



**Federal Aviation
Administration**

***55054001
EN ROUTE
RADAR ASSOCIATE
CONTROLLER TRAINING PART A:
BASIC CONCEPTS***

**Lesson 1: Recording Clearances and
Control Information**










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	Recording Clearances and Control Information
Duration	3 hours, 30 minutes (includes lesson, practice exercises, and ELT)
Version	1.0 2022.08
Reference(s)	JO 7110.65, Air Traffic Control; JO 7210.3 Facility Operation and Administration; JO 7340.2, Contractions
Prerequisites	NONE
Handout(s)	☉ Practice Exercise 1-4
Exercise / Activity	Refer to handout for: <ul style="list-style-type: none">☉ Practice Exercise 1: Flight Strip Data Locations☉ Practice Exercise 2: Strip Marking Symbols☉ Practice Exercise 3: Recording Clearances and Control Information☉ Practice Exercise 4: Flight Strip Marking
Scenario	NONE
Assessments	☉ YES - Written
Materials and Equipment	<ul style="list-style-type: none">☉ Local Strip Marking material as appropriate☉ Pencil and/or pen in black and red
Other Pertinent Information	<ul style="list-style-type: none">☉ Ensure lesson materials are downloaded to the classroom computer☉ Appendix: Location Identifiers☉ Course 57826, RECORDING CLEARANCES and CONTROL INFORMATION, 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

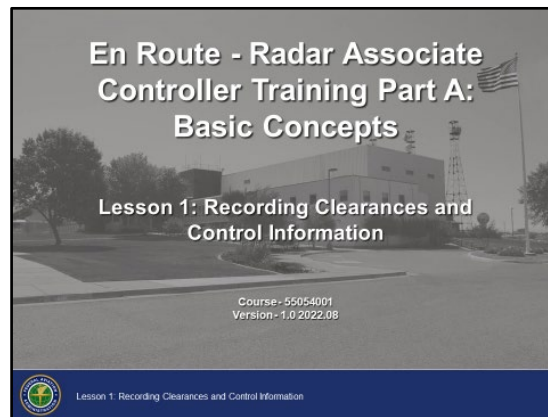
LESSON ICON LEGEND

	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.
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	The Phraseology icon indicates that phraseology is in the content.
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	The Definition icon indicates a published definition.

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LESSON INTRODUCTION

Lesson Overview



Recording Clearances and Control Information

LESSON INTRODUCTION *(CONT'D)*

Lesson Overview (Cont'd)

Recording Clearances and Control Information					
N991L	JAMMZ	17-58-02	110 ✓	CARFF KCDS V14 TUL KTUL/1848	6621
BE90/A	1740		130	1759	
117 03	HBR				

Lesson 1: Recording Clearances and Control Information 1

Overview

Flight progress strips are the official record of control data used to reconstruct flight activities in the event of a systems error, deviation, or accident. One of the requirements to become a radar associate controller is the ability to record clearance and control information on flight progress strips in a clear and concise manner. Forming good strip marking habits will help you become a successful controller.


LESSON INTRODUCTION *(CONT'D)*

Lesson Objectives

Lesson Objectives

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

- Flight progress strip notations
- Flight strip data entries

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Objectives

- ⦿ At the end of this lesson, you will be able to identify:
 - Flight progress strip notations
 - Flight strip data entries

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.


PURPOSE OF STRIP MARKING


Post Current Data

JO 7110.65, par.
2-3-1

Post Current Data

- Clearance information must be current, obsolete data may confuse the current state of the flight
 - Maintain required data only
 - Remove strips when no longer required for control purposes



Lesson 1: Recording Clearances and Control Information3

Post Current Data

- ⦿ Clearance information on flight strips must be current to be useful; obsolete data may confuse the current state of the flight
 - Maintain required data only
 - Remove strips from flight progress boards when no longer required for control purposes
-

PURPOSE OF STRIP MARKING (CONT'D)

