



**Federal Aviation
Administration**

55054001

***EN ROUTE
RADAR ASSOCIATE
CONTROLLER TRAINING PART A:
BASIC CONCEPTS***

**Lesson 5: IFR Clearances and Route
Assignment**










Version: 1.0 2022.08

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LESSON PLAN DATA SHEET

Course Name	En Route Radar Associate Controller Training Part A: Basic Concepts
Course Number	55054001
Lesson Title	IFR Clearances and Route Assignment
Duration	3 hours, 30 minutes (includes lesson, practice exercise, and ELT)
Version	1.0 2022.08
Reference(s)	JO 7110.65, Air Traffic Control; JO 7210.3 Facility Operation and Administration; AIM, Aeronautical Information Manual; FAA-H-8083-16B, Instrument Procedures Handbook; JO 7340.2, Contractions; U.S. Terminal Procedures Publication, SC-4, NW-1, NE-1; FAA Chart User's Guide; TI 6110.108, ERAM Quick Reference Controller Card
Prerequisites	NONE
Handout(s)	☉ Practice Exercise HO01_L05
Exercise / Activity	Refer to handout for: ☉ Practice Exercise: Departure Clearances
Scenario	NONE
Assessments	☉ YES - Written
Materials and Equipment	☉ Pencil and/or pen
Other Pertinent Information	<ul style="list-style-type: none"> ☉ Ensure lesson materials are downloaded to the classroom computer ☉ Course 57834, IFR CLEARANCES and ROUTE ASSIGNMENT, or current course, is available as supplemental training for this lesson ☉ This lesson is based on ERAM EAE410 ☉ The lesson has been reviewed and reflects current orders and manuals as of April 2022

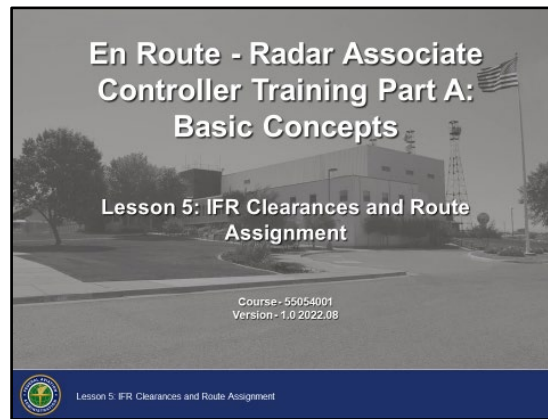
LESSON ICON LEGEND

	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates text that is for the instructor only.
	The Multimedia icon indicates a video or audio clip is in the presentation.
	The Phraseology icon indicates that phraseology is in the content.
	The WBT icon indicates a component of web-based training.
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LESSON INTRODUCTION

Overview



Overview

In earlier courses, you were introduced to Air Traffic Control (ATC) clearances and the role they play in the ATC system. ATC clearances are employed by all controllers to maintain a safe, orderly, and expeditious flow of air traffic. In this lesson, we will focus on ATC clearances as they apply in the en route environment.


LESSON INTRODUCTION (CONT'D)

Lesson Objectives

Lesson Objectives

At the end of this lesson, you will be able to identify:

- Clearance requirements
- Procedures for departing IFR aircraft
- Procedures for IFR clearances



Lesson 5: IFR Clearances and Route Assignment

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Objectives

At the end of this lesson, you will be able to identify:

- ⦿ Clearance requirements
- ⦿ Procedures for departing IFR aircraft
- ⦿ Procedures for IFR clearances

NOTE: There will be a graded end-of-lesson test upon completion of the lesson. The passing score is 70%. If you do not achieve a score of 70%, you will be provided study time and one retake of an alternate end-of-lesson test.

CLEARANCES


ATC Clearances

JO 7110.65,
pars. 4-2-1,
4-6-1

AIM, par. 4-4-3

ATC Clearances

- **Instructions issued by ATC to authorize flight within controlled airspace for the purpose of avoiding collision between known aircraft and/or terrain**
- **Contains items such as:**
 - Clearance limit
 - Route of flight
 - Altitude data

 Lesson 5 IFR Clearances and Route Assignment 2

ATC Clearances



AIR TRAFFIC CLEARANCE - Instructions issued by ATC to authorize flight within controlled airspace for the purpose of avoiding collision between known aircraft and/or terrain.

- ⦿ Contains items such as:
 - Clearance limit
 - When the clearance limit is an airport, the word AIRPORT must follow the airport name
 - May be a NAVAID or other fix
 - When a NAVAID, intersection, or waypoint, is used, include the type
 - Route of flight
 - Departure route, if necessary
 - Airways, routes, courses, headings, azimuths, arcs, or vectors
 - Issued for the altitude or flight level filed by the pilot
 - Altitude data
 - The altitude or flight level to maintain
 - If the altitude assigned is different from the altitude requested by the pilot, ATC will inform the pilot when to expect clearance to the requested altitude
-

CLEARANCES (CONT'D)


Clearance Structure

JO 7110.65, par.
4-2-1

Clearance Structure

- Issue the following clearance items, as appropriate, in the order listed below:

Aircraft ID
Clearance Limit
Standard Instrument Departure (SID)
Route of flight
Altitude data
Mach number
Holding instructions
Any special instructions
Frequency and beacon code information

 Lesson 5: IFR Clearances and Route Assignment 3

Clearance Structure

- ⦿ Issue the following clearance items, as appropriate, in the order listed below:
 - Aircraft ID
 - Clearance Limit
 - Standard Instrument Departure (SID)
 - Route of flight
 - Altitude data
 - Mach number
 - Holding instructions
 - Any special instructions
 - Frequency and beacon code information

CLEARANCES (CONT'D)

Aircraft Identification

JO 7110.65, par.
4-2-1

Aircraft Identification

- All clearances begin with the proper aircraft identification
 - “DELTA TWENTY-TWO CLEARED...”
 - “KINGAIR FOUR FOUR HOTEL KILO CLEARED...”

 Lesson 5: IFR Clearances and Route Assignment 4

Aircraft Identification

- ⦿ All clearances begin with the proper aircraft identification

Examples: “DELTA TWENTY-TWO CLEARED...”

“KINGAIR FOUR FOUR HOTEL KILO CLEARED...”

CLEARANCES (CONT'D)

Clearance Limit, Destination Airport

JO 7110.65, par.
4-2-1

Clearance Limit, Destination Airport

- **The point to which an aircraft is granted an air traffic control clearance**
 - Normally the airport of intended landing
 - Include the airport name and the word "AIRPORT"
- **Examples:**
 - "CLEARED TO DALLAS LOVE AIRPORT..."
 - "CLEARED TO SEDONA AIRPORT..."
 - "CLEARED TO LAGUARDIA AIRPORT..."

 Lesson 5: IFR Clearances and Route Assignment 5

Clearance Limit, Destination Airport

- ⦿ The point to which an aircraft is granted an air traffic control clearance
 - Normally the airport of intended landing
 - Include the airport name and the word AIRPORT



CLEARED TO (destination) AIRPORT

Examples: "CLEARED TO DALLAS LOVE AIRPORT..."

"CLEARED TO SEDONA AIRPORT..."

"CLEARED TO LAGUARDIA AIRPORT..."

CLEARANCES (CONT'D)


Clearance Limit, Intermediate Fix

JO 7110.65,
pars. 4-2-1,
4-6-1

Clearance Limit, Intermediate Fix

- Under certain conditions, a short range clearance is issued to a NAVAID, intersection, or waypoint
 - Include the type if known
- If a delay is expected, issue complete holding instructions
- If no delay expected, state NO DELAY EXPECTED

Examples:
"CLEARED TO YORK VORTAC, NO DELAY EXPECTED"
"CLEARED TO FORT UNION VORTAC HOLD NORTHEAST AS PUBLISHED..."

 Lesson 5: IFR Clearances and Route Assignment 6

Clearance Limit, Intermediate Fix

- ⦿ Under certain conditions, a short range clearance is issued to a NAVAID, intersection, or waypoint
 - Include the type if known
- ⦿ If a delay is expected, issue complete holding instructions
- ⦿ If no delay is expected, state NO DELAY EXPECTED



CLEARED TO (intersection or waypoint name and type)

Examples: "CLEARED TO YORK VORTAC, NO DELAY EXPECTED"

"CLEARED TO FORT UNION VORTAC HOLD NORTHEAST AS PUBLISHED..."


CLEARANCES (CONT'D)

Standard Instrument Departure (SID)

JO 7110.65,
pars. 4-2-1,
4-3-2

Standard Instrument Departure (SID)

- **Assign a SID**
 - Include a transition if necessary
- **Example:**
 - “STROUDSBURG ONE DEPARTURE”
 - “STROUDSBURG ONE DEPARTURE, SPARTA TRANSITION”

 Lesson 5: IFR Clearances and Route Assignment 7

Standard Instrument Departure (SID)

⦿ Assign a SID

- Include a transition if necessary



(SID name and number) DEPARTURE

Examples: “STROUDSBURG ONE DEPARTURE”

“STROUDSBURG ONE DEPARTURE, SPARTA
TRANSITION”


CLEARANCES (CONT'D)

Route of Flight

JO 7110.65,
pars. 4-2-1,
4-4-1, PCG

Route of Flight

- **The route to be flown based on the altitude requested by the pilot**
 - Below FL180: Victor airways, T Routes
 - FL180 and above: Jet Routes, Q Routes
 - Any altitude: Course, heading, azimuth, arc, or vector
- **Also include:**
 - Routing expected if any part of the route beyond a short range clearance limit differs from that filed
- **Example:**
 - "...EXPECT DIRECT TAOS VORTAC VICTOR EIGHTY-THREE..."

 Lesson 5: IFR Clearances and Route Assignment 8

Route of Flight

- ⦿ The route to be flown based on the altitude requested by the pilot
 - Below FL180: Victor airways, T Routes
 - FL180 and above: Jet Routes, Q Routes
 - Any altitude: course, heading, azimuth, arc, or vector
- ⦿ Include routing expected if any part of the route beyond a short range clearance limit differs from that filed



EXPECT FURTHER CLEARANCE VIA (airways, routes, or fixes)

Example: "...EXPECT DIRECT TAOS VORTAC VICTOR EIGHTY-THREE..."


CLEARANCES (CONT'D)

Altitude Data

JO 7110.65,
pars. 4-2-1,
4-3-2

Altitude Data

- **Issue altitude data in the order flown**
 - If the altitude assigned is different from the altitude requested inform the pilot when to expect climb or descent clearance to the requested altitude

 Lesson 5: IFR Clearances and Route Assignment 9

Altitude Data

- ⦿ Issue altitude data in the order flown
 - If the altitude assigned is different from the altitude requested, inform the pilot when to expect climb or descent clearance to the requested altitude
-

CLEARANCES (CONT'D)

Mach Number

JO 7110.65,
pars. 4-2-1,
8-3-3

AIM pars. 4-4-
12, 5-5-9


Mach Number

- Assign speed adjustments using a Mach number, if applicable

Example:

- “MAINTAIN MACH POINT SEVEN FOUR OR GREATER”

NOTE: The use of Mach numbers is restricted to turbojet aircraft with Mach meters.

 Lesson 5: IFR Clearances and Route Assignment 10

Mach Number

- ⦿ Assign speed adjustments using a Mach number, if applicable



MAINTAIN MACH (Mach number)

Example: “MAINTAIN MACH POINT SEVEN FOUR OR GREATER”

NOTE: The use of Mach numbers is restricted to turbojet aircraft with Mach meters.


CLEARANCES (CONT'D)

Holding Instructions

JO 7110.65,
pars. 4-2-1,
4-6-1

Holding Instructions

- **Issue the following:**
 - Clearance limit
 - If any part of the route beyond a clearance limit differs from the last routing cleared, issue the route the pilot can expect beyond the clearance limit
 - Holding instructions
 - May be eliminated when no delay is expected
 - Expect Further Clearance (EFC) time
 - Do not specify this item if no delay is expected

 Lesson 5: IFR Clearances and Route Assignment 11

Holding Instructions

☉ Issue the following:

- Clearance limit
 - If any part of the route beyond a clearance limit differs from the last routing cleared, issue the route the pilot can expect beyond the clearance limit
- Holding instructions
 - May be eliminated when no delay is expected
- Expect Further Clearance (EFC) time
 - Do not specify this item if no delay is expected



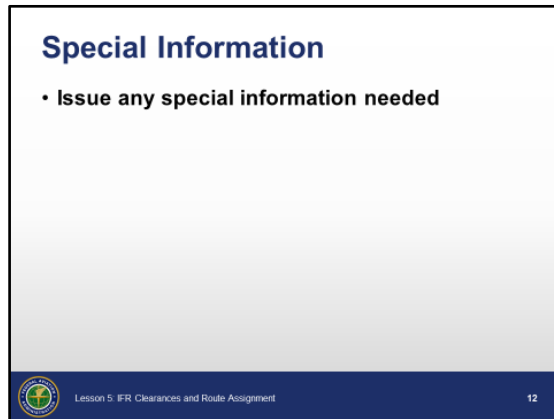
EXPECT FURTHER CLEARANCE VIA (routing)

Example: “EXPECT FURTHER CLEARANCE VIA DIRECT STILLWATER V-O-R, VICTOR TWO TWENTY-SIX SNAPY INTERSECTION, DIRECT NEWARK”

CLEARANCES (CONT'D)

Special Information

JO 7110.65, par.
4-2-1



Special Information

- ⦿ Issue any special information needed


CLEARANCES (CONT'D)

Frequency and Beacon Code Information

JO 7110.65,
pars. 2-1-17,
4-2-1

Frequency and Beacon Code Information

- **Frequency**
 - Issue appropriate frequency
 - Time or location for contacting ATC
- **Beacon Code**
 - Issue the Mode 3/A transponder code

 Lesson 5: IFR Clearances and Route Assignment 13

Frequency and Beacon Code Information

- ⦿ Frequency
 - Issue appropriate frequency
 - Time, fix, altitude, or specifically when to contact a facility
 - ⦿ Beacon Code
 - Issue the Mode 3/A transponder code
-

CLEARANCES (CONT'D)

Clearance Example

JO 7110.65, par.
4-2-1

Aircraft Identification	Clearance limit
Standard Instrument Departure	
Route of flight	
Altitude data in order flown	
Mach number, if applicable	
Holding instructions, Any special instructions	
Frequency	
Beacon Code Information	

Lesson 5: IFR Clearances and Route Assignment 14

Clearance Example

- ⦿ Aircraft ID
 - UNITED FIFTY-FIVE
- ⦿ Clearance Limit
 - CLEARED TO O'HARE AIRPORT
- ⦿ Standard Instrument Departure (SID)
 - VIA AKUNA SEVEN DEPARTURE
- ⦿ Route of flight
 - MCALESTER SPRINGFIELD JAY 105 WELTS SHAIN-ONE
- ⦿ Altitude data in order flown
 - CLIMB AND MAINTAIN FIVE THOUSAND, EXPECT FLIGHT LEVEL THREE ONE ZERO ONE ZERO MINUTES AFTER DEPARTURE

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CLEARANCES (CONT'D)

**Clearance
Example
(Cont'd)**

JO 7110.65, par.
4-2-1

- ⊙ Mach number, if applicable (not issued in this example)
 - ⊙ Holding instructions (not issued in this example)
 - ⊙ Any special instructions (not issued in this example)
 - ⊙ Frequency and beacon code information
 - CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO
 - SQUAWK THREE ONE SIX TWO
-


CLEARANCES (CONT'D)

Clearances to USAF Aircraft

JO 7110.65, par.
4-2-1

Clearances to USAF Aircraft

- **When issuing a clearance to an airborne USAF aircraft containing an altitude assignment, do not include more than one of the following in the same transmission:**
 - Frequency change
 - Transponder change
 - Heading
 - Altimeter setting
 - Traffic information containing an altitude

 Lesson 5: IFR Clearances and Route Assignment 15

Clearances to USAF Aircraft

- ⦿ When issuing a clearance to an airborne USAF aircraft containing an altitude assignment, do not include more than one of the following in the same transmission:
 - Frequency change
 - Transponder change
 - Heading
 - Altimeter setting
 - Traffic information containing an altitude
-

CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

You are issuing a short range clearance to a departing aircraft with a different route than filed. Which statement is correct?

