departure time, cancel and file the proposed flight plan.

e. Acknowledgment from the departure point tie-in AFSS/FSS is required for both VFR and IFR proposals.

7-4-5. IFR FLIGHT PLANS DEPARTING FROM CANADIAN AIRPORTS

a. Accept IFR flight plans departing from Canadian airports and destined to Canada or the U.S.

1. Transmit a proposal message in ARTCC HOST computer format to the associated Canadian ACC. Address messages to the ACC listed in FAAO 7350.6.

2. If Customs flight notification service is requested and available, include ADCUS, pilot's name, and number of persons on board with a notation of the number of non-U.S. citizens as an intrafacility remark.

NOTE-
When ADCUS information is included, Canada will transmit an IFR flight notification message to the appropriate U.S. AFSS/FSS upon aircraft departure.

EXAMPLE-
AIS
FF CZYZZQZX
DTG KBUFYFYX
BUF1435009 FP N1234 CV58/D 280 YYZ P1800 100 YYZ V34 ROC/0030 ADCUS 5 JOHN PILOT 2 NON

M1
FR:I AI:N1234 AT:C421/R TS:240 DD:CYYZ TM:P1800 AE:200
RT:CYYZ..ORD..DSM
*AD:DSM TE:0300 RM:*ADCUS 5 DOE 2 NON*
FB:0400 AA: PD:JOHN DOE
HB:DSM NB:5 CR:R/W TL: OP:ZYZ
CP:
TA:2100

b. Canada does not acknowledge for proposal messages. Do not expect or request acknowledgment.

7-4-6. SEARCH AND RESCUE MESSAGES

Provide Search and Rescue, for flights inbound from Canada, in accordance with Chapter 8.

Section 5. MEXICAN MOVEMENT AND CONTROL MESSAGES (Transborder Flights Only)

7-5-1. GENERAL

Except as outlined in this section, handle transborder Mexican movement and control messages as described in Sections 1, 2, and 3. Transborder flight plans to Mexico with oceanic routing require the ICAO flight plan while the domestic flight plan may be used for flights with route over land.

7-5-2. INBOUNDS FROM MEXICO

a. Flight notification messages.

1. M1FC. When received in the proper format, VFR flight notification messages are automatically acknowledged and suspensed. Deliver VFR and IFR ADCUS messages to U.S. Customs. Store IFR ADCUS messages in the M1 DD file.

2. AIS. Acknowledge receipt of a flight notification message as soon as practical by transmitting the letter R followed by the full ACID; e.g., R N7llVR. Deliver VFR and IFR ADCUS messages to U.S. Customs. Suspense VFR flight notification messages until arrival or closure information is received. File IFR messages.

b. Search and Rescue. Provide search and rescue service in accordance with standard format/time increments listed in Section 3, Alerting Service, and Chapter 8, Search and Rescue (SAR) Procedures for VFR Aircraft. The departure station in Mexico is responsible for initiating SAR action until an acknowledgment of the flight notification message is received.

7-5-3. OUTBOUNDS TO MEXICO

a. When customs notification service is requested for an airport-of-entry, include ADCUS, the number of persons on board, and the pilot's name in the remarks section of the flight plan.

NOTE-
Mexican customs regulations require that only international airports-of-entry may be used for first landing.

REFERENCE-
FAAO 7350.6, Location Identifiers.

1. If the pilot still intends to land at a destination other than an airport-of-entry, advise the pilot that the flight plan will not be used for Customs or search and rescue service in Mexico.

2. Transmit the flight notification message to the Regional Flight Dispatch Office, not the destination tie-in station.

NOTE-
If the correct addressee cannot be determined, transmit to the nearest border Regional Flight Dispatch Office.

b. When a pilot files an IFR flight plan and Customs notification service is requested for an airport-of-entry, include ADCUS and the information listed in subpara 7-5-3a. Transmit to the appropriate ARTCC.

NOTE-
Mexico requires notification of an inbound aircraft before its arrival. The inclusion of ADCUS in the remarks section of an IFR flight plan or flight notification message satisfies this requirement.

c. VFR Flight Plans.

1. Upon notification of departure of VFR flights, transmit a flight notification message. When Customs notification service is requested for an airport-of-entry include ADCUS and the information listed in subpara 7-5-3a. Address messages to the ICAO addressee for the appropriate destination location.

2. If a VFR flight plan is filed with a destination other than an airport-of-entry, transmit the flight notification message to the Regional Flight Dispatch Office, not the destination tie-in station. If the correct addressee cannot be determined, transmit to the nearest border Regional Flight Dispatch Office.

NOTE-
Facilities with interphone/telephone capability may relay flight notification messages by this method.

REFERENCE-
FAAO 7350.6, Location Identifiers.

3. M1FC. For automatic addressing and formatting, use V in the flight rules of the domestic flight plan mask. For automatic addressing, use &M in the OP: field. Use the four-letter (ICAO) location identifier for the destination airport. Manually address the message to the designated Regional Flight Dispatch Office.

EXAMPLE-
M1FC
FR:V AI:N1234S AT:C182/A TS:120 DD:SAT TM:D1200
AE:65
RT:SJT..DRT..MMCU
AD:MMCU TE:0400 RM:$ADCUS 4 ZUCHERMANN
FB:0800 AA: PD: A. ZUCHERMANN
HB:SAT NB:4 CR:R/B TL: OP:&M
CP:MMCUXMXO TA:1600

M1FC will automatically address the CP: field if the 4-letter ICAO address is used in the AD: field, &M is used in the OP: field and the destination is an airport-of-entry. Only the tie-in facility will be addressed.

4. AIS. Address messages to the ICAO addressee for the appropriate destination location. Transmit the following information:

(a) Type of flight.

(b) Aircraft identification.

(c) Aircraft type.

(d) Departure point.

(e) Destination.

(f) ETA.

(g) Remarks.

EXAMPLE-
AIS
FF MMCUXMXO
DTG KSJTYFYX
VFR N1234S C182 SJT MMCU 1400 $ADCUS 4ZUCHERMANN

d. If acknowledgment is not received within 30 minutes after departure, transmit a "request acceptance" message to the destination station tie-in addressee and to the Regional Flight Dispatch Office. Manually address the message to the designated Regional Flight Dispatch Office.

REFERENCE-
FAAO 7350.6

EXAMPLE-
AIS
FF MMCUXMXO MMMYXMXO
REQ ACP N1234S

M1FC
ORIGIN:SJT PRECEDENCE:FF TIME:1130
ACK:Y
ADDR:MMCUXMXO MMMYXMXO
REQ ACP N1234S

e. The Regional Flight Dispatch Office involved will then normally send an acknowledgment to the departure station and assume responsibility for the flight notification message.

f. If acknowledgment/acceptance is not received within 1 hour of the departure, use interphone/telephone or other available means to deliver the message to the appropriate Regional Flight Dispatch Office.

g. Do not accept round-robin flight plans to Mexico.

7-5-4. MEXICAN REGIONAL FLIGHT DISPATCH OFFICE TELEPHONE NUMBERS

(See Table 7-5-1.)

Dispatch Office Phone numbers

Mexican Regional Flight Dispatch Office Telephone Numbers		
REGION	*IDENTIFIER*	*TELEPHONE NUMBER*
CENTRO (CENTRAL)	MMMX	01152 5 762-7062 01152 5 784-40-99 ext. 153 01152 5 762-58-77 ext. 153
NORESTE (NORTHEAST)	MMMY	01152 83 454-020 ext. 141
NOROESTE (NORTHWEST)	MMMZ	01152 67 23-114 01152 67 22-075 ext. 140
OCCIDENTE (WEST)	MMGL	01152 36 890-121 ext. 32 and 167
SURESTE (SOUTHEAST)	MMMD	01152 99 231-186 ext. 149

TBL 7-5-1

Section 2. OVERDUE AIRCRAFT ACTION

8-2-1. INITIAL ACTION/QALQ

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

EXAMPLE-
AIS
FF KICTYFYX
DTG KHONYFYX
QALQ N12345

M1FC
ORIGIN:ICT PRECEDENCE:FF TIME: ACK:N
ADDR:MKL
TEXT:QALQ Nl2345

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

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

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

d. Alaska. In addition to subparas 8-2-1a and c, address QALQ, INREQ, or ALNOT messages and replies to PANCYAYX and PAEDYCYX.

NOTE-
RCC's other than Elmendorf AFB (PAEDYCYX) are not on Service B and must be notified by telephone.

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

f. M1FC. Properly formatted QALQ's, INREQ's, ALNOT's, and INCERFA's are automatically placed on the Search and Rescue (SAR) list. Messages are manually deleted from the SAR list using the keyword DM.

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

Upon receipt of the QALQ inquiry, the departure station shall check locally for any information about the aircraft, and take the following action:

a. If the aircraft is located, notify the destination station. The destination station will close the file on the aircraft.

EXAMPLE-
AIS
FF KCOUYFYX
DTG KSBAYFYX
QALQ N12345 C1255

M1FC
ORIGIN:COU PRECEDENCE:FF TIME: ACK:N
ADDR:MKL
TEXT:QALQ Nl2345 C1255

b. If unable to obtain additional information transmit a message to the destination station containing all information not previously sent. Include any verbal or written remarks made by the pilot which may be pertinent to the search. The data transmitted may be obtained from the flight plan information or any other pertinent information located in the DD file. This information can be transmitted using the SV 1, TB, and RV 1 format. Before transmitting, the message will require the correct header to be added to ensure the QALQ reply message is placed on the SAR list.

EXAMPLE-
AIS
FF KPAHYFYX
DTG KLITYFYX
QALQ N12345 C150/X 110 PBF D1235 85
LIT PAH 0130/0400 CLARENCE NEWBERN
601 E 12TH MKC 555-123-4567 2 POB
WHITE/RED

M1FC
ORIGIN:RDU PRECEDENCE:FF TIME: ACK:N
ADDR:PIE
TEXT:QALQ N12345 FR:V AT:C182/T TS:120
DD:EQY TM:D291445 AE:035 RT:EQY..CAE
..ALD..CRG..DAB..ORL..ISM AD:ISM TE:
0400 RM:$REFUEL CRG FB:0430 AA: PD:
MIKE T. BROWN DQY 704-555-1212 NB:2
CR:W/R/B OP: CP:KPIEYFYX TA:291845
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:50 EQY ISM
RMKS:AVFP
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:00 EQY ISM
RMKS:VNR

8-2-3. CANCELLATION OF THE QALQ

If the aircraft is located by the destination station after the QALQ is sent, transmit a cancellation message addressed to all recipients of the QALQ.

EXAMPLE-
AIS
FF KSTLYFYX
DTG KHONYFYX
QALQ N12345 CNLD

M1FC
ORIGIN:JBR PRECEDENCE:FF TIME: ACK:N
ADDR:FOD
TEXT:QALQ Nl2345 CNLD

Section 3. INFORMATION REQUESTS (INREQ'S)

8-3-1. INREQ

If the reply to the QALQ is negative or the aircraft has not been located within 30 minutes after it becomes overdue:

a. The destination station shall transmit a numbered INREQ message to the departure station, flight watch control stations with communication outlets along the route, and other AFSS/FSS's and ARTCC's along the route. In addition, address RCC and DUAT vendors using the collective address KSARYCYX.

1. If the departure airport, route of flight, destination airport or alternate airports are within 50 miles of the Great Lakes, include Cleveland AFSS as an addressee. They will relay to Cleveland RCC.

2. Hawaiian stations shall give preliminary notification to Honolulu SARCC as follows:

(a) Hilo by long distance telephone.

(b) Honolulu AFSS shall use local telephone.

(c) Secondary means for Hilo shall be Service B to Honolulu AFSS and then by telephone between Honolulu AFSS and the SARCC.

b. Include all information in the INREQ message that will assist in search activities.

NOTE-
The National Search and Rescue Plan is outlined in the AIM, Para 6-2-7.

EXAMPLE-
1. AIS
DD (appropriate eight-character identifiers and KSARYCYX)
DTG KLITYFYX
LIT001 (appropriate three-character identifiers)
INREQ N12345 BE36/R 150 PAH D1235
85 PAH LIT FEXHA 1635 DALE CARNINE
601 E. 12TH ST. MKC 555-765-4321 2 POB
BROWN/WHITE (any other information available)

M1FC
ORIGIN:RDU PRECEDENCE:DD TIME:ACK:Y
ADDR:(Appropriate three-character identifiers and KSARYCYX
TEXT:INREQ N12345 FR:V AT:C152/T TS:100
DD:EQY TM:D291445 AE:035 RT:EQY..CAE..
ALD..CRG..DAB..ORL..ISM AD:ISM TE:0400
RM:$REFUEL CRG FB:0430 AA: PD:DAVE
JOHNSON DQY 704-555-1212 NB:1 CR:W/R/B
OP: CP:KPIEYFYX TA:291845
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:50 EQY ISM
RMKS:AVFP
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:00 EQY ISM
RMKS:VNR

2. AIS
DD (appropriate eight-character identifiers and KSARYCYX)
DTG KLITYFYX
LIT001 (appropriate three-character identifiers)
INREQ N12345 BE36/R 150 PAH LIT
DALE CARNINE 601 E. 12TH ST MKC
WIFE REPORTS ETA 1230

M1FC
ORIGIN:OLU PRECEDENCE:DD TIME:ACK:Y
ADDR:(appropriate three-character identifiers and KSARYCYX)
TEXT:INREQ N12345 BE36/R GRI LBF
DALE CARNINE 601 E. 12TH ST MKC
WIFE REPORTS ETA 1230

c. RCC does not have transmit capability. Acknowledgement is not required for messages to RCC.

8-3-2. ACTION UPON RECEIPT OF INREQ

Stations receiving an INREQ shall take the following action:

a. Seek information about the aircraft by checking facility records and all flight plan area airports along the proposed route of flight that could accommodate the aircraft. Notify appropriate ATCT facilities. Reply to the INREQ with a numbered message within 1 hour. If unable to complete the search within 1 hour, forward a status report followed by a final report when the search is complete. If the reply contains pertinent information such as aircraft location or position report, transmit to the destination station.

EXAMPLE-
AIS
DD KLANYFYX
DTG KHONYFYX
HON001 LAN
INREQ N1234A NO SVCS PROVIDED. FPA SRCH INCOMP

AIS
DD KLANYFYX
DTG KHONYFYX
HON002 KLANYFYX
INREQ N1234A NEG INFO

M1FC
ORIGIN:LAN PRECEDENCE:DD TIME: ACK:Y ADDR:HON
TEXT:INREQ Nl234A NO SVCS PROVIDED. FPA SRCH INCOMP
ORIGIN:LAN PRECEDENCE:DD TIME: ACK:Y ADDR:HON
TEXT:INREQ N1234A NEG INFO

NOTE-
Upon receipt of INREQ's and ALNOT's, ATCT's and ARTCC's are required to check facility records, report findings to AFSS/FSS that alerted them within 1 hour, and retain in an active status until canceled.

REFERENCE-
FAAO 7110.65, Para 10-3-4, ALNOT.

b. The destination station shall retransmit the information, as necessary, to all original addressees.

c. Cleveland AFSS. When addressed, shall notify Cleveland U.S. Coast Guard RCC.

d. Hawaiian stations, notify Honolulu SARCC by telephone.

e. Facilities served by the expanded 800 system that have any portion of their incoming calls and/or Service B diverted to another facility shall notify that facility of the INREQ. The facility receiving diverted calls or Service B traffic shall check their records and advise of any information or contact with the aircraft.

8-3-3. CANCELLATION OF INREQ

The INREQ originator shall transmit a numbered cancellation message containing the location of the aircraft to all INREQ addressees when the aircraft is located. Notify associated ATCT facilities.