Records Clearances

JO 7110.65, par.
2-3-1

Strip Marking Records Clearances

- Strip Marking records data on air traffic and clearances required for control and other air traffic control services
 - Proper strip marking is an abbreviated format for recording data
 - Clearances should be correctly represented in strip marking

13 ³¹	100↓80
SQS	

13 ³¹	170↓50
SQS	X 5 SW SQS±80

Lesson 1: Recording Clearances and Control Information

Strip Marking Records Clearances

- Strip marking is used to record data on air traffic, clearances required for control, and other air traffic control services
 - Proper strip marking is an abbreviated format for recording data
 - Clearances should be correctly represented in strip marking

“...DESCEND
AND MAINTAIN
EIGHT
THOUSAND”

13 ³¹	100↓80
SQS	

“...CROSS FIVE
MILES SOUTHWEST
OF SIDON AT OR
BELOW EIGHT
THOUSAND,
MAINTAIN FIVE
THOUSAND”

13 ³¹	170↓50
SQS	X 5 SW SQS±80

NOTE: This lesson uses machine-generated flight strips, but the strip marking is the same for manual flight strips. The blue text in this lesson is used for emphasis on block numbers and specific strip marking examples.

PURPOSE OF STRIP MARKING (CONT'D)

Standard Hand-Printed Characters

JO 7110.65, FIG 2-3-1

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

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Standard Hand-Printed Characters

- ⦿ If strip marking is to be effective, it must be legible and easily interpreted
- ⦿ Use standard characters in the proper data locations as directed by JO 7110.65
- ⦿ Manually prepared strips shall conform to the same format as machine-generated strips
- ⦿ Altitude information may be written in thousands of feet provided the procedure is authorized by the facility manager, and is defined in a facility directive, i.e. 5,000' as 5 and 2,800' as 2.8

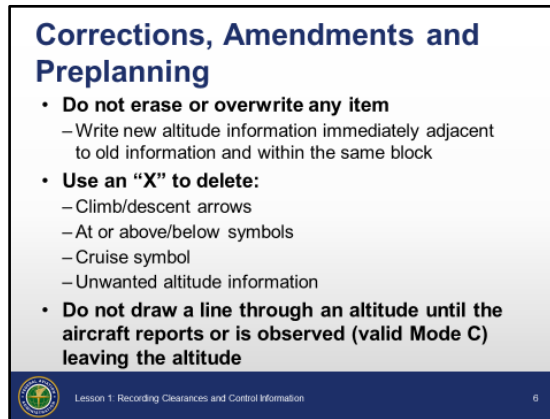
NOTE: A slant line crossing through the number zero and underline of the letter "s" on handwritten portions of flight progress strips are required only when there is reason to believe the lack of these markings could lead to misunderstanding. A slant line crossing through the number zero is required on all weather data.

Examples: Ø, S, Z

PURPOSE OF STRIP MARKING *(CONT'D)*

Corrections, Amendments and Preplanning

JO 7110.65, par.
2-3-1



Corrections and Amendments

- ⦿ Do not erase or overwrite any item
 - Write new altitude information immediately adjacent to old information and within the same block
 - Use an “X” to delete:
 - Climb/descent and maintain arrow
 - At or above/below symbol
 - Cruise symbol
 - Unwanted altitude information
- ⦿ Do not draw a line through an altitude until the aircraft reports or is observed (valid Mode C) leaving the altitude
- ⦿ Preplanning may be written in red
 - Must be distinguished from the current ATC clearance

PURPOSE OF STRIP MARKING (CONT'D)

Corrections, Amendments and Preplanning (Cont'd)

JO 7110.65, par. 2-3-1, FIG 2-3-7

Correct				Incorrect			
AAL2610	HUMBO	19 39	290 ↓ 210 150	AAL2610	HUMBO	19 39	290 ↓ 210 150
MD83/L				MD83/L			
T438 G452	1823			T438 G452	1823		
02				02			
162 01	PXV			162 01	PXV		
DAL44	SOPIE	01 58	340 ↓ 240 ✓	DAL44	SOPIE	01 58	340 ↓ 240 ✓
B752/L				MD83/L			
T454 G468	0123			T454 G468	0123		
02				02			
623 01	LIT			623 01	LIT		

