



**Federal Aviation
Administration**

Initial En Route Qualification Training

Lesson 13 Altimeter Setting and Altitude Assignment

Course 50148001

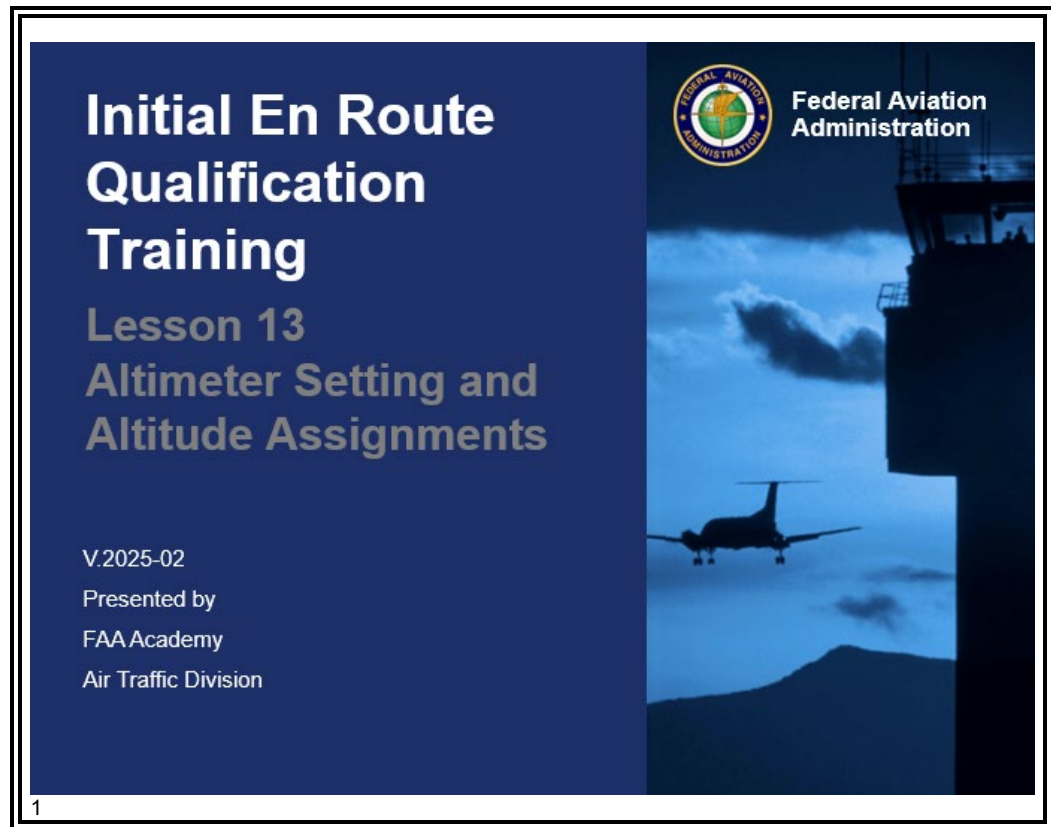
LESSON PLAN DATA SHEET

COURSE NAME:	INITIAL EN ROUTE QUALIFICATION TRAINING
COURSE NUMBER:	50148001
LESSON TITLE:	ALTIMETER SETTING AND ALTITUDE ASSIGNMENT
DURATION:	3+00 HOURS
DATE REVISED:	2025-02
VERSION:	V.2025-02
REFERENCE(S):	FAA ORDER JO 7110.65, AIR TRAFFIC CONTROL; FAR, PART 91.159, VFR CRUISING ALTITUDE OR FLIGHT LEVEL; FAA-H-8038-15A, INSTRUMENT FLYING HANDBOOK
HANDOUT(S):	ALTIMETER SETTING AND ALTITUDE ASSIGNMENTS
EXERCISE(S)/ ACTIVITY(S):	EXERCISE 1: ALTITUDE ASSIGNMENTS EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING
END-OF-LESSON TEST:	YES
PERFORMANCE TEST:	NONE
MATERIALS:	NONE
OTHER PERTINENT INFORMATION:	NONE

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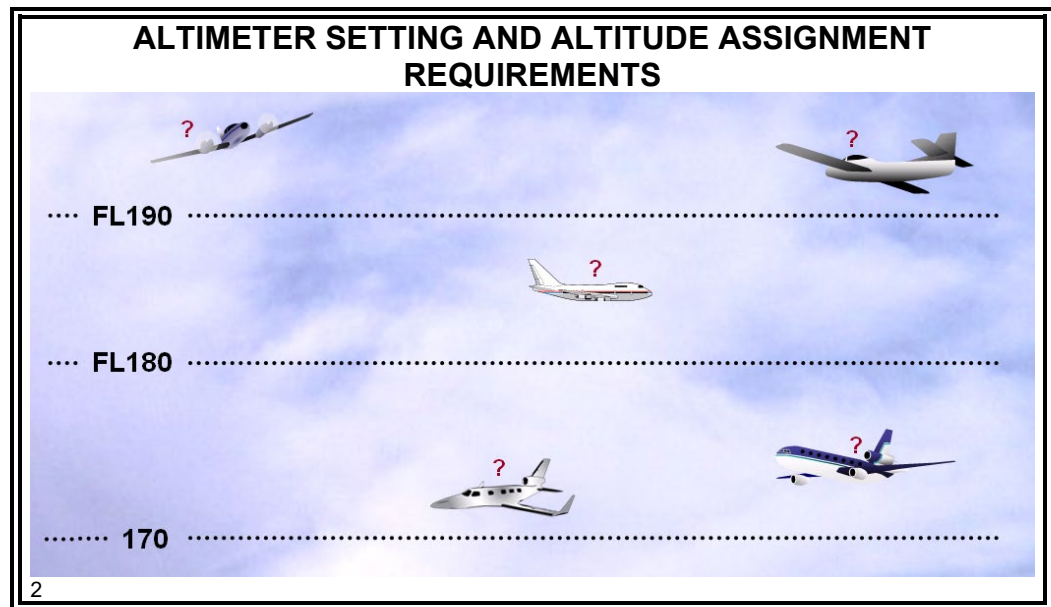
INTRODUCTION



In the Departure Procedures lesson, you learned how to transition an IFR aircraft from the ground into the en route environment. Once an aircraft has departed the airport, controllers **must** continue to issue altitude assignments. Altitude assignments **must** ensure that the aircraft maintains a safe distance, **not only** from other aircraft, but also from terrain, obstructions, or other airspace. You will also learn procedures to issue current and accurate altimeter settings.

Continued on next page

INTRODUCTION *(Continued)*



How do air traffic controllers determine proper altitudes to assign aircraft in order to provide separation from other aircraft? What factors affect these altitudes?