- A. The pilot is responsible for further routing after the clearance limit
- B. Have the new route ready and wait for the pilot to request the route
- C. Include the new expected route in the clearance



Lesson 5: IFR Clearances and Route Assignment



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Question: You are issuing a short range clearance to a departing aircraft with a different route than filed. Which statement is correct?



CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

Which phraseology example is correct when issuing a clearance limit?

- A. "CLEARED TO DALLAS LOVE AIRPORT VIA..."
- B. "CLEARED TO DALLAS LOVE FIELD VIA..."
- C. "CLEARED TO DALLAS LOVE VIA..."

 Lesson 5: IFR Clearances and Route Assignment  17

Question: Which phraseology example is correct when issuing a clearance limit?

CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

Which statement is correct concerning clearances to airborne USAF aircraft that contain an altitude?

- A. Issue as many additional instructions as needed in the following order: frequency, transponder, heading, altimeter setting, traffic information containing an altitude
- B. Do not include more than one of the following: frequency, transponder, heading, altimeter setting, traffic information containing an altitude
- C. USAF aircraft have no restrictions



Lesson 5: IFR Clearances and Route Assignment





Question: Which statement is correct concerning clearances to airborne USAF aircraft that contain an altitude?

CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check
What is the proper order to issue altitude information in a departure clearance?

A. Issue starting at the requested altitude and work down
B. Issue in the order flown
C. Issue all the altitudes then include any restrictions

 Lesson 5: IFR Clearances and Route Assignment  19

Question: What is the proper order to issue altitude information in a departure clearance?

CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

Which statement is correct about issuing a short range clearance limit?

- A. Issue a short range clearance limit only when requested by the pilot
- B. Issue short range clearances only in a radar environment
- C. Issue complete holding instructions or "NO DELAY EXPECTED"



Lesson 5: IFR Clearances and Route Assignment



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Question: Which statement is correct about issuing a short range clearance limit?

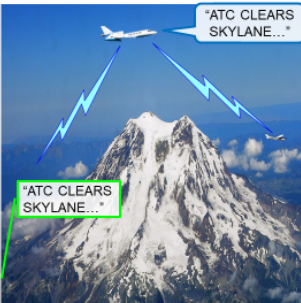
CLEARANCES (CONT'D)

Prefix Clearances for Relay

JO 7110.65,
pars. 4-2-2,
4-2-4, 4-3-2

Prefix Clearances for Relay

- Clearances are relayed verbatim
- Prefix with:
 - “ATC CLEARS”
 - “ATC ADVISES”
 - “ATC REQUESTS”
- FSS must prefix a clearance appropriately



Lesson 5: IFR Clearances and Route Assignment 21

Prefix Clearances for Relay

- ⦿ Clearances are relayed verbatim
- ⦿ Prefix a clearance, information, or a request for information which will be relayed to an aircraft through a non-ATC facility, by stating:



ATC CLEARS

ATC ADVISES

ATC REQUESTS

- ⦿ FSS and ARTCC Flight Data Units must prefix a clearance with the appropriate phrase:
 - “ATC clears,” “ATC advises,” “ATC requests”
 - ⦿ When relaying a departure clearance through FSS, dispatcher, etc.
 - Always include the airport of departure
- Example:** “CLEARED FROM LAKE PROVIDENCE AIRPORT TO ...”

DEPARTURE CLEARANCES

Departure Terminology

JO 7110.65, par.
4-3-1

Departure Terminology

- **Avoid using:**
 - “TAKEOFF”
- **Use these terms when necessary:**
 - “DEPART”
 - “DEPARTURE”
 - “FLY”

Control Towers Only

“CLEARED FOR TAKEOFF RUNWAY...”

Lesson 5 IFR Clearances and Route Assignment 22

Departure Terminology

- ⦿ Avoid using the term TAKEOFF except to actually clear an aircraft for takeoff or to cancel a takeoff clearance
- ⦿ Use these terms when necessary:



DEPART

DEPARTURE

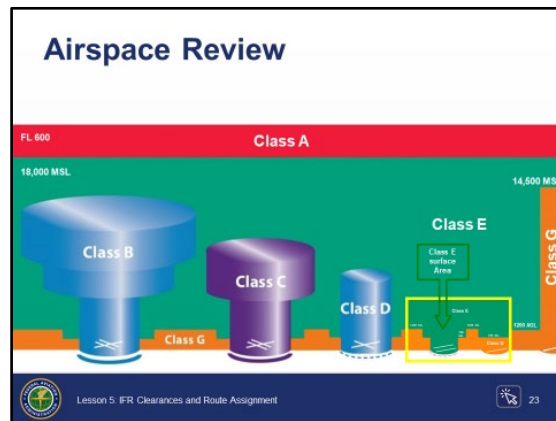
FLY

DEPARTURE CLEARANCES (CONT'D)

Airspace Review

JO 7110.65, par.
4-4-5, PCG

Aeronautical
Chart User's
Guide



Airspace Review

- ⦿ Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace
 - Has defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification
 - Surface areas are the lateral boundaries of Class B, C, D, or E airspace designated for an airport that begins at the surface and extends upward
- ⦿ Class D surface areas
 - Airspace from the surface to 2,500' AGL that have an operational control tower
- ⦿ Class E surface areas
 - When designated as a surface area, the airspace will be configured to contain all instrument procedures
 - Indicated on sectional charts as a dashed magenta line
- ⦿ Class G airspace
 - Uncontrolled airspace
 - Include routes through Class G airspace only when requested by the pilot

DEPARTURE CLEARANCES (CONT'D)

Departure Instructions: Class D

JO 7110.65, par.
4-3-2

Departure Instructions: Class D

N22	T→N TL↑ 350/≡V11↑70	HLI	KGWO SQS V11 KDYL/0053	2552
C310/G T180 02 073 01	1631/ KGWO P1630		CLV30	D-A

"TWIN CESSNA TWO TWO, CLEARED TO DYERSBURG AIRPORT VIA DEPART NORTH, TURN LEFT, FLY HEADING THREE FIVE ZERO UNTIL JOINING VICTOR ELEVEN, VICTOR ELEVEN DYERSBURG. CLIMB AND MAINTAIN SEVEN THOUSAND, CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND, SQUAWK TWO FIVE FIVE TWO."

Lesson 5: IFR Clearances and Route Assignment
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N22	T→N TL↑ 350/≡V11↑70	HLI	KGWO SQS V11 KDYL/0053	2552
C310/G T180 02 073 01	1631/ KGWO P1630		CLV30	D-A

Departure Instructions: Class D

☉ Locations with airport traffic control service

- Specify direction of takeoff/turn or initial heading as necessary, consistent with published Departure Procedures (DP)

Example: Airport traffic control is available through GWO (Greenwood) Tower. Tower advises Runway 36 in use and requests a clearance for N22.

Example: You plan to expedite N22's departure with a north departure to join V11. The pilot will accept a north departure with turns.

Continued on next page

DEPARTURE CLEARANCES (CONT'D)

Departure Instructions, Class D (Cont'd)

JO 7110.65, par.
4-3-2

-
- ⊙ Full clearance delivered to GWO tower:

“TWIN CESSNA TWO TWO, CLEARED TO DYERSBURG AIRPORT VIA DEPART NORTH, TURN LEFT, FLY HEADING THREE FIVE ZERO UNTIL JOINING VICTOR ELEVEN, VICTOR ELEVEN DYERSBURG. CLIMB AND MAINTAIN SEVEN THOUSAND, CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND, SQUAWK TWO FIVE FIVE TWO.”
 - ⊙ Aircraft identification
 - TWIN CESSNA TWO TWO
 - ⊙ Clearance limit
 - CLEARED TO DYERSBURG AIRPORT
 - ⊙ Departure instructions
 - VIA DEPART NORTH, TURN LEFT, FLY HEADING THREE FIVE ZERO UNTIL JOINING VICTOR ELEVEN DYERSBURG
 - ⊙ Route of flight
 - VICTOR ELEVEN
 - ⊙ Altitude
 - CLIMB AND MAINTAIN SEVEN THOUSAND
 - ⊙ Frequency and beacon code
 - CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND
 - SQUAWK TWO FIVE FIVE TWO
-

DEPARTURE CLEARANCES (CONT'D)

Departure Instructions: Class E Surface Area

JO 7110.65, par.
4-3-2

**Class E Surface Area:
Solicit Pilot Concurrence**

N21	1	JAN	KVKS MZ KJAN/0820	3922
C318/10				
T180				
326	01	KVKS P1300	90	

FSS: "REQUEST CLEARANCE FOR CESSNA TWO ONE TO JACKSON"
Controller: "WILL CESSNA TWO ONE ACCEPT A NORTH DEPARTURE WITH TURNS?"
FSS: "AFFIRMATIVE"
Controller: "CLEARANCE..."

Lesson 5: IFR Clearances and Route Assignment 25

Class E Surface Area

- ⦿ Locations without airport traffic control service, but within a Class E surface area
 - Specify direction of takeoff/turn or initial heading if necessary
 - Obtain/solicit the pilot's concurrence concerning a turn or heading before issuing them in a clearance

Example: N21 files direct JAN VORTAC (yellow arrow). You want a more definitive route (blue dotted line) and query the pilot through FSS.

FSS: "REQUEST CLEARANCE FOR CESSNA TWO ONE TO JACKSON"

Controller: "WILL CESSNA TWO ONE ACCEPT A NORTH DEPARTURE WITH TURNS?"

FSS: "AFFIRMATIVE"

Controller: "CLEARANCE..."

DEPARTURE CLEARANCES (CONT'D)

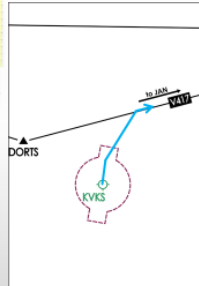
Departure Instructions, Class E Surface Area (Cont'd)



JO 7110.65,
pars. 4-3-2,
4-3-4

Class E Surface Area: Issue Clearance

N21	T→N TR↑ 040/⇒V417	JAN	KVKS, MHZ KJAN/0020	3422
C310/G T180 Ø2	1306/		V417	D-A
326 Ø1	KVKS P1300	90	CLV30	

"CESSNA TWO ONE CLEARED FROM VICKSBURG AIRPORT TO JACKSON AIRPORT VIA DEPART NORTH, TURN RIGHT, FLY HEADING ZERO FOUR ZERO UNTIL JOINING VICTOR FOUR SEVENTEEN, VICTOR FOUR SEVENTEEN MAGNOLIA VORTAC, THEN AS FILED. CLIMB AND MAINTAIN NINER THOUSAND, CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND, SQUAWK THREE FOUR TWO TWO. ADVISE CESSNA TWO ONE RELEASED FOR DEPARTURE."




Lesson 5: IFR Clearances and Route Assignment


N21	T→N TR↑ 040/⇒V417	JAN	KVKS, MHZ KJAN/0020	3422
C310/G T180 Ø2	1306/		V417	D-A
326 Ø1	KVKS P1300	90	CLV30	

"CESSNA TWO ONE CLEARED FROM VICKSBURG AIRPORT TO JACKSON AIRPORT VIA DEPART NORTH, TURN RIGHT, FLY HEADING ZERO FOUR ZERO UNTIL JOINING VICTOR FOUR SEVENTEEN, VICTOR FOUR SEVENTEEN MAGNOLIA VORTAC, THEN AS FILED. CLIMB AND MAINTAIN NINER THOUSAND, CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND, SQUAWK THREE FOUR TWO TWO. ADVISE CESSNA TWO ONE RELEASED FOR DEPARTURE."

- ⊙ Aircraft ID:
 - CESSNA TWO ONE
- ⊙ Clearance limit:
 - CLEARED FROM VICKSBURG AIRPORT TO JACKSON AIRPORT
- ⊙ Departure instructions:
 - VIA DEPART NORTH, TURN RIGHT, FLY HEADING ZERO FOUR ZERO UNTIL JOINING VICTOR FOUR SEVENTEEN

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DEPARTURE CLEARANCES *(CONT'D)*

**Departure
Instructions,
Class E
Surface Area
(Cont'd)**

JO 7110.65,
pars. 4-3-2,
4-3-4

-
- ⊙ Route of flight:
 - VICTOR FOUR SEVENTEEN MAGNOLIA VORTAC, THEN AS FILED
 - ⊙ Altitude data in order flown:
 - CLIMB AND MAINTAIN NINER THOUSAND
 - ⊙ Frequency and beacon code information:
 - CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND
 - SQUAWK THREE FOUR TWO TWO
 - ⊙ Departure release:
 - ADVISE CESSNA TWO ONE RELEASED FOR DEPARTURE
-

DEPARTURE CLEARANCES (CONT'D)

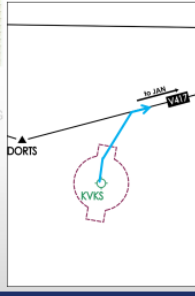
Departure Instructions: Class E Verify Clearance


JO 7110.65, par.
4-3-2


**Class E Surface Area:
Verify Clearance**

N21	T-91N TR1	90	KVKS, MKZ KJAA/10000	3422
C310/G	1000/1000	V417	V417	D-A
326	01	KVKS P1300	90	CLV30

"CESSNA TWO ONE CLEARED FROM VICKSBURG AIRPORT TO JACKSON AIRPORT VIA DEPART NORTH, TURN RIGHT, FLY HEADING ZERO FOUR ZERO UNTIL JOINING VICTOR FOUR SEVENTEEN, VICTOR FOUR SEVENTEEN MAGNOLIA VORTAC, THEN AS FILED. CLIMB AND MAINTAIN NINER THOUSAND. CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND. SQUAWK THREE FOUR TWO TWO. **VERIFY THIS CLEARANCE WILL ALLOW COMPLIANCE WITH TERRAIN OR OBSTRUCTION AVOIDANCE.**"



 Lesson 5: IFR Clearances and Route Assignment

 27

Class E Surface Area: Verify Clearance

- ⦿ In lieu of asking for the pilot's concurrence a verification statement may be appended to the clearance:



**VERIFY THIS CLEARANCE WILL ALLOW COMPLIANCE WITH
TERRAIN OR OBSTRUCTION AVOIDANCE**

- If pilot verifies compliance, issue departure release

DEPARTURE CLEARANCES (CONT'D)

Departure Instructions: Other Airports

JO 7110.65, par. 4-3-2

Departure Instructions: Other Airports

N24	 <div style="border: 1px solid blue; padding: 2px; display: inline-block;"> <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">↗</div> <div>220</div> </div> <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">/ =></div> <div>V427</div> </div> </div>	↑ 60	JAN	<div style="border: 1px solid blue; padding: 2px; display: inline-block;">V427</div> CLV30	5670 D-A
-----	--	------	-----	---	-------------

"CESSNA TWO FOUR CLEARED FROM LAKE PROVIDENCE AIRPORT TO MONROE AIRPORT. WHEN ENTERING CONTROLLED AIRSPACE, FLY HEADING TWO TWO ZERO UNTIL JOINING VICTOR FOUR TWENTY-SEVEN, VICTOR FOUR TWENTY-SEVEN. CLIMB AND MAINTAIN SIX THOUSAND. CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND. SQUAWK FIVE SIX SEVEN ZERO. VERIFY THIS CLEARANCE WILL ALLOW COMPLIANCE WITH TERRAIN OR OBSTRUCTION AVOIDANCE."

