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CENTRAL FLOW CONTROL OPERATIONAL COMPLEX (OPCX) USER'S MANUAL.(U)
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UNCLASSIFIED CSC/SD-78/6167 FAA-RD-79-34 NL

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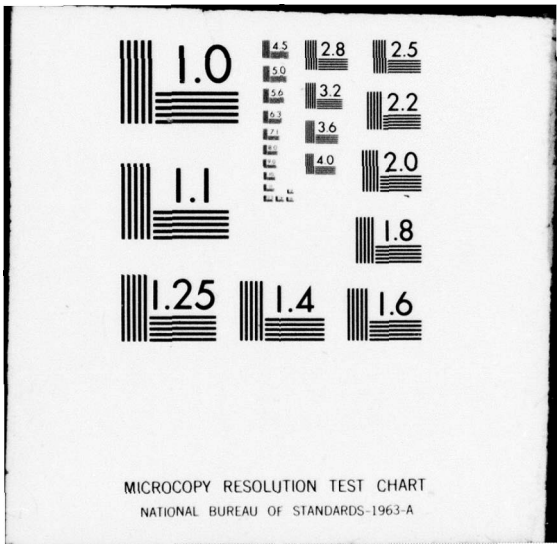
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Report No. FAA-RD-79-34

LEVEL II

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CENTRAL FLOW CONTROL OPERATIONAL PROGRAM USER'S MANUAL

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U.S. DEPARTMENT OF TRANSPORTATION
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Washington, D.C. 20590

79 06 12 015

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CONVERSATION RECORD

1. DATE	2. TIME
18 Jun 79	10:00 am

3. TYPE OF CONVERSATION

☐ TELEPHONE (Incoming) ☒ TELEPHONE (Outgoing) ☐ OFFICE VISIT

4. SUBJECT OF CONVERSATION

Title on AD-A069 872

5. CALL/VISIT MADE BY (Name of person)	5a. OFFICE/FIRM/COMPANY, ETC.	5b. PHONE NO. AND/OR EXT.
Loretta Brown	DDC-TID	46805
6. CALL/VISIT MADE TO (Name of person)	**6a. OFFICE/FIRM/COMPANY, ETC.**	**6b. PHONE NO. AND/OR EXT.**
Margaret Swann	DOT Library	426-3601

7. SUMMARY OF CONVERSATION, AND IF APPLICABLE, STATEMENT AS TO SUBSEQUENT ACTION TAKEN OR TO BE TAKEN

Per Margaret Swann DOT Library,
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wrong. They realized there mistake but didn't
want to go to the expense of printing new covers.

(IF ADDITIONAL SPACE IS NEEDED, CONTINUE ON REVERSE SIDE)

8. PRINTED NAME AND TITLE OF PERSON MAKING/RECEIVING CALL/VISIT	8a. SIGNATURE
Loretta Brown (Technical Information Specialist)	Loretta Brown

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16. Abstract

This document describes the Central Flow Control (CFC) messages and their related output reports. For each message, each input field is described and the range of valid input values is specified. Error diagnostic messages are listed in the Appendices.

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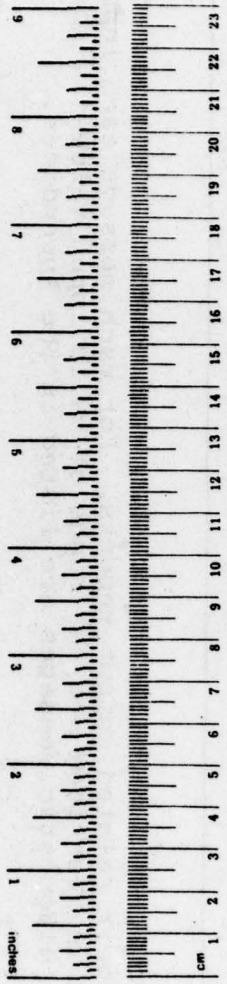
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

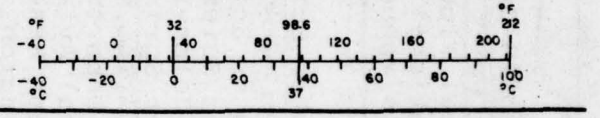
Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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SECTION 1 - INTRODUCTION

1.1 OVERVIEW

This document presents the operational procedures for constructing System Command Center (SCC) and National Airspace (NAS) Enroute messages for processing under the Central Flow Control (CFC) System. This document describes how to:

- Add flights to existing OAG and Non-OAG flight record files
- Update (cancel, inhibit, activate flights, or add actual departure time) flight plans
- Modify landing capacity and general aviation estimates
- List flight plans and flight statistics
- Simulate arrival terminal traffic flow (ARRD, Quota Flow, and FAD messages)

This document does not describe the CFC System itself, does not assume a particular hardware device is used to submit messages, and does not discuss the computer configuration required for running the System (see References, Section 1.2).

Section 2 describes the general procedures for entering input messages. Standard rules for message construction, such as use of fields and elements and delimiter placement, are presented. Section 3 overviews the general output processing for entered messages. Section 4 presents detailed information on how to format each of the 26 messages. The entered data are defined, special considerations for message handling is presented, and realistic examples are given for each message.

1.2 REFERENCES

The following documents may aid the CFC user:

1. Central Flow Control Computer Program Specifications: Application Program Specification, FAA-RD-76-157 September 1976.

2. A Computer Program Functional Design of the Simulation Subsystem of an Automated Central Flow Control System, FAA-RD-76-144, August 1976.

3. OPCX Operator's Manual, CSC/SD-78/6166.

SECTION 2 - GENERAL MESSAGE CHARACTERISTICS

This section describes the general procedures for constructing CFC input messages. Primary areas of discussion are the placement of message fields, elements, and delimiters.

2.1 POSITIONAL FORMAT

A positional format (rather than a free-form format) is used to construct the message text. The message type (e.g., LISA, FP, or ARRD) must always be the first message entry and must always begin in the first character position (no leading blanks). Each additional message entry must occur in a relatively fixed position as defined in Section 4.

2.2 FIELDS AND ELEMENTS

A set of special characters is used as delimiters to separate the various entries in an input message. These delimiters are positional and must appear as indicated in Section 4. A space is the primary delimiter and characters contained between two space delimiters constitute a field. The message type also constitutes a field. A slash is the secondary delimiter and is used to separate a field into entries referred to as elements. Examples of fields and elements are as follows:

1. XXX YYY ZZZ — contains three fields: XXX, YYY, and ZZZ
2. XXX YYY/ZZZ — contains two fields: XXX and YYY/ZZZ. Field 2 contains two elements: YYY and ZZZ

To default a field, a space is entered where that field would normally be. Thus, two consecutive spaces indicate one defaulted field. Three consecutive spaces indicate two defaulted fields. The default for an element is handled in the same manner as a defaulted field, except that delimiters need not be specified when all remaining elements in the field are defaulted.

Examples:

1.	WWW XXX YYY ZZZ	contains four fields, all specified
	WWW YYY ZZZ	defaults field 2
	WWW ZZZ	defaults fields 2 and 3
	WWW	defaults fields 2, 3, and 4
2.	WW/XX/YY/ZZ AA	contains two fields; field 1 has four elements
	WW///ZZ AA	defaults elements 2 and 3
	/XX//ZZ AA	defaults elements 1 and 3
	WW/XX// AA	defaults elements 3 and 4
	WW/XX AA	defaults elements 3 and 4
	WW AA	defaults elements 2, 3, and 4
	/XX AA	defaults elements 1, 3, and 4

In some messages, an element can be further subdivided. A comma is used to separate repeating entries of a given item. Thus, the element X1, X2, X3, X4 represents four specifications of the item X. A dash is used to separate related items of an entry; XX-XY-YZ represents three related items which must be entered in the order specified.

2.3 MESSAGE LENGTH

The actual length of an input message is governed by the number of associated fields and elements. The maximum length of a message is 240 characters. However, the allowable number of input characters is dependent upon the maximum entry capacity of the input device.

SECTION 3 - OUTPUT MESSAGES AND REPORTS

This section describes the general types of messages and reports generated by the receipt of a CFC input message. A detailed output description is presented in Section 4. The two types of transaction output are immediate messages and reports.

3.1 IMMEDIATE MESSAGES

Each input message received by the transaction processors of the CFC System will result in messages being output to the initiator (or locally adapted printer) to reflect the status of the message processing. These messages are referred to as "immediate messages" as they are not spooled for output, but are transmitted directly and immediately back to the initiator.

3.1.1 Echo Message

A copy (echo) of the input message will be transmitted as soon as the format and content of the message has been validation checked.

3.1.2 Accept/Reject Message

Following message validation, an accept message will be issued. If an error is detected in the message, a reject message will be issued and will always be followed by an error message.

3.1.3 Error Message

Two types of error messages are issued. A Normal Error Message is transmitted when an error is detected in the input message. The error message will indicate the type of error and will normally show the message text that is in error. A list of error codes and associated error text is

presented in Appendix A. When a condition is encountered following message validation that indicates a possible system error, an error message is issued of the form:

PROCESSING FAILED - SYSTEM ERROR (dddd)

where dddd = the specific error condition (System Error Code)

A list of System Error Codes is presented in Appendix A.

3.1.4 Processing Status Messages

For non-report transactions, excluding NAS En Route messages, that have successfully completed, a processing completed message is issued. Also, for transactions that cannot be completed due to a system limitation, a message is issued stating the limitation.

3.2 REPORTS

Reports containing requested information are transmitted to output device(s) specified in the input message. Normally, a report will contain header lines, followed by data lines. Each report will contain the transaction time (hour and minute) which is the time of message receipt by the CFC System. A report containing no data lines will still result in the header lines being output. Detailed descriptions of specific message reports are presented in Section 4.

SECTION 4 - DETAILED MESSAGE SPECIFICATIONS

This section presents the user with a detailed description of the 23 CFC messages and the three NAS EnRoute messages. For each message the following information is provided:

- Purpose - the objective of the input message is briefly explained.
- Message Format - a detailed definition and description of the input message is given. Each message field is described and appropriate delimiters are noted. Defaults for each message field or element are also presented. Within the field descriptions are frequent references to Parameter Table Items of the format PTxxx where xxx is variable. These PT items represent constants which are defined in Appendix B.

  The following notation is used in describing message formats:

  { } indicate a choice. One and only one of the items enclosed in the braces is to be used.

  [ ] indicate optional material. A default value is noted for optional items. Braces and brackets together indicate a choice is to be made of optional material.

  ... indicate the preceding item or items enclosed in brackets may be repeated one or more times. The maximum number allowed has been noted in each case.

The following are delimiters and must appear in the message as noted:

Δ (space)

/

,

-

The following notation is used in describing particular items in the message:

L indicates an alphabetic character

d indicates a numeric character

a indicates an alphanumeric character

() indicates the character enclosed is optional. For example, (d)(d)d represents a numeric item of one, two, or three digits.

" " indicates the character(s) enclosed must appear exactly as they appear within the quotation marks.

- Report Description - for a message generating a report, the report is briefly overviewed and the specific data items are defined. An example of the report is presented. A statement indicating no report generated is given when appropriate.

- Special Considerations - message properties, assumptions, and limitations beneficial to the preparation of input messages are presented.

- Examples - two or more examples are given for each message and and intended to illustrate the use and format of each message.

4.1 ACTV MESSAGE

4.1.1 Purpose

The purpose of the ACTV message is to remove the inhibition for a specified flight or all flights for a given airline beginning on a specified day (date), through the time period covered by the OAG Data Base.

4.1.2 Message Format

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
ACTV	"ACTV"	Message Type - Message ID for Activate Processing.	N.A.
AIRCRAFT	LL(a)(d)(d)(d)(d)	Aircraft ID - Activate processing shall be for all flight plans with this flight call sign (airline operator and flight number). The airline operator must be two or three alphabetic characters and the flight number must be all numeric.	N.A.
AIRLINE	LL(L)	Airline Operator - Activate processing shall be for all flights of the specified airline operator. The airline operator must be two or three alphabetic characters.	N.A.
START-TIME	dddd	Start Date - Activate processing will begin on the specified month and day of month. The month value must be 01 through 12 and the day value must be 01 through 29, 30, or 31, as appropriate.	Current Date
START-DAY	ddd	Start Day of Year - Activate processing begins on the specified day of year. The value must be 001 through 366.	Current Day

4.1.3 Report Description

The output shall contain an appropriate message to indicate completion of processing. No report will be generated.

4.1.4 Special Considerations

- Activate processing is limited to the time period covered by the CFC data base flight record file. The start date or day of the year must fall within this time period for the activate processing to be completed. The specified flight(s) will be activated from the start date or day through the end of the OAG time period.

- For a default, the current date or day is defined to be the date on which the transaction is received by the CFC System.

4.1.5 Examples

Example 1: Activate all flights for AA320 starting on July 8.

MESSAGE: ACTV AA320 0708

Example 2: Activate all flights for American Airlines starting on the eighty-fifth day of the year.

MESSAGE: ACTV AA 085

NOTE: All flights are activated from the entered start time to the end of the OAG effective time period.

4.2 ARRD MESSAGE

4.2.1 Purpose

The purpose of the ARRD message is to produce an hourly report of predicted arrival traffic delays at a pacing airport.

4.2.2 Message Format

ARRD△PLACE△ [START-TIME] / [STOP-TIME] / [STACK-SIZE] / [STACK-TIME] △
[OUTDEV[,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
ARRD	"ARRD"	Message Type - Message ID for Arrival Delay Prediction.	N.A.
PLACE	LLL	Location Identifier - Report shall be for the specified pacing airport.	N.A.
START-TIME	dd	Report Start Hour - Report begins with noted GMT hour. Hour values must be 00 through 23.	Current GMT hour
STOP-TIME	dd	Report Stop Hour Report ends at start of noted GMT hour. Hour values must be 00 through 23. Stop time may be ⩽ start time.	Start hour plus PTSTM hours
STACK-SIZE	(d)(d)d	Stack Size - The report shall reflect the specified number of aircraft holding. The number must be 0 through PTSSX.	The actual number of flights holding

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STACK-TIME	dddd	Stack Time - The stack size will be in effect at the specified stack time (GMT hour and minutes). Hours must be 00 through 23 and minutes must be 00 through 59. The specified stack time must be within the range of Report Start Hour minus PTSTN hours and Report Start Hour plus PTSTX hours.	Report Start Hour
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.2.3 Report Description

The output shall include a report title reflecting the nature of the request, the pacing airport for which the information was requested, and the time the message was received.

Output data will include, for each hour of the report, the number of arrivals expected at the pacing airport, the number of those arrivals that have departed prior to that hour, the number of simulated landings, the peak and average number of aircraft holding in the stack, and the peak and average total delay (in minutes) to be expected by aircraft holding. An example follows:

- INPUT

  ```
  ARRD JFK 04/06/40/0440
  ```

- OUTPUT

```
JFK ARRIVAL DELAYS 0000
    40 STACKED 0440
                      AVERAGE   PEAK
TIME ARR ACT LND HLD DLY HLD DLY
0400  40   0   0   4 234  40 500
0440   2   0   1  40 243  41 500
0500  12   0   6  45 290  49 483
```

4.2.4 Special Considerations

- The report period will not be permitted to extend beyond the "Airport Zero Stack Hour" data base value (specified in Landing Capacity Table).
- A report start hour earlier than transaction time will cause the report start and stop hours to be incremented to the corresponding hours of the next day.
- Stop hour less than or equal to start hour results in the stop hour being incremented to the following day.