Purpose

This lesson will help you understand proper altitude assignment, restrictions, verification, and phraseology. In addition, you will learn the procedures for issuing current altimeter settings.

Lesson Objectives

LESSON OBJECTIVES

- On an End-of-Lesson Test, and in accordance with FAA Order JO 7110.65, you will identify procedures and phraseology for:
 - Issuing altimeter settings
 - Assigning altitudes
 - Confirming altitudes

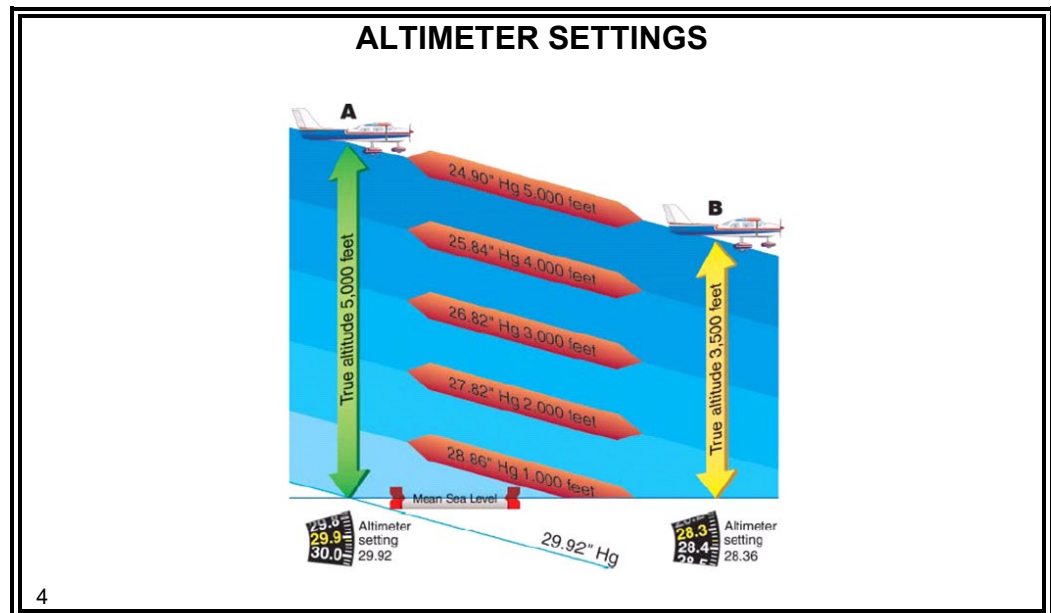
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ALTIMETER SETTINGS

Altimeter Setting

Definition

JO 7110.65,
Pilot/Controller
Glossary,
FAA-H-8038-15A



An **altimeter setting** is the barometric pressure reading used to adjust a pressure altimeter for variations in existing atmospheric pressure or to the standard altimeter setting (29.92).

Current Settings

JO 7110.65,
par. 2-7-1,
FAA-H-8038-15A

- ⦿ Current altimeter settings must be obtained from weather reporting stations.
- ⦿ Maintaining a current altimeter setting is critical because atmospheric pressure is **not** constant.
 - In one location the pressure might be higher than the pressure just a short distance away

NOTE: In areas where altimeters are fluctuating, the controller should be aware that altitudes for aircraft will also fluctuate; therefore, the controller may want to issue the altimeter more frequently than required by the JO 7110.65.

ALTIMETER SETTINGS *(Continued)*

Altimeter Setting

Issuance

JO 7110.65,
pars. 2-7-2, 4-5-4

- ⦿ Issue the current altimeter setting to:
 - All en route aircraft operating below FL180 at least one time while operating within your area of jurisdiction
 - Aircraft cleared to descend below the lowest usable flight level
 - Issue an altimeter setting obtained from the weather reporting station nearest the point the aircraft will descend through the lowest usable flight level
 - Arriving aircraft approximately 50 miles from the destination if that airport is **not** served by an approach control facility
 - Issue destination altimeter setting
- ⦿ Use the following table to determine the lowest usable flight level to clear aircraft at or above 18,000 feet MSL.

ALTIMETER SETTING	LOWEST USABLE FL
29.92 or higher	180
29.91 to 28.92	190
28.91 to 27.92	200

- ⦿ Identify the source of the report.
- ⦿ State if the report is **more than** one hour old.



Phraseology

“THE (facility name) ALTIMETER (setting) MORE THAN ONE HOUR OLD.”



Phraseology Examples

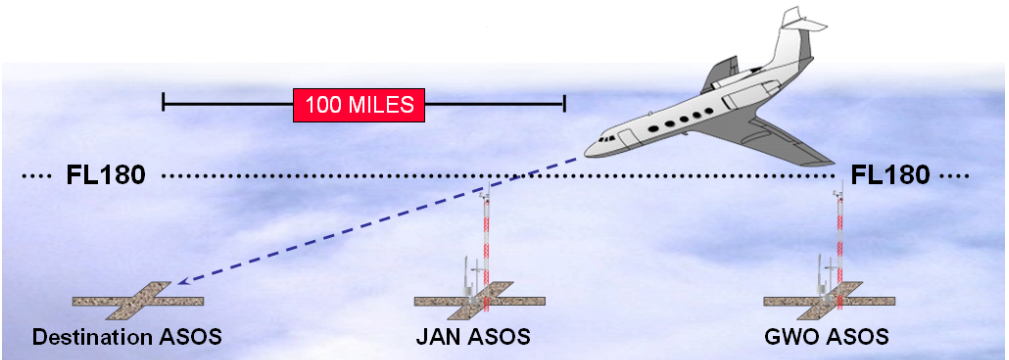
“The Jackson altimeter, two niner niner four.”

“The Vicksburg altimeter two niner eight niner more than one hour old.”

ALTIMETER SETTINGS (Continued)

Knowledge Check

KNOWLEDGE CHECK



The diagram shows a jet airplane flying at a constant altitude of FL180, indicated by a horizontal dotted line. Below the airplane, three ground stations are shown: 'Destination ASOS' on the left, 'JAN ASOS' in the center, and 'GWO ASOS' on the right. A dashed blue line connects the 'Destination ASOS' station to the airplane. A horizontal line with vertical end caps above it spans the distance between 'Destination ASOS' and 'JAN ASOS', with a red box containing the text '100 MILES' in the center. The background is a light blue sky with white clouds.

◆ **QUESTION:** Which altimeter setting should be issued?

- A. Destination
- B. JAN
- C. GWO

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KNOWLEDGE CHECK

◆ **QUESTION:** The current time is 1351Z. What is the phraseology for issuing the 1300Z Jackson altimeter setting of 29.92?