EXAMPLE-
AIS
DD (appropriate eight-character identifiers including KSARYCYX)
DTG KPAHYFYX
PAH001 (appropriate three-character identifiers)
INREQ N1234A CNLD LCTD BWG

M1FC
ORIGIN:FOD PRECEDENCE:DD TIME: ACK:Y ADDR:(appropriate three-character identifiers and KSARYCYX)TEXT:INREQ Nl234A CNLD LCTD DSM

Section 4. ALERT NOTICES (ALNOT'S)

8-4-1. ALNOT

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

a. Address ALNOT messages to your Regional Operations Center and those facilities within the search area. In addition, address the DUAT vendors and RCC using the collective address KSARYCYX. The search area is normally that area extending 50 miles on either side of the proposed route of flight from the last reported position to the destination. The search area may be expanded to the maximum range of the aircraft at the request of the RCC or by the destination station. If the departure airport, route of flight, destination airport, or alternate airports are within 50 miles of the Great Lakes, include Cleveland AFSS as an addressee. They will relay to the Cleveland RCC.

b. Alaska. Address to PANCYGYX, PANCYAYX, and KSARYCYX. (Only AFSS's/FSS's in the ALNOT search area are required to acknowledge.)

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

EXAMPLE-

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

M1FC
ORIGIN:RDU PRECEDENCE:SS TIME: ACK:N
ADDR:(appropriate ARTCC circuit code as identified in subpara 10-1-4c, other addresses as identified in subpara 8-4-1a and KSARYCYX
TEXT:ALNOT N12345 FR:V AT:C172/T TS:100
DD:EQY TM:D291445 AE:035 RT:EQY..CAE..
ALD..CRG..DAB..ORL..ISM AD:ISM TE:0400
RM:$REFUEL CRG FB:0430 AA: PD:JOHN M.
BROWN DQY 704-555-1212 NB:3 CR:W/R/B
OP: CP:KPIEYFYX TA:291845
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:50 EQY ISM
RMKS:AVFP
A/C ID TIME DEP DESTN
INFLT BRFG: N12345 14:00 EQY ISM
RMKS:VNR

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

NOTE-
RCC (Langley AFB) phone numbers are:
(Direct) 804-764-8112 or 800-851-3051
(Langley AFB operator) 804-764-1110 and ask for extension 48112 or Defense Switching Network 574-8112.

8-4-2. ACTION UPON RECEIPT OF ALNOT

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

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

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

EXAMPLE-

AIS
SS KFODYFYX
DTG KANBYFYX
ALNOT N12345 FLD CK INCOMP

AIS
SS KFODYFYX
DTG KANBYFYX
ALNOT N12345 ACFT LCTD OG DHN

M1FC
ORIGIN:GFK PRECEDENCE:SS TIME: ACK:N
ADDR:COU

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

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

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

8-4-3. REPORTING ALNOT STATUS TO RCC

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

a. Agency and the person calling.

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

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

d. Last position report.

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

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

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

8-4-4. CANCELLATION OF ALNOT

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

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

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

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

Chapter 9. FAA WEATHER SERVICES

Section 1. GENERAL

9-1-1. PURPOSE

Surface meteorological observations are filed at scheduled and unscheduled intervals with stations having sending capability to WMSC for dissemination on the Service A domestic aviation weather system. These reports are aviation routine weather reports (METAR) and aviation selected special weather (SPECI). All reports will include a report type and the six-digit time of the observation. Computer sorting and validation requires exact adherence to format and procedure at all times.

9-1-2. SCHEDULED TRANSMISSION TIMES

a. METAR REPORTS. Prepare and code METAR reports for transmission between H+55 and H+00.

1. M1FC entry, use TA mask and specify H in the time field.

2. AIS entry, use /T procedures between H+46 and H+54. Use /D procedure between H+55 and H+00.

b. SPECI AND DELAYED OR CORRECTED REPORTS. Transmit SPECI, delayed or corrected reports as soon as possible after H+00.

1. M1FC entry, use TA mask and leave the time field blank.

2. AIS entry, use /D procedure.

9-1-3. DISTRIBUTION

Most meteorological and NOTAM data exchanged outside of the facility is dependent on the Weather Message Switching Center Replacement (WMSCR). It is important to adhere to strict format and procedures during normal operations, as well as during system interruption periods.

a. Circuit interruption. Notify your tie-in facility, the AIS Customer Service Center, WMSCR and, if appropriate, the GS-200 Host facility of all outages. The AFSS facility should notify their FSDPS, AWP, and the appropriate telco servicing company.

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

c. AIS and WMSCR telephone numbers are as follows:

1. AIS HELPDESK (800) 804-1310.

2. AIS EMERGENCY OUTAGE HOTLINE (703) 818-5551.

3. WMSCR (KNKAWMSC):
Atlanta 404-926-7931
Salt Lake City 801-320-2046.

Section 2. PILOT WEATHER REPORT(UA/UUA)

9-2-1. GENERAL

Pilot Weather Reports (PIREP's) are filed at unscheduled times with stations having sending capability to WMSCR for dissemination on the Service A domestic aviation weather system. These reports shall be entered into the system as individual reports, not appended to a surface observation. Entry shall only be between H+00 and H+55.

9-2-2. PREPARATION FOR TRANSMISSION

a. M1FC entry, use WY mask. (See para 4-2-4.)

b. AIS entry, use /D procedures.

9-2-3. RESPONSIBILITY

FSS specialists shall actively solicit PIREP's in conjunction with preflight and inflight communications with pilots and assure timely dissemination of the PIREP information. Each facility should make special efforts to obtain PIREP's on departure and arrival weather conditions at airports within their flight plan area.

9-2-4. PIREP DISPLAY

Maintain a PIREP display to conform with the particular requirements of your facility. If it is posted for internal use only, symbology may be used at the facility's discretion. If it is displayed as a pilot self-briefing aid, the use of contractions, such as OVC, shall be applicable.

9-2-5. SOLICITING PIREP'S

a. Solicit PIREP's for the affected area(s) when one or more of the following weather conditions exist, are reported, or forecast to occur:

1. Ceilings at or below 5,000 feet.

2. Visibility reported on the surface or aloft is 5 miles or less.

3. Thunderstorms and related phenomenon.

4. Turbulence of moderate degree or greater.

5. Icing of light degree or greater.

6. Wind shear.

7. Volcanic ash clouds are reported or forecast.

NOTE-
Pilots may forward PIREP's regarding volcanic activity using the format described in the Volcanic Activity Reporting Form (VAR) as depicted in the Aeronautical Information Manual, Appendix 2.

b. Also, solicit PIREP's regardless of weather conditions when:

1. An NWS or ATC facility indicates a need because of a specific weather or flight assistance situation.

2. Necessary to determine flying conditions pertinent to natural hazards (mountain passes, ridges, peaks) between the weather reporting stations.

3. The station is designated as responsible for PIREP's in an offshore coastal area.

c. Flight watch specialists shall solicit sufficient PIREP's to remain aware of flight conditions.

d. To solicit PIREP's within a specific area, broadcast a request on NAVAID's, transcribed broadcast facilities, or a selected communications frequency.

PHRASEOLOGY-
PILOT WEATHER REPORTS ARE REQUESTED (location/area). CONTACT (name) RADIO/FLIGHT WATCH ON (frequency) TO REPORT THESE CONDITIONS.

9-2-6. RECORDING OF PIREP DATA

Record PIREP data directly into M1FC, or on FAA Form 7110-2, or on other material deemed appropriate; e.g., 5" x 8" plain paper.

9-2-7. DATA TO BE INCLUDED IN PIREP'S

Include the following reports of flight conditions, as appropriate:

a. Height and coverage of cloud bases, tops, and layers.

b. Flight visibility.

c. Restrictions to visibility and weather occurring at altitude.

d. Air temperature and changes to temperature with altitude or range.

e. Direction and speed of wind aloft.

f. Extent and intensity of turbulence.

REFERENCE-
Para 9-2-8.

g. Extent, type, and intensity of icing.

REFERENCE-
Para 9-2-9.

h. Weather conditions and cloud cover through mountain passes and over ridges and peaks.

i. Location, extent, and movement of thunderstorms and/or tornadic activity.

j. Excessive winds aloft, LLWS, and other phenomena bearing on safety and efficiency of flight.

9-2-8. REPORTING TURBULENCE IN PIREP'S

a. Turbulence reports should include location, altitude, or range of altitudes, and aircraft type, and should include whether in clouds or clear air. The degree of turbulence, intensity, and duration (occasional, intermittent, and continuous) is determined by the pilot. It is essential that the report is obtained and disseminated when possible in conformance with the U.S. Standard Turbulence Criteria Table as follows:

1. Light. Loose objects in aircraft remain at rest.

2. Moderate. Unsecured objects are dislodged. Occupants feel definite strains against seat belts and shoulder straps.

3. Severe. Occupants thrown violently against seat belts. Momentary loss of aircraft control. Unsecured objects tossed about.

4. Extreme. Aircraft is tossed violently about, impossible to control. May cause structural damage.

b. Report CAT or CHOP if used by the pilot to describe the type of turbulence.

9-2-9. REPORTING ICING CONDITIONS IN PIREP'S

a. Icing reports shall include location, altitude or range of altitudes, type aircraft, air temperature, intensity, and type of icing.

b. Icing types.

1. Rime. Rough, milky, opaque ice formed by the instantaneous freezing of small super-cooled water droplets.

2. Clear. A glossy, clear or translucent ice formed by the relatively slow freezing of large super-cooled water droplets.

3. Mixed. A combination of rime and clear.

c. Icing intensity.

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

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

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

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

9-2-10. MEANS USED TO SOLICIT PIREP'S

Inform pilots of a need for PIREP's. The following methods may be used to collect PIREP's:

a. During preflight weather briefings.

b. On post-flight contacts.

c. During regular air-ground contacts.

d. Broadcast a request on NAVAID frequencies.

e. Append a request on HIWAS, TIBS, VOR-TWEB, or TWEB broadcasts.

f. Request PIREP's from air carrier and military operations offices, military pilot-to-forecaster units, and local aircraft operators.

g. Solicit from other air traffic facilities.

9-2-11. PIREP CLASSIFICATION

Categorize PIREP's as follows:

a. URGENT. The following weather phenomena shall be classified as an URGENT (UUA) PIREP:

1. Tornadoes, funnel clouds, or waterspouts.

2. Severe or extreme turbulence (including clear air turbulence).

3. Severe icing.

4. Hail.

5. Low level wind shear. Classify LLWS PIREP's as UUA if the pilot reports air speed fluctuations of 10 knots or more. Classify reports of LLWS with air speed fluctuations less than 10 knots as routine. If air speed fluctuation is not reported, classify PIREP as UUA.

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

6. Volcanic ash clouds.

7. Any other weather phenomena reported which are considered by the specialist as being hazardous, or potentially hazardous, to flight operations.

b. ROUTINE. Classify as ROUTINE (UA) all PIREP's received except those listed above.

9-2-12. PIREP HANDLING

Upon receipt of a PIREP, accomplish the following:

a. Urgent.

1. Deliver to the ARTCC Weather Coordinator as soon as possible.

2. Deliver to the associated WSO as soon as possible.

3. Enter on Service A at the first opportunity.

4. Use in weather briefings, as appropriate.

b. Routine.

1. Transmit on Service A as soon as practical.

2. Broadcast in accordance with established procedures in Chapter 2.

3. Use in weather briefings, as appropriate.

9-2-13. OFFSHORE COASTAL ROUTES

When your station has been given responsibility for collecting offshore coastal route PIREP's:

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

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

NOTE-
The AT division assigns PIREP responsibility for an offshore coastal area, route, or route segment to a specific station. The area assigned will be within the same ARTCC area as the station, and the station shall have adequate air-ground communications coverage over its assigned offshore area.

9-2-14. PIREP PREPARATION

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

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

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

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

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

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

f. Use only authorized aircraft designators and contractions.

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

h. Omit entries of TEI's, except as listed in subpara 9-2-14b, for which no data was reported.

9-2-15. PIREP FORMAT

Using TEI's as described below, prepare PIREP's for system entry in the following format:

a. UUA or UA. Message type - Urgent or Routine PIREP.

b. /OV.

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

EXAMPLE-
/OV KJFK
/OV KJFK107080
/OV KFMG233016/RM RNO 10SW

2. Route segment. Two or more fixes, as in subparas 9-2-15b1 and b2 examples, to describe a route.

EXAMPLE-
/OV KSTL-KMKC
/OV KSTL090030-KMKC045015

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

EXAMPLE-
/TM 1315

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

EXAMPLE-
/FL093
/FL310
/FLUNKN /RM DURGC

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

EXAMPLE-
/TP AEST
/TP B74A
/TP P28R
/TP UNKN

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

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

EXAMPLE-
/SK OVC100-TOP110/ SKC
/SK OVC015-TOP035/OVC230
/SK OVC-TOP085

2. Use authorized contractions for cloud cover.

EXAMPLE-
BKN
FEW
OVC
SCT
SKC

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

EXAMPLE-
/SK SCT-BKN050-TOP100
/SK BKN-OVCUNKN-TOP060/BKN120-TOP150/ SKC

4. Unknown heights are indicated by the contraction UNKN.

EXAMPLE-
/SK OVC065-TOPUNKN

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

EXAMPLE-
/SK OVC065-TOPUNKN /RM IMC

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

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

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

2. Enter flight weather types using one or more of the standard surface weather reporting symbols contained in TBL 9-2-1.

Weather type and symbols

Type	*METAR Code*
Drifting / Blowing Snow	DRSN/BLSN
Drifting Dust	DRDU
Drifting Sand	DRSA
Drizzle/Freezing Drizzle	DZ/FZDZ
Dust / Blowing Dust	DU/BLDU
Duststorm	DS
Fog (vis < 5/8SM)	FG
Freezing Fog	FZFG
Freezing Rain	FZRA
Funnel Cloud	FC
Hail (aprx 1/4" dia or more)	GR
Hail Shower	SHGR
Haze	HZ
Ice Crystals	IC
Ice Pellets/ Showers	PL/SHPL
Mist (vis > 5/8SM)	BR
Patchy Fog	BCFG
Patchy Fog on part of Arpt	PRFG
Rain / Showers	RA/SHRA
Sand / Blowing Sand	SA/BLSA
Sandstorms	SS
Shallow Fog	MIFG
Sml Hail/Snow Pellet Showers	SHGS
Sml Hail/Snow Pellets	GS

Section 10. METEOROLOGICAL IMPACT STATEMENT (MIS)

9-10-1. GENERAL

A Meteorological Impact Statement (MIS) is an unscheduled planning forecast. It is an air traffic oriented forecast intended for ARTCC, Central Flow Weather Service Unit (CFWSU), Center Flow Control Function (CFCF), and hub terminal air traffic facility specialists responsible for making flow control and flow control-related decisions. It enables these specialists to include the impact of expected, specified local and/or national weather conditions in making these decisions.

9-10-2. CRITERIA

a. The MIS describes adverse weather conditions which are expected to begin generally within 4-to-12 hours after the statement's issuance. It can also describe conditions existing when the CWSU begins daily operations if the existing conditions will continue for at least 3 hours, or it can describe conditions existing at the time a briefing is issued. As a minimum, an MIS will be issued when:

1. Any of the following conditions occur or are forecast to occur:

(a) Conditions meeting Convective SIGMET criteria. (See the Weather Service Operations Manual (WSOM), Chapter D-22.)

(b) Moderate or greater icing.

(c) Moderate or greater turbulence.

(d) Heavy precipitation.

(e) Freezing precipitation.

(f) Conditions at, or approaching, low IFR. (See WSOM, Chapter D-21.)

(g) Surface winds, including gusts of 30 knots or greater.

(h) Low level wind shear (within 2,000 feet of the surface).

(i) Volcanic ash, dust storms, or sandstorms.

2. The above conditions will, in the forecaster's judgment, impact the flow of air traffic within the ARTCC area of responsibility.