Lesson 5: IFR Clearances and Route Assignment

N24		<div style="border: 1px solid blue; padding: 2px; display: inline-block;"> <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">↗</div> <div>220</div> </div> <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">/ =></div> <div>V427</div> </div> </div>	↑ 60	JAN	ØM8 MLU KMLU/ØØ35	5670
C310/G T180 Ø2 261 Ø1		<div style="border: 1px solid red; padding: 2px; display: inline-block;">1305/</div>			<div style="border: 1px solid blue; padding: 2px; display: inline-block;">V427</div>	D-A
		ØM8 P1300		60	CLV30	

Departure Instructions: Other Airports

NOTE: Airports without air traffic control service and without Class E surface areas are located within Class G airspace.

- ⦿ Do not specify direction of takeoff or /turn after takeoff
- ⦿ If necessary to specify an initial heading to be flown after takeoff, issue the initial heading so as to apply only within controlled airspace

Example: "...WHEN ENTERING CONTROLLED AIRSPACE, FLY HEADING TWO TWO ZERO UNTIL JOINING VICTOR FOUR TWENTY-SEVEN..."

"CESSNA TWO FOUR CLEARED FROM LAKE PROVIDENCE AIRPORT TO MONROE AIRPORT. WHEN ENTERING CONTROLLED AIRSPACE, FLY HEADING TWO TWO ZERO UNTIL JOINING VICTOR FOUR TWENTY-SEVEN, VICTOR FOUR TWENTY-SEVEN. CLIMB AND MAINTAIN SIX THOUSAND. CONTACT BRAVO CENTER ONE TWO FIVE POINT ZERO LEAVING THREE THOUSAND. SQUAWK FIVE SIX SEVEN ZERO. VERIFY THIS CLEARANCE WILL ALLOW COMPLIANCE WITH TERRAIN OR OBSTRUCTION AVOIDANCE."

- If pilot verifies compliance, issue departure release

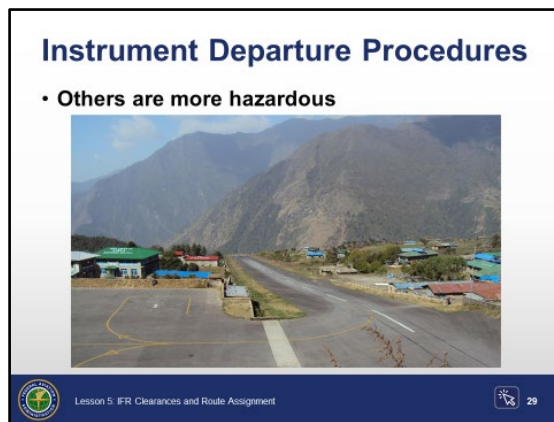
DEPARTURE CLEARANCES (CONT'D)

Instrument Departure Procedures



Instrument Departure Procedures

- ⦿ Some airports have few obstructions
- ⦿ Others are more hazardous



DEPARTURE CLEARANCES (CONT'D)


Instrument Departure Procedures (Cont'd)


JO 7110.65, par.
4-3-2, PCG


AIM, par. 5-2-9

FAA-H-8083-
16B p. 1-8

Instrument Departure Procedures (Cont'd)

- **Preplanned IFR procedures provide obstruction clearance from the terminal area to the en route structure**
 - Obstacle Departure Procedures (ODP) 
 - Printed textually or graphically
 - May be flown without clearance
 - Standard Instrument Departures (SID)
 - Always printed graphically
 - Provide obstruction clearance
 - ATC clearance must be received prior to flying

 Lesson 5: IFR Clearances and Route Assignment 30

- ⊙ Preplanned IFR procedures provide obstruction clearance from the terminal area to the en route structure
 - Obstacle Departure Procedures (ODP)
 - Printed graphically or textually
 - Graphic ODPs have “(OBSTACLE)” printed in the procedure title and are found with the approach charts for each airport
 - Text ODPs are listed by airport in alphabetical order in the front of the U.S. Terminal Procedure Publication (TPP) booklet
 - If an airport has non-standard takeoff minimums, a “triangle T” is in the sections of the instrument procedure chart 
 - May be flown without ATC clearance unless an alternate departure procedure (SID or radar vector) has been assigned by ATC
 - Where pilot compliance is necessary to ensure separation, include the procedure as part of the ATC clearance
 - Standard Instrument Departures (SID)
 - Always printed graphically
 - Provides obstacle clearance
 - ATC clearance must be received prior to flying a SID
 - SIDs are primarily designed for system enhancement and to reduce pilot/controller workload
-

DEPARTURE CLEARANCES (CONT'D)


Visual Climb Over Airport (VCOA)

JO 7110.65, par. 4-3-2, PGC

AIM par. 5-2-9

Visual Climb Over Airport (VCOA)

- **Used in VMC equal to or greater than the specified visibility and ceiling**
 - Allows climbing turns over the airport to the published “at or above” altitude
- **If an ODP is included in the clearance and VCOA is requested by the pilot or assigned by ATC when it is the only procedure published in the ODP, include an instruction to remain within the published visibility of the VCOA**

 Lesson 5: IFR Clearances and Route Assignment 31

Visual Climb Over Airport (VCOA)



VISUAL CLIMB OVER AIRPORT (VCOA) - A departure option for an IFR aircraft operating in visual meteorological conditions equal to or greater than the specified visibility and ceiling, to visually conduct climbing turns over the airport to the published “climb-to” altitude from which to proceed with the instrument portion of the departure.

NOTE: VCOA procedures are developed to avoid obstacles greater than 3 statute miles from the departure end of the runway as an alternative to complying with climb gradients greater than 200 feet per nautical mile.

- ⦿ Used in Visual Meteorological Conditions (VMC) that are equal to or greater than the specified visibility and ceiling
- ⦿ Allows climbing turns over the airport to the published “at or above” altitude
 - At that point, the pilot may proceed in instrument meteorological conditions to:
 - First en route fix using a diverse departure, or
 - Proceed via a published routing to a fix from where the aircraft may join the IFR en route structure
- ⦿ If an ODP is included in the clearance and VCOA is requested by the pilot or assigned by ATC when it is the only procedure published in the ODP, include an instruction to remain within the published visibility of the VCOA

Continued on next page

DEPARTURE CLEARANCES *(CONT'D)*

Visual Climb Over Airport (Cont'd)

JO 7110.65, par.
4-3-2

EXAMPLES: “Depart via the (airport name)(runway number) obstacle departure procedure. Remain within (number of miles) miles of the (airport name) during visual climb” if applicable. Or,
“Depart via the (graphic ODP name) obstacle departure procedure. Remain within (number of miles) miles of the (airport name) during visual climb” if applicable.

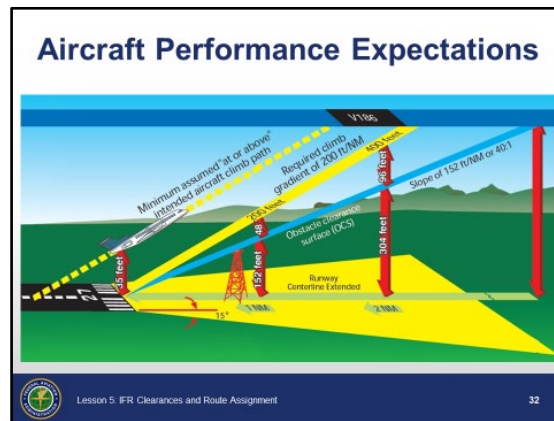
NOTE: Pilots will advise ATC of their intent to use the VCOA option when requesting their IFR clearance.

DEPARTURE CLEARANCES (CONT'D)

Aircraft Performance Expectations

FAA-H-8083-16B pp. 1-16 to 1-18, B-5

AIM, par. 5-2-9



Aircraft Performance Expectations

⦿ On takeoff:

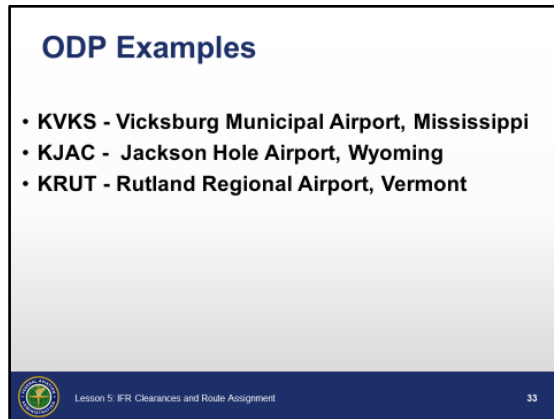
- Aircraft will
 - Cross the end of the runway at least 35' AGL
 - Not turn below 400' AGL
 - Climb at least 200' per NM
- Ceiling and visibility minimum of at least 300' and 1 mile

⦿ If the above will not allow pilot to clear obstacles, FAA may:

- Limit IFR departures from a runway
 - Indicated on a procedure as NA (Not Authorized)
- Require steeper climb gradient
- Raise takeoff minimums
- Create a departure procedure

DEPARTURE CLEARANCES (CONT'D)

ODP Examples



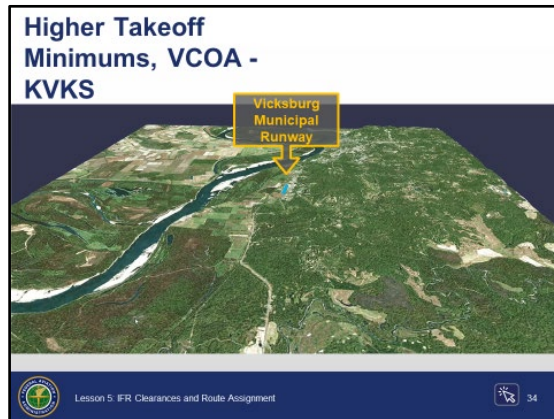
ODP Examples

- ⦿ KVKS - Vicksburg Municipal Airport, Mississippi
 - ⦿ KJAC - Jackson Hole Airport, Wyoming
 - ⦿ KRUT - Rutland Regional Airport, Vermont
-

DEPARTURE CLEARANCES (CONT'D)

Higher Takeoff Minimums, VCOA - KVKS

SC-4, p. L26



VICKSBURG, MS

VICKSBURG MUNI (VKS)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 08NOV18 (18312) (FAA)

TAKEOFF MINIMUMS:

Rwy 1, std. w/min. climb of 290' per NM to 800
or 900 2-1/2 for VCOA. **Rwy 19**, 300-2 or std.
w/min. climb of 425' per NM to 400.

VCOA: **Rwy 1**, obtain ATC approval for VCOA
when requesting IFR clearance. Climb in
visual conditions to cross Vicksburg Muni
airport at or above 900 before proceeding
on course.

Higher Takeoff Minimums, VCOA - KVKS

- ⦿ Relatively flat terrain
 - Departure Procedure (DP) not developed

Continued on next page

DEPARTURE CLEARANCES *(CONT'D)*

Higher Takeoff Minimums, VCOA - KVKs (Cont'd)

SC-4, p. L26

FAA-H-8083-
16B p. 1-8

⊙ Takeoff minimums:

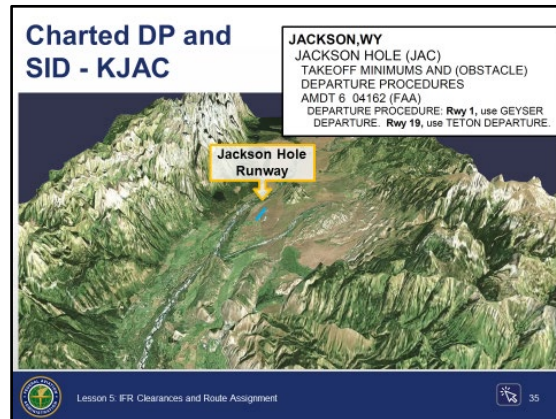
- Runway 1
 - Steeper climb, 290' per NM to 800'
 - VCOA requires 900' ceiling and 2 ½ miles visibility
- Runway 19
 - Higher takeoff minimums, 300' ceiling and 2 miles visibility or
 - Standard minima (300'- 1 mile) and climb of 425' per NM to 400'

NOTE: Takeoff minimums are listed by airport in alphabetical order in the front section of the U.S. Terminal Procedure Publication (TPP) booklet.

DEPARTURE CLEARANCES (CONT'D)

Charted DP and SID - KJAC

NW-1, p. L26



JACKSON,WY
JACKSON HOLE (JAC)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 6 04162 (FAA)
DEPARTURE PROCEDURE: **Rwy 1**, use GEYSER
DEPARTURE. **Rwy 19**, use TETON DEPARTURE.

Charted DP and SID KJAC

Continued on next page

DEPARTURE CLEARANCES *(CONT'D)*

**Charted DP
and SID -
KJAC
(Cont'd)**

NW-1, p. L26

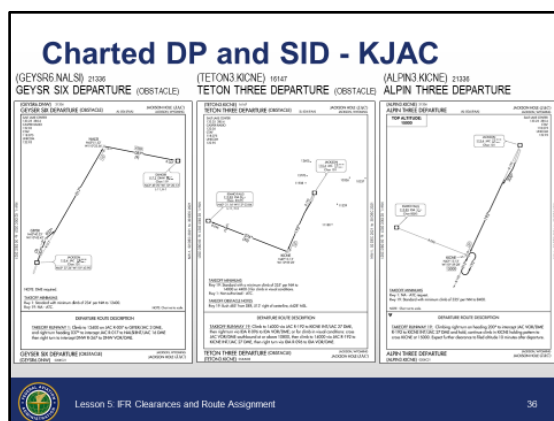
FAA-H-8083-
16B p. 1-8

-
- ⊙ Dangerously high terrain to the west and east
 - ⊙ Graphic departure procedure developed and noted in takeoff minimums
 - Published adjacent to the instrument procedure charts in U.S. Terminal Procedure Publication (TPP) booklet
-

DEPARTURE CLEARANCES (CONT'D)

Charted DP and SID - KJAC (Cont'd)

NW-1, pp. 347-349



TAKEOFF MINIMUMS

Rwy 1: Standard with minimum climb of 234' per NM to 12400.
Rwy 19: NA - ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb to 12400 on JAC R-007 to GIYER/JAC 3 DME, and right turn heading 037° to intercept JAC R-017 to NALSI INT/JAC 16 DME then right turn to intercept DNW R-267 to DNW VOR/DME.