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ALTIMETER SETTINGS *(Continued)*

Knowledge
Check
(Cont'd)

KNOWLEDGE CHECK

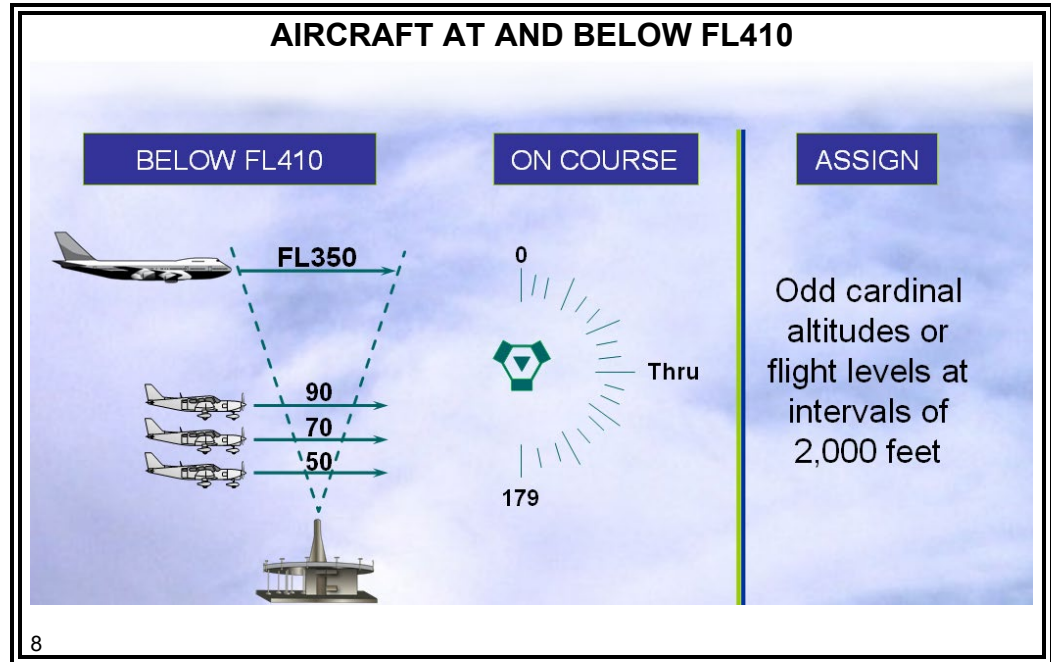
❖ **QUESTION:** The current time is 1730Z. What is the phraseology for issuing the 1600Z Vicksburg altimeter setting of 29.92?

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ALTITUDE ASSIGNMENT REQUIREMENTS

Altitude for Direction of Flight

JO 7110.65,
par. 4-5-2,
table 4-5-1



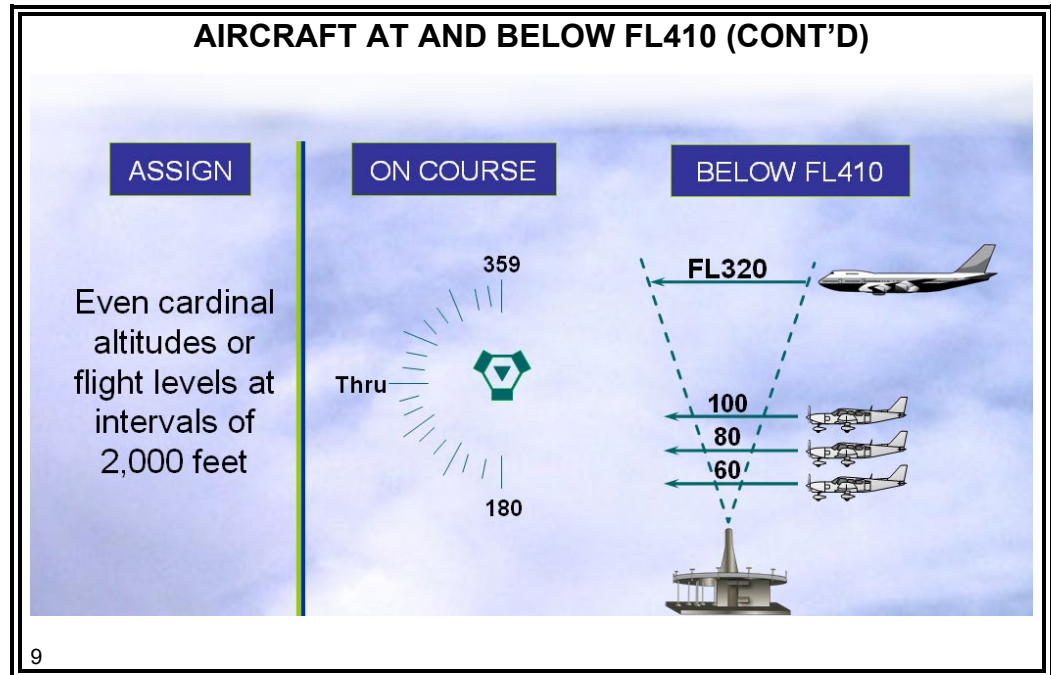
- ⦿ For aircraft operating at and below FL410:
 - On course degrees magnetic 0 through 179, assign:
 - Odd cardinal altitudes or flight levels at intervals of 2,000 feet

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ALTITUDE ASSIGNMENT REQUIREMENTS *(Continued)*

Altitude for Direction of Flight (Cont'd)

JO 7110.65,
par. 4-5-2,
table 4-5-1



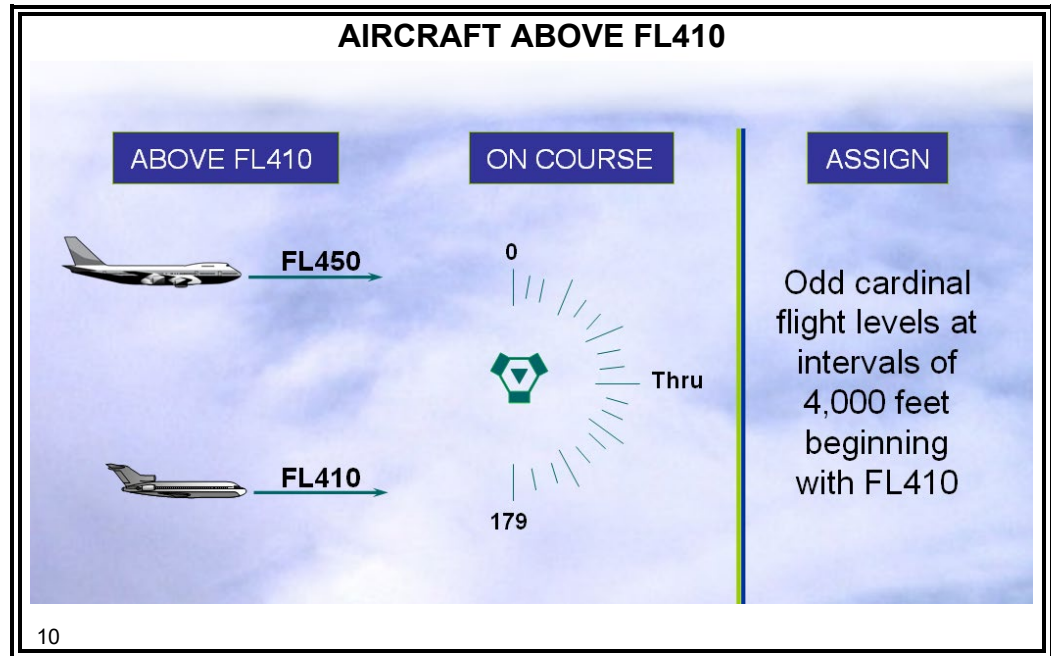
- On course degrees magnetic 180 through 359, assign:
 - Even cardinal altitudes or flight levels at intervals of 2,000 feet