4.2.5 Examples

Example 1: Perform an arrival delay prediction for Kennedy International Airport for the hours 10 through 16. The stack size is expected to be at 30 at the start hour (10).

MESSAGE: ARRD JFK 10/17/30

or ARRD JFK 10/17/30 H

or ARRD JFK 10/17/30 M

Example 2: Perform an arrival delay prediction for Atlanta International Airport for six hours starting with the current hour. Allow the stack size to be computed.

MESSAGE: ARRD ATL

or ARRD ATL H

Example 3: Perform an arrival delay prediction for Atlanta International Airport starting at 1600 (GMT) today and continuing through 1200 (GMT) tomorrow. Set the stack size to 60 aircraft at 1720 (GMT).

MESSAGE: ARRD ATL 16/13/60/1720

Example 4: Default start and stop time for Example #3.

MESSAGE: ARRD ATL //60/1720

4.3 CAPL MESSAGE

4.3.1 Purpose

The purpose of the CAPL message is to list the stored "normal" and "today" landing capacities in hourly increments of time for one or all pacing airports.

4.3.2 Message Format

CAPL△ [PLACE] △ [START-TIME] / [STOP-TIME] △ [OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
CAPL	"CAPL"	Message Type - Message ID for List Landing Capacities.	N.A.
PLACE	LLL	Location Identifier - Landing Capacity listing will be for the specified pacing airport.	All pacing airports
START-TIME	dd	Report Start Time - The report shall begin with the noted GMT hour. The hour values must be 00 through 23.	Current GMT hour
STOP-TIME	dd	Report Stop Time - The report shall end at the start of the noted GMT hour. The hour values may be 00 through 23. Stop hour may be ≤start hour. Start hour = stop hour will result in a full 24 hour report.	Report start GMT hour plus PTSTM hours.

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.3.3 Report Description

The output shall contain a title(s) reflecting the nature of the request, the specified airport(s), and the time of message receipt.

The requested data shall be arranged vertically and grouped by pacing airport. Within each airport group, the columns shall display time (in hours), the normal capacity, and the capacity expected today. An example follows:

- INPUT:

```
CAPL JFK 00/23
```

- OUTPUT:

```
JFK LANDING CAPACITIES 0000
TIME NORM TODAY
0000   35  35
0100   35  35
0200   35  35
0300   35  35
0400   35  35
0500   35  35
0600   35  35
0700   35  35
0800   35  35
0900   35  35
1000   35  35
1100   35  35
1200   35  35
1300   35  35
1400   35  35
1500   35  35
1600   35  35
1700   35  35
1800   35  35
1900   35  35
2000   35  35
2100   35  35
2200   35  35
```

4.3.4 Special Considerations

- Stop hour ≤ start hour will result in the stop hour being incremented to the following day.

4.3.5 Examples

Example 1: List the "normal" and "today" landing capacities for Kennedy from hour 8 through hour 21.

MESSAGE: CAPL JFK 08/22

NOTE: The report is sent to the requestor.

Example 2: List the landing capacities for all pacing airports and send the report to the HSP at CFCF and also back to the requestor at ATCSCC.

MESSAGE: CAPL 00/00 I,H

4.4 CAPS MESSAGE

4.4.1 Purpose

The purpose of the CAPS message is to modify "today" landing capacities in the Today Landing Capacity Table for a specified pacing airport and to issue an associated report.

4.4.2 Message Format

CAPS△PLACE△STARTTIME-STOPTIME-CAPACITY

[,STARTTIME-STOPTIME-CAPACITY] ...

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
CAPS	"CAPS"	Message Type - Message ID for Set Landing Capacities Processing.	N.A.
PLACE	LLL	Location Identifier - Landing capacity updates will be made for the specified pacing airport.	N.A.
STARTTIME	dd	Start Time - Entered capacity begins with noted GMT hour. Hour value must be 00 through 23.	N.A.
STOPTIME	dd	Stop Time - Entered capacity ends at start of noted GMT hour. Hour value must be 00 through 23. Stop hour may be < start hour. Stop hour = start hour covers a full 24 hour period	N.A.
CAPACITY	(d)(d)d	Landing Capacity - New landing capacity value for the associated hour(s). The value of the landing capacity must be 0 through PTCPX.	N.A.

4.4.3 Report Description

The output shall contain a report title reflecting the nature of the request, the time of message receipt, and the specified pacing airport. The output data shall be arranged vertically, allowing columns for time period affected (in hours), the normal capacities for the specified airport, and today's expected capacities.

- INPUT:

  CAPS JFK 16-18-40,18-21-45

- OUTPUT:

```
JFK CAPS 1507
TIME  NORM TODAY
1600   50  40
1700   52  40
1800   55  45
1900   50  45
2000   50  45
```

4.4.4 Special Considerations

- The start time, stop time, and landing capacity value are considered to be a triplet. Twenty-four triplets are allowed in one message. The three items in each triplet must be separated by a dash and multiple triplets must be separated by commas. A valid triplet must have all three items specified.
- Only one capacity update value may be specified for any given hour.
- Stop hour less than or equal to start hour results in the stop hour being incremented to the following day.

4.4.5 Examples

Example 1: Update the landing capacities for Atlanta International Airport to the value of 105 for hours 10 through 13 and to the value of 60 for the hours of 14 through 20.

MESSAGE: CAPL ATL 10-14-105,14-21-60

Example 2: Update the landing capacities for Atlanta International Airport to the value of 6 for hours 18 through 6.

MESSAGE: CAPL ATL 18-07-6

4.5 CXSD MESSAGE

4.5.1 Purpose

The purpose of the CXSD message is to cancel an air carrier flight plan (one record) from the OAG Data Base for the current day.

4.5.2 Message Format

CXSD△AIRCRAFT△DEP△PGTD△ARR

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
CXSD	"CXSD"	Message Type - Message ID for delete flight plan processing.	N.A.
AIRCRAFT	LL(a)(d)(d)(d)(d)	Aircraft ID - Flight's call sign consisting of a two or three alphabetic airline operator followed by the flight number.	N.A.
DEP	LLL	Departure Airport - Location identifier of the departure airport (pacing or non-pacing).	N.A.
PGTD	dddd	Proposed Time of Departure - Proposed time of departure in GMT hours and minutes. The hour values must be 00 through 23 and the minutes must be 00 through 59. The specified proposed time in the message must match the departure time stored in the flight record exactly.	N.A.
ARR	LLL	Arrival Airport - Location identifier of the arrival airport (pacing or non-pacing).	N.A.

4.5.3 Report Description

An appropriate message will be issued upon completion of processing functions. No report will be generated.

4.5.4 Special Considerations

- The CXSD message is for the OAG flight record file only.
- The operational category associated with the airline operator specified must be air carrier.
- The current day for the CXSD message is defined as transaction hour minus PTCD1 and transaction hour plus PTCD2 where PTCD1 + PTCD2 = 24. The proposed departure times will be adjusted to fall within this 24 hour period. Therefore, a flight may be cancelled on one of any three days; i.e., the day of the transaction, the day before the transaction day, or the day following the transaction day. The day on which the flight is to be cancelled must be within the OAG time period.
- It is possible that more than one flight record is found to match the CXSD specifications. The cancel processing will be completed if only one matching flight record is found.
- If an unusually large number of matching flight records (currently set to 50) exist in the flight record file, the CXSD will issue a message that the CXSD processing cannot be completed.

4.5.5 Examples

Example 1: Cancel flight AA320 from the OAG flight record file. The indicated flight departs from Atlanta airport at 0835

(scheduled GMT) and arrives at Chicago O'Hare.

MESSAGE: CXSD AA320 ATL 0835 ORD

Example 2: Cancel the flight of Example #1 for a departure time of hour 0, minute 18.

MESSAGE: CXSD AA320 ATL 0018 ORD

NOTE: The PGTD entered must exactly match the PGTD of the flight in the Data Base or no cancellation is performed.

4.6 DEMA MESSAGE

4.6.1 Purpose

The purpose of the DEMA message is to project for today the number of aircraft expected to arrive hourly at a specified pacing airport or at all the pacing airports in a specified center. The report identifies the number of flights which are active and the number of flights which are GA.

4.6.2 Message Format

DEMA△PLACE△[START]/[STOP]/[{AIRLN[,AIRLN]..} {OPCAT[,OPCAT]...}]/[{CLASS[,CLASS]... } {TYPE[,TYPE]... }]△[OUTDV[,OUTDV]...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DEMA	"DEMA"	Message Type - Message ID for Arrival Demand (Today).	N.A.
PLACE	LLL	Location Identifier - Report shall be for the specified pacing airport or center.	N.A.
START	dd	Report Start Hour - Report begins with noted GMT hour; value must be 00 through 23.	Current GMT hour
STOP	dd	Report Stop Hour - Report ends at start of noted GMT hour; value must be 00 through 23. The stop hour may be start hour. Stop hour = start hour covers a full 24 hour period.	Start hour plus PTSTM
AIRLN	(L)LL	Affiliation: Airlines - Report is limited to noted airline(s). A maximum of 20 airlines may be specified.	All airlines
OPCAT	L	Affiliation: Operational Category - Report is limited to noted operational category or categories. A maximum of 20 operational categories may be specified.	All operational categories

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
		The following are valid operational category codes: C = Air Carrier T = Air Taxi M = Military G = General Aviation	
CLASS	L	Equipment Class - Report will include noted class(es). A maximum of 10 classes may be specified. The following are valid class codes: J = JET T = TURBO P = PROP H = HELIOCOPTER A = AMPHIBIOUS S = SEAPLANE	All classes
TYPE	(a)aaa	Equipment Type - Report will include noted type(s). A maximum of 10 types may be specified.	All types
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.6.3 Report Description

The output contains a report header reflecting the nature of the request, the time of message receipt, the center or pacing airport code, an affiliation line which will include the specific codes that were entered, or if defaulted include "ALL", an equipment line which will include the specified codes, or if defaulted include "ALL". Arrival counts will be summarized by the hour. Flights included will be those expected to arrive between the start time and the stop time. Additionally, columns will be presented for active flights and General Aviation (GA) flights. If GA adjustments were not made to the arrival count, the GA column shall contain zeroes. An example follows:

- INPUT:

```
DEMA ATL 0/23
```

- OUTPUT:

```
ATL ARRIVALS 0000
   AFFILIATION ALL
   EQUIPMENT ALL TYPES/CLASSES
TIME ARR ACT GA
0000  10   2  6
0100  12   2  6
0200   8   0  6
0300   2   0  2
0400   6   0  6
0500   8   0  6
0600   6   0  6
0700   6   0  4
0800  10   0  6
0900  30   0 30
1000  32   0 30
1100  30   0 30
1200  23   0 23
1300  23   0 23
1400  30   0 30
1500  30   0 30
1600  30   0 30
1700  30   0 30
1800  30   0 30
1900  30   0 30
2000  30   0 30
2100  30   0 30
2200  30   0 30
```

4.6.4 Special Considerations

- When a center is specified as the location identifier, the report reflects counts of the pacing airports in that center.
- If a specified center has no pacing airport, no report will be issued.
- GA counts will be made only if the affiliation specification is defaulted to all affiliations or includes GA's and the equipment specification is defaulted to all.
- Start hour less than transaction time indicates the report is to start on the day following transaction day.
- Airlines and Operational Categories may not be specified in the same message.
- Equipment Class and Type may not be entered in the same message.

4.6.5 Examples

Example 1: Generate arrival counts for the flights arriving at pacing airports within the New York Center from hour 8 through hour 12.

MESSAGE: DEMA ZNY 08/13//

or DEMA ZNY 08/13

Example 2: Generate arrival counts for all B727 flights arriving at Atlanta International Airport for a six hour period starting with the current hour. Send the output to the HSP at CFCF and to the requestor.

MESSAGE: DEMA ATL ///B727 H,I

Example 3: Include only Trans World Airlines (TWA) and American Airline (AA) Flights for Example #2.

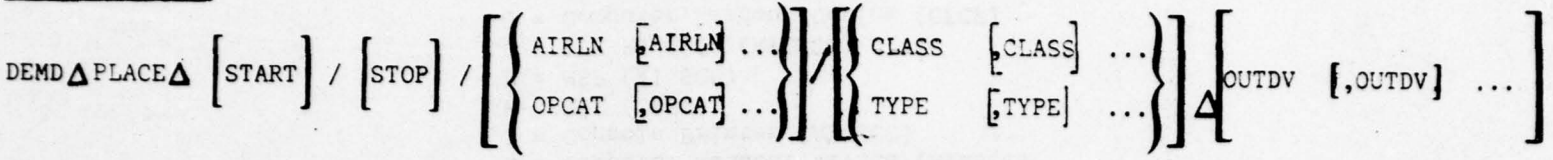
MESSAGE: DEMA ATL //TW,AA/B727 H,I

4.7 DEMD MESSAGE

4.7.1 Purpose

The purpose of the DEMD message is to project the number of aircraft expected to depart hourly from a specified pacing airport or from all pacing airports in a specified center. The report identifies the number of flights which are active and the number of flights which are General Aviation (GA).

4.7.2 Message Format



ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DEMD	"DEMD"	Message Type - Message ID for Departure Demand (Today).	N.A.
PLACE	LLL	Location Identifier - Report shall be for the specified pacing airport or center.	N.A.
START	dd	Report Start Hour - Report begins with noted GMT hour; value must be 00 through 23.	Current GMT hour
STOP	dd	Report Stop Hour - Report ends at start of noted GMT hour; value must be 00 through 23. Stop hour may be ⩽ start hour.	Start hour plus PTSTM
AIRLN	(L)LL	Affiliation: Airlines - Report is limited to noted airline(s). A maximum of 20 airlines may be specified.	All airlines
OPCAT	L	Affiliation: Operational Category - Report is limited to noted operational category or categories. A maximum of 20 operational categories may be specified.	All operational categories

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
		The following are valid operational category codes: C = Air Carrier T = Air Taxi M = Military G = General Aviation	
CLASS	L	Equipment Class - Report will include noted class(es). A maximum of 10 classes may be specified. The following are valid class codes: J = JET T = TURBO P = PROP H = HELIOCOPTER A = AMPHIBIOUS S = SEAPLANE	All classes
TYPE	(a)aaa	Equipment Type - Report will include noted type(s). A maximum of 10 types may be specified.	All types
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.7.3 Report Description

The output contains a report header reflecting the nature of the request, the time of message receipt, the center or pacing airport code, an affiliation line which will include the codes that were entered, or if defaulted include "ALL", and an equipment line which will include the specific code, or if defaulted include "ALL". Departure counts will be summarized by the hour. Flights included will be those expected to depart between the start time and the stop time. Additionally, columns will be presented for active flights and General Aviation (GA) flights. If GA adjustments were not made to the departure count, the entries in the GA column are set to zero. An example follows:

- INPUT:

```
DEMD ATL ////
```

- OUTPUT:

```
ATL  DEPARTURES  0000
     AFFILIATION  ALL
     EQUIPMENT  ALL  TYPES/CLASSES
TIME DEP ACT GA
0000   9   0  6
0100  17   0  6
0200  11   0  6
0300  13   0  6
0400  10   0  6
0500  15   0  6
```

4.7.4 Special Considerations

- When a center is specified as the location identifier, the report reflects counts for the pacing airports in that center.
- If a specified center has no pacing airport, no report will be issued.