GEYSER SIX DEPARTURE (OBSTACLE)
(GEYSR6.DNW) 02DEC21

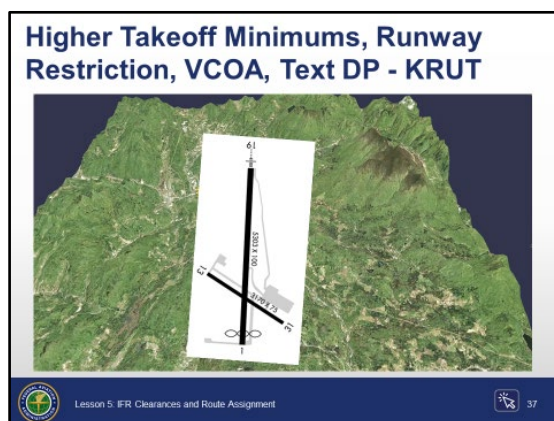
JACKSON, WYOMING
JACKSON HOLE (JAC)

- ⊙ Two graphical ODPs developed, e.g., GEYSER SIX DEPARTURE, TETON THREE DEPARTURE
 - One for each runway
 - Takeoff minimums depicted on chart
 - Standard ceiling/visibility (300'-1 mile)
 - 450' per NM climb rate to 14,000' (7,549' AGL)
 - Pilot may fly without ATC clearance
 - Labeled "(OBSTACLE)" to differentiate from a SID
- ⊙ One SID, e.g., ALPIN THREE DEPARTURE
 - Runway 19 only
 - Standard ceiling/visibility (300'-1 mile)
 - 450' per NM climb rate needed to 15,000' (8,549' AGL)
 - Must be ATC assigned

DEPARTURE CLEARANCES (CONT'D)

Higher
Takeoff
Minimums
Runway
Restriction,
Text DP KRUT

NE-1, p. L45



Higher Takeoff Minimums Runway Restriction, Text DP KRUT

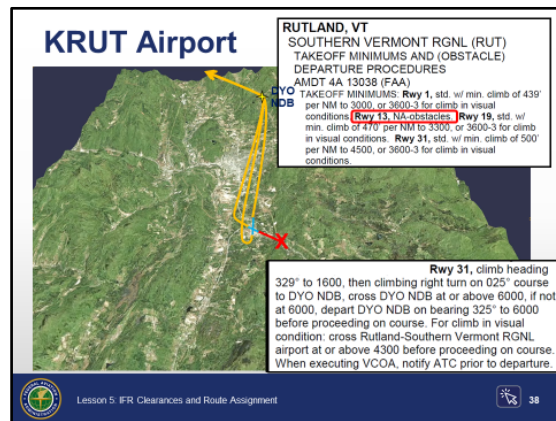
- ⦿ High terrain west, south and east

Continued on next page

DEPARTURE CLEARANCES (CONT'D)

Higher
Takeoff
Minimums
Runway
Restriction,
Text DP KRUT
(Cont'd)

NE-1, p. L45



RUTLAND, VT
SOUTHERN VERMONT RGNL (RUT)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 4A 13038 (FAA)

TAKEOFF MINIMUMS: **Rwy 1**, std. w/ min. climb of 439' per NM to 3000, or 3600-3 for climb in visual conditions. **Rwy 13**, NA-obstacles. **Rwy 19**, std. w/ min. climb of 470' per NM to 3300, or 3600-3 for climb in visual conditions. **Rwy 31**, std. w/ min. climb of 500' per NM to 4500, or 3600-3 for climb in visual conditions.

- ⊙ Runway 13
 - IFR departure not authorized “NA-obstacles”
- ⊙ Runway 1
 - Standard ceiling/visibility (300'-1 mile)
 - 439' per NM climb rate needed to 3,000'
 - ODP over DYO NDB

Continued on next page

DEPARTURE CLEARANCES *(CONT'D)*

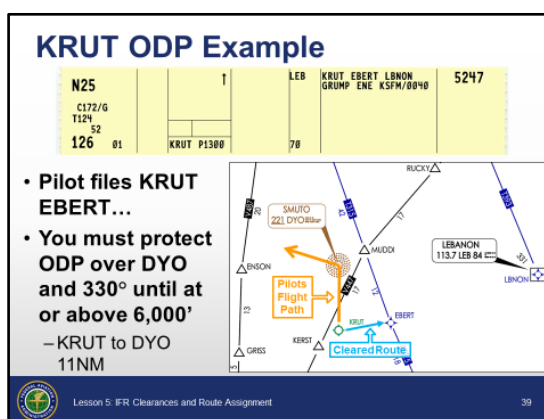
Higher
Takeoff
Minimums
Runway
Restriction,
Text DP KRUT
(Cont'd)
NE-1, p. L45

-
- ⊙ Runway 19
 - Standard ceiling/visibility
 - 470' per NM climb rate needed to 3,300'
 - ODP over DYO NDB
 - ⊙ Runway 31
 - Standard ceiling/visibility
 - 500' per NM climb rate needed to 4,500'
 - ODP over DYO NDB
-

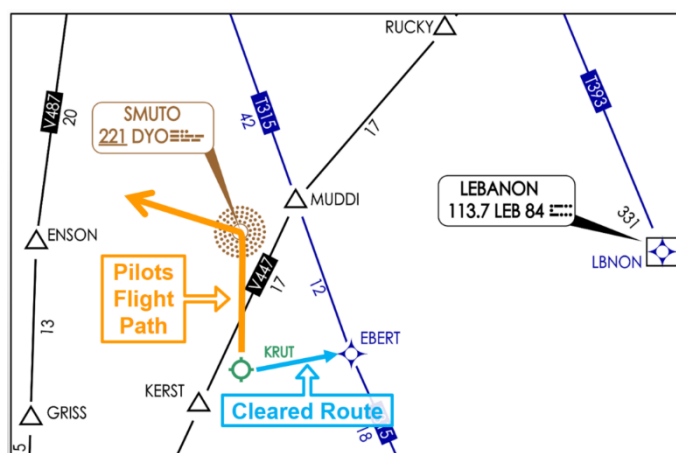
DEPARTURE CLEARANCES (CONT'D)

KRUT ODP Example

JO 7110.65,
PCG



N25	↑	LEB	KRUT EBERT LBNON GRUMP ENE KSFM/0040	5247
C172/G				
T124				
52				
126 01	KRUT P1300	70		



KRUT ODP Example

- ⦿ Because a pilot may fly ODPs without specific authorization, you must be aware of procedures that could maneuver aircraft some distance from the airport
 - DYO is a significant distance from KRUT airport (11 NM)
 - The pilots filed route KRUT EBERT does not indicate the ODP maneuver over DYO NDB
 - A slow climb could possibly require an aircraft to depart DYO NDB on the prescribed 330° heading

DEPARTURE CLEARANCES (CONT'D)

Assigning a SID


JO 7110.65, par. 4-3-2, PCG

AIM, par. 5-2-9

FAA-H-8083-16B p. 1-29

Assigning a SID

- **SIDs are primarily designed for system enhancement to expedite traffic flow and to reduce pilot/controller workload**
 - At busier airports they increase efficiency and reduce communications and departure delays
 - Assign SIDs, as necessary, for traffic management and convenience
- **If it is necessary to assign a crossing altitude, which differs from the SID altitude, emphasize the change to the pilot**



Lesson 5: IFR Clearances and Route Assignment

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Assigning a SID

- ⦿ SIDs are primarily designed for system enhancement to expedite traffic flow and to reduce pilot/controller workload
 - At busier airports they increase efficiency and reduce communications and departure delays
 - Assign SIDs, as necessary, for traffic management and convenience



(SID name and number) DEPARTURE



(SID name and number) DEPARTURE, (transition name)
TRANSITION

Example: “AMERICAN FOUR CLEARED TO ST. LOUIS AIRPORT
VIA BOLDE ONE DEPARTURE SPRINGFIELD
TRANSITION VICTOR FOUR”

- ⦿ If it is necessary to assign a crossing altitude, which differs from the SID altitude, emphasize the change to the pilot



(SID name and number) DEPARTURE, EXCEPT CROSS (revised
altitude information)

Example: “STROUDSBURG ONE DEPARTURE, EXCEPT
CROSS QUAKER AT FIVE THOUSAND”

Continued on next page

DEPARTURE CLEARANCES *(CONT'D)*

Assigning a SID (Cont'd)

JO 7110.65, par.
4-3-2

- ⦿ Specify altitudes when they are not included in the SID



(SID name and number) DEPARTURE. CROSS (fix) AT (altitude)

Example: “STROUDSBURG ONE DEPARTURE, CROSS JERSEY INTERSECTION AT FOUR THOUSAND, CROSS RANGE INTERSECTION AT SIX THOUSAND”

- ⦿ If the pilot has indicated that he/she does not wish to use a SID, assign a preferred departure route
 - Preferential departure route is a specific departure route from an airport or terminal area to an en route point where there is no further need for flow control
-


DEPARTURE CLEARANCES (CONT'D)

Altitude Assignments

JO 7110.65, par.
4-3-2

Altitude Assignments

- **Issue one of the following:**
 - Altitude requested by the pilot
 - Altitude as near as possible to altitude requested by the pilot
 - Inform pilot when to expect requested altitude unless instructions are contained in the specified SID
 - If the requested altitude is not expected to be available, inform the pilot what altitude can be expected and when/where to expect it

 Lesson 5: IFR Clearances and Route Assignment 41

Altitude Assignments

- ⦿ Issue one of the following in the order of preference listed:
 - Altitude requested by the pilot
 - Altitude as near as possible to the altitude requested by the pilot
 - Inform the pilot when to expect clearance to the requested altitude unless instructions are contained in the specified SID
 - If the requested altitude is not expected to be available, inform the pilot what altitude can be expected and when/where to expect it
- ⦿ When the SID contains published crossing restrictions, instruct aircraft to:



CLIMB VIA SID

Example: “CLEARED TO JOHNSTON AIRPORT, SCOTT ONE DEPARTURE, JONEZ TRANSITION, Q ONE FORTY-FIVE, CLIMB VIA SID”

- ⦿ When a top altitude is not published or when it is necessary to issue an interim altitude, instruct aircraft to:



CLIMB VIA SID EXCEPT MAINTAIN (*altitude*)

Example: “CLEARED TO JOHNSTON AIRPORT, SCOTT ONE DEPARTURE, JONEZ TRANSITION, Q ONE FORTY-FIVE, CLIMB VIA SID EXCEPT MAINTAIN FLIGHT LEVEL ONE EIGHT ZERO”


DEPARTURE CLEARANCES (CONT'D)

Altitude Assignments (Cont'd)

JO 7110.65, par. 4-3-2

Altitude Assignments (Cont'd)

- **When a SID:**
 - Does not contain published crossing restrictions and/or
 - Is a SID with a Radar Vector segment, or
 - Is a Radar Vector SID, or
 - Is constructed with a Radar Vector segment and contains published crossing restrictions after the vector segment
- **Instruct aircraft to:**
 - MAINTAIN *(altitude)*
 - or
 - CLIMB AND MAINTAIN *(altitude)*. EXPECT *(requested altitude)* AT *(time or fix)*.

 Lesson 5: IFR Clearances and Route Assignment 42

☉ When a SID:

- Does not contain published crossing restrictions and/or
- Is a SID with a radar vector segment, or
- Is a radar vector SID, or
- Is constructed with a radar vector segment and contains published crossing restrictions after the vector segment

Then:

- Instruct aircraft to



MAINTAIN *(altitude)*

or



CLIMB AND MAINTAIN *(the altitude as near as possible to the pilot's requested altitude)*. EXPECT *(the requested altitude or an altitude different from the requested altitude)* AT *(time or fix)*,

If applicable,




(pilot's requested altitude) IS NOT AVAILABLE

DEPARTURE CLEARANCES (CONT'D)


Clearances to Air Force One

JO 7110.65, par.
4-3-2

**Clearances to
Air Force One**



- **Clearance limit**
 - Do not specify the destination airport
- **Initial altitude**
 - 9,000' AGL or higher
 - If unable the highest available altitude

 Lesson 5: IFR Clearances and Route Assignment 43

Clearances to Air Force One

⦿ Clearance limit

- Do not specify the destination airport

NOTE: Presidential detail is responsible for ensuring the accuracy of the destination airport.



...DESTINATION AS FILED

⦿ Initial altitude:

- To the maximum extent possible, provide unrestricted climb to:
 - 9,000' AGL or higher
 - If unable 9,000' AGL or higher, then the highest available altitude below 9,000' AGL
-



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the proper way to issue departure headings to aircraft departing from airports within Class G airspace?

- A. "...DEPART NORTH, FLY HEADING..."
- B. "...FLY RUNWAY HEADING UNTIL ENTERING CONTROLLED AIRSPACE..."
- C. "...WHEN ENTERING CONTROLLED AIRSPACE, FLY HEADING..."

 Lesson 5: IFR Clearances and Route Assignment  44

Question: What is the proper way to issue departure headings to aircraft departing from airports within Class G airspace?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What prefix phrase must you use to relay a clearance to an aircraft through another aircraft?

- A. "ATC CLEARS"
- B. "ATC RELAYS"
- C. "ATC WANTS"

 Lesson 5: IFR Clearances and Route Assignment  46

Question: What prefix phrase must you use to relay a clearance to an aircraft through another aircraft?

DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

At airports within a Class E surface area where airport traffic control service is **NOT** provided, when can you specify the initial heading to be flown after takeoff?

- A. Anytime you decide, if necessary to expedite the departure
- B. After obtaining/soliciting the pilot's concurrence concerning these items
- C. Only on pilot request



Lesson 5: IFR Clearances and Route Assignment



Question: At airports within a Class E surface area where airport traffic control service is NOT provided, when can you specify the initial heading to be flown after takeoff?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

You issue a departure clearance at an airport with a published Obstacle Departure Procedure (ODP). Which statement is correct?

- A. The pilot may fly the ODP when cleared for departure
- B. You must assign the ODP to all departures
- C. ODPs apply only to pilots unfamiliar with the local terrain

 Lesson 5: IFR Clearances and Route Assignment  47

Question: You issue a departure clearance at an airport with a published Obstacle Departure Procedure (ODP). Which statement is correct?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the minimum altitude you should assign to Air Force One if traffic is not a factor?

- A. FL180
- B. 9,000' AGL
- C. 9,000' MSL

 Lesson 5: IFR Clearances and Route Assignment  48

Question: What is the minimum altitude you should assign to Air Force One if traffic is not a factor?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

Which example is the phraseology for issuing a departure direction?

- A. "TAKEOFF NORTH..."
- B. "DEPART NORTH..."
- C. "EXIT THE TRAFFIC PATTERN NORTH..."

 Lesson 5: IFR Clearances and Route Assignment  49

Question: Which example is the phraseology for issuing a departure direction?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

Which statement is correct concerning a Standard Instrument Departure (SID)?

- A. SIDs may be flown without a specific ATC clearance
- B. SIDs are never published in graphical form
- C. SIDs always provide terrain clearance

 Lesson 5: IFR Clearances and Route Assignment  50

Question: Which statement is correct concerning a Standard Instrument Departure (SID)?

DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

You issue a departure clearance, but due to traffic, you cannot assign the requested altitude. What should you do?

- A. Issue a safe altitude and inform pilot when to expect clearance to the requested altitude
- B. Delay the departure until the requested altitude is available
- C. Issue the lowest safe altitude and wait for the pilot to request higher



Lesson 5: IFR Clearances and Route Assignment



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Question: You issue a departure clearance, but due to traffic, you cannot assign the requested altitude. What should you do?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the proper way to issue a clearance limit to Air Force One?

- A. "CLEARED TO ANDREWS AIRPORT VIA..."
- B. "CLEARED TO ANDREWS AIR FORCE BASE VIA..."
- C. "CLEARED TO DESTINATION AS FILED"

 Lesson 5: IFR Clearances and Route Assignment  52

Question: What is the proper way to issue a clearance limit to Air Force One?



DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

You are issuing a clearance through FSS/ARTCC Flight Data Units. What must be included in the clearance?

- A. Prefix "ATC CLEARS..."
- B. Airport of departure
- C. Time check if a clearance void time is used

 Lesson 5: IFR Clearances and Route Assignment  53

Question: You are issuing a clearance through FSS/ARTCC Flight Data Units. What must be included in the clearance?

DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

You issue a departure clearance with a climb via standard instrument departure but want the aircraft to stop below the highest published altitude. What is the phraseology?

- A. "CLIMB VIA SID EXCEPT MAINTAIN..."
- B. "CLIMB VIA SID STOP CLIMB AT..."
- C. "AMEND CLIMB VIA SID ALTITUDE TO..."



Lesson 5: IFR Clearances and Route Assignment



Question: You issue a departure clearance with a climb via standard instrument departure but want the aircraft to stop below the highest published altitude. What is the phraseology?

PRACTICE EXERCISE: DEPARTURE CLEARANCES

Practice Exercise: Departure Clearances

- **Purpose**
 - Issuing departure clearances using appropriate phraseology
- **Materials**
 - Practice Exercise: Departure Clearances
 - Pencil or pen
- **Directions**
 - This exercise will take approximately 30 minutes to complete. The instructor will present traffic situations and specific departure criteria. You will be required to write out a clearance incorporating these criteria in the proper format. Each situation will be presented individually and reviewed before proceeding to the next.