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ALTITUDE ASSIGNMENT REQUIREMENTS *(Continued)*

Altitude for Direction of Flight (Cont'd)

JO 7110.65,
par. 4-5-2,
table 4-5-1



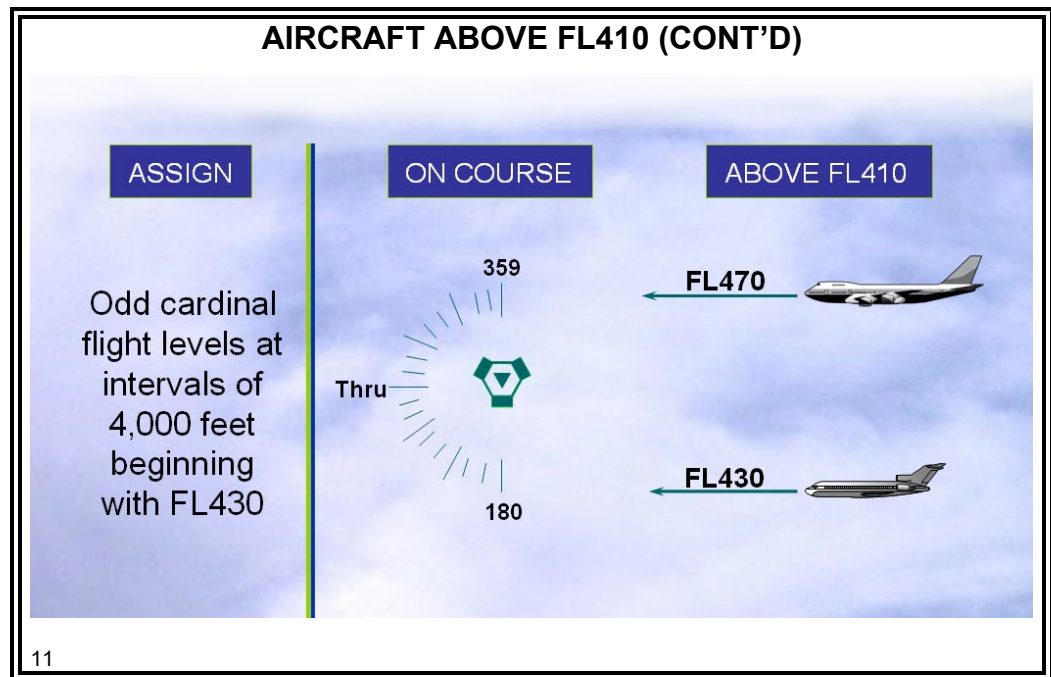
- ⊙ For aircraft operating above FL410:
 - Course degrees magnetic 0 through 179, assign:
 - Odd cardinal flight levels at intervals of 4,000 feet beginning with FL410

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ALTITUDE ASSIGNMENT REQUIREMENTS *(Continued)*

Altitude for Direction of Flight (Cont'd)

JO 7110.65,
par. 4-5-2,
table 4-5-1



- On course degrees magnetic 180 through 359, assign:
 - Odd cardinal flight levels at intervals of 4,000 feet beginning with FL430

ALTITUDE ASSIGNMENT REQUIREMENTS *(Continued)*

Knowledge Check

KNOWLEDGE CHECK

- ❓ **QUESTION:** An IFR aircraft flying a magnetic course of 330 degrees has requested a climb to 8,000. Is that an appropriate altitude for direction of flight? Explain.

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Exceptions

JO 7110.65,
pars. 4-5-3, 2-1-2

- ⊙ With **prior approval** from the affected sector or facility concerned, you may assign an altitude regardless of direction of flight as follows:
 - Traffic conditions prevent the assignment of an appropriate altitude
 - Specific procedures are covered in facility directives and/or inter-facility LOAs
 - The aircraft is experiencing meteorological conditions (e.g., icing, turbulence, weather activity)

NOTE: Because meteorological conditions can deteriorate into an emergency situation, they warrant priority consideration. (Reference FAA Order JO 7110.65 par. 2-1-2)

- A military aircraft is operating on a random route
- The pilot informs you the available appropriate altitude exceeds the aircraft's operational limitations

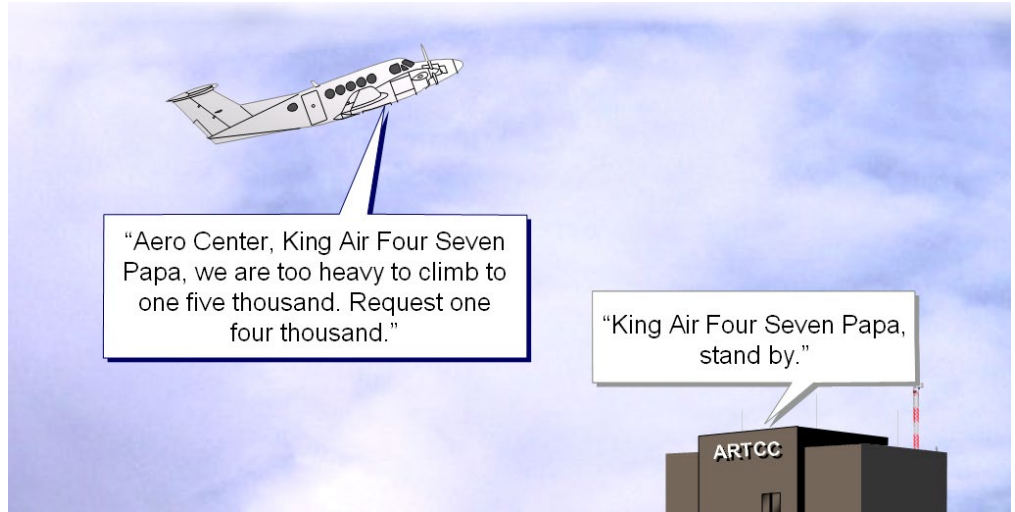
ALTITUDE ASSIGNMENT REQUIREMENTS *(Continued)*