3. The forecast lead time (the time between the issuance of an MIS and the onset of the phenomenon), in the forecaster's judgment, is sufficient to make the issuance of a CWA premature or unnecessary.

b. The MIS will describe the location of the phenomenon using ARTCC relevant points of reference, such as VOR's, and will include the height, extent, intensity, and movement of the phenomenon. MIS's will be numbered sequentially, beginning at midnight local time each day. Forecasters should be aware that the MIS is disseminated and stored as a replaceable product. This means that each MIS issuance must contain all of the pertinent and known details of the conditions meeting MIS issuance criteria including the continuing conditions described in previously issued MIS's.

c. The format of the MIS communications header is: (ARTCC designator) MIS (issuance number)(date/time issued in UTC)/(valid until date/time in UTC) (text).

EXAMPLE-
ZJX MIS 02 111345/120100

SCT LVL 3 AND 4 TSTMS ALG N/S RTES S OF ILM AND E OF SAV/OMN LN DVLPG BY 16Z MAX TOPS 350/400 ELSW ZJX AREA LVL 3 AND 4 TSTMS FRMG IN SHRT LNS OR CLUSTERS AFT 17Z WITH FEW RCHG LVL 5 AND 6 CELLS MOVG GENLY SEWD 10 KTS CONT THRU 00Z CONDS LWRG OCNLY TO LIFR IN HVY PCPN AFT 17Z

NOTE-
The format of the MIS communications header must be followed exactly if the product is to be distributed through AIS.

9-10-3. DISTRIBUTION

The MIS will be distributed to ARTCC area supervisors and traffic management coordinators and will be entered through FAA AIS and other communications media to make it available for dissemination to other FAA and NWS facilities, including adjacent CWSU's and locally designated hub terminal facilities. Distribution may be made directly by the CWSU meteorologist or through the weather coordinator position. When a MIS is issued concurrently with a briefing, the MIS will be distributed through those media to facilities mentioned above which do not receive an alphanumeric version of the briefing's contents.

Section 11. CENTER WEATHER ADVISORY (CWA)

9-11-1. GENERAL

A Center Weather Advisory (CWA) is an unscheduled weather advisory. It is issued for the guidance of ARTCC personnel, designated FAA facilities, CFWSU meteorologists, and air crews inflight to anticipate or avoid adverse weather conditions in terminal and en route environments.

9-11-2. CRITERIA

a. The CWA is not a flight planning document. By nature of its short lead time, it reflects weather conditions in existence at the time of issuance or conditions beginning within the next 2 hours. If conditions are expected to persist beyond the time of the valid period and/or if conditions extend beyond the ARTCC area, statements to this effect should be included in the text. The CWSU will issue a CWA:

1. When necessary as a supplement to an existing WS (including WST's), to an existing WA, or to an existing FA section. The issuance of a CWA under these circumstances should be limited to occasions when, in the judgment of the CWSU meteorologist, real time information adequately supports the issuance of a redefining statement update or advanced amendment. Such real time information regarding the phenomenon covered by a NAWAU product may be pilot reports, radar satellite, or information from other sources. The purpose of the CWA, under these circumstances, is to improve or to update the definition of the phenomenon in terms of relevance to users in the ARTCC area regarding the phenomenon's location, movement, extent, and intensity. A CWA, for example, describing an IFR WA's area of low IFR (LIFR) conditions in terms of ARTCC reference points would be a valid redefinition of the location and intensity relevant to the ARTCC's area and would meet documented requirements.

2. When an inflight advisory has not yet been issued, but the observed or expected weather conditions meet WS or WA criteria based on current pilot reports and reinforced by other sources of information concerning existing meteorological conditions. In this situation, the CWSU meteorologist should call the appropriate forecaster at the NAWAU or appropriate Alaska WSFO. If the CWSU forecaster determines that it is necessary to issue a CWA to allow lead time while the WS/WA is being prepared, the CWA will be issued, and the CWA should indicate that a WS/WA will be issued shortly.

3. The CWSU meteorologist may issue a CWA when observed, or developing weather conditions do not meet WS (including WST) or WA criteria but current pilot reports or other weather information sources indicate that an existing, or anticipated, meteorological phenomena will adversely affect the safe flow of air traffic within the ARTCC area of responsibility. In this situation, the data available must be sufficient, in the judgment of the CWSU meteorologist, to support both the issuance of such an advisory and, if necessary, its continuation.

b. The CWA will describe the location of the phenomenon using ARTCC relevant points of reference, such as VOR's, and will include the height, extent, intensity, and movement of the phenomenon. Each CWA will have a phenomenon number (1 through 6) immediately following the ARTCC identifier in the CWA message heading. A separate phenomenon number will be assigned to each meteorologically distinct condition or group of conditions, such as jetstream clear air turbulence or LIFR/icing conditions northwest of a low pressure center. The use of phenomenon numbers make it possible to store and disseminate up to six unrelated CWA conditions with each condition capable of being updated. Forecasters should be aware that the CWA is stored and disseminated as a replaceable product. This means that each subsequent CWA issuance must contain all the pertinent and known details of the conditions meeting CWA issuance criteria, including the continuing conditions described in the previously issued CWA's. CWA's will also be numbered sequentially, beginning at midnight local time each day. The sequential CWA issuance number will be followed by the related two-digit, alphanumeric designator for inflight advisories in effect if applicable. The CWA communications heading will also contain the CWA date/time of issuance in UTC and the "valid until" date/time in UTC. The difference between these two times will not exceed 2 hours.

c. The format of the CWA communications header is: (ARTCC designator)(phenomenon number) CWA (issuance number)/(if applicable, two-digit inflight advisory alphanumeric designator) (date/time issued in UTC)/(valid until date/time in UTC) (text).

EXAMPLE-
ZOB3 CWA 01 032141/032300
LN LVL 5 AND 6 TSTMS 10S DET TO 40N DJB TO 40E SBN TO 80SE MKG MOVG FROM 2525 3/4 INCH HAIL RPRTD LAST 5 MINS 20 SW YIP LVL 4 TO 6 TSTMS CONTG DTW AREA BYD 2300

ZKC1 CWA 01/ALFA 4 121528/121728
NMRS RPTS OF MDT TO SVR ICG 080/090 30 MILE RADIUS OF STL LGT OR NEG ICG RPTD 040/120 RMNDR OF ZKC AREA AND NE OF AREA

NOTE-
The format of the CWA communications header must be followed exactly if the product is to be distributed through the AIS.

9-11-3. DISTRIBUTION

The CWA will be distributed to ARTCC area supervisors and traffic management coordinators and will be entered through FAA AIS and other communications media to make it available for dissemination to other FAA and NWS facilities. Distribution may be made directly by the CWSU meteorologist or through the weather coordinator position.

Chapter 10. DATA COMMUNICATION SYSTEMS

Section 1. GENERAL

10-1-1. TYPES OF DATA ACCEPTABLE ON FAA DATA COMMUNICATIONS SYSTEMS

a. Distress messages.

b. Messages concerning safety to human life.

c. Flight movement/control/safety messages.

d. Aviation meteorological observations/forecasts/warnings.

e. Administrative messages which pertain to FAA personnel, facilities, or property.

f. Notice to Airmen (NOTAM's) data.

10-1-2. PRIORITY MESSAGES

(See TBL 10-1-1.)

Priority Messages

Priority	*Message Types*	*Action Required*
SS	Involves safety of life or property. Restricted to emergency situations.	Transmit immediately to all addressees and deliver to all internal/external offices you are responsible for.
DD	Priority operational and circuit control data.	Same as above.
FF on local agreements	Flight movement and control data relating safe/efficient operation of aircraft. Also for administrative data of a directive nature.	Transmit immediately, make internal/external delivery during next available administrative work day if office is closed. Delivery may be required to duty officer, dependent.
GG	Meteorological, NOTAM and routine administrative data.	Transmit immediately, make internal/external delivery by 10:30AM of the next business day.

TBL 10-1-1

10-1-3. GENERAL NOTICES

a. GENOT's are transmitted by Washington Headquarters Message Center (RWA/KRWAYAYX) via NADIN.

b. RENOT's are transmitted through NADIN by the ROC.

c. All administrative centers (headquarters/regional/aeronautical offices) are staffed 24 hours per day. The FAA Technical Center is only staffed from 0600-2200 local, from Monday through Friday. Messages sent to them will be acknowledged/disseminated as appropriate during those hours.

d. Administrative messages should be restricted to 20 lines of text and 69 characters per line. Messages exceeding this length shall be sent in individual parts. Facilities who miss a RENOT or GENOT should attempt to obtain it from adjacent facilities, then the ROC. ROC will relay requests to RWA for retransmission of GENOT's.

e. Facilities receiving administrative messages shall not acknowledge unless the message is numbered. Message originators desiring an acknowledgement shall add a number line as the first line of text.

EXAMPLE-
DCA002 CLE DAY
(TEXT)

10-1-4. GROUP CODES

a. NADIN has established group codes to allow message originators to input a single address, which will result in dissemination to a selected number of facilities.

b. System-wide group codes have been established for the primary use of RWA/KRWAYAYX and the ATC System Command Center (KCFCZDZX). These codes are KDOMYFYX and KDOMYYYX respectively.

c. A group code has also been established for each regional office and ARTCC primarily for the issuance of RENOT's and all ARTCC instructions. They are as follows for Regional Offices in TBL 10-1-2 and ARTCC's in TBL 10-1-3.

Region Group Code

Region	*ID*	*Region*	*ID*
Alaska	PANCYGYX	Northwest Mountain	XST
Central	XKC	Southern	XTL
Eastern	XNY	Southwest	XFE
Great Lakes	XGC	Western-Pacific	XLA
New England	XBW		

TBL 10-1-2

ARTCC Group Code

ARTCC	*ID*	*ARTCC*	*ID*
Albuquerque	XXI	Kansas City	XXS
Atlanta	XXN	Los Angeles	XXF
Boston	XXU	Memphis	XXM
Chicago	XXC	Miami	XXL
Cleveland	XXD	Minneapolis	XXE
Denver	XXO	New York	XXR
Ft. Worth	XXJ	Oakland	XXG
Houston	XXH	Salt Lake City	XXP
Indianapolis	XXA	Seattle	XXT
Jacksonville	XXK	Washington	XXQ

TBL 10-1-3

NOTE-
All of the group codes can be converted to a full eight-character address by placing a K in front of and YFYX following the three characters listed in TBL 10-1-2 and TBL 10-1-3.

d. Several other group codes exist for addressing selected groups of ATC facilities. To support MTR data transmission specifically, additional two-letter codes were developed to include all FSS facilities within particular states or areas. Those states with only one FSS, or those with all M1FC facilities, are not included in these codes. All M1FC facilities are served by the address KAWPYFYX. The two-letter identifiers are as follows in TBL 10-1-4:

Two-letter identifiers

AK	AR	CA	KY	NC	PA
TN	WA	WV			

TBL 10-1-4

e. In addition, the following seven-group codes were established that include multiple states:

KFSSYFCE (CENTRAL AREA)

AR-IN-IL-KY-MO-TN

KFSSYFEA (EAST COAST AREA)

MD-NC-NJ-VA-WV

KFSSYFNE (NORTHEAST AREA)

CT-ME-VT

KFSSYFNP (NORTHERN PLAINS AREA)

ID-MT-ND-NE-SD-WY

KFSSYFSE (SOUTHEAST AREA)

AL-FL-GA

KFSSYFWC (WEST COAST AREA)

AZ-CA-NV-OR

f. M1FC contains a group code for Drug Enforcement Agency (DEA). All VFR flight plans are automatically transmitted to the destination and DEA at the time of activation.

g. The group code KSARYCYX has been established to assist in the processing of INREQ's and ALNOT's.

10-1-5. MESSAGE FORMATS

a. Personnel should adhere to the transmit formats defined for systems in use; i.e., M1FC, AIS. Failure to comply can result in the message being rejected by either NADIN or WMSC. This may result in non-delivery to the intended recipients.

b. Full keyboard punctuation is allowed on all messages destined for internal FAA, DOD, NWS dissemination. For international dissemination, punctuation should be limited to those characters identified in pertinent ICAO documents.

c. Contractions and abbreviations should be used to shorten data transmissions to the extent possible. In no case should one be used that is not documented in FAAO 7340.1, Contractions. For international communications, be aware that the foreign correspondent may not understand all FAA contractions and may not

have a full command of the English language. Care should be exercised in international communications to avoid slang phrases and non-ICAO approved abbreviations.

d. RQ/WQ. This message is used when requesting an individual report(s). It consists of the keywords /RQ for AIS or VM for M1FC for individual requests from the global and local data base; /WQ for AIS or NS RQ for M1FC for individual reports from WMSC. To avoid circuit congestion, requests for this type of data may not exceed one line. The following kinds of data may be requested using these keywords: SA, NTM, FD1, FD2, FD3, SW, SD, and FT. The reply to the request for an SA will include the basic METAR and any subsequent Specials (SPECI), amendment, or correction. It will also include all current NOTAM's and PIREP's (UA/UUA) for that weather location. A request for SP will return only the METAR and any SPECI's for that hour. The response to NOTAM requests will include all current NOTAM's for the NOTAM file specified, while requests for an FD or FT will include the current forecast and the latest amendments issued.

NOTE-
This procedure is adequate to facilitate reviewing weather trends; but for briefing purposes, the SA request should be used to ensure all en route and/or terminal NOTAM data pertinent to the flight is available.

EXAMPLE-
(This example is a request for the latest hourly observation and terminal forecast for JFK from WMSC.)
AIS
/WQ JFK SA JFK FT

M1FC
NS RQ JFK SA JFK FT

EXAMPLE-
(To obtain headers when requesting FD data, the input message should contain the word DATA when requesting U.S. FD's and FCST when requesting Canadian FD's.)

AIS
/RQ DATA FD1 SFO FD1 FCST FD1
YYZ FD1

M1FC
NS RQ DATA FD1 SFO FD1 FCST FD1
YYZ FD1

e. WC. This message is used for requesting information, such as that contained in the SACA20 KWBC, which is available at the WMSC in collective form only. Only five collectives shall be called for in a request.

EXAMPLE-
AIS
/WC SACA20 KWBC

f. RC. This message is used to retrieve a collective from the local data base. Non-AIS facilities use it for retrieving data listed in subpara 10-1-5e. Limit requests to one at a time.

EXAMPLE-
M1FC
NS RC SACA20 KWBC

g. RL/WL. The RL function has been set aside for the use of the AWP in M1FC. The AWP is the only facility able to use the RL keyword in M1FC. The WL function should be coordinated with WMSC prior to use by a AIS facility. This message is used in requesting a group of reports, forecasts, or a mixture of these to meet specific requirements. In this type of message, information is requested by specifying a single predetermined list. Only one list may be requested in each message. The lists are intended to provide groupings of individual reports, such as the observations and/or forecasts for all locations in a metropolitan area or along an airway.

10-1-6. WMSCR NEGATIVE RESPONSE MESSAGES

a. WMSCR automatically generates a negative response to request/reply inputs for which it cannot deliver.

1. NO REPORT AVBL. This response means the current data has not been received by WMSCR.

2. NOT IN SYSTEM. This response means WMSCR does not receive and store the requested data.

3. INVALID FORMAT. This response means the computer cannot process the request because of an input error.

b. WMSCR will generate only one negative response message to an RQ transmission that requests multiple reports and only when none of the data requested can be delivered.

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

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

EXAMPLE-
"San Angelo Radio."

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

EXAMPLE-
"Burlington Flight Service."
"Miami Flight Service."

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

EXAMPLE-
"Chanute G-C-A."
"Corpus Christi G-C-A."
"Davison G-C-A."

14-1-15. AIRCRAFT IDENTIFICATION

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

EXAMPLE-
"Bonanza One Two Three Four Tango."
"Douglas Three Zero Five Romeo."
"Jet Commander One Four Two Four."
"November One Two Three Four Golf."

NOTE-
The prefix November denotes a U.S. aircraft registry.

1. Air carrier and other civil aircraft having FAA authorized call signs. State the call sign, in accordance with FAAO 7340.1, Contractions, followed by the flight number in group form.