Lesson 5 IFR Clearances and Route Assignment

55

Purpose

Issuing departure clearances using appropriate phraseology

Materials



Handout:

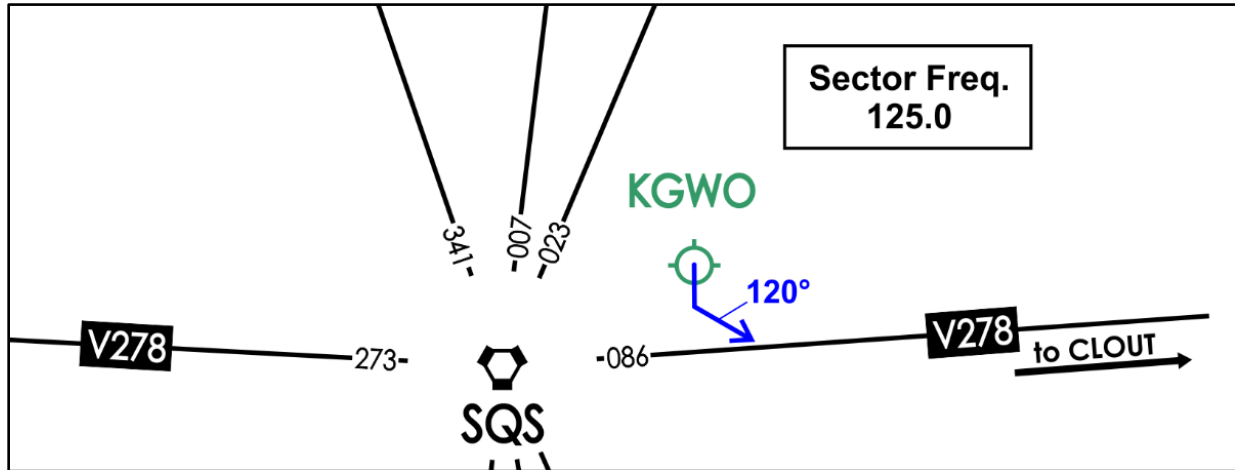
- Practice Exercise: Departure Clearances
 - Pencil or pen
-

Directions

This exercise will take approximately 30 minutes to complete. The instructor will present traffic situations and specific departure criteria. You will be required to write out a clearance incorporating these criteria in the proper format. Each situation will be presented individually and reviewed before proceeding to the next.

PRACTICE EXERCISE: DEPARTURE CLEARANCES (CONT'D)

1.

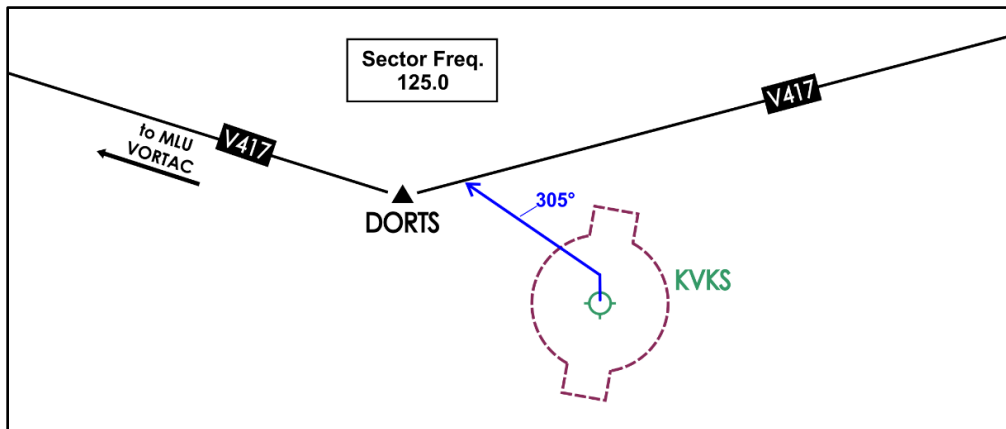


N11		↑		TOMLN	KGWO SQS V278 CLOUT	2533
C182/G					KSTF/0053	
T125						
02						
013	01					
		KGWO	P1030	70		

GWO tower calls for a clearance for N11 to Starkville (KSTF), advises runway 18 is the active. Write the phraseology needed to clear N11 to KSTF at the requested altitude with a south departure to join V278 on a heading of 120°.

PRACTICE EXERCISE: DEPARTURE CLEARANCES (CONT'D)

2.

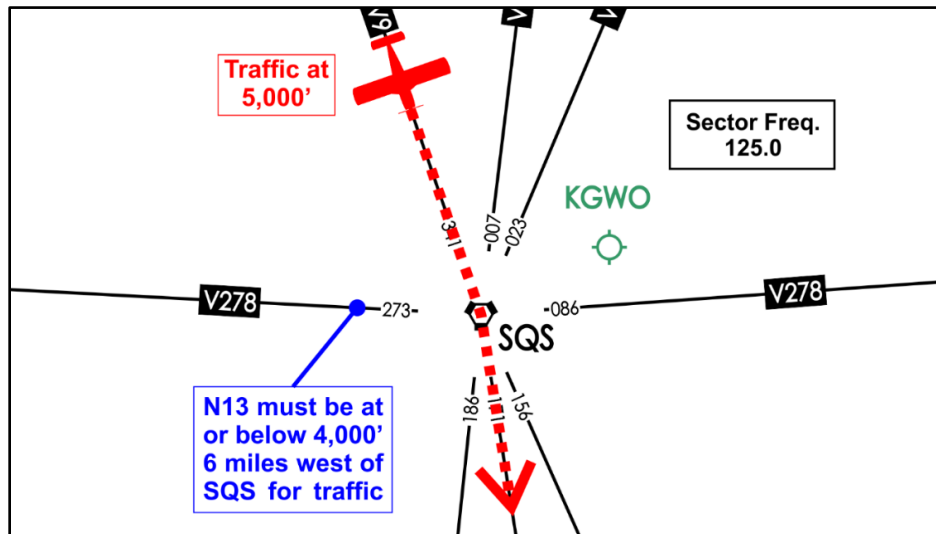


N12		↑	MLU	KVKS MLU KMLU/ØØ53	3357
BE23/A					
T121					
Ø2					
181 Ø1		KVKS PØ955	8Ø		

FSS calls for a clearance for N12 to Monroe (KMLU). Write the phraseology needed to clear N12 to KMLU at the requested altitude with a north departure to join V417 on heading 305°.

PRACTICE EXERCISE: DEPARTURE CLEARANCES (CONT'D)

3.

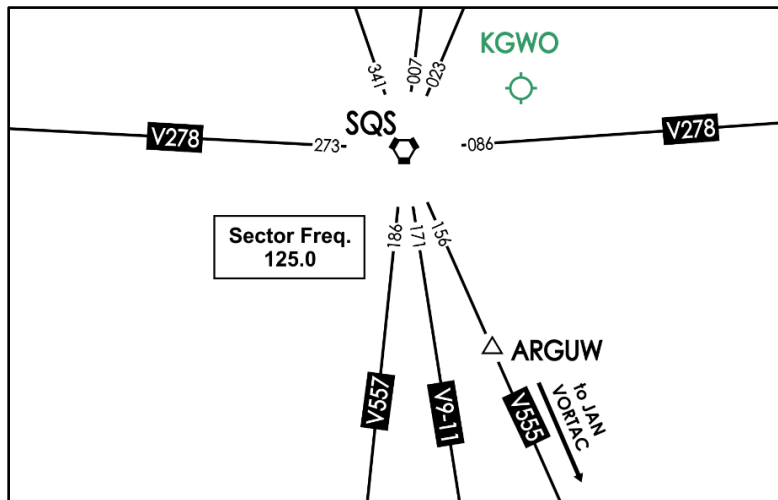


N13		↑	GLH	KGWO SQS V278 GLH KGLH/0033	4271
M020/A					
T145					
02					
014 01		KGWO P1905	80		

GWO tower calls for a clearance for N13 to Greenville (KGLH), advises runway 23 is the active. Write the phraseology needed to clear N13 to KGLH via SQS (Sidon) VORTAC clearing the overflight traffic at 5,000'.

PRACTICE EXERCISE: DEPARTURE CLEARANCES (CONT'D)

4.

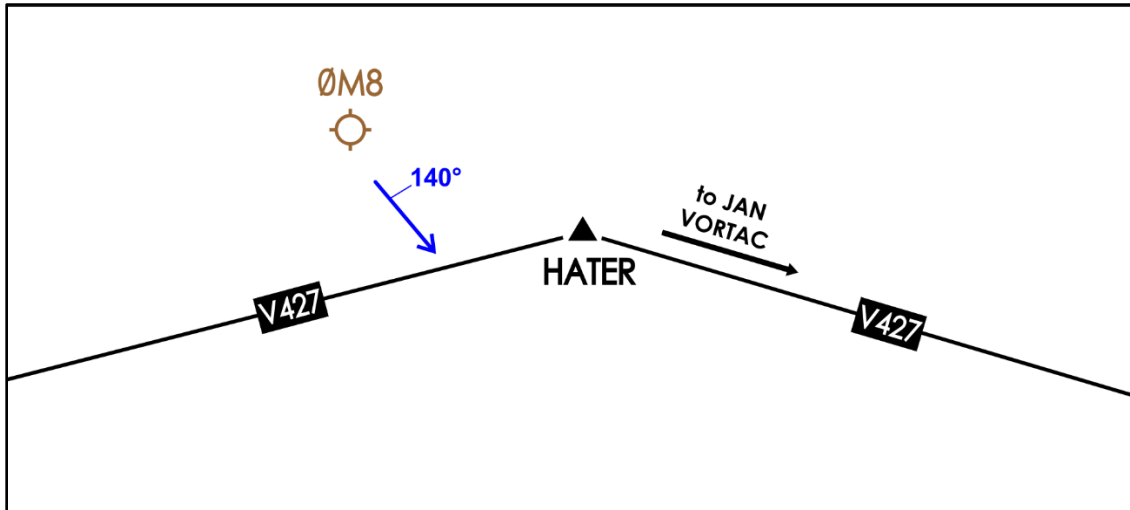


N14		↑	JAN	KGWO SQS V9 JAN	0721
C172/G				KJAN/0053	
T125					
02					
224	01	KGWO P2220	90		

GWO tower calls for a clearance for N14 to Jackson (KJAN), advises runway 23 is the active. Write the phraseology needed to clear N14 for departure. Due to traffic the flight will be cleared to ARGUW intersection via SQS V555 at 5,000' with routing to KJAN on V555. The flight will not hold at ARGUW (initial clearance limit) but the final altitude will be 7,000' after ARGUW.

PRACTICE EXERCISE: DEPARTURE CLEARANCES (CONT'D)

5.



N15		↑	JAN	ØM8 JAN V11 KLUL/Ø105	1406
C182/A T120 Ø2					
443 Ø1		ØM8 PØ150	70		

FSS calls for a clearance for N15 to Laurel (KLUL). ØM8 (Byerly) does not have a Class E surface area. Write the phraseology needed to clear N15 for departure to the requested altitude and join V427 on a 140° heading.

ABBREVIATED DEPARTURE CLEARANCES

Abbreviated Departure Clearance

JO 7110.65,
pars. 4-3-2,
4-3-3

AIM, par. 5-2-6

Abbreviated Departure Clearance			
JBU523	↑	COATE	0721
A321/L		KJFK JFKS COATE Q436	
T455		RAAKK Q438 RUBY	
02		DABJU KGTBK K775G	
224	01	KD69A KD66Y KD68W	
		TAYLR KD48S TOADD	
		JASSE Q90 DNERO	
		ANJLL3 KLAX	
		320	

JET BLUE FIVE TWENTY-THREE CLEARED TO LOS ANGELES AIRPORT VIA KENNEDY FIVE DEPARTURE COATE TRANSITION, THEN AS FILED. CLIMB AND MAINTAIN FIVE THOUSAND, EXPECT FLIGHT LEVEL THREE TWO ZERO ONE ZERO MINUTES AFTER DEPARTURE. CONTACT DEPARTURE ONE TWO FIVE POINT ZERO. SQUAWK ZERO SEVEN TWO ONE."

Lesson 5 IFR Clearances and Route Assignment

Abbreviated Departure Clearance

- ⦿ CLEARED...AS FILED procedures offer a significant time savings over reading the full route to the pilot
- ⦿ Can be used if the following conditions are met:
 - Route of flight filed with ATC has not been changed
 - If the entire route will not be read to the pilot, it is important that the “as filed” portion is the same for pilot and controller
 - ATC facilities have sufficient route information to exercise control responsibilities
 - The route of flight information to be provided may be covered in letters of agreement
 - Destination airport information is relayed between facilities prior to departure
 - Pilots are responsible for providing destination airport information on initial radio call-up
 - The assigned altitude is stated in the clearance
 - Altitude requested by the pilot or as near as possible to the altitude requested by the pilot

ABBREVIATED DEPARTURE CLEARANCES (CONT'D)

Abbreviated Departure Clearance, (Cont'd)

JO 7110.65, par.
4-3-3

AIM, par. 5-2-6

TI 6110.108

Abbreviated Departure Clearance					
Modifications to Route					
N76HL	1	BYP	KDAL SWTSR3 MLC HLV PIA KVYS/0155	2651	
PRML/L TH05 02 009 01	KDAL P1900	350	0FRC/HLV		

• If route must be modified include one of the following in remarks

- FRC
- FRC/(fix)
 - Issue full route to specified fix or destination airport
 - Always first item of intracenter remarks

Lesson 5: IFR Clearances and Route Assignment 67

- ⊙ If necessary, to modify a filed flight plan in order to achieve computer acceptance, include one of the following in remarks:

- FRC - Full route clearance is necessary
- FRC/(fix) - Full route clearance until the initial fix
 - Issue full route to specified fix or destination airport
- FRC or FRC/(fix) must always be the first item of intra-center remarks, “⊕”

- ⊙ When no changes are required in filed route, use the following:



CLEARED TO (destination) AIRPORT AS FILED. MAINTAIN (altitude)

- ⊙ When no change is required in route except addition of SID transition, use the following:



CLEARED TO (destination) AIRPORT (SID name and number)
DEPARTURE, THEN AS FILED. MAINTAIN (altitude)

- ⊙ Specify the assigned altitude, and if required, add any additional instructions or information, including final requested altitude if different than assigned

NOTE: SIDs are excluded from “cleared as filed” procedures; therefore, if a SID is filed by the pilot, it must be restated in an abbreviated departure clearance.


ABBREVIATED DEPARTURE CLEARANCES (CONT'D)

Abbreviated Departure Clearance, (Cont'd)

JO 7110.65, par.
4-3-3, PCG

Abbreviated Departure Clearance

- Nonradar environment, specify one, two, or more fixes as necessary to identify the initial route of flight
- Do not apply these procedures when a pilot requests a detailed clearance or to military operations conducted within:
 - ALTRVs
 - Stereo routes
 - Operations above FL600
 - Other military operations requiring special handling

 Lesson 5: IFR Clearances and Route Assignment 68

- ⦿ In a nonradar environment, specify one, two, or more fixes as necessary to identify the initial route of flight
 - Avoid providing or implying course guidance below the Minimum IFR Altitude (MIA)
 - Use the term VIA
- Example:** “CLEARED TO WATSON AIRPORT AS FILED VIA EMPORIA VORTAC, MAINTAIN SEVEN THOUSAND”
- ⦿ Do not apply abbreviated departure procedures when a pilot requests a detailed clearance or to military operations conducted within:
 - ALTRVs
 - Altitude Reservations under prescribed conditions normally employed for the mass movement of aircraft
 - Stereo routes
 - Routes developed to minimize flight plan handling and communications
 - Operations above FL600
 - Other military operations requiring special handling
-



ABBREVIATED DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is an abbreviated departure clearance?