Exceptions

Example

JO 7110.65,
par. 4-5-3

EXCEPTION TO THE FLIGHT DIRECTION RULE



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REQUEST APPROVAL FROM NEXT SECTOR OR ADJACENT FACILITY



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ALTITUDE ASSIGNMENT REQUIREMENTS *(Continued)*

Stripmarking
JO 7110.65,
par. 2-3-10,
fig. 2-3-7

INAPPROPRIATE ALTITUDE FOR DIRECTION OF FLIGHT
(IAFD OF)

N47P	MLU	08	150 <u>140</u>	ZAMMA	KPSN./MLU V18 MHZ V245	4676
BE20/A	0044	01			IGB KUBS/0220	
T230						
G225						
66						
246	01	MHZ				

Underline the altitude in **RED**.

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EXERCISE 1: ALTITUDE ASSIGNMENTS

Exercise 1

ALTITUDE ASSIGNMENTS EXERCISE



Purpose: to identify the appropriate altitude assignments for aircraft

Directions: review the given flight progress strips and answer the questions

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Directions

Items 1 through 7 are short answer. Write your answers in the spaces provided. You may refer to your Aero Center Airspace Map and the Altitude Assignment Table in the appendix of this document, if needed.

Questions

QUESTION 1: Has United Twenty been assigned an appropriate altitude for direction of flight?

UAL20	MEI 1810	19	100	GLH	KMEI V18 MHZ V74 KGLH	4465
B738/I T410 G425		18				
66						
477 02		MHZ				

Continued on next page

EXERCISE 1: ALTITUDE ASSIGNMENTS *(Continued)*

Questions (Cont'd)

❖ **QUESTION 2:** Would the requested altitude for November One Two Three Foxtrot be appropriate?

N123F				MHZ	KGWO SQS V9 MHZ KJAN/0027	3241
PA27/A						
T160						
66						
322	01		KGWO P1200	70		

❖ **QUESTION 3:** Has November Five Zero Zero Yankee been assigned an appropriate altitude for direction of flight?

N500Y	IGB 1000	48	80	KGWO 1055	KUBS IGB V278 SQS KGWO	1025
M20P/A		10				
T160	G165					
66						
120	03	SQS				

❖ **QUESTION 4:** Has Air Force One Six Two Three Four been assigned an appropriate altitude for direction of flight?

A16234	TXK 1221	33	280	IGB	KAMA TXK J52 IGB KCBM	0612
T38/P		12				
T480	G500					
66						
711	03	SQS				

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EXERCISE 1: ALTITUDE ASSIGNMENTS *(Continued)*

Questions (Cont'd)

❖ **QUESTION 5:** What appropriate altitudes between 110 and FL180 can be assigned to Turk One One?

TURK11			↑	HEZ	KJAN MHZ V245 AEX KEFD	4327
F16/P T510						
66						
228	01	KJAN P1705		???		ZCH

❖ **QUESTION 6:** Has American Forty-Four been assigned an appropriate altitude for direction of flight?

AAL44	DORTS 1622	30	170	ZAMMA	KDAL MLU V417 MHZ V245	1037
MD88/L T430 G410		16			IGB KUBS	
66						
201	02	MHZ				

❖ **QUESTION 7:** What altitudes below 10,000 can be assigned to November One Two One Romeo Bravo?

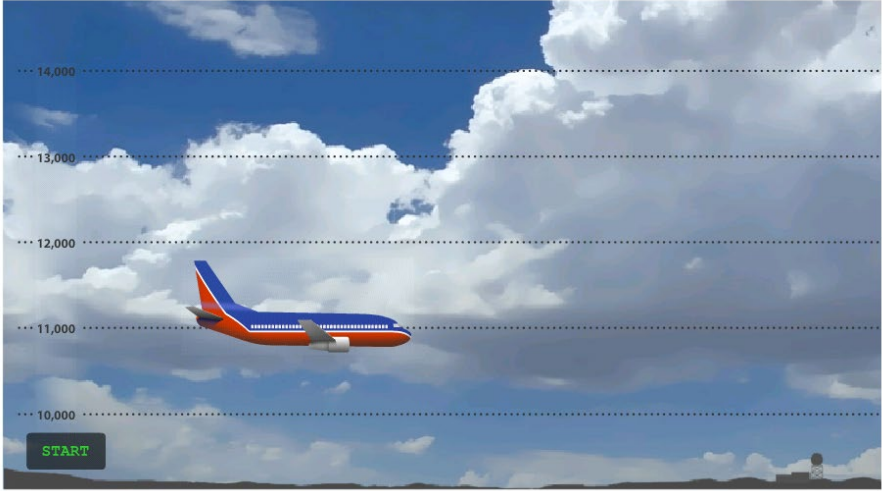
N121RB			↑	HATER	KJAN V427 MLU V18 EIC	0331
BE65/B T165					KSHV/0101	
66						
514	01	KJAN P0600		???		

ALTITUDE ASSIGNMENT PHRASEOLOGY

Instructions to Climb or Descend

JO 7110.65,
par. 4-5-7

INSTRUCTIONS TO CLIMB



ATC: Southwest Twenty-Three, climb and maintain one three thousand.
SWA23: Southwest Twenty-Three, climb and maintain one three thousand.

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- ☉ Issue instructions to climb or descend, including restrictions if required, as follows:
 - Specify time restriction reference the UTC clock and issue a time check
 - If you are in direct, two-way, VHF/UHF voice communication with the pilot and the aircraft is in radar contact, you may specify an elapsed time interval restriction, in full minute increments only, without any reference to the UTC clock.



Phraseology

“CLIMB/DESCEND AND MAINTAIN (altitude). if required,

AFTER PASSING (fix, waypoint), or AT (time) (time in hours, minutes, and nearest quarter minute).”

“CLIMB/DESCEND TO REACH (altitude) AT (time [issue time check] or fix, waypoint).”