EXAMPLE-
"American Five Twenty-One."
"Commuter Six Eleven."
"General Motors Thirty-Fifteen."
"Eastern Ten Zero Four."
"Delta One Hundred."

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

EXAMPLE-
"American Five Twenty-One American."
"Commuter Six Eleven Commuter."
"General Motors Thirty-Seven General Motors."

REFERENCE-
FAAO 7210.3, Para 2-1-2, Facility Standard Operation Procedures Directive.

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

EXAMPLE-
On initial contact.
"Tango Mooney Five Five Five Two Quebec."
or
"Tango November Five Five Five Two Quebec."
On subsequent contacts.
"Mooney Five Two Quebec."
or
"November Five Two Quebec."

b. Lifeguard aircraft.

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

EXAMPLE-
"LIFEGUARD Delta Fifty-One."

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

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

EXAMPLE-
"LIFEGUARD Two Six Four Six X-Ray."

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

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

EXAMPLE-
"Air Guard Copter Two Six Three."
"Army Copter Three Two One Seven Six."
"Coast Guard Six One Three Two Seven."
"Navy Five Six Seven One Three."

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

EXAMPLE-
"Army Copter Three Two One Seven Six Army Copter."
"Coast Guard Six One Three Two Seven Coast Guard."

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

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

EXAMPLE-
"AIR EVAC One Seven Six Five Two."

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

EXAMPLE-
"Air Force RESCUE Six One Five Seven Niner."

(c) Air Mobility Command. REACH.

EXAMPLE-
"REACH Seven Eight Five Six Two."

(d) Special Air Mission. U-S-SAM.

EXAMPLE-
"U-S-SAM Niner One Five Six Two."

(e) USAF Contract Aircraft. LOGAIR.

EXAMPLE-
"LOGAIR Seven Five Eight Two Six."

4. Military tactical and training.

(a) U.S. Air Force, Air National Guard, Military District of Washington priority aircraft, and USAF civil disturbance aircraft. Pronounceable words of three, four, five, or six letters followed by a four-, three-, two-, or one-digit number.

EXAMPLE-
"Okey One Five Seven."
"Pokey Four."
"Slug Two Zero."

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

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

EXAMPLE-
"Marine Four Charlie Two Three Six."
"Navy Golf Alpha Two One."

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

EXAMPLE-
"Alpha Kilo One Five."

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

d. Foreign registry. State one of the following:

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

EXAMPLE-
"Stationair F-L-R-B."
"C-F-L-R-B."
"Canadian Foxtrot Lima Romeo Bravo."

NOTE-
Letters may be spoken individually or phonetically.

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

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

EXAMPLE-
"Air France F-L-R-L-G."

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

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

EXAMPLE-
"Scandinavian Six Eight."
"Scandinavian Sixty-Eight."

3. Military, except Canada.

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

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

(c) The Transport Command of the Canadian Armed Force shall be identified by the words Canadian Military.

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

EXAMPLE-
"Brazilian Air Force Five Three Two Seven Six."
"CANFORCE Five Six Two Seven."

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 Federal Aviation Regulations (FAR's) 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:

AIRCRAFT CONFLICT (ATP-110)
AIRCRAFT LIST (ACL) (ATP-110)
AIRSPACE CONFLICT (ATP-110)
ALERT (ATP-110)
ARRIVAL STREAM FILTER (ASF) (ATP-110)
AUTOMATED PROBLEM DETECTION (APD) (ATP-110)
AUTOMATED PROBLEM DETECTION BOUNDARY (APB) (ATP-110)
AUTOMATED PROBLEM DETECTION INHIBITED AREA (APDIA) (ATP-110)
AUTOMATED UNICOM (ATP-120)
ATC PREFERRED ROUTE NOTIFICATION (ATP-110)
ATC PREFERRED ROUTES (ATP-110)
CONFORMANCE (ATP-110)
CONFORMANCE REGION (ATP-110)
CONTINUE (ATP-120)
CURRENT PLAN (ATP-110)
GRAPHIC PLAN DISPLAY (GPD) (ATP-110)
PLANS DISPLAY (ATP-110)
RECONFORMANCE (ATP-110)
ROUTE ACTION NOTIFICATION (ATP-110)
SPECIAL ACTIVITY AIRSPACE (SAA) (ATP-110)
STRATEGIC PLANNING (ATP-110)
TRAJECTORY (ATP-110)
TRAJECTORY MODELING (ATP-110)
TRIAL PLAN (ATP-110)

USER REQUEST EVALUATION TOOL (URET) (ATP-110)
USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT (URET CCLD) (ATP-110)
WIND GRID DISPLAY (ATP-110)

A

AAI-
(See ARRIVAL AIRCRAFT INTERVAL.)

AAR-
(See AIRPORT ARRIVAL RATE.)

ABBREVIATED IFR FLIGHT PLANS- An authorization by ATC requiring pilots to submit only that information needed for the purpose of ATC. It includes only a small portion of the usual IFR flight plan information. In certain instances, this may be only aircraft identification, location, and pilot request. Other information may be requested if needed by ATC for separation/control purposes. It is frequently used by aircraft which are airborne and desire an instrument approach or by aircraft which are on the ground and desire a climb to VFR-on-top.
(See VFR-ON-TOP.)
(Refer to AIM.)

ABEAM- An aircraft is "abeam" a fix, point, or object when that fix, point, or object is approximately 90 degrees to the right or left of the aircraft track. Abeam indicates a general position rather than a precise point.

ABORT- To terminate a preplanned aircraft maneuver; e.g., an aborted takeoff.

ACC [ICAO]-
(See ICAO term AREA CONTROL CENTER.)

ACCELERATE-STOP DISTANCE AVAILABLE- The runway plus stopway length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff.

ACCELERATE-STOP DISTANCE AVAILABLE [ICAO]- The length of the take-off run available plus the length of the stopway if provided.

ACDO-
(See AIR CARRIER DISTRICT OFFICE.)

ACKNOWLEDGE- Let me know that you have received my message.
(See ICAO term ACKNOWLEDGE.)

ACKNOWLEDGE [ICAO]- Let me know that you have received and understood this message.

ACL-
(See AIRCRAFT LIST.)

ACLS-
(See AUTOMATIC CARRIER LANDING SYSTEM.)

ACLT-
(See ACTUAL CALCULATED LANDING TIME.)

ACROBATIC FLIGHT- An intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.
(Refer to Part 91.)
(See ICAO term ACROBATIC FLIGHT.)

ACROBATIC FLIGHT [ICAO]- Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

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

ACTUAL CALCULATED LANDING TIME- ACLT is a flight's frozen calculated landing time. An actual time determined at freeze calculated landing time (FCLT) or meter list display interval (MLDI) for the 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 vertex time of arrival (VTA) of the aircraft or the tentative calculated landing time (TCLT)/ACLT of the previous aircraft plus the arrival aircraft interval (AAI), whichever is later. This time will not be updated in response to the aircraft's progress.

ACTUAL NAVIGATION PERFORMANCE (ANP)–
(See REQUIRED NAVIGATION PERFORMANCE.)

ADDITIONAL SERVICES- Advisory information provided by ATC which includes but is not limited to the following:

a. Traffic advisories.

b. Vectors, when requested by the pilot, to assist aircraft receiving traffic advisories to avoid observed traffic.

c. Altitude deviation information of 300 feet or more from an assigned altitude as observed on a verified (reading correctly) automatic altitude readout (Mode C.)

d. Advisories that traffic is no longer a factor.

e. Weather and chaff information.

f. Weather assistance.

g. Bird activity information.

h. Holding pattern surveillance. Additional services are provided to the extent possible contingent only upon the controller's capability to fit them into the performance of higher priority duties and on the basis of limitations of the radar, volume of traffic, frequency congestion, and controller workload. The controller has complete discretion for determining if he/she is able to provide or continue to provide a service in a particular case. The controller's reason not to provide or continue to provide a service in a particular case is not subject to question by the pilot and need not be made known to him/her.

(See TRAFFIC ADVISORIES.)

(Refer to AIM.)

ADF-

(See AUTOMATIC DIRECTION FINDER.)

ADIZ-

(See AIR DEFENSE IDENTIFICATION ZONE.)

ADLY-

(See ARRIVAL DELAY.)

ADMINISTRATOR- The Federal Aviation Administrator or any person to whom he/she has delegated his/her authority in the matter concerned.

ADR-

(See AIRPORT DEPARTURE RATE.)

ADVISE INTENTIONS- Tell me what you plan to do.

ADVISORY- Advice and information provided to assist pilots in the safe conduct of flight and aircraft movement.

(See ADVISORY SERVICE.)

ADVISORY FREQUENCY- The appropriate frequency to be used for Airport Advisory Service.

(See LOCAL AIRPORT ADVISORY.)

(See UNICOM.)

(Refer to ADVISORY CIRCULAR NO. 90-42.)

(Refer to AIM.)

ADVISORY SERVICE- Advice and information provided by a facility to assist pilots in the safe conduct of flight and aircraft movement.

(See LOCAL AIRPORT ADVISORY.)

(See TRAFFIC ADVISORIES.)

(See SAFETY ALERT.)

(See ADDITIONAL SERVICES.)

(See RADAR ADVISORY.)

(See EN ROUTE FLIGHT ADVISORY SERVICE.)

(Refer to AIM.)

AERIAL REFUELING- A procedure used by the military to transfer fuel from one aircraft to another during flight.

(Refer to VFR/IFR Wall Planning Charts.)

AERODROME- A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure, and movement of aircraft.

AERODROME BEACON [ICAO]- Aeronautical beacon used to indicate the location of an aerodrome from the air.

AERODROME CONTROL SERVICE [ICAO]- Air traffic control service for aerodrome traffic.

AERODROME CONTROL TOWER [ICAO]- A unit established to provide air traffic control service to aerodrome traffic.

AERODROME ELEVATION [ICAO]- The elevation of the highest point of the landing area.

AERODROME TRAFFIC CIRCUIT [ICAO]- The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

AERONAUTICAL BEACON- A visual NAVAID displaying flashes of white and/or colored light to indicate the location of an airport, a heliport, a landmark, a certain point of a Federal airway in mountainous terrain, or an obstruction.

(See AIRPORT ROTATING BEACON.)

(Refer to AIM.)

AERONAUTICAL CHART- A map used in air navigation containing all or part of the following: topographic features, hazards and obstructions, navigation aids, navigation routes, designated airspace, and airports. Commonly used aeronautical charts are:

a. Sectional Aeronautical Charts (1:500,000)- Designed for visual navigation of slow or medium speed aircraft. Topographic information on these charts features the portrayal of relief and a judicious selection of visual check points for VFR flight. Aeronautical information includes visual and radio aids to navigation, airports, controlled airspace, restricted areas, obstructions, and related data.

b. VFR Terminal Area Charts (1:250,000)- Depict Class B airspace which provides for the control or segregation of all the aircraft within Class B airspace. The chart depicts topographic information and aeronautical information which includes visual and radio aids to navigation, airports, controlled airspace, restricted areas, obstructions, and related data.

c. World Aeronautical Charts (WAC) (1:1,000,000)- Provide a standard series of aeronautical charts covering land areas of the world at a size and scale convenient for navigation by moderate speed aircraft. Topographic information includes cities and towns, principal roads, railroads, distinctive landmarks, drainage, and relief. Aeronautical information includes visual and radio aids to navigation, airports, airways, restricted areas, obstructions, and other pertinent data.

d. En Route Low Altitude Charts- Provide aeronautical information for en route instrument navigation (IFR) in the low altitude stratum. Information includes the portrayal of airways, limits of controlled airspace, position identification and frequencies of radio aids, selected airports, minimum en route and minimum obstruction clearance altitudes, airway distances, reporting points, restricted areas, and related data. Area charts, which are a part of this series, furnish terminal data at a larger scale in congested areas.

e. En Route High Altitude Charts- Provide aeronautical information for en route instrument navigation (IFR) in the high altitude stratum. Information includes the portrayal of jet routes, identification and frequencies of radio aids, selected airports, distances, time zones, special use airspace, and related information.

f. Instrument Approach Procedures (IAP) Charts- Portray the aeronautical data which is required to execute an instrument approach to an airport. These charts depict the procedures, including all related data, and the airport diagram. Each procedure is designated for use with a specific type of electronic navigation system including NDB, TACAN, VOR, ILS/MLS, and RNAV. These charts are identified by the type of navigational aid(s) which provide final approach guidance.

g. Instrument Departure Procedure (DP) Charts- Designed to expedite clearance delivery and to facilitate transition between takeoff and en route operations. Each DP is presented as a separate chart and may serve a single airport or more than one airport in a given geographical location.

h. Standard Terminal Arrival (STAR) Charts- Designed to expedite air traffic control arrival procedures and to facilitate transition between en route and instrument approach operations. Each STAR procedure is presented as a separate chart and may serve a single airport or more than one airport in a given geographical location.

i. Airport Taxi Charts- Designed to expedite the efficient and safe flow of ground traffic at an airport. These charts are identified by the official airport name; e.g., Washington National Airport.

(See ICAO term AERONAUTICAL CHART.)

AERONAUTICAL CHART [ICAO]- A representation of a portion of the earth, its culture and relief, specifically designated to meet the requirements of air navigation.

AERONAUTICAL INFORMATION MANUAL- A primary FAA publication whose purpose is to instruct airmen about operating in the National Airspace System of the U.S. It provides basic flight information, ATC Procedures and general instructional information concerning health, medical facts, factors affecting flight safety, accident and hazard reporting, and types of aeronautical charts and their use.

AERONAUTICAL INFORMATION PUBLICATION [AIP] [ICAO]- A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

A/FD-

(See AIRPORT/FACILITY DIRECTORY.)

AFFIRMATIVE- Yes.

AIM-

(See AERONAUTICAL INFORMATION MANUAL.)

AIP [ICAO]-

(See AERONAUTICAL INFORMATION PUBLICATION.)

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

AIR CARRIER DISTRICT OFFICE- An FAA field office serving an assigned geographical area, staffed with Flight Standards personnel serving the aviation industry and the general public on matters related to the certification and operation of scheduled air carriers and other large aircraft operations.

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 shall 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 next higher category should be used. For example, an aircraft which falls in Category A, but is circling to land at a speed in excess of 91 knots, should 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 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 more than 255,000 pounds 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 255,000 pounds.

c. Small- Aircraft of 41,000 pounds or less maximum certificated takeoff weight.

(Refer to AIM.)

AIRCRAFT CONFLICT- Predicted conflict, within URET CCLD, 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 CORE CAPABILITY LIMITED DEPLOYMENT.)

AIRCRAFT LIST (ACL)- A view available with URET CCLD 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 CORE CAPABILITY LIMITED DEPLOYMENT.)

AIRCRAFT SURGE LAUNCH AND RECOVERY- Procedures used at USAF bases to provide increased launch and recovery rates in instrument flight rules conditions. ASLAR is based on:

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

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

AIR DEFENSE EMERGENCY- A military emergency condition declared by a designated authority. This condition exists when an attack upon the continental U.S., Alaska, Canada, or U.S. installations in Greenland by hostile aircraft or missiles is considered probable, is imminent, or is taking place.

(Refer to AIM.)

AIR DEFENSE IDENTIFICATION ZONE- The area of airspace over land or water, extending upward from the surface, within which the ready identification, the location, and the control of aircraft are required in the interest of national security.

a. Domestic Air Defense Identification Zone. An ADIZ within the United States along an international boundary of the United States.

b. Coastal Air Defense Identification Zone. An ADIZ over the coastal waters of the United States.

c. Distant Early Warning Identification Zone (DEWIZ.) An ADIZ over the coastal waters of the State of Alaska.

ADIZ locations and operating and flight plan requirements for civil aircraft operations are specified in FAR Part 99.

(Refer to AIM.)

AIRMAN'S METEOROLOGICAL INFORMATION-

(See AIRMET.)