- GA counts will be made only if the affiliation specification is defaulted to all affiliations or includes GAs and the equipment specification is defaulted to all.
- Start hour less than transaction time indicates the report is to start on the day following transaction day.
- Airlines and Operational CAtegories may not be specified in the same message.
- Equipment Class and Type may not be entered in the same message.

4.7.5 Examples

Example 1: Generate departure counts for all flights departing pacing airports within the New York Center from hour 8 through hour 12.

MESSAGE: DEMD ZNY 08/13//

or DEMD ZNY 08/13

Example 2: Generate departure counts for all B727 flights departing Atlanta International Airport for a six hour period starting with the current hour. Send the output to the HSP at CFCF and to the requestor.

MESSAGE: DEMD ATL ///B727 H,I

Example 3: Include only Trans World Airlines (TWA) and American Airline (AA) flights for Example #2.

MESSAGE: DEMD ATL //TW,AA/B727 H,I

4.8 DESA MESSAGE

4.8.1 Purpose

The purpose of the DESA message is to project the number of aircraft scheduled to arrive in the future at any specified airport or at all the airports in a specified center. The demand data are taken only from the OAG Data Base. The report identifies the number of flights that are GA, unless the demand is for a non-pacing airport.

4.8.2 Message Format

DESAΔPLACEΔ[[{STARTDATE / STARTDAY}]] / [STARTTIME] / [[{STOPDATE / STOPDAY}]] / [STOPTIME] /
[{AIRLN [,AIRLN] ... / OPCAT [,OPCAT] ...}] / [{CLASS [,CLASS] ... / TYPE [,TYPE] ...}] Δ[OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DESA	"DESA"	Message Type - Message ID for Arrival Demand (Future).	N.A.
PLACE	LLL	Location Identifier Report shall be for the specified pacing or non-pacing airport or center.	N.A.
STARTDATE	dddd	Report Start Date - Report begins on noted date (month and day of month). The month must be 01 through 12 and the day must be 01 through 29, 30, or 31 as appropriate.	Current Date
STARTDAY	ddd	Report Start Day of Year - Report begins on noted day of the year. The day of the year must be 001 through 366.	Current Day
STARTTIME	dd	Report Start Time - Report begins with noted GMT hour. The specified hour must be 00 through 23.	Current GMT hour of the start date

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STOPDATE	dddd	Report Stop Date - Report ends on noted date (month and day of month). The month must be 01 through 12 and the day must be 01 through 29, 30, or 31, as appropriate.	Start Date plus PTSDT
STOPDAY	ddd	Report Stop Day of Year - Report ends on noted day of year. The value must be 001 through 366.	Start Date plus PTSDT
STOPTIME	dd	Report Stop Time - Report ends at start of noted GMT hour of the Stop Date. The specified hour must be 00 through 23. The stop hour may be $\leq$ the start hour.	Start Hour plus PTSTM
AIRLN	(L)LL	Affiliation: Airlines - Report is limited to noted airline(s). A maximum of 20 airlines may be specified.	All airlines
OPCAT	L	Affiliation: Operational Category - Report is limited to noted operational category or categories. A maximum of 20 operational categories may be specified. The following are valid operational category codes: C = Air Carrier T = Air Taxi M = Military G = General Aviation	All operational categories
CLASS	L	Equipment Class - Report will include noted class(es). A maximum of 10 classes may be specified.	All classes

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
		The following are valid class codes: J = JET T = TURBO P = PROP H = HELIOCOPTER A = AMPHIBIOUS S = SEAPLANE	
TYPE	(a)aaa	Equipment Type - Report will include noted type(s). A maximum of 10 types may be specified.	All types
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.8.3 Report Description

The output shall contain a report title reflecting the nature of the request, the center or any specified airport for which the report was requested, and the time of message receipt. An affiliation line will include the specific odes that were entered, of if defaulted, include "ALL". Arrival counts will be summarized by date/hour. Flights included will be those expected to arrive between the start date/time and stop date/stop time. A General Aviation (GA) count is also presented; if GA adjustments were not made to the arrival counts, the GA column will contain zeroes. An example follows:

- INPUT:

  DESA MDT 0302/00/0304/00/C/J

- OUTPUT:

```
MDT ARRIVALS 0000
   AFFILIATION AIR CARRIER
   EQUIPMENT JETS


TIME  ARR  GA  DATE

0000    2   0  0302
0100    4   0
0200    0   0
0300    0   0
0400    0   0
0500    0   0
0600    0   0
0700    0   0
0800    0   0
0900    0   0
1000    0   0
1100    0   0
1200    0   0
1300    0   0
1400    0   0
1500    0   0
1600    0   0
```

TIME	ARR	GA	DATE
1700	0	0	
1800	0	0	
1900	0	0	
2000	0	0	
2100	0	0	
2200	0	0	
2300	0	0	
0000	2	0	0303
0100	4	0	
0200	0	0	
0300	0	0	
0400	0	0	
0500	0	0	
0600	0	0	
0700	0	0	
0800	0	0	
0900	0	0	
1000	0	0	
1100	0	0	
1200	0	0	
1300	0	0	
1400	0	0	
1500	0	0	
1600	0	0	
1700	0	0	
1800	0	0	
1900	0	0	
2000	0	0	
2100	0	0	
2200	0	0	
2300	0	0	

4.8.4 Special Considerations

- The start time of the report period must be less than the stop time of the report period.
- The start and stop times of the report period must be in the OAG time period for the current data base.
- GA counts will be separately identified only if the equipment specification is defaulted to all and the affiliation specification is either defaulted to all or specifies GA. Furthermore, the GA counts will never appear if the location identifier is a non-pacing airport.
- Start hour less than transaction time indicates the report is to start on the day following transaction day.

4.8.5 Examples

Example 1: Generate a list of all arrival counts for Atlanta International Airport starting on July 5 and ending at the beginning of August 1 (zero hour for each day).

MESSAGE: DESA ATL 0705/00/0801/00

Example 2: Generate a list of arrival counts for all airports in the New York Center starting on hour 12 of day 40 of the year and ending on hour 6 of day 42 of the year. The arriving aircraft must be jets or turbo-jets that are air-carriers.

MESSAGE: DESA ZNY 040/12/042/06/C/J,T

Example 3: Generate a list of arrival counts for Pittsburgh Airport starting at the current hour of today and continuing to the start of January 2. The aircraft must be B727s. The output is to be sent to the HSP at CFCF and to the requestor.

MESSAGE: DESA PIT //0102/00//B727 H,I

4.9 DESD MESSAGE

4.9.1 Purpose

The purpose of the DESD message is to project the number of aircraft scheduled to depart in the future from any specified airport or from all airports in a specified center. The demand data are taken only from the OAG Data Base. The report identifies the number of flights that are GA, unless the demand is for a non-pacing airport.

4.9.2 Message Format

$$\text{DESD}\Delta\text{PLACE}\Delta\left[\left\{\begin{matrix}\text{STARTDATE}\\ \text{STARTDAY}\end{matrix}\right\}\right] / \left[\text{STARTTIME}\right] / \left[\left\{\begin{matrix}\text{STOPDATE}\\ \text{STOPDAY}\end{matrix}\right\}\right] / \left[\text{STOPTIME}\right] /$$

$$\left[\left\{\begin{matrix}\text{AIRLN } [,\text{AIRLN}]\ldots\\ \text{OPCAT } [,\text{OPCAT}]\ldots\end{matrix}\right\}\right] / \left[\left\{\begin{matrix}\text{CLASS } [,\text{CLASS}]\ \ldots\\ \text{TYPE } [,\text{TYPE}]\ \ldots\end{matrix}\right\}\right] \Delta \left[\text{OUTDEV } [\ ,\text{OUTDEV}]\ \ldots\ \right]$$

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DESD	"DESD"	Message Type - Message ID for Departure Demand (Future).	N.A.
PLACE	LLL	Location Identifier Report shall be for the specified pacing or non-pacing airport or center.	N.A.
STARTDATE	dddd	Report Start Date - Report begins on noted date (month and day of month). The month must be 01 through 12 and the day must be 01 through 29, 30, or 31 as appropriate.	Current Date
STARTDAY	ddd	Report Start Day of Year - Report begins on noted day of the year. The day of the year must be 001 through 366.	Current Day
STARTTIME	dd	Report Start Time - Report begins with noted GMT hour. The specified hour must be 00 through 23.	Current GMT hour of the Start Date
STOPDATE	dddd	Report Stop Date - Report ends on noted date (month and day of month). The month must be 01 through 12 and the day must be 01 through 29, 30, or 31, as appropriate.	Start Date plus PTSDT

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STOPDAY	ddd	Report Stop Day of Year - Report ends on noted day of year. The value must be 001 through 366.	Start Date plus PTSCT
STOPTIME	dd	Report Stop Time - Report ends at start of noted GMT hour of the Stop Date. The specified hour must be 00 through 23. The stop hour may be ≤ the start hour.	Start Hour plus PTSTM
AIRLN	(L)LL	Affiliation: Airlines - Report is limited to noted airline(s). A maximum of 20 airlines may be specified.	All airlines
OPCAT	L	Affiliation: Operational Category - Report is limited to noted operational category or categories. A maximum of 20 operational categories may be specified. The following are valid operational category codes: C = Air Carrier T = Air Taxi M = Military G = General Aviation	All operational categories
CLASS	L	Equipment Class - Report will include noted class(es). A maximum of 10 classes may be specified. The following are valid class codes: J = JET T = TURBO P = PROP H = HELIOCOPTER A = AMPHIBIOUS S = SEAPLANE	All classes
TYPE	(a)aaa	Equipment Type - Report will include noted type(s). A maximum of 10 types may be specified.	All types

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.9.3 Report Description

The output contains a report title reflecting the nature of the request, the airport or center code specified, and the time of message receipt. An affiliation line includes specific codes that were entered, or if defaulted include "ALL". Entered Equipment Codes are printed, or if defaulted,"ALL". Departure counts will be summarized by the date/hour. Flights included will be those expected between the start date/start time and stop date/stop time. A General Aviation (GA) count is also presented; however, if GA adjustments were not made to the departure count, the entries in the GA column will contain zeroes. An example follows:

- INPUT:

  DESD ATL 1220/00/1225

- OUTPUT:

ATL DEPARTURES 0000
AFFILIATION ALL
EQUIPMENT ALL TYPES/CLASSES

TIME	DEP	GA	DATE
0000	9	6	1220
0100	17	6	
0200	11	6	
0300	13	6	
0400	10	6	
0500	15	6	
0600	7	6	
0700	6	6	
0800	6	6	
0900	6	6	
1000	7	6	
1100	20	6	
1200	9	6	
1300	8	6	
1400	11	6	
1500	18	6	
1600	8	6	
1700	26	6	
.	.	.	
.	.	.	
.	.	.	
2200	12	6	
2300	19	6	
0000	9	6	1225
0100	17	6	
0200	10	6	
0300	13	6	
0400	9	6	
0500	15	6	

4.9.4 Special Considerations

- The start times of the report period must be less than the stop time of the report period.
- The start and stop times of the report period must be in the OAG time period for the current Data Base.
- GA counts will be separately identified only if the equipment specification is defaulted to"ALL"and the affiliation specification is either defaulted to"ALL"or specifies GA. Furthermore, the GA counts will never appear if the location identifier is a non-pacing airport.
- Start hour less than transaction time indicates the report is to start on the day following transaction day.

4.9.5 Examples

Example 1: Generate a list of all departure counts for Atlanta International Airport starting on July 5 and ending at the beginning of August 1 (zero hour for each day).

MESSAGE: DESD ATL 0705/00/0801/00

Example 2: Generate a list of departure counts for all airports in the New York Center starting on hour 12 of day 40 of the year and ending on hour 6 of day 42 of the year. The departing aircraft must be jets or turbo-jets that are air-carriers.

MESSAGE: DESD ZNY 040/12/042/06/C/J,T

Example 3: Generate a list of departure counts for Pittsburgh Airport starting at the current hour of today and continuing to the start of January 2. The aircraft must be B727s. The output is to be sent to the HSP at CFCF and to the requestor.

MESSAGE: DESD PIT //0102/00//B727 H,I

4.10 DLDY MESSAGE

4.10.1 Purpose

The purpose of the DLDY message is to project for today the number of hourly arrivals at a specified pacing airport when flights departing from another specified pacing airport are delayed by a specified amount of time. The report identifies the number of flights which are active and the number of flights which are General Aviation (GA).

4.10.2 Message Format

DLDYΔARRΔDEP/[START] /[STOP] /DELAYΔ[OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DLDY	"DLDY"	Message Type - Message ID for departure delay test message.	N.A.
ARR	LLL	Arrival Airport - Location identifier of the arrival airport (pacing only).	N.A.
DEP	LLL	Departure Airport - Location identifier of the departure airport (pacing only) for which the delay factor will be applied.	N.A.
START	dd	Report Start Hour - Report begins with noted GMT hour. Hour value must be 00 through 23.	Current GMT hour
STOP	dd	Report Stop Hour - Report shall end at the beginning of the noted GMT hour. Hour value must be 00 through 23. Stop hour may be $\leqslant$ start hour.	Start Hour plus stop time parameter (PTSTM)
DELAY	(d)(d)d	Delay Factor - Delay factor in minutes to be applied to each flight arriving at the specified arrival airport from the specified departure airport. The delay factor must be $\leqslant$ to the maximum delay factor (PTDFX).	N.A.

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.10.3 Report Description

The output contains a report title reflecting the nature of the request, the arrival pacing airport specified, and the time of message receipt. Arrival counts will be summarized by the hour. Flights included will be those expected to arrive between the start time and the stop time with the delay factor added to all departure flights from the specified departure airport. Additionally, columns for active flights and General Aviation (GA) flights are included. An example follows:

- INPUT:

  DLDY JFK ORD/08/13/45

- OUTPUT:

  JFK ARRIVALS WITH 45 MINUTE DELAY OF ORD DEPARTURES 0630

TIME	ARD	ACT	GA
0800	20	1	2
0900	44	0	3
1000	36	0	2
1200	47	0	1

4.10.4 Special Considerations

- There is an upper limit to the number of flight records that the DLDY transaction can process. This number is currently set to 200. An alternative to this situation is to resubmit the message with a shorter time frame.
- A start hour less than transaction time indicates the start hour applies to the day following transaction day.

- Stop hour less than or equal to start hour will result in the stop hour being incremented to the following day.

4.10.5 Examples

Example #1: Count the number of arrivals at Atlanta International Airport of flights departing from Chicago O'Hare International Airport that are delayed by 80 minutes. Provide arrival counts for a six hour period starting with the current hour.

MESSAGE: DLDY ATL ORD///80

Example #2: Change the report time period of Example #1 to be from hour 3 through hour 16. Send the output to the HSP at CFCF.

MESSAGE: DLDY ATL ORD/03/17/80 H

4.11 DM MESSAGE

4.11.1 Purpose

The purpose of the DM message is to add the actual departure time to a flight record for a departure aircraft going to a pacing airport. The message must be recieved from an ARTCC. The flight record can be in either the OAG or Non-OAG Data Base.