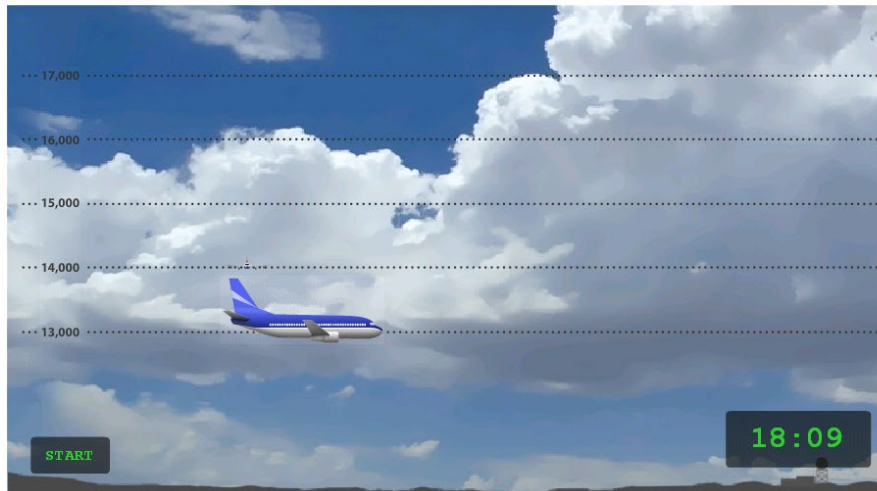
“CLIMB/DESCEND TO REACH (altitude) within two minutes”.

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Altitude to Maintain or Cruise Instructions

JO 7110.65,
par. 4-5-7

ALTITUDE TO MAINTAIN



ATC: Delta Ten maintain one three thousand until one eight one two, climb and maintain one five thousand, time one eight one zero.
DAL10: Delta Ten maintain one three thousand until one eight one two, climb and maintain one five thousand.

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☉ Issue altitude to maintain or cruise instructions as follows:



Phraseology

“MAINTAIN/CRUISE (altitude).”

“MAINTAIN (altitude) UNTIL (time [issue time check], fix, waypoint).”

“CROSS (fix, point, waypoint) AT or ABOVE/BELOW (altitude), CRUISE (altitude).”

“INTERCEPT (route) AT OR ABOVE/BELOW (altitude), CRUISE (altitude).”

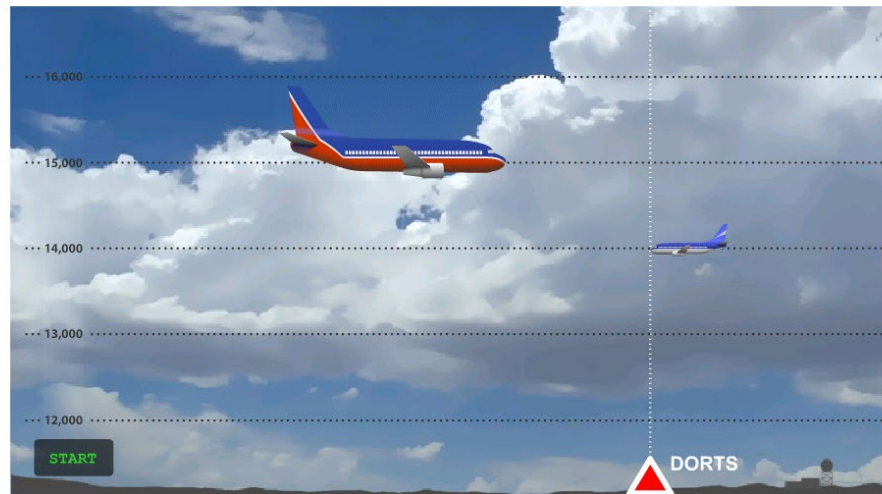
ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Instructions to Climb or Descend

JO 7110.65,
par. 4-5-7

INSTRUCTIONS TO DESCEND

Example 1



ATC: American Fourteen Twenty-Three, maintain one five thousand until DORTS, descend and maintain one three thousand.

AAL1423: American Fourteen Twenty-Three, maintain one five thousand until DORTS, descend and maintain one three thousand.

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Continued on next page

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

**Instructions
to Climb or
Descend
(Cont'd)**
JO 7110.65,
par. 4-5-7

INSTRUCTIONS TO DESCEND

Example 2



ATC: November Two Five Papa, descend to reach six thousand at or before zero eight one four, time zero eight one one.

N25P: November Two Five Papa, descend to reach six thousand at or before zero eight one four.

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ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

**Assignment
of Specified
Altitude Over
Fix or
Waypoint**
JO 7110.65,
par. 4-5-7

SPECIFIC ALTITUDE OVER FIX



ATC: November Two Five Papa, cross Sidon VORTAC at and maintain one zero thousand.
N25P: November Two Five Papa, cross Sidon VORTAC at and maintain one zero thousand.

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☉ Assign a specified altitude over a specified fix or waypoint as follows:



Phraseology

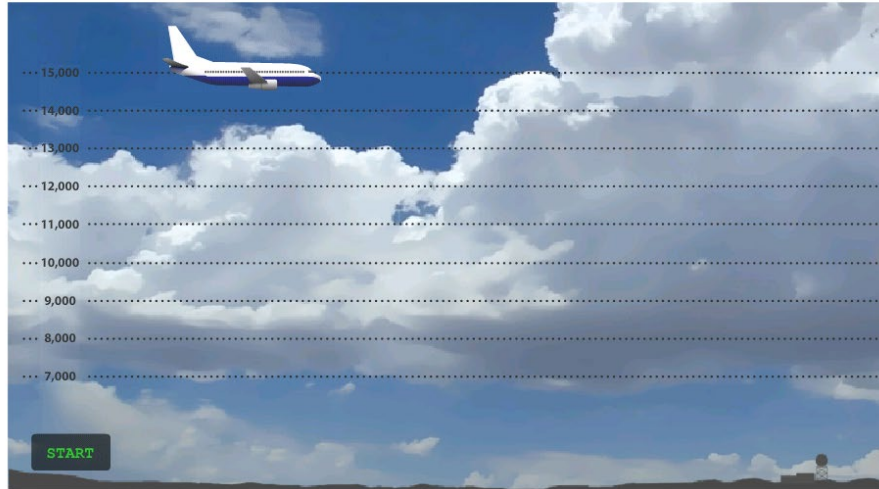
“CROSS (fix, waypoint) AT (altitude)”

“CROSS (fix, waypoint) AT OR ABOVE/BELOW (altitude)”

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Pilot's Discretion
JO 7110.65,
par. 4-5-7

PILOT'S DISCRETION DESCENT



ATC: United Two Twelve cross Magnolia VORTAC at and maintain 7000.
UAL212: United Two Twelve cross Magnolia VORTAC at and maintain 7000.

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Phraseology

☉ Assign a clearance to climb/descend at pilot's discretion as follows:

"CLIMB/DESCEND AT PILOT'S DISCRETION"

NOTE: Crossing restrictions, approach clearances, and cruise clearances allow for descent at pilot's discretion.

Continued on next page

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Pilot's Discretion (Cont'd)

JO 7110.65,
par. 4-5-7



Phraseology

- ⦿ Portion of climb/descent may be authorized at pilot's discretion.
 - Specify altitude to which aircraft **must** climb/descent, followed by altitude to maintain at pilot's discretion

"CLIMB/DESCEND NOW TO (altitude), THEN CLIMB/DESCEND AT PILOT'S DISCRETION, MAINTAIN (altitude)."