Correct				Incorrect			
AAL2610	HUMBO	19 39	290 ↓ 210 150	AAL2610	HUMBO	19 39	290 ↓ 210 150
MD83/L				MD83/L			
T438 G452	1823			T438 G452	1823		
02				02			
162 01	PXV			162 01	PXV		

Example: AAL2610 was cleared to FL210 and reported out of FL290. Prior to reaching FL210 the flight was cleared lower to 15,000'. The incorrect example shows a report leaving FL210.

Correct				Incorrect			
DAL44	SOPIE	01 58	340 ↓ 240 ✓	DAL44	SOPIE	01 58	340 ↓ 240 ✓
B752/L				MD83/L			
T454 G468	0123			T454 G468	0123		
02				02			
623 01	LIT			623 01	LIT		

Example: DAL44 reports level at FL240. The down arrow is crossed out with an "X" to avoid looking like an "at or below" arrow.

PURPOSE OF STRIP MARKING (CONT'D)

Knowledge Check

Knowledge Check



Which flight strip has properly printed characters?

A. **DAL33** **T-N** **↑**
M083/L **TR 060**
T410
02
567 01 **1513/**
KTUL P1425

B. **VV83578** **T-S** **TL** **↑**
P8/I
T410
02
117 01 **0139/**
KTUL P0145

C. **AAL63** **T-R** **TR** **↑**
A319/L
T422
02
017 01 **1509/**
KTUL P1344

D. **N3721K** **T-N** **TL** **↑**
BE90/A
T210
S2
117 03 **0627/**
KTUL P0615

 Lesson 1: Recording Clearances and Control Information  8

Question: Which flight strip has properly printed characters?



PURPOSE OF STRIP MARKING *(CONT'D)*

Knowledge Check

Knowledge Check

How is unwanted altitude information indicated in strip marking?

A. Overwrite the attitude with bold pen
B. Draw a single horizontal line through the altitude
C. Place an "X" over the altitude

 Lesson 1: Recording Clearances and Control Information  9

Question: How is unwanted altitude information indicated in strip marking?



PURPOSE OF STRIP MARKING *(CONT'D)*

Knowledge Check

Knowledge Check

When should flight strips be removed from flight progress boards?

A. When the pilot checks on frequency
B. At the end of your shift
C. When no longer required for control purposes

 Lesson 1: Recording Clearances and Control Information  10

Question: When should flight strips be removed from flight progress boards?

TYPES OF FLIGHT STRIPS

Proposal Strips

JO 7110.65, FIG
2-3-2

Proposal Strips					
SWA6557	B737/L T475 Ø2 245 Ø1	↑ 16	KHOU P165Ø 19	38Ø	KHOU STYCK7 DOLEY ZEMMA TSDLE3 KOKC 1006 SLOW CLIMBER
N9281B	P46T/G T241 24 439 Ø1	↑ 16	KFSM P1422 19	11Ø	KFSM FSM V289 DGD V72 MAP V238 DELMA V234 ENL KFWC 2702 NO OXYGEN
N739ZR	C82R/G T121 36 269 Ø1	↑ 16	KFYV P12Ø3 19	7Ø	KMKO HANIG V532 FSM V74 LIT KLIT/Ø124 1424

SWA6557	B737/L T475 Ø2 245 Ø1	↑ 16	KHOU P165Ø 19	38Ø	KHOU STYCK7 DOLEY ZEMMA TSDLE3 KOKC 1006 SLOW CLIMBER
N9281B	P46T/G T241 24 439 Ø1	↑ 16	KFSM P1422 19	11Ø	KFSM FSM V289 DGD V72 MAP V238 DELMA V234 ENL KFWC 2702 NO OXYGEN
N739ZR	C82R/G T121 36 269 Ø1	↑ 16	KFYV P12Ø3 19	7Ø	KMKO HANIG V532 FSM V74 LIT KLIT/Ø124 1424