4.11.2 Message Format

DM △ AIRCRAFT △ DEP △ ACTUAL △ ARR

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DM	"DM"	Message Type	N.A.
AIRCRAFT	La(a)(a)(a)(a)(a)	Aircraft Identification - Flight's call sign. The first character must be alphabetic and the remaining 1-6 characters must be alphanumeric.	N.A.
DEP	LLL	Departure Airport - Location identifier of the departure airport (pacing or non-pacing).	N.A.
ACTUAL	dddd	Actual Departure Time - Actual departure time in GMT hours and minutes. Hour values must be 00 through 23 and minute values must be 00 through 59. The actual departure time must be within PTACT of the proposed departure time in the flight record.	N.A.
ARR	LLL	Arrival Airport - Location identifier of the arrival airport (pacing only).	N.A.

4.11.3 Report Description

No report will be generated.

4.11.4 Special Considerations

- The current day definition for the DM message is the 24 hour period between transaction hour minus PTCD1 and transaction hour plus PTCD2. Therefore, the actual departure time could apply to the day prior to transaction day or the day following the transaction day.

- If more than one flight plan is found to match the DM specifications, no DM processing will be done.

4.11.5 Examples

Example 1: Enter from an ARTCC the actual departure time of 1650 (GMT) into the flight record for flight AA316 departing from Pittsburgh, arriving at Chicago O'Hare.

MESSAGE: DM AA316 PIT 1650 ORD

NOTE: If transaction hour is 0400, the actual departure time is entered for the previous day. For a transaction hour of 0500 or 2200, the actual departure time is entered for today (based on PTCD1 = 12 and PTCD2 = 12).

Example 2: Enter the actual departure time of hour eight, minute 35 (GMT) for the flight of Example #1.

MESSAGE: DM AA316 PIT 0835 ORD

4.12 FADF MESSAGE

4.12.1 Purpose

The purpose of the FADF message is to provide reports of departure control delays, first tier center release rates, and other subsidiary information to be used to limit flight delays in the specified arrival pacing airport terminal area to a controller specified level. Reports are based on flights from the OAG and Non-OAG Data Bases, hourly landing rates, hourly general aviation counts, a zone structure relating flight origins to tier centers, a stack size specified for a given hour of the day, the maximum delay desired in the arrival terminal area, the earliest time at which the release rates can be implemented, and an ETE cutoff time to restrict ground delays to flights having short times enroute.

Each flight assigned a flow control is listed in the Energy Conservation Flow Control report.

4.12.2 Message Format

FADF$_{\Delta}$ PLACE$_{\Delta}$ [START-TIME] / [STOP-TIME] / [ETE] / [ZONE]/

[STACK-SIZE]/ [STACK-TIME] /HOLDTIME $_{\Delta}$ [OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FADF	"FADF"	Message Type - Message ID for Fuel Advisory by Flight	N.A.
PLACE	LLL	Location Identifier - Simulation report shall be for the specified pacing airport.	N.A.
START-TIME	dd	Report Start Hour - Calculations and report shall begin with the specified GMT hour. Hour values must be 00 through 23.	Current GMT hour
STOP-TIME	dd	Report Stop Hour - Calculations and report shall end at start of noted GMT hour.Values must be 00 through 23. Stop hour may be $\leq$ start hour.	Start Time plus PTSTM hours
ETE	(d)(d)d	Estimated Time EnRoute - Report will include flights with ETE value in minutes less than or equal to specified ETE value. The ETE value must be 0 through PTETX minutes.	All ETE's
ZONE	d	Zone Identifier - The QFLW report will be generated for the specified zone. The zone values may be 0 through 9.	No QFLW report will be generated

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STACK-SIZE	(d)(d)d	Stack Size - Calculations shall use the specified number of aircraft holding. The number must be 0 through PTSSX.	The actual number of flights holding
STACK-TIME	dddd	Stack Time - The stack size will be in effect at the specified stack time (hours and minutes). Hour must be 00 through 23 and minutes must be 00 through 59. The specified stack time must be within the range of Report Start Hour minus PTSTN hour and Report Start Hour plus PTSTX hours.	Report Start Hour
HOLDTIME	(d)(d)d	Hold Time - The hold time value (minutes) specifies the maximum amount of delay in arrival center. Hold time values may be 0 through PTNTX minutes.	N.A.
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.12.3 Report Description

The output contains a series of reports. The first is a listing in hourly increments of the landing capacities (CAPL) for the specified pacing airport during the specified or defaulted time range. The second report is a listing in hourly increments of the General Aviation Estimates (GAEL) for the specified pacing airport during the specified or implied time range. If the FADF input contains a zone qualifier, a Quota Flow First Tier (QFLW) report is generated for the specified pacing airport during the adapted (parameter) time range utilizing the stack size/time and hold time criteria. The next report to be output is a listing in hourly increments of the controlled arrival delay predictions (ARRD) for the specified time period. The last report in the series to be output contains the assigned delay time for each individual flight in addition to the departure airport, estimated departure clearance time, proposed gate time of departure, ground assigned delay, total delay, estimated time enroute, new estimated time of arrival, and boundary crossing time. An example follows:

- INPUT

```
FADF JFK 04/04/180////40
```

- OUTPUT:

JFK LANDING CAPACITIES 0000

TIME	NORM	TODAY
0400	35	6
0500	35	6
0600	35	6
0700	35	6
0800	35	4
0900	35	4
1000	35	4
1100	35	4
1200	35	4
1300	35	35
1400	35	35
1500	35	35
1600	35	35
1700	35	35
1800	35	35
1900	35	35
2000	35	35
2100	35	35
2200	35	35
2300	35	35
2300	35	35
0000	35	4
0100	35	4
0200	35	6
0300	35	6
0400	4	6
0500	4	6
0600	4	6
0700	4	6
0800	4	4
0900	4	4
1000	4	4
1100	4	4
1200	4	4
1300	4	4
1400	4	4
1500	4	4
1600	4	4
1700	4	4
1800	4	4
1900	4	4
2000	4	4
2100	4	4
2200	4	4
2300	4	4
0000	4	4
0100	4	4
0200	4	6
0300	4	6

JFK ARRIVAL DELAYS CONTROLLED
0 STACKED 0400

TIME	ARR	ACT	LND	AVERAGE HLD	AVERAGE DLY	PEAK HLD	PEAK DLY
0400	8	0	6	11	1	2	20
0500	8	0	6	27	3	4	40
0600	10	0	6	51	6	8	80
0700	6	0	6	66	7	8	110
0800	4	0	4	78	7	8	112
0900	4	0	4	78	7	8	112
1000	4	0	4	78	7	8	112
1100	4	0	4	71	7	8	112
1200	4	0	4	45	7	8	65
1300	4	0	12	6	3	7	12
1400	4	0	4	0	0	0	0
1500	4	0	4	0	0	0	0
1600	4	0	4	0	0	0	0
1700	4	0	4	0	0	0	0
1800	4	0	4	0	0	0	0
1900	4	0	4	0	0	0	0
2000	4	0	4	0	0	0	0
2100	4	0	4	0	0	0	0
2200	4	0	4	0	0	0	0
2300	5	0	5	1	1	1	1
0000	7	0	4	24	1	3	40
0100	5	0	4	35	3	4	40
0200	9	0	6	47	6	7	65
0300	5	0	6	50	6	7	75

JFK ENERGY CONSERVATION FLOW CONTROL BY FLIGHT ID
ETE 180
HOLD TIME 40

IDENT	DEP	EDCT	PGTD	GAD	TDLY	ETE	NETA	BXTM
SI0005	JFK	0435	P0430	5	45	45	0520	0520
SI0006	JFK	0445	P0430	15	55	45	0530	0530
SI0007	JFK	0455	P0430	25	65	45	0540	0540
SI0008	LGA	0535	P0500	35	75	15	0550	0550
SI0004	EWR	0500	P0430	30	70	60	0600	0600
SI0009	LGA	0540	P0500	40	80	30	0610	0610
SI0004	EWR	0520	P0430	50	90	60	0620	0620
SI0009	LGA	0600	P0500	60	100	30	0630	0630
SI0012	PHL	0005	P0000	5	45	30	0035	0035
SI0015	PIT	0020	P0000	20	60	30	0050	0050
SI0013	PIT	0025	P0000	5	45	60	0105	0105
SI0014	MDT	0020	P0000	20	60	60	0120	0120
SI0016	RDU	0030	P0000	30	70	60	0130	0130
SI0017	HSV	0040	P0000	40	80	60	0140	0140
SI0013	PIT	0050	P0000	50	90	60	0150	0150
SI0014	MDT	0100	P0000	60	100	60	0200	0200
SI0016	RDU	0110	P0000	70	110	60	0210	0210
SI0017	HSV	0120	P0000	80	120	60	0220	0220
SI0001	ATL	0330	P0300	30	70	30	0400	0400
SI0001	ATL	0340	P0300	40	80	30	0410	0410

4.12.4 Special Considerations

- The report period will not be permitted to extend beyond the "Airport Zero Stack Hour" data base value. To continue or project the simulation through the Zero Stack Hour, the computed stack size from the initial simulation should be used as input to the succeeding simulation.
- A report start hour earlier than transaction time will cause the report start and stop hours to be incremented to the corresponding hours of the next day.
- The Quota Flow portion of a FAD report will have inaccurate release rates in the last two report hours if the stop time is equal to or adjusted to the Zero Stack hour.

4.12.5 Examples

Example #1: Perform a FAD simulation on Atlanta International Airport starting at 0900 (GMT) and ending at 1400 (GMT). The stack size is set to 50 aircraft at 0930 (GMT) and aircraft are permitted a 20 minute hold at the arrival center. Flights with ETEs greater than 180 minutes are not assigned ground delays. Zone structure number one is used.

MESSAGE: FADF ATL 09/14/180/1/50/0930/20

Example #2: Perform a FAD simulation on Atlanta International Airport for six hours starting with the current hour. The stack size is set to 105 aircraft at start hour. Allow flights to hold up to 20 minutes in the arrival center. All flights can be assigned ground delays and no quota flow report is requested. The report is to be sent to the HSP at CFCF.

MESSAGE: FADF ATL ////105//20 H

4.13 FADP MESSAGE

4.13.1 Purpose

The purpose of the FADP message is to provide reports of departure control delays, first tier center release rates, and other subsidiary information to be used to limit flight delays in the specified arrival pacing airport terminal area to a controller-specified level. Reports are based on flights from the OAG and Non-OAG Data Bases, hourly landing rates, hourly general aviation counts, a zone structure relating flight origins to tier centers, a stack size specified for a given hour of the day, the maximum delay desired in the arrival terminal area, the earliest time at which the release rates can be implemented, and an ETE cutoff time to restrict ground delays to flights having short times enroute.

The Energy Conservation Flow Control report presents counts of flow controlled aircraft at 15 minute periods over the specified report period.

4.13.2 Message Formats

FADP$_{\Delta}$ PLACE $_{\Delta}$ [START-TIME] / [STOP-TIME] / [ETE] / [ZONE] /

[STACK-SIZE] / [STACK-TIME] /HOLDTIME$_{\Delta}$ [OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FADP	"FADP"	Message Type - Message ID for Fuel Advisory by Block.	N.A.
PLACE	LLL	Location Identifier - Simulation report shall be for the specified pacing airport.	N.A.
START-TIME	dd	Report Start Hour - Calculations and report shall begin with the specified GMT hour. Hour values must be 00 through 23.	Current GMT hour
STOP-TIME	dd	Report Stop Hour - Calculations and report shall end at start of noted GMT hour. Values must be 00 through 23. Stop hour may be start hour.	Start Time plus PTSTM hours.
ETE	(d)(d)d	Estimated Time EnRoute - Reports will include flights with ETE value in minutes less than or equal to specified ETE value. The ETE value must be 0 through PTETX minutes.	All ETEs
ZONE	d	Zone Identifier - The QFLW report will be generated for the specified zone. The zone values may be 0 through 9.	No QFLW report will be generated

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STACK-SIZE	(d)(d)d	Stack Size - Calculations shall use the specified number of aircraft holding. The number must be 0 through PTSSX.	The actual number of flights holding
STACK-TIME	dddd	Stack Time - The stack size will be in effect at the specified stack time (hours and minutes). Hours must be 00 through 23 and minutes must be 00 through 59. The specified stack time must be within the range of Report Start hour minus PTSTN hours and Report Start hour plus PTSTX hours.	Report Start Hour
HOLDTIME	(d)(d)d	Hold Time - The hold time value (minutes) specified the maximum amount of delay in arrival center. Hold time values may be 0 through PTHTX minutes.	N.A.
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.13.3 Report Description

The FADP message causes the generation of a series of reports. The first is a listing in hourly increments of the landing capacities (CAPL) for the specified pacing airport during the specified or implied time range. The second report is a listing in hourly increments of the General Aviation Estimates (GAEL) for the specified pacing airport during the specified or implied time range. If the FADP input contains a zone qualifier, a Quota Flow First Tier (QFLW) report is generated for the specified pacing airport during the adapted (parameter) time range utilizing the stack size/time and hold time criteria. The next report to be output is a listing in hourly increments of the controlled arrival delay predictions (ARRD) for the specified pacing airport during the specified or implied time range. The last report in the series to be output contains the average control delay times in 15 minute increments for the specified or implied time range. An example follows:

- INPUT

  FADP JFK 04/12/10//40/0415/40

- OUTPUT

JFK LANDING CAPACITIES 0000

TIME	NORM	TODAY
0400	35	6
0500	35	6
0600	35	6
0700	35	6
0800	35	4
0900	35	4
1000	35	4
1100	35	4
0400	4	6
0500	4	6
0600	4	6
0700	4	6
0800	4	4
0900	4	4
1000	4	4
1100	4	4

JFK ARRIVAL DELAYS CONTROLLED
40 STACKED 0415

				AVERAGE		PEAK	
TIME	ARR	ACT	LND	HLD	DLY	HLD	DLY
0400	40	0	0	4	224	40	485
0415	6	0	4	41	260	43	513
0500	12	0	6	47	293	51	486
0600	6	0	6	48	288	48	447
0700	6	0	6	48	276	48	397
0800	14	0	4	47	256	48	348
0900	4	0	4	47	221	48	294
1000	4	0	4	47	183	48	241
1100	44	0	4	47	140	48	188

JFK ENERGY CONSERVATION FLOW CONTROL
ETE 10
HOLD TIME 40

ARR TIME	AVERAGE DELAY CNTL	STCK	TOTL
0400	0	225	225
0415	0	503	503
0430	0	513	513
0445	0	496	496
0500	0	488	488
0515	0	480	480
0530	0	475	475
0545	0	460	460
0600	0	444	444
0615	0	432	432
0630	0	419	419
0645	0	407	407
0700	0	394	394
0715	0	382	382
0730	0	370	370
0745	0	357	357
0800	0	342	342
0815	0	329	329
0830	0	316	316
0845	0	302	302
0900	0	289	289
0915	0	276	276
0930	0	263	263
0945	0	249	249
1000	0	236	236
1015	0	223	223
1030	0	209	209
1045	0	196	196
1100	0	183	183

4.13.4 Special Considerations

- The report period will not be permitted to extend beyond the "Airport Zero Stack Hour" data base value. To continue or project the simulation through the Zero Stack hour, the computed stack size from the initial simulation should be used as input to the succeeding simulation.