NOTE: Pilot's discretion, when used in conjunction with altitude assignments, means that ATC has offered the pilot the option of starting climb or descent whenever he/she wishes and conducting the climb or descent at any rate he/she wishes. He/she may temporarily level off at any intermediate altitude. However, once he/she has vacated an altitude, he/she may **not** return to that altitude. When you issue a pilot's discretion clearance, you **must** protect more altitudes for a longer period of time.

Canceling Pilot's Discretion

JO 7110.65,
par. 4-2-5

- ⦿ When canceling pilot's discretion portion of a climb/descent clearance:
 - Assign a new altitude and inform the pilot that the new altitude is an amended altitude
-

Route Or Altitude Amendments

JO 7110.65,
par. 4-2-5

- ⦿ When a route or altitude in a previously issued clearance is amended, restate all applicable restrictions.
-

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Assigning More Than One Altitude

JO 7110.65,
par. 4-5-7

ASSIGNING MORE THAN ONE ALTITUDE



ATC: Yukon One Five, maintain block one five thousand through one seven thousand.
Yukon15: Yukon One Five, maintain block one five thousand through one seven thousand.

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☉ Assign **more than** one altitude as follows:



Phraseology

“MAINTAIN BLOCK (altitude) THROUGH (altitude)”

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Instructions When Pilot Cannot Accept Clearance

JO 7110.65,
par. 4-5-7

⊙ When a pilot is unable to accept a clearance:

- Issue revised instruction to ensure positive control and approved separation

NOTE:

1. 14 CFR Section 91.123 states that a pilot is **not** allowed to deviate from an ATC clearance “that has been obtained...unless an amended clearance is obtained” (except when an emergency exists).
 2. A pilot is therefore expected to advise the controller if a clearance **cannot** be accepted when the clearance is issued. “We will try” and other such acknowledgements do **not** constitute pilot acceptance of an ATC clearance.
 3. Controllers are expected to issue ATC clearances which conform with normal aircraft operational capabilities and do **not** require “last minute” amendments to ensure standard separation.
 4. “Expedite” is **not** to be used in lieu of appropriate restrictions to ensure separation.
-

ALTITUDE ASSIGNMENT PHRASEOLOGY *(Continued)*

Anticipated Altitude Change

JO 7110.65,
par. 4-5-8



Phraseology

☉ Inform aircraft when to:

- Expect climb/descent clearance, or
- Request altitude change from another facility

“EXPECT HIGHER/LOWER IN (number of miles or minutes)
MILES/MINUTES,

or

AT (fix).”

“REQUEST ALTITUDE/FLIGHT LEVEL CHANGE FROM (name of facility).

if required,

AT (time, fix, or altitude).”

Knowledge Check

KNOWLEDGE CHECK

❓ **QUESTION:** N46P is westbound on V278 at six thousand requesting one zero thousand. In order to protect traffic southbound on V9 at seven thousand, you determine that a 6-mile crossing restriction northeast of Sidon is necessary. What is the proper phraseology to issue this clearance?

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EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING

Exercise 2

ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING EXERCISE



Purpose: to practice issuing altitude clearances and using altitude assignment phraseology

Directions: review the given flight progress strips, mark the strips with the appropriate altitude clearance, then write the correct phraseology

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Directions

For items 1 through 4, write the altitude assignment phraseology indicated by the flight progress strip shown. For items 5 through 8, mark the strips accordingly based on the altitude clearances provided.

NOTE: For the purpose of this exercise, **no** coordination is shown on the flight progress strips.

Continued on next page

EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING *(Continued)*

Questions

EXERCISE 2 – QUESTION 1						
N512Y		↑	↑ 90	HLI	KGWO SQS V535 HLI	D-A
BE35/B			X8NE SQS		M41/0051	
T195			↓ 70			
66						
01		KGWO P1700		90		

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EXERCISE 2 – QUESTION 2						
UAL27	GLH	14	170✓↓150	MEI	KPBF./GLH V74 MHZ V18	4010
A319/L	1803	18	170/26 SE		KMEI	
T420 G410			GLH			
66						
126	01	MHZ				

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Continued on next page

EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING *(Continued)*

Questions
(Cont'd)

EXERCISE 2 – QUESTION 3							
SWA28		↑	↑100	MHZ	KGWO SQS V557 MHZ V245	4521	D-A
B733/I			X7SW SQS		KHEZ		
T420			↓60				
66							
523	01	KGWO P1700		100			
35							

EXERCISE 2 – QUESTION 4							
JOKER06	IGB	22	80✓↑100	GLH	KCBM IGB V278 GLH KLRF	4522	
C130/A	1957	20	80/14 NE				
T310 G300							
66							
701	03	SQS					
36							

Continued on next page

EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING *(Continued)*

Questions
(Cont'd)

EXERCISE 2 – QUESTION 5

Mark the strip accordingly based on the clearance provided below.

UAL57	HEZ 1849	03 19	150✓	ZAMMA	KBTR HEZ V245 IGB KGTR	4523
A320/I T460 G470						
66						
227 01		MHZ				

“United Fifty-Seven, climb and maintain one seven thousand.”

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Continued on next page

EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING *(Continued)*

Questions
(Cont'd)

EXERCISE 2 – QUESTION 6

Mark the strip accordingly based on the clearance provided below.

AAL27 CRJ7/L T420 G405 66 506 03	UJM 0202	12 02	170✓	MHZ	KMEM UJM V9 MHZ V11 KMOB	5232
		SQS				

“American Twenty-Seven, maintain one seven thousand until one seven miles southeast Sidon VORTAC, descend and maintain one five thousand.”

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Continued on next page

EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING *(Continued)*

Questions
(Cont'd)

EXERCISE 2 – QUESTION 7

Mark the strip accordingly based on the clearance provided below.

KING11			↑		MHZ	KGWO SQS V11 MHZ V245 AEX KEFD	3445
C130/A T310							D-A
66							
722	01		KGWO P0015		120		

“King One One, ...cross five miles southeast Sidon VORTAC at or below six thousand, climb and maintain one two thousand.”

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NOTE: The departure clearance has been issued with the destination airport as the clearance limit.

Continued on next page

EXERCISE 2: ALTITUDE ASSIGNMENT PHRASEOLOGY AND STRIPMARKING *(Continued)*

Questions
(Cont'd)

EXERCISE 2 – QUESTION 8

Mark the strip accordingly based on the clearance provided below.