AIRMET- In-flight weather advisories issued only to amend the area forecast concerning weather phenomena which are of operational interest to all aircraft and

potentially hazardous to aircraft having limited capability because of lack of equipment, instrumentation, or pilot qualifications. AIRMET's concern weather of less severity than that covered by SIGMET's or Convective SIGMET's. AIRMET's cover moderate icing, moderate turbulence, sustained winds of 30 knots or more at the surface, widespread areas of ceilings less than 1,000 feet and/or visibility less than 3 miles, and extensive mountain obscurement.

(See AWW.)

(See SIGMET.)

(See CONVECTIVE SIGMET.)

(See CWA.)

(Refer to AIM.)

AIR NAVIGATION FACILITY- Any facility used in, available for use in, or designed for use in, aid of air navigation, including landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio-directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing and take-off of aircraft.

(See NAVIGATIONAL AID.)

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

AIRPORT ADVISORY AREA- The area within ten miles of an airport without a control tower or where the tower is not in operation, and on which a Flight Service Station is located.

(See LOCAL AIRPORT ADVISORY.)

(Refer to AIM.)

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

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

AIRPORT ELEVATION- The highest point of an airport's usable runways measured in feet from mean sea level.

(See TOUCHDOWN ZONE ELEVATION.)

(See ICAO term AERODROME ELEVATION.)

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

AIRPORT INFORMATION AID-

(See AIRPORT INFORMATION DESK.)

AIRPORT INFORMATION DESK- An airport unmanned facility designed for pilot self-service briefing, flight planning, and filing of flight plans.

(Refer to AIM.)

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

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

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

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

3. SSALF- Simplified Short Approach Light System with Sequenced Flashing Lights.

4. SSALR- Simplified Short Approach Light System with Runway Alignment Indicator Lights.

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

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

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

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

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

(Refer to FAAO 6850.2, VISUAL GUIDANCE LIGHTING SYSTEMS.)

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

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

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

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

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

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

h. Boundary Lights- Lights defining the perimeter of an airport or landing area.

(Refer to AIM.)

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

a. Visual.

b. Nonprecision instrument.

c. Precision instrument.

(Refer to AIM.)

AIRPORT MOVEMENT AREA SAFETY SYSTEM (AMASS)- A software enhancement to ASDE radar which provides logic predicting the path of aircraft landing and/or departing, and aircraft and/or vehicular movements on runways. Visual and aural alarms are activated when logic projects a potential collision.

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

AIRPORT RESERVATION OFFICE- Office responsible for monitoring the operation of the high density rule. Receives and processes requests for IFR operations at high density traffic airports.

AIRPORT ROTATING BEACON- A visual NAVAID operated at many airports. At civil airports, alternating white and green flashes indicate the location of the airport. At military airports, the beacons flash alternately white and green, but are differentiated from civil beacons by dualpeaked (two quick) white flashes between the green flashes.

(See SPECIAL VFR OPERATIONS.)

(See INSTRUMENT FLIGHT RULES.)

(Refer to AIM.)

(See ICAO term AERODROME BEACON.)

AIRPORT SURFACE DETECTION EQUIPMENT- Radar equipment specifically designed to detect all principal features on the surface of an airport, including aircraft and vehicular traffic, and to present the entire image on a radar indicator console in the control tower. Used to augment visual observation by tower personnel of aircraft and/or vehicular movements on runways and taxiways.

AIRPORT SURVEILLANCE RADAR- Approach control radar used to detect and display an aircraft's position in the terminal area. ASR provides range and azimuth information but does not provide elevation data. Coverage of the ASR can extend up to 60 miles.

AIRPORT TAXI CHARTS-

(See AERONAUTICAL CHART.)

AIRPORT TRAFFIC CONTROL SERVICE- A service provided by a control tower for aircraft operating on the movement area and in the vicinity of an airport.

(See MOVEMENT AREA.)

(See TOWER.)

(See ICAO term AERODROME CONTROL SERVICE.)

AIRPORT TRAFFIC CONTROL TOWER-

(See TOWER.)

AIR ROUTE SURVEILLANCE RADAR- Air route traffic control center (ARTCC) radar used primarily to detect and display an aircraft's position while en route between terminal areas. The ARSR enables controllers to provide radar air traffic control service when aircraft are within the ARSR coverage. In some instances, ARSR may enable an ARTCC to provide terminal radar services similar to but usually more limited than those provided by a radar approach control.

AIR ROUTE TRAFFIC CONTROL CENTER- A facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace and principally during the en route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to VFR aircraft.

(See NAS STAGE A.)

(See EN ROUTE AIR TRAFFIC CONTROL SERVICES.)

(Refer to AIM.)

AIRSPACE CONFLICT- Predicted conflict of an aircraft and active Special Activity Airspace (SAA).

AIRSPACE HIERARCHY- Within the airspace classes, there is a hierarchy and, in the event of an overlap of airspace: Class A preempts Class B, Class B preempts Class C, Class C preempts Class D, Class D preempts Class E, and Class E preempts Class G.

AIRSPEED- The speed of an aircraft relative to its surrounding air mass. The unqualified term "airspeed" means one of the following:

a. Indicated Airspeed- The speed shown on the aircraft airspeed indicator. This is the speed used in pilot/controller communications under the general term "airspeed."

(Refer to FAR Part 1.)

b. True Airspeed- The airspeed of an aircraft relative to undisturbed air. Used primarily in flight planning and en route portion of flight. When used in pilot/controller communications, it is referred to as "true airspeed" and not shortened to "airspeed."

AIRSTART- The starting of an aircraft engine while the aircraft is airborne, preceded by engine shutdown during training flights or by actual engine failure.

AIR TAXI- Used to describe a helicopter/VTOL aircraft movement conducted above the surface but normally not above 100 feet AGL. The aircraft may proceed either via hover taxi or flight at speeds more than 20 knots. The pilot is solely responsible for selecting a safe airspeed/altitude for the operation being conducted.

(See HOVER TAXI.)

(Refer to AIM.)

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 manoeuvering 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. FAR 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 manoeuvering area between aircraft and obstructions; and

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- An Air Traffic Tactical Operations facility consisting of four operational units.

a. Central Flow Control Function (CFCF). Responsible for coordination and approval of all major intercenter flow control restrictions on a system basis in order to obtain maximum utilization of the airspace.

(See QUOTA FLOW CONTROL.)

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

(See ALTITUDE RESERVATION.)

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

(Refer to FAR Part 93.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

d. ATC Contingency Command Post. A facility which enables the FAA to manage the ATC system when significant portions of the system's capabilities have been lost or are threatened.

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.

AIRWAY- A Class E airspace area established in the form of a corridor, the centerline of which is defined by radio navigational aids.

(See FEDERAL AIRWAYS.)

(Refer to FAR Part 71.)

(Refer to AIM.)

(See ICAO term AIRWAY.)

AIRWAY [ICAO]- A control area or portion thereof established in the form of corridor equipped with radio navigational aids.

AIRWAY BEACON- Used to mark airway segments in remote mountain areas. The light flashes Morse Code to identify the beacon site.

(Refer to AIM.)

AIT-

(See AUTOMATED INFORMATION TRANSFER.)

ALERFA (Alert Phase) [ICAO]- A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

ALERT- A notification to a position that there is an aircraft-to-aircraft or aircraft-to airspace conflict, as detected by Automated Problem Detection (APD).

ALERT AREA-

(See SPECIAL USE AIRSPACE.)

ALERT NOTICE- A request originated by a flight service station (FSS) or an air route traffic control center (ARTCC) for an extensive communication search for overdue, unreported, or missing aircraft.

ALERTING SERVICE- A service provided to notify appropriate organizations regarding aircraft in need of

search and rescue aid and assist such organizations as required.

ALNOT- (See ALERT NOTICE.)

ALONG TRACK DISTANCE (LTD) - The distance measured from a point-in-space by systems using area navigation reference capabilities that are not subject to slant range errors.

ALPHANUMERIC DISPLAY- Letters and numerals used to show identification, altitude, beacon code, and other information concerning a target on a radar display.

(See AUTOMATED RADAR TERMINAL SYSTEMS.)

(See NAS STAGE A.)

ALTERNATE AERODROME [ICAO]- An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing.

Note: The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for the flight.

ALTERNATE AIRPORT- An airport at which an aircraft may land if a landing at the intended airport becomes inadvisable.

(See ICAO term ALTERNATE AERODROME.)

ALTIMETER SETTING- The barometric pressure reading used to adjust a pressure altimeter for variations in existing atmospheric pressure or to the standard altimeter setting (29.92.)

(Refer to FAR Part 91.)

(Refer to AIM.)

ALTITUDE- The height of a level, point, or object measured in feet Above Ground Level (AGL) or from Mean Sea Level (MSL.)

(See FLIGHT LEVEL.)

a. MSL Altitude- Altitude expressed in feet measured from mean sea level.

b. AGL Altitude- Altitude expressed in feet measured above ground level.

c. Indicated Altitude- The altitude as shown by an altimeter. On a pressure or barometric altimeter it is altitude as shown uncorrected for instrument error and uncompensated for variation from standard atmospheric conditions.

(See ICAO term ALTITUDE.)

ALTITUDE [ICAO]- The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL.)

ALTITUDE READOUT- An aircraft's altitude, transmitted via the Mode C transponder feature, that is visually displayed in 100-foot increments on a radar scope having readout capability.

(See AUTOMATED RADAR TERMINAL SYSTEMS.)

(See NAS STAGE A.)

(See ALPHANUMERIC DISPLAY.)

(Refer to AIM.)

ALTITUDE RESERVATION- Airspace utilization under prescribed conditions normally employed for the mass movement of aircraft or other special user requirements which cannot otherwise be accomplished. ALTRV's are approved by the appropriate FAA facility.

(See AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER.)

ALTITUDE RESTRICTION- An altitude or altitudes, stated in the order flown, which are to be maintained until reaching a specific point or time. Altitude restrictions may be issued by ATC due to traffic, terrain, or other airspace considerations.

ALTITUDE RESTRICTIONS ARE CANCELED- Adherence to previously imposed altitude restrictions is no longer required during a climb or descent.

ALTRV-

(See ALTITUDE RESERVATION.)

AMASS-

(See AIRPORT MOVEMENT AREA SAFETY SYSTEM.)

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 INSTRUMENT APPROACH PROCEDURE.)

(See CLEARED APPROACH.)

(Refer to AIM and FAR 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.

(Refer to AIM.)

(See ICAO term APPROACH CONTROL SERVICE.)

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 IFR Altitude- MIA.)

(See Minimum En Route Altitude- MEA.)

(See Minimum Obstruction Clearance Altitude- MOCA.)

(See Minimum Vectoring Altitude- MVA.)

APPROPRIATE TERRAIN CLEARANCE MINIMUM ALTITUDE- Any of the following:

(See Minimum IFR Altitude- MIA.)

(See Minimum En Route Altitude- MEA.)

(See Minimum Obstruction Clearance Altitude- MOCA.)

(See Minimum Vectoring Altitude- MVA.)

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 ICAO term for 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- Area Navigation (RNAV) provides enhanced navigational capability to the pilot. RNAV equipment can compute the airplane position, actual track and ground speed and then provide meaningful information relative to a route of flight selected by the pilot. Typical equipment will provide the pilot with distance, time, bearing and crosstrack error relative to the selected "TO" or "active" waypoint and the selected route. Several distinctly different

navigational systems with different navigational performance characteristics are capable of providing area navigational functions. Present day RNAV includes INS, LORAN, VOR/DME, and GPS systems. Modern multi-sensor systems can integrate one or more of the above systems to provide a more accurate and reliable navigational system. Due to the different levels of performance, area navigational capabilities can satisfy different levels of required navigational performance (RNP). The major types of equipment are:

a. VORTAC referenced or Course Line Computer (CLC) systems, which account for the greatest number of RNAV units in use. To function, the CLC must be within the service range of a VORTAC.

b. OMEGA/VLF, although two separate systems, can be considered as one operationally. A long-range navigation system based upon Very Low Frequency radio signals transmitted from a total of 17 stations worldwide.

c. Inertial (INS) systems, which are totally self-contained and require no information from external references. They provide aircraft position and navigation information in response to signals resulting from inertial effects on components within the system.

d. MLS Area Navigation (MLS/RNAV), which provides area navigation with reference to an MLS ground facility.

e. LORAN-C is a long-range radio navigation system that uses ground waves transmitted at low frequency to provide user position information at ranges of up to 600 to 1,200 nautical miles at both en route and approach altitudes. The usable signal coverage areas are determined by the signal-to-noise ratio, the envelope-to-cycle difference, and the geometric relationship between the positions of the user and the transmitting stations.

f. GPS-is a space-base radio positioning, navigation, and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis, to an unlimited number of properly equipped users. The system is unaffected by weather, and provides a worldwide common grid reference system.

(See ICAO term AREA NAVIGATION.)

AREA NAVIGATION [ICAO]- A method of navigation which permits aircraft operation on any desired flight path within the coverage of station-referenced navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

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 IAF's 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 IAF's.

c. STANDARD I- An RNAV approach design for a single runway with both corner IAF's 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. TAA's 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 STREAM FILTER (ASF)- An on/off filter that allows the conflict notification function to be inhibited for arrival streams into single or multiple airports to prevent nuisance alerts.

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 ARRIVAL STREAM FILTER.)

ASLAR-
(See AIRCRAFT SURGE LAUNCH AND RECOVERY.)

ASP-
(See ARRIVAL SEQUENCING PROGRAM.)

ASR-
(See AIRPORT SURVEILLANCE RADAR.)

ASR APPROACH-
(See SURVEILLANCE APPROACH.)

ATC-
(See AIR TRAFFIC CONTROL.)

ATCAA-
(See ATC ASSIGNED AIRSPACE.)

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 FAR Part 91.)

ATC PREFERRED ROUTE NOTIFICATION- URET CCLD 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 CORE CAPABILITY LIMITED DEPLOYMENT.)

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

ATCRBS-

(See RADAR.)

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

ATCSCC-

(See AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER.)

ATCSCC DELAY FACTOR- The amount of delay calculated to be assigned prior to departure.

ATCT-

(See TOWER.)

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.

ATTS-

(See AUTOMATED TERMINAL TRACKING SYSTEM.)

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.

(See COUPLED APPROACH.)

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.

AUTOMATED INFORMATION TRANSFER- A pre-coordinated 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 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 CCLD performs conflict detection.

(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT.)

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- The generic term for the ultimate in functional capability afforded by several automation systems. Each differs in functional capabilities and equipment. ARTS plus a suffix roman numeral denotes a specific system. A following letter indicates a major modification to that system. In general, an ARTS displays for the terminal controller aircraft identification, flight plan data, other flight associated information; e.g., altitude, speed, and aircraft position symbols in conjunction with his radar presentation. Normal radar co-exists with the alphanumeric display. In addition to enhancing visualization of the air traffic situation, ARTS facilitate intra/inter-facility transfer and coordination of flight information. These capabilities are enabled by specially designed computers and subsystems tailored to the radar and communications equipments and operational requirements of each automated facility. Modular design permits adoption of improvements in computer software and electronic technologies as they become available while retaining the characteristics unique to each system.

a. ARTS II. A programmable nontracking, computer-aided display subsystem capable of modular expansion. ARTS II systems provide a level of

automated air traffic control capability at terminals having low to medium activity. Flight identification and altitude may be associated with the display of secondary radar targets. The system has the capability of communicating with ARTCC's and other ARTS II, IIA, III, and IIIA facilities.

b. ARTS IIA. A programmable radar-tracking computer subsystem capable of modular expansion. The ARTS IIA detects, tracks, and predicts secondary radar targets. The targets are displayed by means of computer-generated symbols, ground speed, and flight plan data. Although it does not track primary radar targets, they are displayed coincident with the secondary radar as well as the symbols and alphanumerics. The system has the capability of communicating with ARTCC's and other ARTS II, IIA, III, and IIIA facilities.

c. ARTS III. The Beacon Tracking Level of the modular programmable automated radar terminal system in use at medium to high activity terminals. ARTS III detects, tracks, and predicts secondary radar-derived 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 it does not track primary targets, they are displayed coincident with the secondary radar as well as the symbols and alphanumerics. The system has the capability of communicating with ARTCC's and other ARTS III facilities.

d. 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.