Proposal Strips

- ⦿ Proposal strips represent the initial departure airport
 - Block 16 - Up arrow indicates a departing flight
 - Block 19 - Proposed departure time
 - Ground speed and sector times are not computed

TYPES OF FLIGHT STRIPS (CONT'D)

Departure Strips - Data Entries

JO 7110.65, FIG 2-3-2

Departure Strips - Data Entries					
N38TS	T→S TL ↑ 235 ⇒ V278 SQS	15	GLH	KGWO SQS V278 VUZ KBHM/0055	3603
PC12/G T280 02 168 01	KGWO P1204	X17 W SQS ↓ 60 20	150	26 C LV30	28 D-A 29-30
15. Clearance information for departing aircraft 18. Departure time (actual or assumed) 20. Altitude information 26. Remarks 28. Miscellaneous control data 29-30. Transfer of control data and coordination indicators					
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N38TS	T→S TL ↑ 235 ⇒ V278 SQS	15	GLH	KGWO SQS V278 VUZ KBHM/0055	3603
PC12/G T280 02 168 01	KGWO P1204	X17 W SQS ↓ 60 20	150	26 C LV30	28 D-A 29-30

Departure Strips

- ⊙ Block 15 - Clearance information for departing aircraft
- ⊙ Block 18 - Departure time (actual or assumed)
- ⊙ Block 20 - Altitude information
 - Including restrictions
 - In hundreds of feet or as per facility directive
- ⊙ Block 26 - Pertinent remarks
- ⊙ Block 28 - Miscellaneous control data
 - Clearance limit
 - Expected further clearance time
 - Time cleared for approach, etc.
- ⊙ Blocks 29 and 30 - Transfer-of-control data and coordination indicator, if required

TYPES OF FLIGHT STRIPS (CONT'D)

En Route Strips - Data Entries

JO 7110.65, FIG 2-3-2

En Route Strips - Data Entries									
N234	UJM	11	15	42	150 ✓	MHZ	KSUS. / UJM V9 MCB V9 RAYOP KNEW/1750	1005	
PC12/G T265 G267 02	1529	12	15		20	1556			
104 03	14a	SOS	19	20a					ZHU

11. Previous fix
12. Estimated time over previous fix
14a. Plus time, in minutes, previous fix to the posted fix
15. Center estimated time over posted fix
19. Posted fix
20. Altitude information
20a. TCAS Resolution Advisory (RA) events

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N234	UJM	11	15	42	150 ✓	MHZ	KSUS. / UJM V9 MCB V9 RAYOP KNEW/1750	1005	
PC12/G T265 G267 02	1529	12	15		20	1556			
104 03	14a	SOS	19	20a					ZHU

En Route Strips

NOTE: Flight strips for en route flights contain fix and time data which aid in determining the aircraft position. Altitude information is always present.

Further information found on the flight strips, include:

- ⦿ Block 11 - Previous fix
- ⦿ Block 12 - Estimated time over previous fix
- ⦿ Block 14a - Plus time expressed in minutes from the previous fix to the posted fix
- ⦿ Block 15 - Center estimated time over posted fix
- ⦿ Block 19 - Posted fix
- ⦿ Block 20 - Altitude information
- ⦿ Block 20a - TCAS Resolution Advisory (RA) events
 - Optional when voice recorders are operational
 - Required when voice recorders are not operating and strips are used
 - Record RA's climb or descend arrow and time event is reported

TYPES OF FLIGHT STRIPS (CONT'D)

Arrival Strips - Data Entries

JO 7110.65, FIG
2-3-2

Arrival Strips - Data Entries					
N35VC	BARNE	17	30	↓ 16	170
C402/G					
T205 G257	1723				
02					
234	02				
		KTVR			
16. Arrival arrow					

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N35VC	BARNE	17	30	↓ 16	170	KCLL./AEX V245 BARNE KTVR	2776
C402/G							
T205 G257	1723						
02							
234	02						
		KTVR					

Arrival Strips

⦿ Block 16 - Arrival arrow

- Generated by the automation based on local adaptation

NOTE: Arrival strips will contain a down arrow in block 16 to indicate an approach clearance may be needed for this flight.