- A. Departure clearance containing no altitude information
- B. Departure clearance using "Cleared as filed..."
- C. Departure clearance for ALTRVs

 Lesson 5: IFR Clearances and Route Assignment  69

Question: What is an abbreviated departure clearance?



ABBREVIATED DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What does “FRC/OVR” in remarks signify?

- A. Fly Right Course Over the airport
- B. Full Return Capable Overseas Flight
- C. Full Route Clearance to OVR

 Lesson 5: IFR Clearances and Route Assignment  70

Question: What does “FRC/OVR” in remarks signify?



ABBREVIATED DEPARTURE CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

Which flight group is authorized to receive an abbreviated departure clearance?

- A. Operations above FL600
- B. General aviation aircraft
- C. Stereo Routes

 Lesson 5: IFR Clearances and Route Assignment  71

Question: Which flight group is authorized to receive an abbreviated departure clearance?


DEPARTURE RESTRICTIONS

Departure Restrictions

JO 7110.65,
pars. 4-3-4, 4-3-5

Departure Restrictions

- Assign the following to separate departures from other traffic or to restrict or regulate the departure flow:
 - Departure release
 - Release time
 - Hold for release
 - Expect departure clearance time
 - Call for release
 - Clearance void time
 - Ground stop

 Lesson 5 IFR Clearances and Route Assignment 72

Departure Restrictions


- ⦿ Assign the following to separate departures from other traffic or to restrict or regulate the departure flow:
 - Departure release
 - Release time
 - Hold for release
 - Expect departure clearance time
 - Call for release
 - Clearance void time
 - Ground stop
 - ⦿ Departures from an airport without an operating control tower must be issued either a departure release, a hold for release, or a release time
-

Departure Release

JO 7110.65, par.
4-3-4

Departure Release							
N234		1 ↑ 90	HATER	0M8 HATER V427 V18	2167		
C310/G		V41623 (28)		MEI KMEI/0100			
T180		1618/					
02							
206	01	0M8 P1600	90				

“...ADVISE NOVEMBER TWO THREE FOUR
RELEASED FOR DEPARTURE”

 Lesson 5: IFR Clearances and Route Assignment 73

Departure Release

- ⦿ When conditions allow, release the aircraft as soon as possible

To another controller,



(aircraft identification) RELEASED

To a flight service specialist, or Flight Data Communication Specialist (FDSCS),



ADVISE (aircraft identification) RELEASED FOR DEPARTURE

To a pilot at an airport without an operating control tower,



(aircraft identification) RELEASED FOR DEPARTURE

Example: “...ADVISE NOVEMBER TWO THREE FOUR RELEASED FOR DEPARTURE”

DEPARTURE RESTRICTIONS (CONT'D)

Release Time

JO 7110.65 par.
4-3-4

JO 7340.2

Release Time									
N234	RLS 1618	↑ 90	HATER	0M8 HATER V427 V18	2167				
C310/G	V4623 (28)			MEI KMEI/0100					
T180	HFR				D-A				
02	1618/								
206	01	0M8 P1600	90						

"...RELEASED FOR DEPARTURE AT ONE SIX ONE EIGHT..."

Lesson 5: IFR Clearances and Route Assignment 74

Release Time (RLS)

- ⦿ A departure time restriction issued to a pilot by ATC when necessary to separate a departing aircraft from other traffic
 - Release times must be issued to pilots when necessary to specify the earliest time an aircraft may depart
 - The facility issuing a release time to a pilot must issue a time check
- ⦿ Release times using a specified number of minutes do not require a time check



(Aircraft identification) RELEASED FOR DEPARTURE AT (time in hours and/or minutes),

and if required,



IF NOT OFF BY (time), ADVISE (facility) NOT LATER THAN (time) OF INTENTIONS. TIME (time in hours, minutes, and nearest quarter minute)



(Aircraft identification) RELEASED FOR DEPARTURE IN (number of minutes) MINUTES

Example: "NOVEMBER TWO THREE FOUR RELEASED FOR DEPARTURE AT ONE SIX ONE EIGHT"

and if required,



IF NOT OFF IN (number of minutes) MINUTES, ADVISE (facility) OF INTENTIONS WITHIN (number of minutes) MINUTES

DEPARTURE RESTRICTIONS (CONT'D)


Hold For Release

JO 7110.65 par.
4-3-4

Hold For Release

N234		1 ↑ 90	HATER	0M8 HATER V427 V18	2167
C310/G		HFR		MEI KMEI/0100	D-A
T180					
02					
206	01	0M8 P1600	90		

- **Used by ATC to delay an aircraft for traffic, weather, volume, etc.**
 - Hold for release instructions are used to inform a pilot or a controller that an IFR departure clearance is not valid until a release time or additional instructions have been received

 Lesson 5: IFR Clearances and Route Assignment 75

Hold For Release (HFR)

- ⦿ Used by ATC to delay an aircraft for traffic, weather, volume, etc.

- Hold for release instructions are used to inform a pilot or a controller that an IFR departure clearance is not valid until a release time or additional instructions have been received
- When issuing hold for release instructions, include departure delay information



**HOLD FOR RELEASE, EXPECT (*time in hours and/or minutes*)
DEPARTURE DELAY**

- ⦿ When conditions allow, release the aircraft as soon as possible
 - To another controller,



(*aircraft identification*) RELEASED

- To a flight service specialist



ADVISE (*aircraft identification*) RELEASED FOR DEPARTURE

- To a pilot at an airport not served by a control tower,



(*aircraft identification*) RELEASED FOR DEPARTURE

DEPARTURE RESTRICTIONS (CONT'D)


Expect Departure Clearance Time

JO 7110.65,
pars. 4-3-4,
4-3-5

Expect Departure Clearance Time

N5910F	1	CAM	KLEB BAUER CAM Q822	4610
BE40/L			FNT WYNDE9 KORD/0210	EDCT
T455				1706
37				
319 01	KLEB P1632	340		

- Runway release time assigned to an aircraft in a traffic management program

 Lesson 5: IFR Clearances and Route Assignment 78

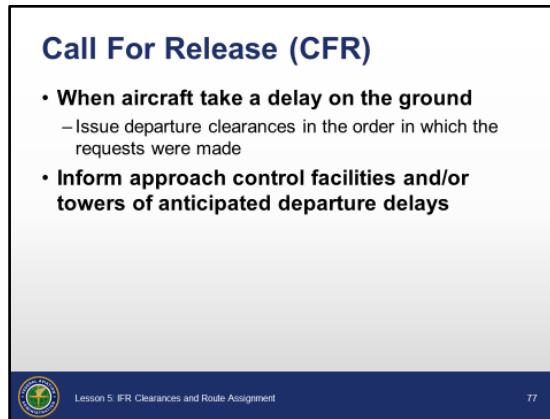
Expect Departure Clearance Time (EDCT)

- ⦿ Runway release time assigned to an aircraft in a traffic management program
 - Shown on the flight progress strip as an EDCT
 - Flights are expected to depart no earlier than 5 minutes before, and no later than 5 minutes after the EDCT
 - Do not release aircraft on their assigned EDCT if a Ground Stop (GS) applicable to that aircraft is in effect

DEPARTURE RESTRICTIONS (CONT'D)

Call For Release (CFR)

JO 7110.65, par.
4-3-4



Call For Release (CFR)

- ⦿ A restriction where ARTCCs require a terminal facility to initiate verbal coordination to secure approval for release of a departure into the en route environment
 - When aircraft elect to take delay on the ground before departure
 - Issue departure clearances to them in the order in which the requests for clearance were originally made, if practicable
 - Inform approach control facilities and/or towers of anticipated departure delays
 - When CFR is in effect, release aircraft so they are airborne within a window that extends from 2 minutes prior and ends 1 minute after the assigned time, unless otherwise coordinated
-

DEPARTURE RESTRICTIONS (CONT'D)


Clearance Void Time

JO 7110.65, par.
4-3-4

Clearance Void Time

N726PG	1	↑100	GCK	KLVS GCK IRK J26	4610
BE40/L	V-2235 (45)			JOT J146 GIJ J554	
T455				JHW ALB J49 BGR	D-A
16	2235/			KBGR/0442	
429 01	KLVS P2240		370	CLV80	ZKC

"...CLEARANCE VOID IF NOT OFF BY TWO TWO THREE FIVE. IF NOT OFF BY TWO TWO THREE FIVE, ADVISE BRAVO CENTER NOT LATER THAN TWO TWO FOUR FIVE OF INTENTIONS."

 Lesson 5: IFR Clearances and Route Assignment 78

Clearance Void Time

- ⦿ Used by ATC to advise an aircraft that the departure clearance is automatically canceled if takeoff is not made prior to a specified time
 - The pilot must obtain a new clearance or cancel his/her IFR flight plan if not off by the specified time
 - Airports not served by control towers, provide alternative instructions requiring the pilots to advise ATC of their intentions no later than 30 minutes after the clearance void time if not airborne
 - Facility delivering a clearance void time to a pilot must issue a time check
 - A void time issued using a specified number of minutes does not require a time check



CLEARANCE VOID IF NOT OFF BY (clearance void time),

and if required,



IF NOT OFF BY (clearance void time), ADVISE (facility) NOT LATER THAN (time) OF INTENTIONS. TIME (time in hours, minutes, and the nearest quarter minute)

or



CLEARANCE VOID IF NOT OFF IN (number of minutes) MINUTES
and if required,



IF NOT OFF IN (number of minutes) MINUTES, ADVISE (facility) OF INTENTIONS WITHIN (number of minutes) MINUTES

Example: "CLEARANCE VOID IF NOT OFF BY TWO TWO THREE FIVE. IF NOT OFF BY TWO TWO THREE FIVE, ADVISE BRAVO CENTER NOT LATER THAN TWO TWO FOUR FIVE OF INTENTIONS"


DEPARTURE RESTRICTIONS (CONT'D)

Ground Stop

JO 7110.65,
pars.4-3-4, 4-3-
5, PCG

Ground Stop

- **Requires aircraft meeting specific criteria to remain on the ground**
 - The criteria may be:
 - Airport specific
 - Airspace specific
 - Equipment specific
- **Do not release aircraft on an EDCT if a ground stop applicable to that aircraft is in effect**

 Lesson 5: IFR Clearances and Route Assignment 79

Ground Stop

- ⦿ Requires aircraft meeting specific criteria to remain on the ground
 - The criteria may be specific to:
 - Airport
 - Airspace
 - Equipment
 - Ground stops normally occur with little or no warning
 - Do not release aircraft on their assigned EDCT if a ground stop applicable to that aircraft is in effect
 - Unless approval has been received from the originator of the ground stop

Examples:

- Departures to San Francisco
 - Departures entering YORKTOWN sector
 - Category I and II aircraft landing Charlotte
-

DEPARTURE RESTRICTIONS (CONT'D)

Coordination with Receiving Facility

JO 7110.65, par. 4-3-8

Coordination with Receiving Facility

N13	1	GLH	KGWO_IGR_KUBS/0050	4271
M020/A			SQS V278	
T145				
02				
014	01	KGWO P1905		

- **Coordinate if less than 15 minutes flying time from the transferring facility's boundary**
 - If automatic transfer of data between automated systems will occur flying time may be reduced to 5 minutes

Lesson 5: IFR Clearances and Route Assignment

Coordination with Receiving Facility

- ⦿ Coordinate if the departure point is less than 15 minutes flying time from the transferring facility's boundary
 - If automatic transfer of data between automated systems will occur flying time may be reduced to 5 minutes
 - A mileage from the boundary may replace the time parameter when mutually agreeable to both facilities
- ⦿ The actual departure time or a subsequent strip posting time must be forwarded to the receiving facility unless assumed departure times are agreed upon and that time is within 3 minutes of the actual departure time



DEPARTURE RESTRICTIONS (CONT'D)

Information Forwarded to Receiving Facility

JO 7110.65, par. 2-2-6, 4-3-8

Information Forwarded to Receiving Facility

- Forward the following information to the receiving facility:
 - Aircraft identification
 - Number of aircraft
 - Assigned altitude and ETA over last reporting point/fix
 - Altitude entering receiving facility
 - True airspeed
 - Point of departure
 - Route of flight
 - Destination airport and clearance limit
 - ETA at destination airport
 - Altitude requested if differs from requested altitude
 - Beacon code
 - Longitudinal separation, if needed
 - Additional information

 Lesson 5: IFR Clearances and Route Assignment  81

Information Forwarded to Receiving Facility

- ⦿ Where appropriate, use computer equipment in lieu of manual coordination procedures
 - Do not use the remarks section of flight progress strips in lieu of voice coordination to pass control information
- ⦿ Forward the following information to the receiving facility
 - Aircraft identification
 - Number of aircraft if more than one
 - Heavy aircraft indicator “H/” if appropriate
 - Type of aircraft
 - Aircraft equipment suffix
 - Assigned altitude and Estimated Time of Arrival (ETA) over last reporting point/fix in transferring facility’s area
 - Or assumed departure time when the departure point is the last point/fix in the transferring facility’s area
 - Altitude at which aircraft will enter the receiving facility’s area if other than the assigned altitude
 - True airspeed
 - Point of departure
 - Route of flight remaining

Continued on next page

DEPARTURE RESTRICTIONS (CONT'D)

Information Forwarded to Receiving Facility (Cont'd)

JO 7110.65,
pars. 2-2-6, 4-3-
8

-
- Destination airport and clearance limit
 - If other than destination airport
 - ETA at destination airport
 - Not required for military or scheduled air carrier aircraft
 - Altitude requested by the aircraft if assigned altitude differs from requested altitude
 - Within a facility only

NOTE: When an aircraft has crossed one facility's area and assignment at a different altitude is still desired, the pilot will reinitiate the request with the next facility.

- When flight plan data must be forwarded manually and an aircraft has been assigned a beacon code by the computer, include the code as part of the flight plan
 - Longitudinal separation being used in nonradar operations between aircraft at the same altitude
 - If it results in these aircraft having less than 10 minutes separation at the facilities' boundary
 - Unless specified in a Letter of Agreement (LOA)
 - Any additional non-routine operational information pertinent to flight safety
-

DEPARTURE RESTRICTIONS (CONT'D)

VFR Release of IFR Departures

JO 7110.65, par. 4-3-9

VFR Release of IFR Departures

- Aircraft on an IFR flight plan requests a VFR departure through a terminal facility, FSS, or air/ground communications station:
 - You may authorize an IFR flight planned aircraft to depart VFR
 - Inform the pilot of the proper frequency
 - State where or when to contact the facility
- If unable to issue clearance, inform pilot and:
 - Suggest delay be taken on the ground
 - If pilot insists on departing VFR inform the facility/sector holding the flight plan

 Lesson 5: IFR Clearances and Route Assignment 82

VFR Release of IFR Departures

- ⦿ When an aircraft which has filed an IFR flight plan requests a VFR departure through a terminal facility, FSS, or air/ground communications station:
 - You may authorize an IFR flight planned aircraft to depart VFR
 - Inform the pilot of the proper frequency
 - State where or when to contact the facility responsible for issuing the clearance



V-F-R DEPARTURE AUTHORIZED. CONTACT (*facility*) ON (*frequency*) AT (*location or time, if required*) FOR CLEARANCE

- ⦿ If unable to issue clearance, inform pilot and:
 - Suggest delay be taken on the ground
 - If pilot insists on departing VFR and obtaining IFR clearance in the air, inform the facility/sector holding the flight plan:
 - Pilot's intentions
 - VFR departure time (if possible)
-



DEPARTURE RESTRICTIONS (CONT'D)

Knowledge Check

Knowledge Check

Who must issue a time check for clearance void times?