AUTOMATED TERMINAL TRACKING SYSTEM (ATTS)- ATTS is used to identify the numerous tracking systems including ARTS IIA, ARTS IIE, ARTS IIIA, ARTS IIIE, STARS, and M-EARTS.

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 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 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."
(Refer to AIM.)
(See ICAO term AUTOMATIC TERMINAL INFORMATION SERVICE.)

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.

CLEARANCE LIMIT- The fix, point, or location to which an aircraft is cleared when issued an air traffic clearance.
(See ICAO term CLEARANCE LIMIT.)

CLEARANCE LIMIT [ICAO]- The point of which an aircraft is granted an air traffic control clearance.

CLEARANCE VOID IF NOT OFF BY (TIME)- Used by ATC to advise an aircraft that the departure clearance is automatically canceled if takeoff is not made prior to a specified time. The pilot must obtain a new clearance or cancel his IFR flight plan if not off by the specified time.
(See ICAO term CLEARANCE VOID TIME.)

CLEARANCE VOID TIME [ICAO]- A time specified by an air traffic control unit at which a clearance ceases to be valid unless the aircraft concerned has already taken action to comply therewith.

CLEARED AS FILED- Means the aircraft is cleared to proceed in accordance with the route of flight filed in the flight plan. This clearance does not include the altitude, DP, or DP Transition.
(See REQUEST FULL ROUTE CLEARANCE.)
(Refer to AIM.)

CLEARED (Type of) APPROACH- ATC authorization for an aircraft to execute a specific instrument approach procedure to an airport; e.g., "Cleared ILS Runway Three Six Approach."
(See INSTRUMENT APPROACH PROCEDURE.)
(See APPROACH CLEARANCE.)
(Refer to AIM.)
(Refer to FAR Part 91.)

CLEARED APPROACH- ATC authorization for an aircraft to execute any standard or special instrument approach procedure for that airport. Normally, an aircraft will be cleared for a specific instrument approach procedure.
(See INSTRUMENT APPROACH PROCEDURE.)
(See CLEARED (TYPE OF) APPROACH.)
(Refer to AIM.)
(Refer to Part 91.)

CLEARED FOR TAKEOFF- ATC authorization for an aircraft to depart. It is predicated on known traffic and known physical airport conditions.

CLEARED FOR THE OPTION- ATC authorization for an aircraft to make a touch-and-go, low approach, missed approach, stop and go, or full stop landing at the discretion of the pilot. It is normally used in training so that an instructor can evaluate a student's performance under changing situations.
(See OPTION APPROACH.)
(Refer to AIM.)

CLEARED THROUGH- ATC authorization for an aircraft to make intermediate stops at specified airports without refiling a flight plan while en route to the clearance limit.

CLEARED TO LAND- ATC authorization for an aircraft to land. It is predicated on known traffic and known physical airport conditions.

CLEARWAY- An area beyond the takeoff runway under the control of airport authorities within which terrain or fixed obstacles may not extend above specified limits. These areas may be required for certain turbine-powered operations and the size and upward slope of the clearway will differ depending on when the aircraft was certificated.
(Refer to FAR Part 1.)

CLIMBOUT- That portion of flight operation between takeoff and the initial cruising altitude.

CLIMB TO VFR- ATC authorization for an aircraft to climb to VFR conditions within Class B, C, D, and E surface areas when the only weather limitation is restricted visibility. The aircraft must remain clear of clouds while climbing to VFR.
(See SPECIAL VFR CONDITIONS.)
(Refer to AIM.)

CLOSE PARALLEL RUNWAYS- Two parallel runways whose extended centerlines are separated by less than 4,300 feet, having a Precision Runway Monitoring (PRM) system that permits simultaneous independent ILS approaches.

CLOSED RUNWAY- A runway that is unusable for aircraft operations. Only the airport management/military operations office can close a runway.

CLOSED TRAFFIC- Successive operations involving takeoffs and landings or low approaches where the aircraft does not exit the traffic pattern.

CLOUD– A cloud is a visible accumulation of minute water droplets and/or ice particles in the atmosphere above the Earth's surface. Cloud differs from ground fog, fog, or ice fog only in that the latter are, by definition, in contact with the Earth's surface.

CLT-
(See CALCULATED LANDING TIME.)

CLUTTER- In radar operations, clutter refers to the reception and visual display of radar returns caused by

precipitation, chaff, terrain, numerous aircraft targets, or other phenomena. Such returns may limit or preclude ATC from providing services based on radar.

(See GROUND CLUTTER.)

(See CHAFF.)

(See PRECIPITATION.)

(See TARGET.)

(See ICAO term RADAR CLUTTER.)

CMNPS-

(See CANADIAN MINIMUM NAVIGATION PERFORMANCE SPECIFICATION AIRSPACE.)

COASTAL FIX- A navigation aid or intersection where an aircraft transitions between the domestic route structure and the oceanic route structure.

CODES- The number assigned to a particular multiple pulse reply signal transmitted by a transponder.

(See DISCRETE CODE.)

COMBINED CENTER-RAPCON- An air traffic facility which combines the functions of an ARTCC and a radar approach control facility.

(See AIR ROUTE TRAFFIC CONTROL CENTER.)

(See RADAR APPROACH CONTROL FACILITY.)

COMMON POINT- A significant point over which two or more aircraft will report passing or have reported passing before proceeding on the same or diverging tracks. To establish/maintain longitudinal separation, a controller may determine a common point not originally in the aircraft's flight plan and then clear the aircraft to fly over the point.

(See SIGNIFICANT POINT.)

COMMON PORTION-

(See COMMON ROUTE.)

COMMON ROUTE- That segment of a North American Route between the inland navigation facility and the coastal fix.

COMMON TRAFFIC ADVISORY FREQUENCY (CTAF)- A frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating control tower. The CTAF may be a UNICOM, Multicom, FSS, or tower frequency and is identified in appropriate aeronautical publications.

(Refer to AC 90-42, Traffic Advisory Practices at Airports Without Operating Control Towers.)

COMPASS LOCATOR- A low power, low or medium frequency (L/MF) radio beacon installed at the site of the outer or middle marker of an instrument landing system (ILS). It can be used for navigation at distances of approximately 15 miles or as authorized in the approach procedure.

a. Outer Compass Locator (LOM)- A compass locator installed at the site of the outer marker of an instrument landing system.

(See OUTER MARKER.)

b. Middle Compass Locator (LMM)- A compass locator installed at the site of the middle marker of an instrument landing system.

(See MIDDLE MARKER.)

(See ICAO term LOCATOR.)

COMPASS ROSE- A circle, graduated in degrees, printed on some charts or marked on the ground at an airport. It is used as a reference to either true or magnetic direction.

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."

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 conflictions 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 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.

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 FAR Part 91 (for specific operating requirements, please refer to FAR 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 FAR 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 airspaces 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, an outer circle with a 10NM radius that extends from 1,200 feet to 4,000 feet above the airport elevation and an outer area. 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 DEPARTURE TIME PROGRAMS- These programs are the flow control process whereby aircraft are held on the ground at the departure airport when delays are projected to occur in either the en route system or the terminal of intended landing. The purpose of these programs is to reduce congestion in the air traffic system or to limit the duration of airborne holding in the arrival center or terminal area. A CDT is a specific departure slot shown on the flight plan as an expected departure clearance time (EDCT).

CONTROLLED TIME OF ARRIVAL- The original estimated time of arrival adjusted by the ATCSCC ground delay factor.

CONTROLLER-

(See AIR TRAFFIC CONTROL SPECIALIST.)

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

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.

CONVECTIVE SIGMET- A weather advisory concerning convective weather significant to the safety of all aircraft. Convective SIGMET's 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 $^{4}/_{10}$ (40%) or more, and hail $^{3}/_{4}$ inch or greater.

(See AWW.)
(See SIGMET.)
(See CWA.)
(See AIRMET.)
(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.

(See AUTOLAND APPROACH.)

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.

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 RADIAL.)
(See INSTRUMENT LANDING SYSTEM.)
(See MICROWAVE LANDING SYSTEM.)

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 MINIMUM IFR ALTITUDES.)
(See ALTITUDE RESTRICTION.)
(Refer to FAR 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 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 FAR's 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 FAR's 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 TMS 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 CONTROL AREA [ICAO].)

CTAF-

(See COMMON TRAFFIC ADVISORY FREQUENCY.)

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.)

G

GATE HOLD PROCEDURES- Procedures at selected airports to hold aircraft at the gate or other ground location whenever departure delays exceed or are anticipated to exceed 15 minutes. The sequence for departure will be maintained in accordance with initial call-up unless modified by flow control restrictions. Pilots should monitor the ground control/clearance delivery frequency for engine start/taxi advisories or new proposed start/taxi time if the delay changes.
(See FLOW CONTROL.)

GCA-
(See GROUND CONTROLLED APPROACH.)

GENERAL AVIATION- That portion of civil aviation which encompasses all facets of aviation except air carriers holding a certificate of public convenience and necessity from the Civil Aeronautics Board and large aircraft commercial operators.
(See ICAO term GENERAL AVIATION.)

GENERAL AVIATION [ICAO]- All civil aviation operations other than scheduled air services and nonscheduled air transport operations for remuneration or hire.

GEO MAP- The digitized map markings associated with the ASR-9 Radar System.

GLIDEPATH-
(See GLIDESLOPE.)

GLIDEPATH INTERCEPT ALTITUDE-
(See GLIDESLOPE INTERCEPT ALTITUDE.)

GLIDESLOPE- Provides vertical guidance for aircraft during approach and landing. The glideslope/glidepath is based on the following:

a. Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS/MLS, or

b. Visual ground aids, such as VASI, which provide vertical guidance for a VFR approach or for the visual portion of an instrument approach and landing.

c. PAR. Used by ATC to inform an aircraft making a PAR approach of its vertical position (elevation) relative to the descent profile.
(See ICAO term GLIDEPATH.)

GLIDEPATH [ICAO]- A descent profile determined for vertical guidance during a final approach.

GLIDESLOPE INTERCEPT ALTITUDE- The minimum altitude to intercept the glideslope/path on a precision approach. The intersection of the published intercept altitude with the glideslope/path, designated on Government charts by the lightning bolt symbol, is the precision FAF; however, when the approach chart shows an alternative lower glideslope intercept altitude, and ATC directs a lower altitude, the resultant lower intercept position is then the FAF.
(See FINAL APPROACH FIX.)
(See SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE.)

GLOBAL POSITIONING SYSTEM (GPS)- A space-base radio positioning, navigation, and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis, to an unlimited number of properly equipped users. The system is unaffected by weather, and provides a worldwide common grid reference system. The GPS concept is predicated upon accurate and continuous knowledge of the spatial position of each satellite in the system with respect to time and distance from a transmitting satellite to the user. The GPS receiver automatically selects appropriate signals from the satellites in view and translates these into three-dimensional position, velocity, and time. System accuracy for civil users is normally 100 meters horizontally.

GO AHEAD- Proceed with your message. Not to be used for any other purpose.

GO AROUND- Instructions for a pilot to abandon his approach to landing. Additional instructions may follow. Unless otherwise advised by ATC, a VFR aircraft or an aircraft conducting visual approach should overfly the runway while climbing to traffic pattern altitude and enter the traffic pattern via the crosswind leg. A pilot on an IFR flight plan making an instrument approach should execute the published missed approach procedure or proceed as instructed by ATC; e.g., "Go around" (additional instructions if required).
(See LOW APPROACH.)
(See MISSED APPROACH.)

GPD-
(See GRAPHIC PLAN DISPLAY.)

GPS-
(See GLOBAL POSITIONING SYSTEM.)

GRAPHIC PLAN DISPLAY (GPD)- A view available with URET CCLD that provides a graphic display of aircraft, traffic, and notification of predicted conflicts. Graphic routes for Current Plans and Trial Plans are displayed upon controller request.
(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT.)

GROUND CLUTTER- A pattern produced on the radar scope by ground returns which may degrade other radar returns in the affected area. The effect of ground clutter is minimized by the use of moving target indicator (MTI) circuits in the radar equipment resulting in a radar presentation which displays only targets which are in motion.
(See CLUTTER.)

GROUND COMMUNICATION OUTLET (GCO)- An unstaffed, remotely controlled, ground/ground communications facility. Pilots at uncontrolled airports may contact ATC and FSS via VHF to a telephone connection to obtain an instrument clearance or close a VFR or IFR flight plan. They may also get an updated weather briefing prior to take-off. Pilots will use four "key clicks" on the VHF radio to contact the appropriate ATC facility or six "key clicks " to contact the FSS. The GCO system is intended to be used only on the ground.

GROUND CONTROLLED APPROACH- A radar approach system operated from the ground by air traffic control personnel transmitting instructions to the pilot by radio. The approach may be conducted with surveillance radar (ASR) only or with both surveillance and precision approach radar (PAR). Usage of the term "GCA" by pilots is discouraged except when referring to a GCA facility. Pilots should specifically request a "PAR" approach when a precision radar approach is desired or request an "ASR" or "surveillance" approach when a nonprecision radar approach is desired.
(See RADAR APPROACH.)

GROUND DELAY- The amount of delay attributed to ATC, encountered prior to departure, usually associated with a CDT program.

GROUND SPEED- The speed of an aircraft relative to the surface of the earth.

GROUND STOP- Normally, the last initiative to be utilized; this method mandates that the terminal facility will not allow any departures to enter the ARTCC airspace until further notified.

GROUND VISIBILITY-
(See VISIBILITY.)

P

P TIME-
(See PROPOSED DEPARTURE TIME.)

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.)

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.

PIDP-
(See PROGRAMMABLE INDICATOR DATA PROCESSOR.)

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 FAR Part 91.)

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 wishes and conducting the climb or descent at any rate he wishes. He may temporarily level off at any intermediate altitude. However, once he has vacated an altitude, he may not return to that altitude.

PILOT WEATHER REPORT- A report of meteorological phenomena encountered by aircraft in flight.
(Refer to AIM.)

PIREP-
(See PILOT WEATHER REPORT.)

PLANS DISPLAY- A display available in URET CCLD 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 CORE CAPABILITY LIMITED DEPLOYMENT.)

POINT OUT-
(See RADAR POINT OUT.)

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.

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.

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

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 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.

PREFERENTIAL ROUTES- Preferential routes (PDR's, PAR's, and PDAR's) 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. PDAR's 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.)

(See NAS STAGE A.)

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 DP's and STAR's and may be defined by airways, jet routes, direct routes between NAVAID's, Waypoints, NAVAID radials/DME, or any combinations thereof.

(See INSTRUMENT DEPARTURE PROCEDURE.)

(See STANDARD TERMINAL ARRIVAL.)

(See PREFERENTIAL ROUTES.)

(See CENTER'S AREA.)

(Refer to AIRPORT/FACILITY DIRECTORY.)

(Refer to NOTICES TO AIRMEN PUBLICATION.)

PRE-FLIGHT PILOT BRIEFING-

(See PILOT BRIEFING.)

PREVAILING VISIBILITY-

(See VISIBILITY.)

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 manoeuvre 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.

PROGRAMMABLE INDICATOR DATA PROCESSOR- The PIDP is a modification to the AN/TPX-42 interrogator system currently installed in fixed RAPCON's. 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 ARTCC's.

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.

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 a scheduled flight will depart the gate (scheduled operators) or the actual runway off time for nonscheduled operators. For EDCT purposes, the ATCSCC adjusts the "P" time for scheduled operators to reflect the runway off times.

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.)

PTS-
(See POLAR TRACK STRUCTURE.)

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.

by the pilot, to observe and note deviations from its authorized flight path, airway, or route. When being applied specifically to radar monitoring of instrument approaches; i.e., with precision approach radar (PAR) or radar monitoring of simultaneous ILS/MLS approaches, it includes advice and instructions whenever an aircraft nears or exceeds the prescribed PAR safety limit or simultaneous ILS/MLS no transgression zone.