- A report start hour earlier than transaction time will cause the report start and stop hours to be incremented to the corresponding hours of the next day.

- The Quota Flow portion of a FAD report will have inaccurate release rates in the last two report hours if the stop time is equal to or adjusted to the Zero Stack hour.

4.13.5 Examples

Example #1: Perform a FAD simulation on Atlanta International Airport starting at 0900 (GMT) and ending at 1400 (GMT). The stack size is set to 50 aircraft at 0930 (GMT) and aircraft are permitted a 20 minute hold at the arrival center. Flights with ETEs greater than 180 minutes are not assigned ground delays. Zone structure number one is used.

MESSAGE: FADP ATL 09/14/180/1/50/0930/20

Example #2: Perform a FAD simulation on Atlanta International Airport for six hours starting with the current hour. The stack

size is set to 105 aircraft at start hour. Allow flights to hold up to 20 minutes in the arrival center. All flights can be assigned ground delays and no quota flow report is requested. The report is to be sent to the HSP at CFCF.

MESSAGE: FADP ATL ////105//20 H

4.14 FADT MESSAGE

4.14.1 Purpose

The purpose of the FADT message is to simulate the arrival times at a specified arrival airport using test values to determine the need for implementing FADF or FADP procedures. The FADT message provides reports of departure control delays, first tier center release rates, and other subsidiary information to be used to limit flight delays in the specified arrival pacing airport terminal area to a controller specified level. Reports are based on flights from the OAG and NON-OAG Data Bases, hourly landing rates, a zone structure relating flight origins to tier centers, a stack size for a given hour of the day, the maximum delay desired in the terminal area, departure delays at up to five specified departure airports, and the earliest time at which the release rates could be implemented.

The Data Base is not affected by this message.

4.14.2 Message Format

FADTΔPLACEΔ[STARTTIME] / [STOPTIME] / [TESTSTART-TESTSTOP-TESTCAP
[TESTSTART-TESTSTOP-TESTCAP] ...] / [ZONE] / [STACKSIZE] / [STACKTIME] /
HOLDTIME/ [DELAY-DEP [,DELAY-DEP] ...]Δ[OUTDEV [, OUTDEV]...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FADT	"FADT"	Message Type - Message ID for Fuel Advisory Departure Test Processing	NA
PLACE	LLL	Location Identifier - *Simulation report shall be for the specified* pacing airport	NA
STARTTIME	dd	Report Start Hour - Calculations and report shall begin with the specified GMT hour. Hour values must be 00 through 23.	Current GMT hour
STOPTIME	dd	Report Stop Hour - Calculations and report shall end at start of noted GMT hour.Values must be 00 through 23. Stop hour may be ⩽start time.	Start Time plus PTSTM hours
TESTSTART	dd	Test Start Hour - The associated test capacity will be effective beginning with the noted GMT hour. The hour value may be 00 through 23.	The default value for the start time-- test stop time-- test capacity triplet entries will be the capacities for the current day for the specified pacing airport.
TESTSTOP	dd	Test Stop Hour -- The associated test capacity will be effective up to the start of the test stop hour. The hour value must be 00 through 23. Stop time may be ⩽ start hour.	

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
TESTCAP	(d)(d)d	Test Capacity Specification - The simulation calculations will use the specified landing capacity for the associated test hours. The value must be 0 through PTCPX. NOTE: The test start/hour-stop/hour - capacity is considered a triplet and all 3 must be entered. There may be a maximum of 24 triplet-i.e., one for each hour of the day. Only 1 test capacity may be entered per hour.	
ZONE	d	Zone Identifier - The QFLW report will be generated for the specified zone. The zone values may be 0 through 9.	No QFLW report will be generated.
STACKSIZE	(d)(d)d	Stack Size - - Calculations shall use the specified number of aircraft holding. The number must be 0 through PTSSX.	The actual number of flight holding
STACKTIME	dddd	Stack Time - - The stack size will be in effect at the specified stack time (hours and minutes). Hours must be 00 through 23 and minutes must be 00 through 59. The specified stack time must be within range of Report Start hour minus PTSSN hour and Report Start hour plus PTSSX hours.	Report Start Hour
HOLDTIME	(d)(d)d	Hold Time - - The hold time value (minutes) specifies the amount of delay in arrival center. Hold time values may be 0 through PTHTX minutes.	NA

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
DELAY	(d)(d)d	Departure Delay Factor - - The delay factor in minutes to be applied to the specified departure airport. The departure delay values may be 0 through PTDFX minutes*	0 Delay Factor if no departure delay pairs
DEP	LLL	Departure Airport - The departure airport associated with the preceeding delay factor.*	
		*Note: There may be 5 departure delay pairs entered in one message. Each pair must be separated by a comma.	
OUTDEV	L	Output Device Identification - - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP(CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.14.3 Report Description

A series of reports will be generated which are similar to the FADP message. The reports will include a QFLW (only if a zone identifier was entered) report, an ARRD report, and a FADP report (which includes the entered test capacities and delay factors for the specified departure airports) for each hour of the total report.

- INPUT

```
FADT JFK 04/08/10-20-40//5/0415/40/40-LGA,30-PHL,50-EWR
```

- OUTPUT

```
JFK ARRIVAL DELAYS CONTROLLED
     5 STACKED 0415
                        AVERAGE  PEAK
TIME ARR ACT LND HLD DLY HLD DLY
0400   5   0   0   2  36   5  50
0415   5   0   4   5  45   6  70
0500   4   0   6   4  36   6  65
0600  12   0   6   7  75  10 160
0700   9   0   6  12  95  13 166

JFK ENERGY CONSERVATION TEST FLOW CONTROL
   TEST CAPACITIES 1000-2000  40
   DELAY  40LGA- 30PHL- 50EWR
   HOLD TIME  40
ARR   AVERAGE DELAY
TIME CNTL STCK TOTL
0400    0   36   36
0415    0   60   60
0430   30   70   40
0445    0   70   70
0500   28   83   55
0515   55   95   40
0530  100  140   40
0545   50  138   88
0600    0  135  135
0615    0  143  143
0630    0  150  150
0645    0  158  158
```

4.14.4 Special Consideration

- The report period will not be permitted to extend beyond the "Airport Zero Stack Hour" data base value. To continue or project the simulation through the Zero Stack hour, the computed Stack Size from the initial simulation should be used as input to the succeeding simulation.

- A report start hour earlier than transaction time will cause the report start and stop hour to be incremented to the corresponding hours of the next day.

- The Quota Flow portion of a FAD report will have inaccurate release rates in the last two report hours if the stop time is equal to or adjusted to the Zero Stack hour.

4.14.5 Examples

Example #1 Perform a FAD test simulation on Atlanta International Airport starting at 1300 (GMT) and ending at 2000 (GMT). Set the landing capacity to 50 during these hours. Allow the stack size to be computed. Allow the flights to hold up to 60 minutes at the arrival center. A quota flow report is requested and zone #3 is to be used.

MESSAGE: FADT ATL 13/20/13-20-50/3///60

Example #2 Perform a FAD test simulation on Atlanta International Airport for six hours starting with the current hour. Set the landing capacities to 5 from hours 8 to 12 and

to 40 from 12 to 14. Set the stack size to 40 at the report start hour. Allow all flights a 40 minute hold time at the arrival center. Delay all flights from Chicago O'Hare by 20 minutes. No quota flow report is requested.

MESSAGE: FADT ATL //8-12-5,12-14-40//40//40/20-ORD

Example #3 Perform a FAD test simulation on Atlanta International Airport for six hours starting at 1200(GMT). Allow all flights a 100 minute hold time at the arrival center. Default all other inputs and send the report to the HSP at CFCF.

MESSAGE: FADT ATL 12//////100/ H or

FADT ATL 12//////100 H

4.15 FIXL MESSAGE

4.15.1 Purpose

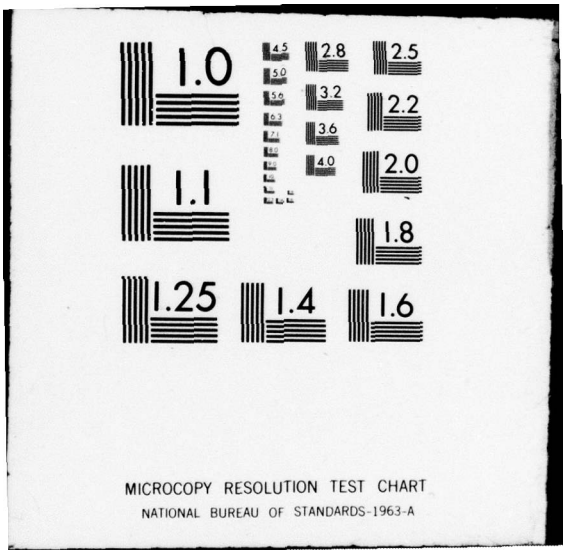
The purpose of the FIXL message is to project the number of aircraft expected to arrive hourly at a specified arrival fix or at all the fixes associated with a specified pacing airport. The report will identify the number of arrivals that are active.

AD-A069 872 COMPUTER SCIENCES CORP SILVER SPRING MD SYSTEM SCIEN--ETC F/G 1/5
CENTRAL FLOW CONTROL OPERATIONAL COMPLEX (OPCX) USER'S MANUAL.(U)
JAN 79 DOT-FA77WA-3955

UNCLASSIFIED CSC/SD-78/6167 FAA-RD-79-34 NL

2 OF 2
AD
A069872

END
DATE
FILMED
7 -79
DDC


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

4.15.2 **Message Format**

$$\text{FIXL}\Delta\left\{\begin{matrix}\text{ARR}\\\text{FIX}\end{matrix}\right\}\Delta[\text{START}]\ /\ [\text{STOP}]\ \Delta\left[\text{OUTDEV}\ [,\text{OUTDEV}]\ \ldots\right]$$

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FIXL	"FIXL"	Message Type - Message ID for Fix Loading Processing	N. A.
ARR	LLL	Arrival Airport - Report shall be for all fixes associated with the specified airport (pacing only).	N. A.
FIX	LLL	Arrival Fix - Report shall be for the specified arrival fix.	N. A.
START	dd	Report Start Hour - Report begins with noted GMT hour. Hour value must be 00 through 23.	Current GMT hour.
STOP	dd	Report Stop Hour Report ends at start of noted GMT hour. Hour value must be 00 through 23. Stop hour may be $<$ start hour.	Start Time plus the stop time parameter (PTSTM)

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of requestor

4.15.3 Report Description

The output shall contain a report title reflecting the nature of the request, the pacing airport or arrival fix specified, and the time of message receipt. Arrival counts will be summarized by the hour. Flights included will be those expected to arrive between the start time and stop time at the fix(es). Additionally, a column will be presented for active flights. If a pacing airport was entered in the message, counts will be summarized for all fixes associated with that arrival/pacing airport by the hour. An example follows:

- INPUT

```
FIXL ORD 18/19 I,U
```

- OUTPUT

```
ORD ARRIVAL FIX LOADING 1745
TIME  FIX   ARR ACT
1800 CGT     20  19
     3       14  14
     3PT      7   6
     FARMM   13  11
     VAINS    6   6
```

4.15.4 Special Considerations

- The start and stop hours must be within the OAG and NON-OAG time period.
- Stop hour $\leq$ start hour results in the stop hour being incremented to the following day.
- Start hours less than transaction time indicate the report is to start on the day following transaction day.

- When a pacing airport is specified as the location identifier and more than 1 arrival fix is associated with an arrival/departure pair, only the first fix is counted.

4.15.5 Examples

Example #1 List flight arrival counts at the Chicago Heights (CGT) fix for hours 0 through 8.

MESSAGE: FIXL CGT 00/09

Example #2 List fix arrival counts for arrivals at all fixes associated with O'Hare International Airport. The report is for six hours starting with the current hour. The report is to be sent to the HSP at CFCF.

MESSAGE: FIXL ORD H

4.16 FP MESSAGE

4.16.1 Purpose

The purpose of the FP message is to add a flight plan record to the Non-OAG Data Base for a non-carrier flight that plans to land at a pacing airport. The FP message must be received from an ARTCC.

4.16.2 **Message Format**

FP△AIRCRAFT△TYPE△DEP△PGTD△ARR/ETE

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FP	"FP"	Message Type - Message ID for flight plan insert to Non-OAG file.	NA
AIRCRAFT	La(a)(a)(a)(a)(a)	Aircraft ID - Non-air carrier flights' call sign. The first character must be alphabetic and the remaining 1-6 characters must be alphanumeric.	NA
TYPE	(a)aaa	Equipment Type - The aircraft type identifier must be 3 or 4 alphanumeric characters.	NA
DEP	LLL	Departure Airport - Location identifier of the departure airport (pacing or non-pacing).	NA
PGTD	dddd	Departure Time - Flight is scheduled to depart at noted GMT hour and minute. Hour values must be 00 through 23 and minute value must be 00 through 59.	NA

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
ARR	LLL	Arrival Airport - Location identifier of arrival airport. Must be a pacing airport.	NA
ETE	(d)(d)d	Estimated Time En Route - Value in minutes of estimated time En Route. ETE value must be 0 through the maximum allowable value (PTETX)	NA

4.16.3 Report Description

The output shall contain an appropriate message to indicate completion of processing. No report will be generated.

4.16.4 Special Considerations

- The FP message is designed to add non-air carrier flight plans only.
- The flight will be scheduled to depart for the current day. The current day definition for the FP processing is transaction hour minus PTCD1 to transaction hour plus PTCD2, where PTCD1 + PTCD2 = 24 hours. The proposed time of departure will be adjusted to fall within this 24 hour period. Therefore, the flight may be scheduled to fly on one of three days; i.e., the day of the transaction, the day prior to the transaction day, or the day following the transaction day.
- The day of the flight must be within the Non-OAG time period.
- If a flight record meeting the input specifications already exists in the data base, no insert processing is done.

4.16.5 Examples

Example 1: Enter a flight plan from an ARTCC into the Non-OAG Data Base for flight N7316 departing from Pittsburgh, arriving at Chicago O'Hare. The aircraft is a B727 which is scheduled to depart at 1620 (GMT) and has an estimated time en route of 85 minutes. Current time is approximately 1500.

MESSAGE: FP N7316 B727 PIT 1620 ORD/85

Example 2: Enter the flight plan from Example 1, but specify tomorrow's scheduled time of departure as the ninth minute of the zeroeth hour (GMT).

MESSAGE: FP N7316 B727 PIT 0009 ORD/85

4.17 FPSD MESSAGE

4.17.1 Purpose

The purpose of the FPSD message is to add a flight plan record to the OAG Data Base for an air carrier flight.