UAL33	STUEE 2108	20	170✓	MEI	KSHV EIC V18 MEI KMGM	2023
A319/I T440 G410		21				
66						
514 01		MHZ				

“United Thirty-Three, maintain one seven thousand until eight miles southeast Magnolia VORTAC, descend and maintain one three thousand.”

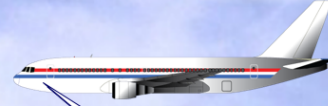
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ALTITUDE ASSIGNMENT CONFIRMATION

Altitude Confirmation Requirements (Nonradar)

JO 7110.65,
par. 4-5-9

CONFIRM ALTITUDE

ON INITIAL CONTACT	ON EACH POSITION REPORT
"Aero Center, American Ten, estimating Sidon VORTAC one seven one five." 	 "Aero Center, United Sixty-Two over Magnolia VORTAC at one seven one eight estimating Sidon VORTAC one seven two six."

Don't they know their altitudes?



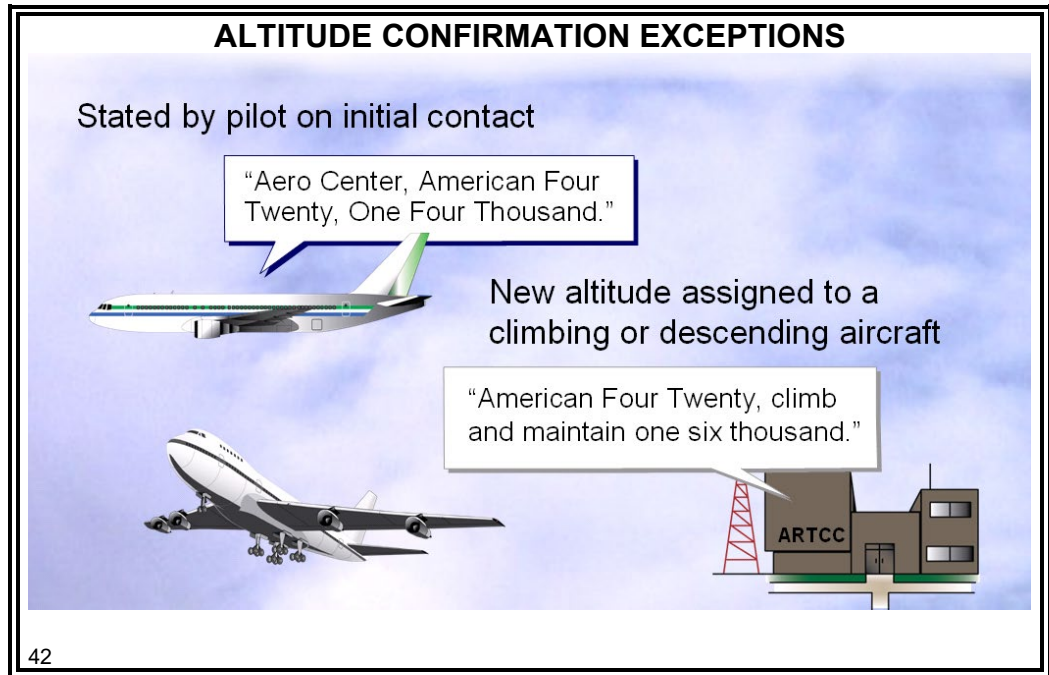
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- ⦿ On initial contact, or when position reports are received, request a pilot to confirm his/her assigned altitude unless:
 - The pilot states the assigned altitude on initial contact
 - You assign a new altitude to a climbing or descending aircraft

Continued on next page

ALTITUDE ASSIGNMENT CONFIRMATION *(Continued)*

**Altitude
Confirmation
Requirements
(Nonradar)
(Cont'd)**
JO 7110.65,
par. 4-5-9



**Altitude
Confirmation
Phraseology
(Nonradar)**
JO 7110.65,
par. 4-5-9



Phraseology

- ⦿ Ask for altitude assignment verification in the following situations:
 - In level flight situations:

"VERIFY AT (altitude/flight level)"

Continued on next page

ALTITUDE ASSIGNMENT CONFIRMATION *(Continued)*

**Altitude
Confirmation
Phraseology
(Nonradar)
(Cont'd)**
JO 7110.65,
par. 4-5-9



**Phraseology
Example**

ALTITUDE CONFIRMATION PHRASEOLOGY



ATC: United Two Ten verify assigned altitude one five thousand.
UAL210: United Two Ten is out of one four thousand three hundred climbing to one five thousand.

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- In climbing or descending situations if aircraft has been assigned an altitude below the lowest usable flight level:



Phraseology

“VERIFY ASSIGNED ALTITUDE (altitude).”

- If aircraft has been assigned a flight level at or above the lowest usable flight level



Phraseology

“VERIFY ASSIGNED FLIGHT LEVEL (flight level).”

IN CONCLUSION

Lesson Review

LESSON REVIEW

The following topics were covered in this lesson:

- Altimeter settings
- Altitude assignment requirements
- Altitude assignment phraseology
- Altitude assignment confirmation



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End-of-Lesson Test

END OF LESSON TEST

**Altimeter
Setting and
Altitude
Assignments**



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APPENDIX: ALTITUDE ASSIGNMENT TABLE

Altitude Assignment Table

JO 7110.65,
par. 4-5-2,
table 4-5-1

AIRCRAFT OPERATING	ON COURSE DEGREES MAGNETIC	ASSIGN	EXAMPLES
Below 3,000 feet above surface (AGL)	Any course	Any altitude	** Not used in Aero Center Airspace
At and below FL410	0 through 179	Odd cardinal altitude or flight levels at intervals of 2,000 feet	3,000 feet, 5,000 feet, FL310, FL330
	180 through 359	Even cardinal altitudes or flight levels at intervals of 2,000 feet	4,000 feet, 6,000 feet, FL320, FL340
Above FL410	0 through 179	Odd cardinal flight levels at intervals of 4,000 feet beginning with FL410	FL450, FL490, FL530
	180 through 359	Odd cardinal flight levels at intervals of 4,000 feet beginning with FL430	FL430, FL470, FL510
One-way routes (except in composite systems)	Any course	Any cardinal altitude or flight level below FL410 or any odd cardinal flight level above FL410	FL270, FL280, FL290, FL300, FL310, FL410, FL430, FL450
Within an ALTRV	Any course	Any altitude or flight level	
In transition to/from or within Oceanic airspace where composite separation is authorized	Any course	Any odd or even cardinal flight level including those above FL290	FL280, FL290, FL300, FL310, FL320, FL330, FL340
In aerial refueling tracks and anchors	Any course	Altitude blocks as requested. Any altitude or flight level	050B080, FL180B220, FL280B310
Aircraft within RVSM or RVSM transition airspace	Any course	Any designated cardinal altitude	FL330, FL340, FL350, FL360