(See ADDITIONAL SERVICES.)

(See TRAFFIC ADVISORIES.)

b. Radar Navigational Guidance- Vectoring aircraft to provide course guidance.

c. Radar Separation- Radar spacing of aircraft in accordance with established minima.

(See ICAO term RADAR SERVICE.)

RADAR SERVICE [ICAO]- Term used to indicate a service provided directly by means of radar.

a. Monitoring- The use of radar for the purpose of providing aircraft with information and advice relative to significant deviations from nominal flight path.

b. Separation- The separation used when aircraft position information is derived from radar sources.

RADAR SERVICE TERMINATED- Used by ATC to inform a pilot that he will no longer be provided any of the services that could be received while in radar contact. Radar service is automatically terminated, and the pilot is not advised in the following cases:

a. An aircraft cancels its IFR flight plan, except within Class B airspace, Class C airspace, a TRSA, or where Basic Radar service is provided.

b. An aircraft conducting an instrument, visual, or contact approach has landed or has been instructed to change to advisory frequency.

c. An arriving VFR aircraft, receiving radar service to a tower-controlled airport within Class B airspace, Class C airspace, a TRSA, or where sequencing service is provided, has landed; or to all other airports, is instructed to change to tower or advisory frequency.

d. An aircraft completes a radar approach.

RADAR SURVEILLANCE- The radar observation of a given geographical area for the purpose of performing some radar function.

RADAR TRAFFIC ADVISORIES- Advisories issued to alert pilots to known or observed radar traffic which may affect the intended route of flight of their aircraft.

(See TRAFFIC ADVISORIES.)

RADAR TRAFFIC INFORMATION SERVICE-

(See TRAFFIC ADVISORIES.)

RADAR VECTORING [ICAO]- Provision of navigational guidance to aircraft in the form of specific headings, based on the use of radar.

RADAR WEATHER ECHO INTENSITY LEVELS- 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 radar weather echo intensity. The National Weather Service has categorized radar weather echo intensity for precipitation into six levels. These levels are sometimes expressed during communications as "VIP LEVEL" 1 through 6 (derived from the component of the radar that produces the information-Video Integrator and Processor). The following list gives the "VIP LEVELS" in relation to the precipitation intensity within a thunderstorm:

a. Level 1. WEAK

b. Level 2. MODERATE

c. Level 3. STRONG

d. Level 4. VERY STRONG

e. Level 5. INTENSE

f. Level 6. EXTREME

(See AC 00-45, Aviation Weather Services.)

RADIAL- A magnetic bearing extending from a VOR/VORTAC/TACAN navigation facility.

RADIO-

a. A device used for communication.

b. Used to refer to a flight service station; e.g., "Seattle Radio" is used to call Seattle FSS.

RADIO ALTIMETER- Aircraft equipment which makes use of the reflection of radio waves from the ground to determine the height of the aircraft above the surface.

RADIO BEACON-

(See NONDIRECTIONAL BEACON.)

RADIO DETECTION AND RANGING-

(See RADAR.)

RADIO MAGNETIC INDICATOR- An aircraft navigational instrument coupled with a gyro compass or similar compass that indicates the direction of a selected NAVAID and indicates bearing with respect to the heading of the aircraft.

RAMP-

(See APRON.)

RANDOM ALTITUDE- An altitude inappropriate for direction of flight and/or not in accordance with

FAAO 7110.65, Para 4-5-1, VERTICAL SEPARATION MINIMA.

RANDOM ROUTE- Any route not established or charted/published or not otherwise available to all users.

RC-
(See ROAD RECONNAISSANCE.)

RCAG-
(See REMOTE COMMUNICATIONS AIR/GROUND FACILITY.)

RCC-
(See RESCUE COORDINATION CENTER.)

RCO-
(See REMOTE COMMUNICATIONS OUTLET.)

RCR-
(See RUNWAY CONDITION READING.)

READ BACK- Repeat my message back to me.

RECEIVER AUTONOMOUS INTEGRITY MONITORING (RAIM)- A technique whereby a civil GNSS receiver/processor determines the integrity of the GNSS navigation signals without reference to sensors or non-DoD integrity systems other than the receiver itself. This determination is achieved by a consistency check among redundant pseudorange measurements.

RECEIVING CONTROLLER- A controller/facility receiving control of an aircraft from another controller/facility.

RECEIVING FACILITY-
(See RECEIVING CONTROLLER.)

RECONFORMANCE- The automated process of bringing an aircraft's Current Plan Trajectory into conformance with its track.

REDUCE SPEED TO (SPEED)-
(See SPEED ADJUSTMENT.)

REIL-
(See RUNWAY END IDENTIFIER LIGHTS.)

RELEASE TIME- A departure time restriction issued to a pilot by ATC (either directly or through an authorized relay) when necessary to separate a departing aircraft from other traffic.
(See ICAO term RELEASE TIME.)

RELEASE TIME [ICAO]- Time prior to which an aircraft should be given further clearance or prior to which it should not proceed in case of radio failure.

REMOTE COMMUNICATIONS AIR/GROUND FACILITY- An unmanned VHF/UHF transmitter/receiver facility which is used to expand ARTCC air/ground communications coverage and to facilitate direct contact between pilots and controllers. RCAG facilities are sometimes not equipped with emergency frequencies 121.5 MHz and 243.0 MHz.
(Refer to AIM.)

REMOTE COMMUNICATIONS OUTLET- An unmanned communications facility remotely controlled by air traffic personnel. RCO's serve FSS's. RTR's serve terminal ATC facilities. An RCO or RTR may be UHF or VHF and will extend the communication range of the air traffic facility. There are several classes of RCO's and RTR's. The class is determined by the number of transmitters or receivers. Classes A through G are used primarily for air/ground purposes. RCO and RTR class O facilities are nonprotected outlets subject to undetected and prolonged outages. RCO (O's) and RTR (O's) were established for the express purpose of providing ground-to-ground communications between air traffic control specialists and pilots located at a satellite airport for delivering en route clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times. As a secondary function, they may be used for advisory purposes whenever the aircraft is below the coverage of the primary air/ground frequency.

REMOTE TRANSMITTER/RECEIVER-
(See REMOTE COMMUNICATIONS OUTLET.)

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 RCC's.

(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 OWN NAVIGATION- Used by ATC to advise a pilot to resume his 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.)

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 FAR 91.117.

RMI-

(See RADIO MAGNETIC INDICATOR.)

RNAV-

(See AREA NAVIGATION.)

(See ICAO Term AREA NAVIGATION.)

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

(See AREA NAVIGATION.)

(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 CCLD notification that a PAR/PDR/PDAR has been applied to the flight plan.

(See ATC PREFERRED ROUTE NOTIFICATION.)

(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT.)

ROUTE SEGMENT- As used in Air Traffic Control, a part of a route that can be defined by two navigational fixes, two NAVAID's, 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 takeoff 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 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 FAR Part 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.)

S

SAA-
(See SPECIAL ACTIVITY AIRSPACE.)

SAFETY ALERT- A safety alert issued by ATC to aircraft under their control if ATC is aware the aircraft is at an altitude which, in the controller's judgment, places the aircraft in unsafe proximity to terrain, obstructions, or other aircraft. The controller may discontinue the issuance of further alerts if the pilot advises he is taking action to correct the situation or has the other aircraft in sight.

a. Terrain/Obstruction Alert- A safety alert issued by ATC to aircraft under their control if ATC is aware the aircraft is at an altitude which, in the controller's judgment, places the aircraft in unsafe proximity to terrain/obstructions; e.g., "Low Altitude Alert, check your altitude immediately."

b. Aircraft Conflict Alert- A safety alert issued by ATC to aircraft under their control if ATC is aware of an aircraft that is not under their control at an altitude which, in the controller's judgment, places both aircraft in unsafe proximity to each other. With the alert, ATC will offer the pilot an alternate course of action when feasible; e.g., "Traffic Alert, advise you turn right heading zero niner zero or climb to eight thousand immediately."

The issuance of a safety alert is contingent upon the capability of the controller to have an awareness of an unsafe condition. The course of action provided will be predicated on other traffic under ATC control. Once the alert is issued, it is solely the pilot's prerogative to determine what course of action, if any, he will take.

SAIL BACK- A maneuver during high wind conditions (usually with power off) where float plane movement is controlled by water rudders/opening and closing cabin doors.

SAME DIRECTION AIRCRAFT- Aircraft are operating in the same direction when:

a. They are following the same track in the same direction; or

b. Their tracks are parallel and the aircraft are flying in the same direction; or

c. Their tracks intersect at an angle of less than 45 degrees.

SAR-
(See SEARCH AND RESCUE.)

SAY AGAIN- Used to request a repeat of the last transmission. Usually specifies transmission or portion thereof not understood or received; e.g., "Say again all after ABRAM VOR."

SAY ALTITUDE- Used by ATC to ascertain an aircraft's specific altitude/flight level. When the aircraft is climbing or descending, the pilot should state the indicated altitude rounded to the nearest 100 feet.

SAY HEADING- Used by ATC to request an aircraft heading. The pilot should state the actual heading of the aircraft.

SDF-
(See SIMPLIFIED DIRECTIONAL FACILITY.)

SEA LANE- A designated portion of water outlined by visual surface markers for and intended to be used by aircraft designed to operate on water.

SEARCH AND RESCUE- A service which seeks missing aircraft and assists those found to be in need of assistance. It is a cooperative effort using the facilities and services of available Federal, state and local agencies. The U.S. Coast Guard is responsible for coordination of search and rescue for the Maritime Region, and the U.S. Air Force is responsible for search and rescue for the Inland Region. Information pertinent to search and rescue should be passed through any air traffic facility or be transmitted directly to the Rescue Coordination Center by telephone.

(See FLIGHT SERVICE STATION.)

(See RESCUE COORDINATION CENTER.)

(Refer to AIM.)

SEARCH AND RESCUE FACILITY- A facility responsible for maintaining and operating a search and rescue (SAR) service to render aid to persons and property in distress. It is any SAR unit, station, NET, or other operational activity which can be usefully employed during an SAR Mission; e.g., a Civil Air Patrol Wing, or a Coast Guard Station.

(See SEARCH AND RESCUE.)

SECTIONAL AERONAUTICAL CHARTS- (See AERONAUTICAL CHART.)

SECTOR LIST DROP INTERVAL- A parameter number of minutes after the meter fix time when arrival aircraft will be deleted from the arrival sector list.

SEE AND AVOID- When weather conditions permit, pilots operating IFR or VFR are required to observe and maneuver to avoid other aircraft. Right-of-way rules are contained in FAR Part 91.

SEGMENTED CIRCLE- A system of visual indicators designed to provide traffic pattern information at airports without operating control towers.
(Refer to AIM.)

SEGMENTS OF AN INSTRUMENT APPROACH PROCEDURE- An instrument approach procedure may have as many as four separate segments depending on how the approach procedure is structured.

a. Initial Approach- The segment between the initial approach fix and the intermediate fix or the point where the aircraft is established on the intermediate course or final approach course.
(See ICAO term INITIAL APPROACH SEGMENT.)

b. Intermediate Approach- The segment between the intermediate fix or point and the final approach fix.
(See ICAO term INTERMEDIATE APPROACH SEGMENT.)

c. Final Approach- The segment between the final approach fix or point and the runway, airport, or missed approach point.
(See ICAO term FINAL APPROACH SEGMENT.)

d. Missed Approach- The segment between the missed approach point or the point of arrival at decision height and the missed approach fix at the prescribed altitude.
(Refer to FAR Part 97.)
(See ICAO term MISSED APPROACH PROCEDURE.)

SELECTED GROUND DELAYS- A traffic management procedure whereby selected flights are issued ground delays to better regulate traffic flows over a particular fix or area.

SEPARATION- In air traffic control, the spacing of aircraft to achieve their safe and orderly movement in flight and while landing and taking off.
(See SEPARATION MINIMA.)
(See ICAO term SEPARATION.)

SEPARATION [ICAO]- Spacing between aircraft, levels or tracks.

SEPARATION MINIMA- The minimum longitudinal, lateral, or vertical distances by which aircraft are spaced through the application of air traffic control procedures.
(See SEPARATION.)

SERVICE- A generic term that designates functions or assistance available from or rendered by air traffic control. For example, Class C service would denote the ATC services provided within a Class C airspace area.

SEVERE WEATHER AVOIDANCE PLAN- An approved plan to minimize the affect of severe weather on traffic flows in impacted terminal and/or ARTCC areas. SWAP is normally implemented to provide the least disruption to the ATC system when flight through portions of airspace is difficult or impossible due to severe weather.

SEVERE WEATHER FORECAST ALERTS- Preliminary messages issued in order to alert users that a Severe Weather Watch Bulletin (WW) is being issued. These messages define areas of possible severe thunderstorms or tornado activity. The messages are unscheduled and issued as required by the National Severe Storm Forecast Center at Kansas City, Missouri.
(See AIRMET.)
(See SIGMET.)
(See CONVECTIVE SIGMET.)
(See CWA.)

SFA-
(See SINGLE FREQUENCY APPROACH.)

SFO-
(See SIMULATED FLAMEOUT.)

SHF-
(See SUPER HIGH FREQUENCY.)

SHORT RANGE CLEARANCE- A clearance issued to a departing IFR flight which authorizes IFR flight to a specific fix short of the destination while air traffic control facilities are coordinating and obtaining the complete clearance.

SHORT TAKEOFF AND LANDING AIRCRAFT AIRCRAFT- An aircraft which, at some weight within its approved operating weight, is capable of operating from a STOL runway in compliance with the applicable STOL characteristics, airworthiness, operations, noise, and pollution standards.
(See VERTICAL TAKEOFF AND LANDING AIRCRAFT.)

SIAP-
(See STANDARD INSTRUMENT APPROACH PROCEDURE.)

SIDESTEP MANEUVER- A visual maneuver accomplished by a pilot at the completion of an instrument approach to permit a straight-in landing on a parallel runway not more than 1,200 feet to either side of the runway to which the instrument approach was conducted.
(Refer to AIM.)

SIGMET- A weather advisory issued concerning weather significant to the safety of all aircraft. SIGMET advisories cover severe and extreme turbulence, severe icing, and widespread dust or sandstorms that reduce visibility to less than 3 miles.
(See AIRMET.)
(See AWW.)
(See CONVECTIVE SIGMET.)
(See CWA.)
(See ICAO term SIGMET INFORMATION.)
(Refer to AIM.)

SIGMET INFORMATION [ICAO]- Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

SIGNIFICANT METEOROLOGICAL INFORMATION-
(See SIGMET.)

SIGNIFICANT POINT- A point, whether a named intersection, a NAVAID, a fix derived from a NAVAID(s), or geographical coordinate expressed in degrees of latitude and longitude, which is established for the purpose of providing separation, as a reporting point, or to delineate a route of flight.

SIMPLIFIED DIRECTIONAL FACILITY- A NAVAID used for nonprecision instrument approaches. The final approach course is similar to that of an ILS localizer except that the SDF course may be offset from the runway, generally not more than 3 degrees, and the course may be wider than the localizer, resulting in a lower degree of accuracy.
(Refer to AIM.)

SIMULATED FLAMEOUT- A practice approach by a jet aircraft (normally military) at idle thrust to a runway. The approach may start at a runway (high key) and may continue on a relatively high and wide downwind leg with a continuous turn to final. It terminates in landing or low approach. The purpose of this approach is to simulate a flameout.
(See FLAMEOUT.)

SIMULTANEOUS ILS APPROACHES- An approach system permitting simultaneous ILS/MLS approaches to airports having parallel runways separated by at least 4,300 feet between centerlines. Integral parts of a total system are ILS/MLS, radar, communications, ATC procedures, and appropriate airborne equipment.
(See PARALLEL RUNWAYS.)
(Refer to AIM.)