4.17.2 Message Format

FPSD△AIRCRAFT△DEP△PGTD△ARR△ETE△TYPE△ [SCHEDULE] /{ {START DATE / START DAY} } {{STOP DATE / STOP DAY}}

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FPSD	"FPSD"	Message Type - Message ID for adding a flight plan to the OAG flight record file.	NA
AIRCRAFT	LL(a)(d)(d)(d)(d)	Aircraft ID - Air carrier flights' call sign consisting of a 2- or 3-alphabetic airline operator followed by the flight number.	NA
DEP	LLL	Departure Airport - Location identifier of the departure airport (pacing or non-pacing)	NA
PGTD	dddd	Proposed Time of Departure - Proposed time of departure shall be the noted GMT hour and minute. The hour value must be 00 through 23 and the minute value must be 00 through 59.	NA
ARR	LLL	Arrival Airport - Location identifier of the arrival airport (pacing or non-pacing)	NA

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
ETE	(d)(d)d	Estimated Time En Route - Value in minutes of the estimated time in route. The maximum value allowed is determined by PTETX.	NA
TYPE	(a)aaa	Aircraft Type - Aircraft type identifier consisting of 3 or 4 alphanumeric characters.	NA
SCHEDULE	LLLLLLL	Day of Operation - A series of seven alphabetic characters of X or O to represent the day(s) of operation. X = day of operation O = non-operation The position of each character determines the day of the week beginning with Sunday and ending with Saturday (from left to right)	Current day only
STARTDATE	dddd	Start Date of Operation - The flight becomes active in the specified month and days of month. Month value must be 01 through 12 and day value must be 01 through 29, 30, or 31, as appropriate.	Current date
STARTDAY	ddd	Start Day of Year - The day of year the flight is active. The day of year value must be 001 through 366.	Current day
STOP DATE	dddd	Stop Date of Operation - Month and day of month on which the flight is active for the last time. Month value must be 01 through 12 and day value must be 01 through 29, 30, or 31 as appropriate.	Start date plus PTSDT
STOP DAY	ddd	Stop Day of Year - The day of the year on which the flight is last active. The day value must be 0001 through 366.	Start date plus PTSDT

4.17.3 Report Description

The output contains an appropriate message to indicate completion of processing. No report will be generated.

4.17.4 Special Considerations

- The FPSD message will add a flight plan to the OAG flight record file only.
- The operational category of the airline operator must be air carrier.
- The current day definition employed when the day of operation specification is defaulted is the 24-hour period beginning with the hour of the transaction. The proposed time of departure will be adjusted to fall within the 24-hour period.
- When the day of operation is defaulted, the start date or day,and stop date or day,must also be defaulted.
- The start date or day,and stop date or day, if specified, must be within the OAG time frame.
- The flight plan will not be added if the flight plan already exists in the data base (either OAG or Non-OAG).

4.17.5 Examples

Example 1: Add a flight record to the OAG Data Base for American Airline flight AA320 that departs from Atlanta International Airport and arrives at Kennedy International Airport. The flight has a PGTD of 0825 (GMT), ETE of 125 minutes, and is scheduled to depart on Monday through Friday every week starting August 9, ending August 30.

MESSAGE: FPSD AA320 ATL 0825 JFK B727 OXXXXXO/0809/0830

Example 2: Add the flight plan of Example 1, but schedule a departure for today only.

MESSAGE: FPSD AA320 ATL 0825 JFK B727

4.18 GAEL MESSAGE

4.18.1 Purpose

The purpose of the GAEL message is to list stored "normal" and "today" general aviation estimates (hourly) for a specified pacing airport or center.

4.18.2 **Message Format**

GAEL△PLACE△ [STARTTIME] / [STOPTIME]△[OUTDEV [,OUTDEV] ..]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
GAEL	"GAEL"	Message Type - Message ID for list general aviation estimates	NA
PLACE	LLL	Location Identifier - General aviation estimates list will be for the specified pacing airport or center.	NA
STARTTIME	dd	Report Start Time - The report shall begin with the noted GMT hour. The hour values may be 00 through 23.	Current GMT hour
STOPTIME	dd	Report Stop Time - The report shall end at the start of the noted GMT hour. The hour values may be 00 through 23. Stop hour may be ≤ start hour. Start hour = stop hour will produce a full 24-hour report.	Start GMT hour plus PTSTM hours
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC)	Console printer of requestor

H = HSP (CFCF)
M = MSP (ATCSCC)
U = TTY Reperf. (ATCSCC)
J = Computer Readout Device (CFCF)
K = Console Printer (CFCF)
T = TTY Reperf. (CFCF)

4.18.3 Report Description

The output shall contain a report reflecting the nature of the request, the center or pacing airport specified, and the time of message receipt. The output shall be arranged by hour with columns displaying time, normal General Aviation (GA) estimates, and today's GA estimates. An example follows.

•INPUT

GAEL ZAU 16/20 I,M

•OUTPUT

```
ZAU GA ESTIMATES 1535
TIME NORM TODAY
1600  18   22
1700  18   18
1800  18   18
1900  18   18
```

4.18.4 Special Considerations

- Stop hour less than or equal to start hour will result in the stop hour being incremented to the following day.

4.18.5 Examples

Example 1: List the GA estimates for New York Center for a full day.

MESSAGE: GAEL ZNY 00/00

Example 2: List the GA estimates for Atlanta International Airport for the hours starting at 0700 GMT and ending at 1300 GMT. The output will be sent to the HSP at CFCF.

MESSAGE: GAEL ATL 07/14 H

4.19 GAES MESSAGE

4.19.1 Purpose

The purpose of the GAES message is to modify "today" general aviation estimates in the Today General Aviation Table for a specified pacing airport or center.

4.19.2 Message Format

GAES△PLACE△STARTTIME-STOPTIME-GA [,STARTTIME-STOPTIME-GA] ...

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
GAES	"GAES"	Message Type - Message ID for GA Estimates Update Processing	NA
PLACE	LLL	Location Identifier - GA Estimates update will be made for the specified pacing airport or center.	NA
STARTTIME	dd	Start Time - Entered GA Estimate begins with noted GMT hour. Hour value must be 00 through 23.	NA
STOPTIME	dd	Stop Time - Entered GA Estimate ends at start of noted GMT hour. Hour value must be 00 through 23. Stop hour may be ≤ start hour. Stop hour = start hour covers a full 24 hour period.	NA

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
GA	(d)(d)d	GA Estimate - New GA Estimate for the associated hour(s). The value of the GA estimate must be 0 through PTGCX for centers and 0 through PTGPX for pacing airports.	NA

4.19.3 Report Description

The output shall contain a report title reflecting the nature of the request, the center or pacing airport specified, and the time of message receipt. The output column displays time, normal general aviation estimates, and updated "today" general aviation estimates for each hour specified. An example follows:

- INPUT

  GAES ZAU 08-13-15,22-01-10

- OUTPUT

```
ZAU GA ESTIMATES 0038
TIME NORM TODAY
0000   12  10
0008   10  15
0009   10  15
0010   10  15
0011   15  15
0012   15  15
0022   12  10
0023   12  10
```

4.19.4 Special Considerations

- The start time, stop time, and GA estimate update value are considered to be a triplet. Twenty-four triplets are allowed in a message. The three items in each triplet must be separated by a dash and multiple triplets must be separated by commas. A valid triplet must have all three items specified.
- Only one GA estimate update value may be specified for any given hour.

4.19.5 Examples

Example 1: Update the GA estimates for Atlanta International Airport for hour 8 through hour 23 to the value of 20.

MESSAGE: GAES ATL 08-00-20

Example 2: Update the GA estimates for Atlanta International Airport to the value of 20 for hours 0 through 8 and to the value of 8 for hours 16 through 20.

MESSAGE: GAES ATL 00-09-20,16-21-8

4.20 INHB MESSAGE

4.20.1 Purpose

The purpose of the INHB message is to inhibit a specified flight or all flights for a specified airline beginning on the day (date) specified, through the time period covered by the OAG Data Base.

4.20.2 **Message Format**

$$\text{INHB}\Delta \left\{ \begin{matrix} \text{AIRCRAFT} \\ \text{AIRLINE} \end{matrix} \right\} \Delta \left[\left\{ \begin{matrix} \text{START DATE} \\ \text{START DAY OF YEAR} \end{matrix} \right\} \right]$$

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
INHB	"INHB"	Message Type - Message ID for Inhibit Processing	NA
AIRCRAFT	LL(a)(d)(d)(d)(d)	Aircraft ID - Inhibit processing shall be for all flight plans with this flight call sign (airline operator and flight number). The airline operator must be 2 or 3 alphabetic characters and the flight number must be all numeric.	NA
AIRLINE	LL(L)	Airline Operator - Inhibit processing shall be for all flights of the specified airline operator. The airline operator must be 2 or 3 alphabetic characters.	NA
START DATE	dddd	Start Date - Inhibit processing will begin on the specified month and day of month. The month value must be 01 through 12 and the day value must be 01 through 29, 30, or 31, as appropriate.	Current Date

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
START DAY OF YEAR	ddd	Start Day of Year - Inhibit processing begins on the specified day of year. The value must be 001 through 366.	Current Day

4.20.3 Report Description

The output shall contain an appropriate message to indicate completion of processing. No report will be generated.

4.20.4 Special Considerations

- Inhibit processing is limited to the time period covered by the CFC data base flight record file. The start date or day of the year must fall within this time period for the inhibit processing to be completed. The specified flight(s) will be inhibited from the start date or day through the end of this time period.
- The current date or day is defined to be the date on which the transaction is initiated.

4.20.5 Examples

Example 1: Inhibit all flights for AA230 starting today and continuing to the end of the OAG flight record file period.

MESSAGE: INHB AA230

Example 2: Inhibit all American Airline flights in the Data Base (OAG) starting May 30 and continuing to the end of the flight record file period.

MESSAGE: INHB AA 0530

Example 3: Inhibit all American Airline flights in the OAG Data Base starting on the fourth day of the year and continuing to the end of the flight record file period.

MESSAGE: INHB AA 004

4.21 LIFP MESSAGE

4.21.1 Purpose

The purpose of the LIFP message is to list flight plan data for a specified flight. If a pacing airport is specified, the flight plan data is limited to flight legs arriving at or departing from the pacing airport. If no pacing airport is specified, the flight plan data is limited to flight legs arriving at or departing from any pacing airport.

4.21.2 Message Format

LIFP△AIRCRAFT△[PLACE]△[OUTDEV [,OUTDEV]]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
LIFP	"LIFP"	Message Type - Message ID for List Flight Plan Processing	NA
AIRCRAFT	La(a)(a)(a)(a)	Aircraft Identification - Flight's call sign to be listed in report; the first character must be alphabetic and the remaining 1-6 characters must be alphanumeric.	NA
PLACE	LLL	Location Identifier - Flight plans arriving or departing at the specified pacing airport will appear in the report.	All pacing airports
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console Printer of Requestor

4.21.3 Report Description

The output contains information related to a selected flight at pacing airports. If a pacing airport name is entered, the flight plan information for the selected flight shall be limited to data for the selected pacing airport. If no airport is specified, the flight data for the selected flight will be presented for all pacing airports. The flight plan data includes aircraft identifier, departure airport, proposed gate time of departure (PGTD), destination airport, proposed time of arrival (PTOA), and the aircraft type. The PGTD will be prepared as an indication of whether or not a flight is active (P/A).

- INPUT

  LIFP AA1 ATL

- OUTPUT

```
IDENT   DEP   PGTD   ARR  PTOA  TYPE  QQQQ
AA1     EWR   P0001  ATL  0105  AA1B
AA1     ATL   P1201  EWR  1305  AA1B
```

4.21.4 Special Considerations

- The current day definition for the LIFP message is the 24 hour (PTCD3) period beginning with the transaction hour.
- The LIFP processing can handle a maximum of 50 flight plans.
- It is possible that there are no matching flight plans in the data base, in which case the header will appear but no data lines will follow.

4.21.5 **Examples**

Example 1: List flight plan(s) for flight AA230 that arrives or departs Chicago O'Hare International Airport.

MESSAGE: LIFP AA230 ORD

Example 2: List flight plan(s) for flight AA230 that arrives or departs all pacing airports. Send the report to the H&P at CFCF.

MESSAGE: LIFP AA230 H

4.22 LISA MESSAGE

4.22.1 Purpose

The purpose of the LISA message is to list selected flight plans from the OAG and Non-OAG Data Bases that arrive at a specified pacing airport or at all pacing airports in a specified center. The flights are listed in ascending order of proposed arrival time (PTOA) for each pacing airport.

4.22.2 Message Format

LISA Δ PLACE Δ [STARTTIME] / [STOPTIME] / [{AIRLN [,AIRLN] ... / OPCAT [,OPCAT] ...}] /

[{CLASS [,CLASS] ... / TYPE [,TYPE] ...}] / [ETE] Δ [FORMAT [,FORMAT] ...] / [OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
LISA	"LISA"	Message Type - Message ID for List Arrival	NA
PLACE	LLL	Location Identifier - The report shall list arrivals at the specified *pacing airport or center.*	NA
STARTTIME	dd	Report Start Time - The report shall begin with the noted GMT hour. The hour value shall be 00 through 23.	Current GMT hour
STOPTIME	dd	Report Stop Time - The report shall end at the start of the noted GMT hour. The hour value shall be 00 through 23. Stop hour may be ≤ start hour. Start hour = stop hour results in a full 24 hour report period.	Start hour plus PTSTM hours
AIRLN	(L)LL	Affiliation: Airlines - Report is limited to noted airline(s). A maximum of 24 airlines may be specified.	All airlines

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
OPCAT	L	Affiliation: Operational Category - Report is limited to noted operational category or categories. A maximum of 20 operational categories may be entered in one message. The following are valid operational category codes: C = Air Carrier T = Air Taxi M = Military G = General Aviation	All operation categories
CLASS	L	Equipment Class - Report will include noted class(es). A maximum of 10 classes may be specified. The following are valid class codes: J = Jet T = Turbo P = Prop H = Helicopter A = Amphibious S = Seaplane	All classes
TYPE	(a)aaa	Equipment Type - Report will include noted type(s). A maximum of 10 types may be specified.	All types
ETE	(d)(d)d	Estimated Time En Route - Report shall include flights with ETE $\leq$ to the specified ETE. The ETE value may be 0 through PTETX minutes.	All ETEs

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FORMAT		Output Format Identifier - The report shall include headings and data for the specified output format identifier. Valid output format identifiers are:	Report will contain aircraft ID, departure airport, PGTD, arrival airport, PTOA, and arrival center
	"DEP"	= departure airport	
	"PGTD"	= proposed time of departure and the prefix denoting proposed (P) or active (A)	
	"ARR"	= arrival airport	
	"PTOA"	= proposed time of arrival	
	"CTR"	= departure center	
	"TYPE"	= equipment type *	
	"CLASS"	= equipment class* *Both class and type may not be entered in the same message.	
	"ETE"	= Estimated time En Route.	
		The identifiers do not have to appear in any particular order. Aircraft ID will always appear in the output report.	
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are:	Console printer of requestor
		G = Computer Readout Device (ATCSCC)	
		I = Console Printer (ATCSCC)	
		H = HSP (CFCF)	
		M = MSP (ATCSCC)	
		U = TTY Reperf. (ATCSCC)	
		J = Computer Readout (CFCF)	
		K = Console Printer (CFCF)	
		T = TTY Reperf. (CFCF)	

4.22.3 Report Description

The output contains a title reflecting the nature of the request, the center or pacing airport code, and the time of message receipt. The data are listed by flight identification and contain departure airport, proposed gate time of departure (PGTD), arrival airport (when center is specified), proposed time of arrival (PTOA), center code (departure ARTCC), type or class if specified, and estimated time en route (ETE) if requested. A report for a center with multiple pacing airports is time-ordered by PTOA, by airport. An example follows:

- INPUT

```
LISA ZNY 12/17//B727
```

- OUTPUT

```
ZNY ARRIVALS 0000
   AFFILIATION ALL
   EQUIPMENT B727
   ETE ALL
IDENT    DEP   PGTD  ARR  PTOA  CTR

DL188    ATL  P1121  LGA  1309  ZTL
EA366    GSO  P1225  LGA  1340  ZTL
DL392    CLT  P1303  LGA  1422  ZTL
EA352    CLT  P1317  LGA  1441  ZTL
EA907    AVP  P1145  PHL  1223  ZNY
DL286    ATL  P1131  PHL  1309  ZTL
DL455    JFK  P1302  PHL  1343  ZNY
NW537    EWR  P1540  PHL  1621  ZNY
```

4.22.4 Special Considerations

- The report can handle only a predefined number of flight records (currently set at 1500). If more records are found, processing stops. An alternative to this situation is to resubmit the message using a smaller time span.