FLIGHT STRIP DATA ENTRIES

Computer Programmed Blocks

JO 7110.65, FIG 2-3-2

Computer Programmed Blocks					
N726PG	SAF	19	40	16	240
BE40/L	069				
T455 G257 8	031				
616/42 9	1933				
7 512	10 05/1	KLIT	LESME	KSAF/1945	5670
KSAF					

6. Sector number
7. Computer ID (CID)
8. Estimated ground speed
9. Sector/Strip Request (SR) originator
10. Strip number/revision
16. Arrow; departing "↑", arriving "↓"

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N726PG	SAF	19	40	16	240	KLIT	LESME	KSAF/1945	5670
BE40/L	069								
T455 G257 8	031								
616/42 9	1933								
7 512	10 05/1								
		KSAF							

Computer Programmed Blocks

- Some flight strip block fields are generated by the automation and include:

- Block 6 - Sector number
- Block 7 - Computer identification number (CID)
- Block 8 - Estimated ground speed
 - Not displayed on proposal strips
- Block 9 - Sector/Strip Request (SR) originator
- Block 10 - Strip number (strip number/revision number)
- Block 16 - Arrow; departing "↑", arriving "↓"

NOTE: For a complete list of the blocks in which data is entered on a flight progress strip, see FAA Order JO 7110.65, par. 2-3-2.

FLIGHT STRIP DATA ENTRIES (CONT'D)

Flight Strip Data Locations

JO 7110.65, FIG 2-3-2

Flight Strip Data Locations				
3 AWI3973	↑	PTW 21	KPHL PTW PTW320 CHLSE V499 CFB V29 SYR KSYR/0120	27 3420
4 CRJ2/Q		24 200	25	
5 T384			26	29-30
18 088 01	KPHL P1425 19			

3. Aircraft identification
4. Number, type aircraft/suffix
5. Filed true airspeed
19. Fix, proposed time
21. Next fix
24. Requested altitude
25. Point of origin, route of flight
26. Remarks
27. Beacon code
29-30. Transfer of control data and coordination indicators

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3 AWI3973	↑	PTW 21	KPHL PTW PTW320 CHLSE V499 CFB V29 SYR KSYR/0120	27 3420
4 CRJ2/Q		24 200	25	
5 T384			26	29-30
18 088 01	KPHL P1425 19			

Flight Strip Data Locations

- ⊙ Block 3 - Aircraft identification
 - Appropriate prefix followed by a combination of letters and/or numbers
 - Seven maximum allowable characters
- ⊙ Block 4 - Aircraft data
 - Number of aircraft, if more than one
 - Heavy indicator, if appropriate
 - Type aircraft
 - Equipment suffix
- ⊙ Block 5 - Filed true airspeed
 - "T" followed by two, three, or four digits
 - SC - Speed classified
- ⊙ Block 19 - Fix and proposed departure time
 - Location identifier
 - For departing aircraft, add proposed departure time
 - "P" followed by four-digit proposal time
- ⊙ Block 21 - Next posted fix or coordination fix

Continued on next page

FLIGHT STRIP DATA ENTRIES *(CONT'D)*

Flight Strip Data

Locations (Cont'd)

JO 7110.65, FIG
2-3-2

-
- ⊙ Block 24 - Requested altitude
 - Two or three digits representing altitude in hundreds of feet or as per facility directive
 - OTP or OTP/(altitude)
 - VFR conditions on top
 - Altitude block
 - (altitude)B(altitude)
 - Lowest altitude first
 - ⊙ Block 25 - Point of origin, route, destination, and Estimated Time of Arrival (ETA), Estimated Time En route (ETE)
 - Location identifier
 - Victor airways, jet routes, or direct routes
 - ETA
 - Follows destination on general aviation arrival aircraft
 - ETE
 - Follows destination on general aviation departure aircraft