SIMULTANEOUS MLS APPROACHES-
(See SIMULTANEOUS ILS APPROACHES.)

SINGLE DIRECTION ROUTES- Preferred IFR Routes which are sometimes depicted on high altitude en route charts and which are normally flown in one direction only.
(See PREFERRED IFR ROUTES.)
(Refer to AIRPORT/FACILITY DIRECTORY.)

SINGLE FREQUENCY APPROACH- A service provided under a letter of agreement to military single-piloted turbojet aircraft which permits use of a single UHF frequency during approach for landing. Pilots will not normally be required to change frequency from the beginning of the approach to touchdown except that pilots conducting an en route descent are required to change frequency when control is transferred from the air route traffic control center to the terminal facility. The abbreviation "SFA" in the DOD FLIP IFR Supplement under "Communications" indicates this service is available at an aerodrome.

SINGLE-PILOTED AIRCRAFT- A military turbojet aircraft possessing one set of flight controls, tandem cockpits, or two sets of flight controls but operated by one pilot is considered single-piloted by ATC when determining the appropriate air traffic service to be applied.
(See SINGLE FREQUENCY APPROACH.)

SLASH- A radar beacon reply displayed as an elongated target.

SLDI-
(See SECTOR LIST DROP INTERVAL.)

SLOT TIME-
(See METER FIX TIME/SLOT TIME.)

SLOW TAXI- To taxi a float plane at low power or low RPM.

SN-
(See SYSTEM STRATEGIC NAVIGATION.)

SPEAK SLOWER- Used in verbal communications as a request to reduce speech rate.

SPECIAL ACTIVITY AIRSPACE (SAA)- Any airspace with defined dimensions within the National Airspace System wherein limitations may be imposed upon aircraft operations. This airspace may be restricted areas, prohibited areas, military operations areas, air ATC assigned airspace, and any other designated airspace areas. The dimensions of this airspace are programmed into URET CCLD and can be designated as either active or inactive by screen entry. Aircraft trajectories are constantly tested against the dimensions of active areas and alerts issued to the applicable sectors when violations are predicted.

(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT.)

SPECIAL EMERGENCY- A condition of air piracy or other hostile act by a person(s) aboard an aircraft which threatens the safety of the aircraft or its passengers.

SPECIAL INSTRUMENT APPROACH PROCEDURE-

(See INSTRUMENT APPROACH PROCEDURE.)

SPECIAL USE AIRSPACE- Airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Types of special use airspace are:

a. Alert Area- Airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft. Alert Areas are depicted on aeronautical charts for the information of nonparticipating pilots. All activities within an Alert Area are conducted in accordance with Federal Aviation Regulations, and pilots of participating aircraft as well as pilots transiting the area are equally responsible for collision avoidance.

b. Controlled Firing Area- Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons and property on the ground.

c. Military Operations Area (MOA)- A MOA is airspace established outside of Class A airspace area to separate or segregate certain nonhazardous military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.

(Refer to AIM.)

d. Prohibited Area- Airspace designated under part 73 within which no person may operate an aircraft without the permission of the using agency.

(Refer to En Route Charts, AIM.)

e. Restricted Area- Airspace designated under FAR Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency. Restricted areas are depicted on en route charts. Where joint use is authorized, the name of the ATC controlling facility is also shown.

(Refer to FAR Part 73.)

(Refer to AIM.)

f. Warning Area- A warning area is airspace of defined dimensions extending from 3 nautical miles outward from the coast of the United States, that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning area is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both.

SPECIAL VFR CONDITIONS- Meteorological conditions that are less than those required for basic VFR flight in Class B, C, D, or E surface areas and in which some aircraft are permitted flight under visual flight rules.

(See SPECIAL VFR OPERATIONS.)

(Refer to FAR Part 91.)

SPECIAL VFR FLIGHT [ICAO]- A VFR flight cleared by air traffic control to operate within Class B, C, D, and E surface areas in metrological conditions below VMC.

SPECIAL VFR OPERATIONS- Aircraft operating in accordance with clearances within Class B, C, D, and E surface areas in weather conditions less than the basic VFR weather minima. Such operations must be requested by the pilot and approved by ATC.

(See SPECIAL VFR CONDITIONS.)

(See ICAO term SPECIAL VFR FLIGHT.)

SPEED-

(See AIRSPEED.)

(See GROUND SPEED.)

SPEED ADJUSTMENT- An ATC procedure used to request pilots to adjust aircraft speed to a specific value for the purpose of providing desired spacing. Pilots are expected to maintain a speed of plus or minus 10 knots

or 0.02 Mach number of the specified speed. Examples of speed adjustments are:

a. "Increase/reduce speed to Mach point (number.)"

b. "Increase/reduce speed to (speed in knots)" or "Increase/reduce speed (number of knots) knots."

SPEED BRAKES- Moveable aerodynamic devices on aircraft that reduce airspeed during descent and landing.

SPEED SEGMENTS- Portions of the arrival route between the transition point and the vertex along the optimum flight path for which speeds and altitudes are specified. There is one set of arrival speed segments adapted from each transition point to each vertex. Each set may contain up to six segments.

SQUAWK (Mode, Code, Function)- Activate specific modes/codes/functions on the aircraft transponder; e.g., "Squawk three/alpha, two one zero five, low."
(See TRANSPONDER.)

STAGING/QUEUING- The placement, integration, and segregation of departure aircraft in designated movement areas of an airport by departure fix, EDCT, and/or restriction.

STANDARD INSTRUMENT APPROACH PROCEDURE-
(See INSTRUMENT APPROACH PROCEDURE.)

STANDARD RATE TURN- A turn of three degrees per second.

STANDARD TERMINAL ARRIVAL- A preplanned instrument flight rule (IFR) air traffic control arrival procedure published for pilot use in graphic and/or textual form. STAR's provide transition from the en route structure to an outer fix or an instrument approach fix/arrival waypoint in the terminal area.

STANDARD TERMINAL ARRIVAL CHARTS-
(See AERONAUTICAL CHART.)

STAND BY- Means the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait as in "stand by for clearance." The caller should reestablish contact if a delay is lengthy. "Stand by" is not an approval or denial.

STAR-
(See STANDARD TERMINAL ARRIVAL.)

STATE AIRCRAFT- Aircraft used in military, customs and police service, in the exclusive service of any government, or of any political subdivision, thereof including the government of any state, territory, or possession of the United States or the District of Columbia, but not including any government-owned aircraft engaged in carrying persons or property for commercial purposes.

STATIC RESTRICTIONS- Those restrictions that are usually not subject to change, fixed, in place, and/or published.

STATIONARY RESERVATIONS- Altitude reservations which encompass activities in a fixed area. Stationary reservations may include activities, such as special tests of weapons systems or equipment, certain U.S. Navy carrier, fleet, and anti-submarine operations, rocket, missile and drone operations, and certain aerial refueling or similar operations.

STEPDOWN FIX- A fix permitting additional descent within a segment of an instrument approach procedure by identifying a point at which a controlling obstacle has been safely overflown.

STEP TAXI- To taxi a float plane at full power or high RPM.

STEP TURN- A maneuver used to put a float plane in a planing configuration prior to entering an active sea lane for takeoff. The STEP TURN maneuver should only be used upon pilot request.

STEREO ROUTE- A routinely used route of flight established by users and ARTCC's identified by a coded name; e.g., ALPHA 2. These routes minimize flight plan handling and communications.

STOL AIRCRAFT-
(See SHORT TAKEOFF AND LANDING AIRCRAFT.)

STOP ALTITUDE SQUAWK- Used by ATC to inform an aircraft to turn-off the automatic altitude reporting feature of its transponder. It is issued when the verbally reported altitude varies 300 feet or more from the automatic altitude report.
(See ALTITUDE READOUT.)
(See TRANSPONDER.)

STOP AND GO- A procedure wherein an aircraft will land, make a complete stop on the runway, and then commence a takeoff from that point.
(See LOW APPROACH.)
(See OPTION APPROACH.)

STOP BURST-
(See STOP STREAM.)

STOP BUZZER-
(See STOP STREAM.)

STOPOVER FLIGHT PLAN- A flight plan format which permits in a single submission the filing of a

sequence of flight plans through interim full-stop destinations to a final destination.

STOP SQUAWK (Mode or Code) - Used by ATC to tell the pilot to turn specified functions of the aircraft transponder off.

(See STOP ALTITUDE SQUAWK.)

(See TRANSPONDER.)

STOP STREAM - Used by ATC to request a pilot to suspend electronic countermeasure activity.

(See JAMMING.)

STOPWAY- An area beyond the takeoff runway no less wide than the runway and centered upon the extended centerline of the runway, able to support the airplane during an aborted takeoff, without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff.

STRAIGHT-IN APPROACH IFR- An instrument approach wherein final approach is begun without first having executed a procedure turn, not necessarily completed with a straight-in landing or made to straight-in landing minimums.

(See STRAIGHT-IN LANDING.)

(See LANDING MINIMUMS.)

(See STRAIGHT-IN APPROACH VFR.)

STRAIGHT-IN APPROACH VFR- Entry into the traffic pattern by interception of the extended runway centerline (final approach course) without executing any other portion of the traffic pattern.

(See TRAFFIC PATTERN.)

STRAIGHT-IN LANDING- A landing made on a runway aligned within 30° of the final approach course following completion of an instrument approach.

(See STRAIGHT-IN APPROACH-IFR.)

STRAIGHT-IN LANDING MINIMUMS-

(See LANDING MINIMUMS.)

STRAIGHT-IN MINIMUMS-

(See STRAIGHT-IN LANDING MINIMUMS.)

STRATEGIC PLANNING- Planning whereby solutions are sought to resolve potential conflicts.

SUBSTITUTIONS- Users are permitted to exchange CTA's. Normally, the airline dispatcher will contact the ATCSCC with this request. The ATCSCC shall forward approved substitutions to the TMU's who will notify the appropriate terminals. Permissible swapping must not change the traffic load for any given hour of an EQF program.

SUBSTITUTE ROUTE- A route assigned to pilots when any part of an airway or route is unusable because of NAVAID status. These routes consist of:

a. Substitute routes which are shown on U.S. Government charts.

b. Routes defined by ATC as specific NAVAID radials or courses.

c. Routes defined by ATC as direct to or between NAVAID's.

SUNSET AND SUNRISE- The mean solar times of sunset and sunrise as published in the Nautical Almanac, converted to local standard time for the locality concerned. Within Alaska, the end of evening civil twilight and the beginning of morning civil twilight, as defined for each locality.

SUPER HIGH FREQUENCY- The frequency band between 3 and 30 gigahertz (GHz). The elevation and azimuth stations of the microwave landing system operate from 5031 MHz to 5091 MHz in this spectrum.

SUPPLEMENTAL WEATHER SERVICE LOCATION- Airport facilities staffed with contract personnel who take weather observations and provide current local weather to pilots via telephone or radio. (All other services are provided by the parent FSS).

SUPPS- Refers to ICAO Document 7030 Regional Supplementary Procedures. SUPPS contain procedures for each ICAO Region which are unique to that Region and are not covered in the worldwide provisions identified in the ICAO Air Navigation Plan. Procedures contained in chapter 8 are based in part on those published in SUPPS.

SURFACE AREA- The airspace contained by the lateral boundary of the Class B, C, D, or E airspace designated for an airport that begins at the surface and extends upward.

SURPIC- A description of surface vessels in the area of a Search and Rescue incident including their predicted positions and their characteristics.

(See FAAO 7110.65, Para 10-6-4, *INFLIGHT CONTINGENCIES.*)

SURVEILLANCE APPROACH- An instrument approach wherein the air traffic controller issues instructions, for pilot compliance, based on aircraft position in relation to the final approach course (azimuth), and the distance (range) from the end of the runway as displayed on the controller's radar scope. The controller

will provide recommended altitudes on final approach if requested by the pilot.
(Refer to AIM.)

SWAP-
(See SEVERE WEATHER AVOIDANCE PLAN.)

SWSL-
(See SUPPLEMENTAL WEATHER SERVICE LOCATION.)

SYSTEM STRATEGIC NAVIGATION- Military activity accomplished by navigating along a preplanned route using internal aircraft systems to maintain a desired track. This activity normally requires a lateral route width of 10 NM and altitude range of 1,000 feet to 6,000 feet AGL with some route segments that permit terrain following.

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.)

(Refer to AIM.)

(Refer to FAR Part 91.)

(See ICAO term AERODROME TRAFFIC CIRCUIT.)

TRAFFIC SITUATION DISPLAY (TSD)- TSD is a computer system that receives radar track data from all 20 CONUS ARTCC's, 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 CCLD representation of the path an aircraft is predicted to fly based upon a Current Plan or Trial Plan.

(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT)

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.

(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.)

TRANSITIONAL AIRSPACE- That portion of controlled airspace wherein aircraft change from one phase of flight or flight condition to another.

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.

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.)

(Refer to AIM.)

(See ICAO term TRANSPONDER.)

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.)

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.)

U

UDF-
(See DIRECTION FINDER.)

UHF-
(See ULTRAHIGH FREQUENCY.)

ULTRAHIGH FREQUENCY- The frequency band between 300 and 3,000 mHz. The bank of radio frequencies used for military air/ground voice communications. In some instances this may go as low as 225 mHz and still be referred to as UHF.

ULTRALIGHT VEHICLE- An aeronautical vehicle operated for sport or recreational purposes which does not require FAA registration, an airworthiness certificate, nor pilot certification. They are primarily single occupant vehicles, although some two-place vehicles are authorized for training purposes. Operation of an ultralight vehicle in certain airspace requires authorization from ATC.
(See FAR Part 103.)

UNABLE- Indicates inability to comply with a specific instruction, request, or clearance.

UNDER THE HOOD- Indicates that the pilot is using a hood to restrict visibility outside the cockpit while simulating instrument flight. An appropriately rated pilot is required in the other control seat while this operation is being conducted.
(Refer to FAR Part 91.)

UNICOM- A nongovernment communication facility which may provide airport information at certain airports. Locations and frequencies of UNICOM's are shown on aeronautical charts and publications.
(See AIRPORT/FACILITY DIRECTORY.)
(Refer to AIM.)

UNPUBLISHED ROUTE- A route for which no minimum altitude is published or charted for pilot use. It may include a direct route between NAVAID's, a radial, a radar vector, or a final approach course beyond the segments of an instrument approach procedure.
(See PUBLISHED ROUTE.)
(See ROUTE.)

UPWIND LEG-
(See TRAFFIC PATTERN.)

URET-
(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT.)

URET CCLD-
(See USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT.)

URGENCY- A condition of being concerned about safety and of requiring timely but not immediate assistance; a potential distress condition.
(See ICAO term URGENCY.)

URGENCY [ICAO]- A condition concerning the safety of an aircraft or other vehicle, or of person on board or in sight, but which does not require immediate assistance.

USAFIB-
(See ARMY AVIATION FLIGHT INFORMATION BULLETIN.)

USER REQUEST EVALUATION TOOL CORE CAPABILITY LIMITED DEPLOYMENT (URET CCLD)- User Request Evaluation Tool Core Capability Limited Deployment is an automated tool provided at each Radar Associate position in selected En Route facilities. This tool utilizes flight and radar data to determine present and future trajectories for all active and proposal aircraft and provides enhanced, automated flight data management.

UVDF-
(See DIRECTION FINDER.)

W

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

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

WARNING AREA-
(See SPECIAL USE AIRSPACE.)

WASS-
(See WIDE-AREA AUGMENTATION SYSTEM.)

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

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

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

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

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

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

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

WING TIP VORTICES-
(See VORTICES.)

WORDS TWICE-

a. As a request: "Communication is difficult. Please say every phrase twice."

b. As information: "Since communications are difficult, every phrase in this message will be spoken twice."

WORLD AERONAUTICAL CHARTS-
(See AERONAUTICAL CHART.)

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

WST-
(See CONVECTIVE SIGMET.)
(See WEATHER ADVISORY.)

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