- A. FBO at the departure field
- B. Facility issuing the clearance to the pilot
- C. Flight dispatcher

 Lesson 5 IFR Clearances and Route Assignment  83

Question: Who must issue a time check for clearance void times?



DEPARTURE RESTRICTIONS (CONT'D)

Knowledge Check

Knowledge Check

What is the departure window associated with a Call For Release (CFR)?

- A. 2 minutes prior and ends 1 minute after the assigned time
- B. 5 minutes prior and ends 5 minutes after the assigned time
- C. 10 minutes prior and ends 5 minutes after the assigned time

 Lesson 5: IFR Clearances and Route Assignment  84

Question: What is the departure window associated with a Call For Release (CFR)?



DEPARTURE RESTRICTIONS (CONT'D)

Knowledge Check

Knowledge Check

What should be included with a HFR time?

- A. High flow route clearance
- B. A clearance void time
- C. Departure delay information

 Lesson 5: IFR Clearances and Route Assignment  85

Question: What should be included with a HFR time?



DEPARTURE RESTRICTIONS (CONT'D)

Knowledge Check

Knowledge Check

Actual departure times must be forwarded to an external facility if assumed departure time differs by what amount?

- A. 3 minutes
- B. 5 minutes
- C. 10 minutes

 Lesson 5: IFR Clearances and Route Assignment  88

Question: Actual departure times must be forwarded to an external facility if assumed departure time differs by what amount?



DEPARTURE RESTRICTIONS (CONT'D)

Knowledge Check

Knowledge Check

A pilot with an IFR flight plan requests a VFR departure but due to volume, you know a clearance cannot be issued in the near future. What should you do?

- A. Issue a provisional SVFR clearance to aid the pilot
- B. Clear the pilot to depart "AT YOUR OWN RISK"
- C. Suggest a delay be taken on the ground

 Lesson 5: IFR Clearances and Route Assignment  87

Question: A pilot with an IFR flight plan requests a VFR departure but due to volume, you know a clearance cannot be issued in the near future. What should you do?



DEPARTURE RESTRICTIONS (CONT'D)

Knowledge Check

Knowledge Check

What must be issued to departures from airports without an operating control tower?

- A. Wind and altimeter check
- B. Departure release
- C. Runway heading alignment confirmation

 Lesson 5: IFR Clearances and Route Assignment  88


Question: What must be issued to departures from airports without an operating control tower?

SELECTED IFR CLEARANCES

Through Clearance



JO 7110.65, par.
4-2-6

Through Clearance



The diagram shows an aircraft icon on the left. A blue box with a double-headed arrow contains the text "Cleared for approach and through to final destination". Above this box is a small orange diamond labeled "OBST". To the right of the box is a blue arrow pointing right with the text "To Destination".

- **You may clear aircraft through intermediate stops**
 - Issue departure restrictions as necessary

 Lesson 5: IFR Clearances and Route Assignment  89

Through Clearance

- ⦿ You may clear aircraft through intermediate stops



CLEARED THROUGH (airport) TO (fix)

- ⦿ A through clearance is not an approach clearance
 - ⦿ Advantages
 - One clearance takes the place of two
 - ⦿ Disadvantages
 - Routes and airports involved are tied up until aircraft's position is obtained
 - ⦿ Issue departure restrictions as necessary, such as clearance void time
-


SELECTED IFR CLEARANCES (CONT'D)

Airfile Aircraft Guidelines

JO 7110.65, par.
4-2-9

Airfile Aircraft Guidelines

- **Process airfile aircraft as follows:**
 - Ensure aircraft is within your area of jurisdiction, unless coordinated
 - Obtain information necessary to provide IFR service
 - Issue clearance to:
 - Destination airport
 - Short range clearance limit
 - Instruct pilot to contact FSS if flight plan cannot be processed

 Lesson 5: IFR Clearances and Route Assignment 90

Airfile Aircraft Guidelines

⦿ Process airfile aircraft as follows:

- Ensure aircraft is within your area of jurisdiction, unless coordinated
- Obtain information necessary to provide IFR service
- Issue clearance to:
 - Destination airport, short range clearance limit, or instruct pilot to contact FSS if flight plan cannot be processed

NOTE: These procedures do NOT imply that processing airfiles has priority over other ATC duties.


SELECTED IFR CLEARANCES (CONT'D)

IFR to VFR

JO 7110.65, par.
4-2-8

IFR to VFR

- Clear an aircraft planning IFR operations for the initial part of the flight and VFR for the latter part to the fix at which the IFR part ends

 Lesson 5: IFR Clearances and Route Assignment 91

IFR to VFR

- ⦿ Clear an aircraft planning IFR operations for the initial part of the flight and VFR for the latter part to the fix at which the IFR part ends
-


SELECTED IFR CLEARANCES (CONT'D)

VFR to IFR

JO 7110.65, par.
4-2-8

VFR to IFR

- **Treat an aircraft planning VFR operations for the initial part of the flight and IFR for the latter part as a VFR departure**
 - Issue a clearance to this aircraft when it requests IFR clearance approaching the fix where it proposes to start IFR operations

 Lesson 5: IFR Clearances and Route Assignment 92

VFR to IFR

- ⦿ Treat an aircraft planning VFR operations for the initial part of the flight and IFR for the latter part as a VFR departure

- Issue a clearance to this aircraft when it requests IFR clearance approaching the fix where it proposes to start IFR operations



CLEARED TO (destination) AIRPORT AS FILED

- Assign a beacon code to Mode C equipped aircraft to allow for Minimum Safe Altitude Warning (MSAW) alarms

- ⦿ When a VFR aircraft operating below the minimum altitude for IFR operations requests an IFR clearance and the pilot informs you, or you are aware, that they are unable to climb in VFR conditions to the minimum IFR altitude:

- Before issuing a clearance, ask if the pilot is able to maintain terrain and obstruction clearance during a climb to the minimum IFR altitude



(Aircraft call sign), ARE YOU ABLE TO MAINTAIN YOUR OWN TERRAIN AND OBSTRUCTION CLEARANCE UNTIL REACHING (appropriate MVA/MIA/MEA/OROCA)



OFF-ROUTE OBSTRUCTION CLEARANCE ALTITUDE (OROCA)

- An off-route altitude which provides obstruction clearance with a 1,000' buffer in non-mountainous terrain areas and a 2,000' buffer in designated mountainous areas within the United States. This altitude may not provide signal coverage from ground-based navigational aids, air traffic control radar, or communications coverage.

Continued on next page

SELECTED IFR CLEARANCES (CONT'D)

VFR to IFR (Cont'd)

JO 7110.65,
pars. 4-2-8, 10-
2-7

- If the pilot is able to maintain their own terrain and obstruction clearance, issue the appropriate IFR clearance
- If the pilot states that they are unable to maintain terrain and obstruction clearance, instruct the pilot to maintain VFR and to state intentions
- If VFR aircraft requests assistance when it encounters or is about to encounter IFR weather conditions, determine the facility best able to provide service
- If a frequency change is necessary:
 - Advise the pilot of the reason for the change
 - Request the aircraft contact the appropriate control facility
 - Inform that facility of the situation
- If the aircraft is unable to communicate with the control facility:
 - Relay information and clearances

NOTE: Pilots of pop-up aircraft are responsible for terrain and obstruction clearance until reaching MIA or MEA; however, assigning a clearance/procedure transfers that responsibility to the controller. Do NOT assign or imply specific course guidance that could be in effect below the MIA or MEA.


SELECTED IFR CLEARANCES (CONT'D)

North American Route Program (NRP)

JO 7110.65,
pars. 2-2-15, 2-1-4, 2-5-1, 4-2-5

North American Route Program (NRP)

- **If the aircraft is moved due to weather, traffic, or other tactical reasons**
 - “NRP” must be retained in remarks
- **If the route is altered due to a pilot request**
 - “NRP” must be removed from remarks
- **“NRP” must not be entered in the remarks unless:**
 - Prior coordination is accomplished

 Lesson 5: IFR Clearances and Route Assignment 99

North American Route Program



NORTH AMERICAN ROUTE PROGRAM (NRP) - A set of rules and procedures which are designed to increase the flexibility of user flight planning within published guidelines

- ⦿ If the aircraft is moved due to weather, traffic, or other tactical reasons
 - “NRP” must be retained in the remarks section of the flight plan
- ⦿ If the route of flight is altered due to a pilot request
 - “NRP” must be removed from the remarks section of the flight plan
- ⦿ “NRP” must not be entered in the remarks section of a flight plan, unless:
 - Prior coordination is accomplished with the Air Traffic Control System Command Center (ATCSCC) or as prescribed by international NRP flight operations procedure
- ⦿ The en route facility within which an international flight entering the contiguous U.S. requests to participate in the NRP must enter “NRP” in the remarks section of the flight plan
- ⦿ Aircraft operating under the North American Route Program (NRP) are not subject to route limiting restrictions (e.g., published preferred IFR routes, letter of agreement requirements, standard operating procedures)
 - Avoid route and/or altitude changes for aircraft participating in the North American Route Program (NRP) and that are displaying “NRP” in the remarks section of their flight plan


SELECTED IFR CLEARANCES (CONT'D)

Route Structure Transitions

JO 7110.65, par.
4-4-2

Route Structure Transitions

- **Transitions within or between route structures, may be accomplished via multiple methods. Clear aircraft by one or more of the following:**
 - Vector aircraft:
 - Assign a SID/STAR
 - Clear departing or arriving aircraft:
 - To climb or descend via radials, courses, or azimuths of the ATS route assigned
 - Direct to or between the NAVAIDs forming the ATS route assigned

 Lesson 5: IFR Clearances and Route Assignment 94

Route Structure Transitions

- ⦿ Transitions within or between route structures, may be accomplished via multiple methods. Clear aircraft by one or more of the following:
 - Vector aircraft:
 - To/from radials, courses, or azimuths of the Air Traffic Service (ATS) route assigned
 - Assign a SID/STAR
 - Clear departing or arriving aircraft:
 - To climb or descend via radials, courses, or azimuths of the ATS route assigned
 - Direct to or between the NAVAIDs forming the ATS route assigned


SELECTED IFR CLEARANCES (CONT'D)

Route Structure Transitions (Cont'd)

JO 7110.65,
pars. 4-4-1,
4-4-2

Route Structure Transitions (Cont'd)

- Clear aircraft to climb or descend via:
 - ATS route, specified radials, courses, or azimuths of NAVAIDs
- Clear RNAV aircraft between designated or established ATS routes via random RNAV routes to a NAVAID, waypoint, airport or fix on the new route
- Provide radar monitoring to RNAV equipped aircraft transitioning via random RNAV routes
- Offset from published or established ATS route at a specified distance and direction for random (impromptu) RNAV Routes

 Lesson 5: IFR Clearances and Route Assignment 95

- Clear aircraft to climb or descend via:
 - ATS routes, specified radials, courses, or azimuths of NAVAIDs
- Clear RNAV aircraft between designated or established ATS routes via random RNAV routes to a NAVAID, waypoint, airport or fix on the new route
- Provide radar monitoring to RNAV equipped aircraft transitioning via random RNAV routes
 - EXCEPTION: GNSS equipped aircraft /G, /L, /S, and /V not on a random impromptu route
- Offset from published or established ATS route at a specified distance and direction for random (impromptu) RNAV Routes



OFFSET(distance) RIGHT/LEFT OF (route)

Example: “OFFSET EIGHT MILES RIGHT OF VICTOR SIX”

SELECTED IFR CLEARANCES (CONT'D)

DME Arcs of NAVAIDS


JO 7110.65,
pars. 2-5-2,
4-4-1, PCG

FAA-H-8083-
16B, p 4-43

FAA-H-8083-
25B, pp G-10,
G-17

DME Arcs of NAVAIDS

- **Flight track a constant distance from the station or waypoint**
- **Predicated on DME collocated with a facility**
 - Cannot be based on an ILS or LOC DME source
 - DME arcs on approach plates will have a lead radial
- **Assign a DME arc by stating**
 - Distance from the NAVAID followed by "MILE ARC"
 - Direction from the NAVAID
 - Eight principal points of the compass
 - "OF," and the name of the NAVAID

Lesson 5: IFR Clearances and Route Assignment96

DME Arcs of NAVAIDS

- ⊙ A flight track that is a constant distance from the station or waypoint
- ⊙ DME arcs are predicated on DME collocated with a facility providing omnidirectional course information, such as a VOR, VOR/DME, or VORTAC
 - A DME arc cannot be based on an ILS or LOC DME source because omnidirectional course information is not provided
 - DME arcs on approach plates will have a lead radial to alert the pilot approaching a point where the turn from the DME arc to the inbound course is started

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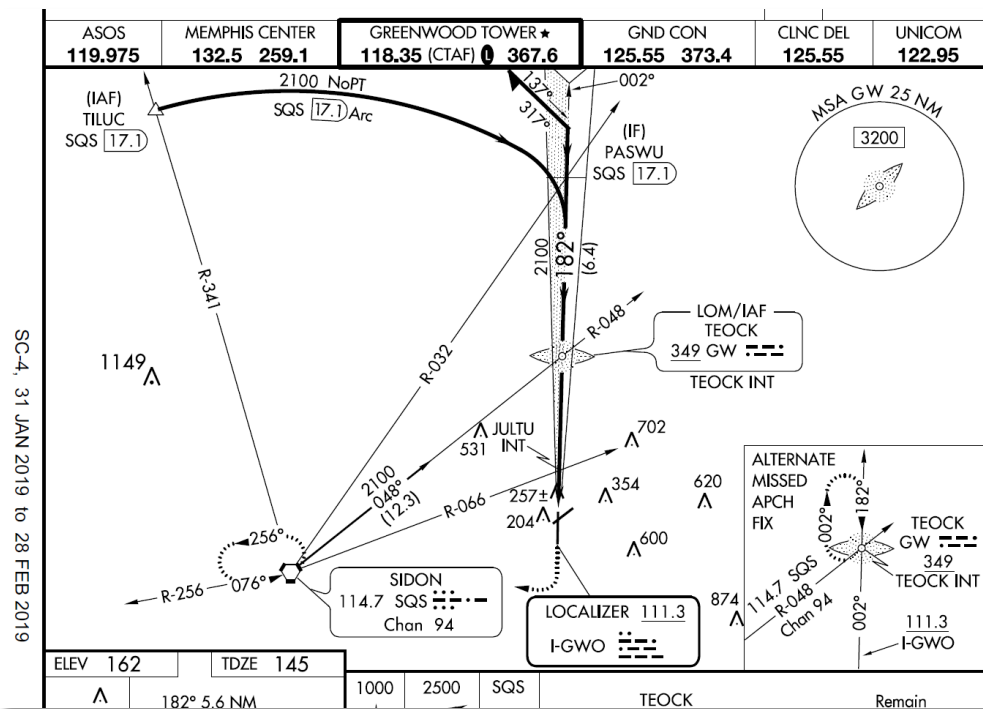
SELECTED IFR CLEARANCES (CONT'D)

DME Arcs of NAVAIDS (Cont'd)

JO 7110.65,
pars. 2-5-2,
4-4-1, PCG

FAA-H-8083-
16B, 4-43

FAA-H-8083-
25B, G-10, G-17



⦿ Assign a DME arc by stating

- Distance in miles from the NAVAID followed by the words MILE ARC
- Direction from the NAVAID
 - Eight principal points of the compass
- The word OF, and the name of the NAVAID

Example: “ONE SEVEN POINT ONE MILE ARC NORTH OF SIDON VORTAC.”