- When a center is entered as the location identifier, the list report will be for each pacing airport in that center. There will be no report for a specified center that contains no pacing airports.
- In the event that there are no flight records meeting the input specifications, the header lines will appear, but no data lines will follow.
- When a center is specified as the location identifier, the arrival airport will always appear in the report.
- A start hour less than transaction time indicates a start time for the day following transaction day.
- Airlines and Operational Categories may not be specified in the same message.
- Equipment Class and Type codes may not be entered in the same message.

4.22.5 Examples

Example 1: List all flights arriving at Kennedy International Airport starting at 0800 (GMT) for a six hour period (default). Output fields are defaulted.

MESSAGE: LISA JFK 08////

or LISA JFK 08

Example 2: List all flights arriving at the New York Center starting at 1200 (GMT) and ending at 2300 (GMT). Print out data for PTOA, PGTD, and ETE.

MESSAGE: LISA ZNY 12/23/// PTOA,PGTD, ETE

or LISA ZNY 12/23 PTOA,PGTD,ETE

Example 3: List all American Airline Flights, which are jets, arriving at Atlanta International Airport for a six hour period starting with the current hour. The flights must have ETEs less than or equal to 3 hours (180 minutes). The output is to be printed at the HSP or CFCF.

MESSAGE: LISA ATL //AA/J/180 /H

NOTE: The report data items printed are the defaults (DEP, PGTD, ARR, PTOA, and CTR).

Example 4: List all general aviation flights arriving at the New York Center for a full day starting with the current hour (1000 - GMT). The aircraft must be jets or turbo-jets.

MESSAGE: LISA ZNY 10/10/G/J,T

4.23 LISD MESSAGE

4.23.1 Purpose

The purpose of the LISD message is to list selected flight plans from the OAG and Non-OAG Data Bases that depart from a specified pacing airport or from all pacing airports in a specified center. The flights are listed in ascending order of proposed departure time (PGTD) for each pacing airport.

4.23.2 Message Format

LISD$_{\Delta}$ PLACE$_{\Delta}$ [STARTTIME] / [STOPTIME] / [{AIRLN [,AIRLN] ... / OPCAT [,OPCAT] ...}] /

[{CLASS [,CLASS] ... / TYPE [,TYPE] ...}] /[ETE]$_{\Delta}$[FORMAT [,FORMAT] ...] / [OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
LISA	"LISA"	Message Type - Message ID for List Departures	NA
PLACE	LLL	Location Identifier - The report shall list departures from the specified pacing airport or from all pacing airports in the specified center.	NA
STARTTIME	dd	Report Start Time - The report shall begin with the noted GMT hour. The hour value shall be 00 through 23.	Current GMT hour
STOPTIME	dd	Report Stop Time - The report shall end at the start of the noted GMT hour. The hour value shall be 00 through 23. Stop hour may be ≤ start hour. Start hour = stop hour results in a full 24 hour report period.	Start hour plus PTSTM hours
AIRLN	(L)LL	Affiliation: Airlines - Report is limited to noted airline(s). A maximum of 20 airlines may be specified.	All airlines

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
OPCAT	L	Affiliation: Operational Category - Report is limited to noted operational category or categories. A maximum of 20 operational categories may be entered in one message. The following are valid operational category codes: C = Air Carrier T = Air Taxi M = Military G = General Aviation	All operational categories
CLASS	L	Equipment Class - Report will include noted class(es). A maximum of 10 classes may be specified. The following are valid class codes: J = Jet T = Turbo P = Prop H = Helicopter A = Amphibious S = Seaplane	All classes
TYPE	(a)aaa	Equipment Type - Report will include noted type(s). A maximum of 10 types may be specified.	All types
ETE	(d)(d)d	Estimated Time En Route - Report shall include flights with ETE $\leq$ to the specified ETE. The ETE value may be 0 through PTETX minutes.	All ETEs

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
FORMAT		Output Format Identifier - The report shall include headings and data for the specified output format identifiers. Valid output format identifiers are:	Report will contain aircraft ID, departure airport, PGTD, arrival airport, PTOA, and arrival center
	"DEP"	= departure airport	
	"PGTD"	= proposed time of departure and the prefix denoting proposed (P) or active (A)	
	"ARR"	= arrival airport	
	"PTOA"	= proposed time of arrival	
	"CTR"	= arrival center	
	"TYPE"	= equipment type *	
	"CLASS"	= equipment class* *Both class and type may not be entered in the same message.	
	"ETE"	= estimated time En Route	
		The identifiers do not have to appear in any particular order. Aircraft ID will always appear in the output report.	
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are:	Console printer of requestor
		G = Computer Readout Device (ATCSCC)	
		I = Console Printer (ATCSCC)	
		H = HSP)CFCF)	
		M = MSP (ATCSCC)	
		U = TTY Reperf. (ATCSCC)	
		J = Computer Readout (CFCF)	
		K = Console Printer (CFCF)	
		T = TTY Reperf. (CFCF)	

4.23.3 Report Description

The output shall contain a title reflecting the nature of the request, the center or pacing airport code, and the time of message receipt. The flights will be listed in ascending order based on PGTD. The report will contain the aircraft ID and any other data specified by the output format identifier. The arrival airports will always be output when a center is specified as a location identifier. An example follows:

- INPUT

```
LISD ORD 12/15/NW,TW/B727,DC9/120 PGTD,ARR,PTOA
,CTR,TYPE,ETE/I,M
```

- OUTPUT

```
ORD DEPARTURES 1402
   AFFILIATION NW, TW
   EQUIPMENT B727, DC9
   ETE 120
IDENT    PGTD ARR PTOA CTR TYPE ETE
TW565   A1205 PHL 1312 ZNY B72S  67
TW560   A1250 LGA 1356 ZNY B727  66
NW300   A1300 DCA 1350 ZDC B727  50
NW323   P1330 DTW 1420 ZOB B727  50
TW550   A1355 BOS 1511 ZBW DC9b  50
TW503   P1440 PHL 1545 ZNY DC9b  76
TW570   P1455 LGA 1600 ZNY DC9b  65
```

4.23.4 Special Considerations

- The report can handle only a predefined number of flight records (currently set at 1500). If more records are found, processing stops. An alternative to this situation is to resubmit the message using a smaller time span.
- When a center is entered as the Location Identifier, the list report will be for each pacing airport in that center. There will be no report for a center that contains no pacing airport.

- In the event that there are no flight records meeting the input specifications, the header lines will appear, but no data lines will follow.
- If the entered start hour is less than transaction time, the start hour is assumed to be for the next day. Stop time is handled similarly.
- When a center is specified as the location identifier, the departure airport will always appear in the output report.
- Airlines and Operational Categories may not be specified in the same message.
- Equipment Class and Type codes may not be entered in the same message.

4.23.5 Examples

Example 1: List all flights departing from Kennedy International Airport starting at 0800 (GMT) for a six hour period (default). Output fields are defaulted.

MESSAGE: LISD JFK 08////

or LISD JFK 08

Example 2: List all flights departing from the New York Center starting at 1200 (GMT) and ending at 2300 (GMT). Print out only the data for PGTD and ETE.

MESSAGE: LISD ZNY 12/23/// PGTD,ETE

or LISD ZNY 12/23 PGTD,ETE

Example 3: List all American Airline jet flights departing from Atlanta International Airport for a six hour period starting with the current hour. The flights must have ETEs less than or equal to 3 hours (180 minutes). The output is to be printed at the HSP at the CFCF.

MESSAGE: LISD ATL //AA//180 /H

NOTE: The report data items printed are the defaults (DEP, PGTD, ARR, PTOA, and CTR).

Example 4: List all general aviation flights departing from the New York Center for a full day starting with the current hour (1000 - GMT). The aircraft must be jets or turbo-props.

MESSAGE: LISD ZNY 10/10/G/J,T

4.24 QFLW MESSAGE

4.24.1 Purpose

The purpose of the QFLW message is to provide a report of tier center release rates and other subsidiary information used to limit the delays taken in the arrival terminal area to a controller-specified level. The report is based on flights from the OAG and Non-OAG Data Bases, hourly landing rates, hourly general aviation counts, a zone structure relating flight origins to tier center, a specified stack size for a given hour of the day, the maximum delay desired in the terminal area, and the earliest time at which the release rates can be implemented.

4.24.2 Message Format

QFLW$_{\Delta}$PLACE$_{\Delta}$[STARTTIME] /[STOPTIME] / ZONE /[STACKSIZE] /[STACKTIME]
/HOLDTIME$_{\Delta}$[OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
QFLW	"QFLW"	Message Type - Message ID for Quota Flow first tier processing	NA
PLACE	LLL	Location Identifier - Simulation report shall be for the specified pacing airport.	NA
STARTTIME	dd	Report Start Hour - Calculations and report shall begin with the specified GMT hour. Hour values must be 00 through 23.	Current GMT hour
STOPTIME	dd	Report Stop Time - Calculations and report shall end at start of noted GMT hour. Value must be 00 through 23. Stop hour may be $\leq$ start hour.	Start Time plus PTSTM hours
ZONE	d	Zone Identifier - The QFLW report will be generated for the specified zone. The zone values may be 0 through 9.	NA
STACKSIZE	(d)(d)d	Stack Size - Calculations shall use the specified number of aircraft holding. The number must be 0 through PTSSX.	The actual number of flights holding

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STACKTIME	dddd	Stack Time - The stack size will be in effect at the specified stack time (GMT hour and minute). Hour must be 00 through 23 and minutes must be 00 through 59. The specified stack time must be within the range of report start hour minus PTSTN hour and report start hour plus PTSTX hours.	Report start hour
HOLDTIME	(d)(d)d	Hold Time - The hold time value (minutes) specifies the amount of delay in arrival center. Hold time values may be 0 through PTHTX minutes.	NA
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout Device (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reper. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console printer of requestor

4.24.3 Report Description

The output contains a report title reflecting the nature of the request, the pacing airport specified, and message input time. The output data for each hour of the report will include the number of aircraft that can be released from each tier center into the impacted center and the number of flights for each tier center to be carried over to next hour.

An example follows:

- INPUT

  QFLW ORD 18/21/2/35/1820/40 I,M

- OUTPUT

```
ORD QUOTA FLCW ZONE 2 1815
    35 STACKED 1810
   HOLD TIME  40
TIME ZMP ZKC ZID ZOB ZAU TOTAL
1800   5   2   4   5   2   18
NEXT   3   2   0   0   0    5
1900  13   4   2   1   0   20
NEXT   4   3   7   0   0   14
2000   8   3   8   1   0   20
NEXT   7  11   7   3   4   32
```

4.24.4 Special Considerations

- The report period will not be permitted to extend beyond the "Airport Zero Stack Hour" data base value. To continue or project the simulation through the Zero Stack hour, the computed stack size from the initial simulation should be used as input to the succeeding simulation.
- A report start hour earlier than transaction time will cause the report start and stop hours to be incremented to the corresponding hours of the next day.
- The report will have inaccurate release rates in the last two report hours if the stop time is equal to or adjusted to the Zero Stack hour.

- Inconsistent or inaccurate reports will result when a QFLOW message follows a FAD message for the same pacing airport.

4.24.5 Examples

Example 1: Perform a quota flow simulation on Atlanta International Airport starting at 1200 (GMT) and ending at 1800 (GMT). Use zone structure number 2 and allow the stacking to be computed. Allow aircraft to hold for only 30 minutes at the arrival center.

MESSAGE: QFLW ATL 12/18/2///30

Example 2: Perform a six hour quota flow simulation on Atlanta International Airport starting at 0900 (GMT) using zone structure number 9. Set the stack size to 75 at start hour and limit the stack hold time to 15 minutes. Send the report to the HSP at the CFCF and to the requestor.

MESSAGE: QFLW ATL 09//9/75//15 H,I

4.25 QFLZ MESSAGE

4.25.1 Purpose

The purpose of the QFLZ message is to provide a report of tier center release rates and other subsidiary information used to limit the delays taken in the arrival terminal area to a controller-specified level. The report is based on flights from the OAG and Non-OAG Data Bases, hourly landing rates, hourly general aviation counts, a zone structure relating flight origins to tier centers, a specified stack size for a given hour of the day, the maximum delay desired in the terminal area, and the earliest time at which the release rates can be implemented.

The report contains, in addition to a QFLW type report, subzone release rates of origin centers associated with each first tier center.

4.25.2 **Message Format**

QFLZ$_{\Delta}$ PLACE $_{\Delta}$ [STARTTIME] /[STOPTIME]/ ZONE /[STACKSIZE]/[STACKTIME]
/HOLDTIME$_{\Delta}$[OUTDEV [,OUTDEV] ...]

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
QFLZ	"QFLZ"	Message Type - Message ID for Quota Flow by zone processing	NA
PLACE	LLL	Location Identifier - Simulation report shall be for the specified pacing airport.	NA
STARTTIME	dd	Report Start Hour - Calculations and report shall begin with the specified GMT hour. Hour values must be 00 through 23.	Current GMT hour
STOPTIME	dd	Report Stop Hour - Calculations and report shall end at start of noted GMT hour. Values must be 00 through 23. Stop hour may be ≤ start hour.	Start time plus PTSTM hours
ZONE	d	Zone Identifier - The QFLW report will be generated for the specified zone. The zone values may be 0 through 9.	NA
STACKSIZE	(d)(d)d	Stack Size - Calculations shall use the specified number of aircraft holding. The number must be 0 through PTSSX.	The actual number of flights holding

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
STACKTIME	dddd	Stack Time - The stack size will be in effect at the specified stack time (hours and minutes). Hours must be 00 through 23 and minutes must be 00 through 59. The specified stack time must be within the range of report start hour minus PTSTN hour and report start hour plus PTSTX hours.	Report start hour
HOLDTIME	(d)(d)d	Hold Time - The hold time value (minutes) specifies the amount of delay in arrival center. Hold time values may be 0 through PTHTX minutes.	NA
OUTDEV	L	Output Device Identification - Report will be output to the device(s) specified. A maximum of 10 output device codes may be entered. Valid output device codes are: G = Computer Readout (ATCSCC) I = Console Printer (ATCSCC) H = HSP (CFCF) M = MSP (ATCSCC) U = TTY Reperf. (ATCSCC) J = Computer Readout Device (CFCF) K = Console Printer (CFCF) T = TTY Reperf. (CFCF)	Console printer of requestor

4.25.3 Report Description

The output contains a report title reflecting the nature of the request, the pacing airport code, and the time of message receipt. The output data for each hour of the report will include the number of aircraft that can be released from each tier center into the impacted center, the number of flights for each tier center to be carried over to the next hour, and the subzone release rates of origin center associated with each first tier center. An example follows:

•INPUT

```
QFLZ JFK 04/06/1/40/0430/40
```

•OUTPUT

```
JFK QUOTA FLOW ZONE 1 0000
    40 STACKED 0430
   HOLD TIME  40
TIME     ZNY     ZBW     ZOE     ZDO     DGA     TOTAL
0400       0       0       0       0       4         4
NEXT      10       0       0       0                10
    ZNY    0  ZBW 0  ZOB 0  ZTL 0
                    ZMP 0  ZME 0
                    ZAU 0  ZJX 0
                    ZKC 0  ZFW 0
                    ZDV 0  ZDC 0
                    ZLA 0  ZMA 0
                    ZOA 0  ZID 0
                    ZLC 0  ZHU 0
                    ZSE 0
                    ZAB 0
0500       0       0       0       0       6         6
NEXT      14       0       0       0                14
    ZNY    0  ZBW 0  ZOB 0  ZTL 0
                    ZMP 0  ZME 0
                    ZAU 0  ZJX 0
                    ZKC 0  ZFW 0
                    ZDV 0  ZDC 0
                    ZLA 0  ZMA 0
                    ZOA 0  ZID 0
                    ZLC 0  ZHU 0
                    ZSE 0
```

4.25.4 Special Considerations

- The report period will not be permitted to extend beyond the "Airport Zero Stack Hour" data base value. To continue or project the simulation through the Zero Stack hour, the computed stack size from the initial simulation should be used as input to the succeeding simulation.
- Airport start hour earlier than transaction time will cause the report start and stop hours to be incremented to the corresponding hours of the next day.
- The report will have inaccurate release rates in the last two report hours if the stop time is equal to or adjusted to the Zero Stack hour.
- Inconsistent or inaccurate reports will result when QFLOW message follows a FAD message for a pacing airport.

4.25.5 Examples

Example 1: Perform a quota flow simulation on Atlanta International Airport starting at 1200 (GMT) and ending at 1800 (GMT). Use zone structure number 2 and allow the stack size to be computed. Allow aircraft to hold for only 30 minutes at the arrival center.

MESSAGE: QFLZ ZTL 12/18/2///30

Example 2: Perform a six hour quota flow simulation on Atlanta International Airport starting at 0900 (GMT) using zone structure number 9. Set the stack size to 75 at start hour and limit the stack hold time to 15 minutes. Send the report to the HSP at the CFCF and to the requestor.

MESSAGE: QFLZ ATL 09//9/75//15 H,I

4.26 RS MESSAGE

4.26.1 Purpose

The purpose of the RS message is to remove a specified flight plan record from the Non-OAG Data Base or to delete a specified flight plan record from the OAG Data Base for today's operation only. The proposed flight plan must contain an arrival pacing airport.

4.26.2 **Message Format**

RS$_{\Delta}$AIRCRAFT$_{\Delta}$DEP$_{\Delta}$PGTD

ITEM	STRUCTURE	DESCRIPTION	DEFAULT
RS	"RS"	Message Type - Message ID for remove strip processing	NA
AIRCRAFT	La(a)(a)(a)(a)	Aircraft Identification - The remove strip processing will be for the specified aircraft ID. The first character must be alphabetic and the remaining 1-6 characters must be alphanumeric.	NA
DEP	LLL	Departure Airport - The remove strip processing will be for the specified departure airport (pacing or non-pacing).	NA
PGTD	dddd	Proposed Time of Departure - The specified proposed time of departure in hours and minutes will further identify the flight plan to be removed. The PGTD specified must be within PTDTD seconds of the PGTD in the flight plan. The specified hour must be 00 through 23 and minutes must be 00 through 59.	NA

4.26.3 Report Description

No report will be generated.

4.26.4 Special Considerations

- The current day definition for RS processing is transaction hour minus PTCD1 and transaction hour plus PTCD2 where (PTCD1 + PTCD2) $\leq$ 24. The departure time may be adjusted accordingly. Therefore, the flight plan may be removed on 1 of 3 calendar days; i.e., the day of the transaction, the day prior to the transaction, or the day following the transaction.
- The RS processing requires that the arrival airport be a pacing airport.
- If more than one flight plan is found to match the input specifications, no RS processing will be done.

4.26.5 Examples

Example 1: Cancel flight AA316 from the flight record files for today's flight departing from Chicago O'Hare at 1650 (GMT). The current time of day is approximately 1500.

MESSAGE: RS AA316 ORD 1650

Example 2: Delete flight N1368 from the Non-OAG Data Base for tomorrow's flight departing from Chicago O'Hare at 0415 (GMT). The current time of day is approximately 1800.

MESSAGE: RS N1368 ORD 0415

APPENDIX A - OPERATIONAL PROCESSING FAILED MESSAGES

Failure to complete processing of a message due to a system error (normally related to a Data Base access error) results in the generation of an error message of the form:

APS009 PROCESSING FAILED - SYSTEM ERROR(dddd)

where dddd is one of the System Error Codes listed in the following table.

System Error Code	Reason	Message(s)
9	Unable to retrieve the PT Table from the Data Base	ALL
13	Error requesting update of the flight record file	FP
14	Flight record retrieval error	FP
15	Error requesting update of the OAG flight record file	FPSD
16	Flight record retrieval error	FPSD
17	Continue table retrieval error	QFLW, QFLZ, FADF, FADP
18	Error requesting update of a Non-OAG flight record	FADF, FADP
19	Error requesting update of an OAG flight record	FADF, FADP
20	Error requesting update of a flight record	DM
21	Flight record retrieval error	DM
22	OAG flight record retrieval error	FIXL
23	Non-OAG flight record retrieval error	FIXL
24	Error retrieving Arrival Fix (AV) table data	FIXL

System Error Code	Reason	Message(s)
25	Error requesting update of the Simulation Continue Table	QFLW, QFLZ FADF, FADP
26	Error retrieving data from the Normal General Aviation Table (NJ)	FADF
27	Error retrieving data from the Normal GA Table (NJ)	FADP
28	Error retrieving data from the Airport Fix Table (AF)	FIXL
29	Error retrieving data from the Type Table (PK)	FP, FPSD
30	Error retrieving data from the Center Table (CP)	RS, FP, DM, FPSD, CXSD
31	Error retrieving data from the Airport Table (AJ) or the Center Table (CP)	DESA, DESD
32	Error retrieving data from the Airport Table (AJ)	RS
33	Error requesting update of the Non-OAG flight record	RS
34	Flight record retrieval error	RS
35	Operational Category Table (OK) retrieval error	DESD
36	Operational Category Table (OK) retrieval error	DESA
37	Error retrieving data from the Center Table (CP)	QFLZ
38	Error requesting update of an OAG flight record	CXSD
39	Flight record retrieval error	CXSD
40	Error requesting update of an OAG flight record	ACTV
41	Flight record retrieval error	ACTV

System Error Code	Reason	Message(s)
42	Error requesting update of an OAG flight record	INHB
43	Flight record retrieval error	INHB
44	More flight legs exist in the Data Base than can be processed by the message processor	LIFD
45	Flight record retrieval error	LIFP
46	Message length too long	ALL
48	Error retrieving the data from the Normal Capacity Table (NY)	CAPL
55	Error retrieving data from the User GA Table (UJ) or the Normal GA Table (NJ)	GAEL
56	Error retrieving data from the Center Table (CP)	LISA
57	Flight record retrieval error	LISA
58	Error retrieving data from the Cutput Device Table (OD)	REPORT MESSAGES
59	Error requesting update of the Today Landing Capacity Table (UY)	CAPS
60	Error retrieving data from the Today Landing Capacity Table (UY)	CAPS
61	Error retrieving data from the Normal Landing Capacity Table (NY)	CAPS
62	Error requesting update of the User GA Table (UJ)	GAES
63	Error retrieving data from the Normal GA Table (NJ)	GAES
64	Error retrieving data from the Today GA Table (UJ)	GAES
65	Report line exceeds maximum length allowed	ALL REPORT MESSAGES

System Error Code	Reason	Message(s)
66	Data Base retrieval of report conversion data failed	ALL REPORT MESSAGES
67	Unable to initialize message block to be sent to the Executive	ALL REPORT MESSAGES
68	Flight record retrieval error (OAG)	DESA
69	Flight record retrieval error (OAG)	DESD
70	Flight record retrieval error	LISD
71	Error retrieving data from the Airport Table (AJ)	CAPL
73	Flight record retrieval error	DEMA
76	Flight record retrieval error	DLDY
77	Flight record retrieval error	DEMD
78	Error retrieving data from the Operational Category Table (OK)	DEMA, DEMD, DLDY
79	Error retrieving data from the Operational Category Table (OK)	RS, DM, FP CXSD, FPSD,
80	Error retrieving data from the Today GA Table (UJ)	DEMD

In addition to the above System Error Codes, the following System Errors are generated from the software which performs simulations (the Simulation Subsystem).

System Error Code	Reason	Message(s)
1	Error retrieving normal landing capacities	All simulation messages
2	Error retrieving data from the Continue Table	All simulation messages
3	Error retrieving today GA estimates	All simulation messages

System Error Code	Reason	Message(s)
4	Error retrieving today landing capacities	All simulation messages
5	Zone Table retrieval error	FADF, FADP, FADT, QFLW, QFLZ
101	Non-OAG flight record retrieval error	All simulation messages
102	OAG flight record retrieval error	All simulation messages

APPENDIX B - PARAMETER TABLE CONSTANTS

Constant	Definition	Value
PTSTM	Stop time increment	6 hours
PTSDT	Stop date increment	14 days
PTDFX	Maximum delay factor	240 minutes
PTETX	Maximum ETE	180 minutes
PTSTN	Minimum stack time	4 hours
PTSTX	Maximum stack time	2 hours
PTHTX	Maximum hold time	180 minutes
PTCPX	Maximum capacity count	200
PTSSX	Maximum stack size	200
PTACX	Maximum GAs per center	500
PTAPX	Maximum GAs per pacing airport	50
PTCD1	Start of current day t (Transaction Hour Minus PTCD1)	12 hours
PTCD2	End of current day t (Transaction Hour Plus PTCD2)	12 hours
PTCD3	Current day t (Transaction Hour to Transaction Hour Plus PTCD3)	
PTAFD	Active flight time difference	240 minutes
PTDTE	Duplicate ETE time increment	10 minutes
PTACT	Actual/scheduled departure test time increment	20 minutes

APPENDIX C - DATA BASE ERROR CODES

Code	Description	Module
-1	Error occurred writing to a disk file	EXDAWI
-2	Error occurred reading a disk file	EXDARI
-3	Parameter error detected in calling sequence to DBGTFR	DBGTFR
-4	Incorrect Data Base Work Area Address passed to module DBCTBE	DBCTBE
-5	Attempted creation of a table entry that already exists	DBCTBE
-6	No space available for new table entry	DBCTBE
-7	Table write attempted without a prior table retrieval	DBSETT
-8	Attempted retrieval of a data base table that does not exist	DBRETT
-9	Errors detected while validating a data base header record	DBHVAL
-10	Retrieval header record data does not match data for requested table	DBRETT
-11	Attempt to change an access key or to delete a record key online	DBONLK
-12	Key changed but not indicated	DBWTMT
-13	Error occurred in flight record retrieval with relative record access	DBOFLK
-14	Table specified in retrieval has a duplicate ID	DBWTMT
-15	Undefined access type; not airline operator, aircraft ID, or terminal	DBGIND
-16	Flight record relative record number or block number out of range	DBGIND
-17	Requested Block or record number out of range in calling sequence	DBRFRB

Code	Description	Module
-18	Flight Index set record requested is an unused record	DBFIS
-19	Block number retrieved does not match block requested	DBRFRB DBRETT
-20	Record requested does not fall within the block retrieved	DBRFRB
-21	Invalid index on aircraft ID retrieval	DBRFRB
-22	Invalid index on airline operator retrieval	DBFIS
-24	Invalid arrival/departure IDs in record header	DBRFRB
-25	Update attempted without an associated lock on the set or block	DBUPFR
-26	Non-OAG Housekeeping Set not defined in the Table Mapping Table Set (TZ)	DBWTMT
-27	No range in the Flight Accession Table (FAT) for the specified aircraft ID	DBUFAT
-28	Specified record not found in the Flight Index Set (FIS)	DBUFIS
-29	Error occurred in assigning an overflow block to a set	DBCBS
-30	No space available to insert new flight record	DBCBS
-31	Table to be updated does not have an entry in the TZ Table	DBSCUR
-32	Update of specified table not authorized for this PE	DBSCUR
-33	Input data error to update process	DBVNDI
-34	Error detected in validating a data base interface calling sequence	DBCSVM
-35	No space available in the Flight Index Set to insert new record	DBBHUP

Code	Description	Module
-36	Lock queue full; no space available for requested entry	DBLLMG
-37	Invalid lock request; hierarchical error or requested set not defined in Lock Parameter Table	DBLLMG
-38	A test lock function found the required lock not set	DBLLMG
-39	Message ID or set ID not found in the Lock Parameter Set (JG)	DPGTFR
-40	Message ID specified in calling sequence to DBUPFR not found in Lock Parameter Set (JG)	DBBHUP
-41	No free blocks available for Flight Record Set	DBBHUP
-42	No free blocks available for Flight Index Set (FIS)	DBBHUP
-43	Error detected in data for a table or table entry update	DBDVAL
-44	Minimum/maximum or null data error detected in validating data for table update	DBDVAL
-45	Module ID error detected in validating a data base interface calling sequence	DBCSVM
-46	Missing data was detected in validating a data base interface calling sequence	DBCSVM
-47	Requested record size item too large in data base interface calling sequence	DBCSVM
-48	Invalid item specified in call to extract data items from flight records	DBEXTR
-49	Current Before/After Look Set has no more space available	DBSTPL
-122	Forward overflow block pointer not equal to block number read in (Flight Record Set)	DBINSP
-123	Backward overflow pointer not equal to block number read in (Flight Record Set)	DBINSP

Code	Description	Module
-124	Flight record being examined is marked as an unused slot	DBINSP
-125	End of file encountered on Flight Record Set when more data is indicated	DBINSP
-126	Arrival/departure terminals in flight record do not match arrival/departure block indicated in ADT Table	DBINSP
-127	Default error code; indicates no processing done by lower level modules	DBTABT DBGETE DBGETR

DATA BASE ERROR MESSAGE FORMAT

Message	Field Length	Field Description
DBERR1	5	Data Base ID
	5	Component ID
	2	Table/Set ID
	5	Caller Module ID
	5	Executing Module ID
	3	Module Parameter Number
	3	Error Type Code
	8	Access Key
	6	Buffer Address
	6	Access Start Time
	6	Access Stop Time
DBERR2	6	Applications Buffer Address
	8	Entry Size
	6	Relative Record in Table
	6	Relative Record in Block
	5	Block Number
	3	Statistic Indicator
	3	Access Mode
	3	Data Base Error Status
	3	Lock Indicator
	3	TMT Subscript Number
	3	Data Base Flag Indicator
		Key Change Indicator