SELECTED IFR CLEARANCES (CONT'D)

Radius of a NAVAID

JO 7110.65,
pars. 2-5-2, 4-4-
1, PCG

Radius of a NAVAID

- **Courses, azimuths, bearings, quadrants, or radials within a radius of a NAVAID**
 - State direction from NAVAID in terms of the quadrant; e.g., NE, SE, SW, NW
 - Quadrant - A quarter part of a circle, centered on a NAVAID, oriented clockwise from magnetic north as follows:
 - NE quadrant 000-089
 - SE quadrant 090-179
 - SW quadrant 180-269
 - NW quadrant 270-359

 Lesson 5: IFR Clearances and Route Assignment 97

Radius of a NAVAID

☉ Courses, azimuths, bearings, quadrants, or radials within a radius of a NAVAID

- State direction from NAVAID in terms of the quadrant; e.g., NE, SE, SW, NW
 - Quadrant - A quarter part of a circle, centered on a NAVAID, oriented clockwise from magnetic north as follows:
 - NE quadrant 000-089
 - SE quadrant 090-179
 - SW quadrant 180-269
 - NW quadrant 270-359
- Follow with the distance in miles from the NAVAID



CLEARED TO FLY (*general direction from NAVAID*) OF (*NAVAID name and type*) BETWEEN (*specified*) COURSES TO/BEARINGS FROM/RADIALS (*NAVAID name when a NDB*) WITHIN (*number of miles*) MILE RADIUS

or



CLEARED TO FLY (*specified*) QUADRANT OF (*NAVAID name and type*) WITHIN (*number of miles*) MILE RADIUS.

Examples: “CLEARED TO FLY EAST OF ALLENTOWN VORTAC BETWEEN THE ZERO FOUR FIVE AND THE ONE THREE FIVE RADIALS WITHIN FOUR ZERO MILE RADIUS”

“CLEARED TO FLY NORTHEAST QUADRANT OF PHILLIPSBURG VORTAC WITHIN FOUR ZERO MILE RADIUS”



SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the definition of “quadrant” from the Pilot/Controller Glossary?

- A. Four-part departure with 90° turns
- B. Quarter part of a circle centered on a NAVAID
- C. Military Operations Area shaped like a square

 Lesson 5: IFR Clearances and Route Assignment  98

Question: What is the definition of “quadrant” from the Pilot/Controller Glossary?

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

A flight with "NRP" in remarks changes the route of flight at the pilot's request. What is the proper procedure?

- A. Deny all route requests from "NRP" aircraft
- B. Allow the New Route Possible request and leave "NRP" in the remarks
- C. Remove "NRP" from remarks



Lesson 5: IFR Clearances and Route Assignment



Question: A flight with "NRP" in remarks changes the route of flight at the pilot's request. What is the proper procedure?

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the phraseology used to issue a DME arc south of Pendleton VORTAC at 15 miles?

- A. "ONE FIVE MILE ARC SOUTH OF PENDLETON VORTAC"
- B. "DME ARC SOUTH OF PENDLETON VORTAC AT ONE FIVE MILES"
- C. "DME ARC OF PENDLETON VORTAC AT ONE FIVE MILES SOUTH"



Lesson 5: IFR Clearances and Route Assignment



Question: What is the phraseology used to issue a DME arc south of Pendleton VORTAC at 15 miles?

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the phraseology to clear an aircraft to fly a parallel course to an air traffic service route?

- A. "OFFSET EIGHT MILES RIGHT OF VICTOR SIX"
- B. "PARALLEL VICTOR SIX EIGHT MILES RIGHT"
- C. "FLY ALONG SIDE VICTOR SIX BY EIGHT MILES"



Lesson 5: IFR Clearances and Route Assignment



Question: What is the phraseology to clear an aircraft to fly a parallel course to an air traffic service route?

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What magnetic radials make up the southeast quadrant of a NAVAID?

- A. 100-180°
- B. 120-200°
- C. 090-179°



Lesson 5: IFR Clearances and Route Assignment

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Question: What magnetic radials make up the southeast quadrant of a NAVAID?

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is a key factor when issuing a clearance to airfile aircraft?

- A. Displaying the current altimeter
- B. Ensure the aircraft is within your area of jurisdiction
- C. Advise the pilot to remain clear of clouds



Lesson 5: IFR Clearances and Route Assignment

103

Question: What is a key factor when issuing a clearance to airfile aircraft?

SELECTED IFR CLEARANCES (CONT'D)



Substitute Routes

JO 7110.65,
pars. 4-4-1, 4-4-4, PCG

FAA Chart
User's Guide

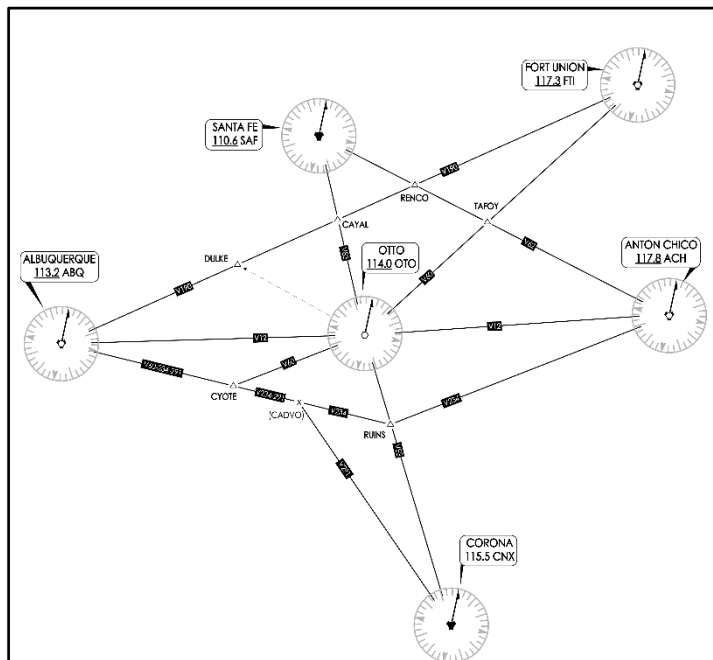
Substitute Routes

- When any part of an airway or route is unusable because of NAVAID status, clear aircraft that are not RNAV capable via one of the following alternative routes:
 - Route depicted on current U.S. Government charts/publications
 - Use the word "substitute" immediately preceding the alternative route in issuing the clearance
 - Route defined by specifying NAVAID radials, courses, or azimuths
 - Route defined as direct to or between NAVAIDs
 - Vectors

Lesson 5: IFR Clearances and Route Assignment104

Substitute Routes

- ⦿ When any part of an airway or route is unusable because of NAVAID status, clear aircraft that are not RNAV capable via one of the following alternative routes:
 - Route depicted on current U.S. Government charts/publications
 - Use the word SUBSTITUTE immediately preceding the alternative route in the clearance



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SELECTED IFR CLEARANCES (CONT'D)

Substitute Routes (Cont'd)

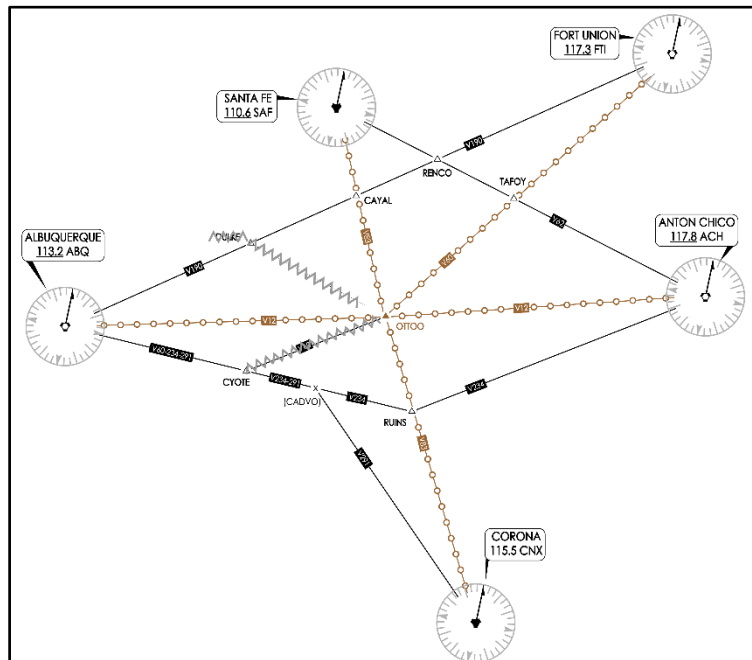
JO 7110.65,
pars. 4-4-1, 4-4-
4, PCG

FAA Chart
User's Guide



SUBSTITUTE (ATS route) FROM (fix) to (fix)

- Route defined by specifying NAVAID radials, courses, or azimuths
- Route defined as direct to or between NAVAIDs
- Vectors
- Defined by this symbol:



NOTE: Inform area navigation aircraft that will proceed to the NAVAID location of the NAVAID outage.


SELECTED IFR CLEARANCES (CONT'D)

Class G Airspace

JO 7110.65, par.
4-4-5

Class G Airspace

- **Include routes through Class G airspace only when requested by the pilot**
 - Flight plans filed for random RNAV routes through Class G airspace are considered a request by the pilot
 - Flight plans containing military training route segments in/through Class G airspace are considered a request by the pilot

 Lesson 5: IFR Clearances and Route Assignment 105

Class G Airspace

- ⦿ Include routes through Class G airspace only when requested by the pilot
 - Flight plans filed for random RNAV routes through Class G airspace are considered a request by the pilot
 - Flight plans containing military training route segments in/through Class G airspace are considered a request by the pilot
-

SELECTED IFR CLEARANCES (CONT'D)



Clearance Amendments

JO 7110.65, par.
4-2-5

Clearance Amendments									
<ul style="list-style-type: none">• Amend route of flight in a previously issued clearance by one of the following:<ul style="list-style-type: none">– State which portion of the route is being amended, and then state the amendment– State the amendment to the route, and then state that the rest of the route is unchanged									
N21A	FTR	08 ⁰⁹	↓	90	DTA	KTUL / ECO V41 DTA	4702		
C182/A						V174 ALF KAIR			
T165	G155	0800				FRANK VTI			
66									
341	01	ECO							

Lesson 5: IFR Clearances and Route Assignment

Clearance Amendments

- ⦿ Amend route of flight in a previously issued clearance by one of the following:
 - State which portion of the route is being amended, and then state the amendment
-  CHANGE (portion of route) TO READ (new portion of route)
- State the amendment to the route, and then state that the rest of the route is unchanged
-  (Amendment to route), REST OF ROUTE UNCHANGED

Continued on next page

SELECTED IFR CLEARANCES (CONT'D)

Clearance Amendments (Cont'd)

JO 7110.65, par. 4-2-5

N21A	FTR	08 ⁰⁹	↓	90	DTA	KTUL. / . ECO V41 DTA V174 ALF KAIR FRANK V71	4702
C182/A T165 G155 66 341 01	0800						
		ECO					

- Issue the entire route by stating the amendment

Example: Cessna 21A has been cleared to the Airville Airport via V41 Delta VOR V174 Alpha VOR, direct Airville Airport, maintain 9,000. After takeoff, the aircraft is rerouted via V41 Frank intersection, V71 Delta VOR, V174 Alpha VOR. The controller issues one of the following as an amended clearance:



CHANGE...TO READ...

Example: "CESSNA TWO ONE ALPHA CHANGE VICTOR FORTY-ONE DELTA TO READ VICTOR FORTY-ONE FRANK, VICTOR SEVENTY-ONE DELTA"



...REST OF ROUTE UNCHANGED

Example: "CESSNA TWO ONE ALPHA CLEARED VIA VICTOR FORTY-ONE FRANK, VICTOR SEVENTY-ONE DELTA, REST OF ROUTE UNCHANGED"

- Restate entire route and altitude

Example: "CESSNA TWO ONE ALPHA CLEARED VIA VICTOR FORTY-ONE FRANK, VICTOR SEVENTY-ONE DELTA, VICTOR ONE SEVENTY-FOUR ALPHA V-O-R, DIRECT AIRVILLE AIRPORT, MAINTAIN NINER THOUSAND"


SELECTED IFR CLEARANCES (CONT'D)

Arrival Information

JO 7110.65,
pars. 2-1-16,
2-1-17, 4-8-8

Arrival Information

- **If flight is within a surface area for which the tower has responsibility:**
 - Coordinate with the nonapproach control tower
 - Unless otherwise specified in a letter of agreement
- **Transfer radio communications**
 - Before an aircraft enters the receiving controller's area
- **If an IFR aircraft intends to land at an airport not served by a tower or FSS**
 - Approve a change to the advisory service frequency when you no longer require direct communications

 Lesson 5: IFR Clearances and Route Assignment 107

Arrival Information

- ⦿ If flight is within a surface area for which the tower has responsibility:
 - Coordinate with the appropriate nonapproach control tower on an individual aircraft basis before issuing a clearance
 - Unless otherwise specified in a letter of agreement
- ⦿ Transfer radio communications
 - Before an aircraft enters the receiving controller's area of jurisdiction
 - Unless otherwise coordinated, or
 - Specified by a letter of agreement or a facility directive
- ⦿ If an IFR aircraft intends to land at an airport not served by a tower or FSS
 - Approve a change to the advisory service frequency when you no longer require direct communications



CHANGE TO ADVISORY FREQUENCY APPROVED

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the phraseology used when you no longer require direct communication to aircraft landing at an airport without a tower or FSS?

- A. "CHANGE TO ADVISORY FREQUENCY APPROVED"
- B. "CONTACT UNICOM FREQUENCY"
- C. "CALL YOUR ARRIVAL ON THE CTAF FREQUENCY"



Lesson 5: IFR Clearances and Route Assignment



Question: What is the phraseology used when you no longer require direct communication to aircraft landing at an airport without a tower or FSS?

SELECTED IFR CLEARANCES (CONT'D)

Knowledge Check

Knowledge Check

What is the phraseology used at the end of a route change clearance to indicate the remainder is the same as the current route of flight?

- A. "...REMAINDER OF ROUTE IS THE SAME"
- B. "...REST OF ROUTE UNCHANGED"
- C. "...NO CHANGE TO REST OF ROUTE"



Lesson 5: IFR Clearances and Route Assignment



Question: What is the phraseology used at the end of a route change clearance to indicate the remainder is the same as the current route of flight?


CONCLUSION

Lesson Summary

Lesson Summary

This lesson covered:

- Clearance requirements
- Procedure for departing IFR aircraft
- Procedures for IFR clearances

 Lesson 5 IFR Clearances and Route Assignment 110

Summary

- ⦿ Clearance requirements
 - Air traffic clearance and structure
 - Aircraft identification
 - Clearance limit
 - Standard instrument departure
 - Route of flight
 - Altitude data
 - Mach number
 - Holding instructions
 - Special instructions
 - Frequency and beacon code information
 - Clearances to USAF aircraft
 - Prefix clearances

Continued on next page

CONCLUSION

Lesson Summary (Cont'd)

-
- ⊙ Procedure for departing IFR aircraft
 - Departure terminology
 - Departure instructions:
 - Class D
 - Class E surface areas
 - Other airports
 - Instrument departure procedures
 - Departure procedures
 - Visual climb over airport
 - Standard instrument departure
 - Altitude assignments
 - Air Force One departure clearances
 - Abbreviated departure clearance
 - Modifications to route
 - Departure restrictions
 - Clearance void times
 - Hold for release
 - Release times
 - Expect departure clearance time
 - Call for release
 - Ground stop
 - Coordination with receiving facility
 - Information forwarded to receiving facility
 - VFR release of IFR departures

Continued on next page

CONCLUSION

Lesson Summary (Cont'd)

- ⊙ Procedures for IFR clearances
 - Through clearance
 - Airfile aircraft guidelines
 - Composite flight plan
 - IFR to VFR
 - VFR to IFR
 - North American route program
 - Route structure transitions
 - DME arcs of NAVAIDs
 - Radius of a NAVAID
 - Substitute routes
 - Class G airspace
 - Clearance amendments
 - Arrival information
-