NOTE: To convert ETE to ETA, add ETE to departure time to determine ETA. General aviation pilots are required to file ETE.
 - ⊙ Block 26 - Pertinent remarks
 - Use plain language or words, phrases, or symbols contained in JO 7110.65, Table. 1-2-1

Examples: Minimum fuel, point out, radar vector, speed adjustment information, sector/position number (in accordance with JO 7110.65, par. 2-2-1), or NRP
 - ⊙ Block 27 - Beacon code
 - Normally assigned by the computer
 - ⊙ Blocks 29 and 30 - Transfer-of-control data and coordination indicator
-

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

What block contains Filed True Airspeed?

A. 4
B. 5
C. 8

 Lesson 1: Recording Clearances and Control Information  17

Question: What block contains Filed True Airspeed?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

What block contains Proposed Departure Time?

A. 15
B. 18
C. 19

 Lesson 1: Recording Clearances and Control Information  18

Question: What block contains Proposed Departure Time?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

Miscellaneous Control Data (e.g., clearance limit, EFC, time cleared for approach) is entered in which block?

A. 25
B. 26
C. 28

 Lesson 1: Recording Clearances and Control Information  19

Question: Miscellaneous Control Data (e.g., clearance limit, EFC, time cleared for approach) is entered in which block?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

Departure Time (actual or assumed) is entered in which block?

A. 15
B. 18
C. 19

 Lesson 1: Recording Clearances and Control Information  20

Question: Departure Time (actual or assumed) is entered in which block?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

Altitude Information is entered in which block?

A. 20
B. 21
C. 25

 Lesson 1: Recording Clearances and Control Information  21

Question: Altitude Information is entered in which block?

FLIGHT STRIP DATA ENTRIES (CONT'D)

Knowledge Check

The slide displays a 'Knowledge Check' section. At the top, it shows a simplified layout of a flight strip with various numbered blocks. The blocks are arranged in a grid-like fashion, with numbers 3 through 30 (including 29-30) indicating different sections for data entry. Below the layout, a question is posed: 'Departure Instructions are entered in which block?'. Three options are provided: A. 15, B. 25, and C. 28. The slide footer includes the FAA logo, the text 'Lesson 1: Recording Clearances and Control Information', and a small icon with the number 22.

Knowledge Check

3 11 15 16 20 21 25 27
4 12 18 28
5 6 8 14a 19 20a 24 26 29-30
7 10

Departure Instructions are entered in which block?

A. 15
B. 25
C. 28

Lesson 1: Recording Clearances and Control Information 22

Question: Departure Instructions are entered in which block?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

Which block contains a Center Estimate over Posted Fix for en route flights?

A. 11
B. 15
C. 21

 Lesson 1: Recording Clearances and Control Information  23

Question: Which block contains a Center Estimate over Posted Fix for en route flights?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

RA events are recorded in which block?

A. 20a
B. 25
C. 26

 Lesson 1: Recording Clearances and Control Information  24

Question: RA events are recorded in which block?



FLIGHT STRIP DATA ENTRIES (CONT'D)

Knowledge Check

Knowledge Check

Which block will contain an arrow to indicate departing/arriving flights?

A. 15
B. 16
C. 20

 Lesson 1: Recording Clearances and Control Information  25

Question: Which block will contain an arrow to indicate departing/arriving flights?

FLIGHT STRIP DATA ENTRIES (CONT'D)



Knowledge Check

Knowledge Check

3		11	15	16	20	21	25	27
4								28
5		8	12	18				29-30
7	10	14a	19	20a	24	26		

Which block contains the Estimated Time over Previous Fix?

A. 12
B. 18
C. 21

 Lesson 1: Recording Clearances and Control Information  28

Question: Which block contains the Estimated Time over Previous Fix?

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PRACTICE EXERCISE 1: FLIGHT STRIP DATA LOCATIONS

Practice Exercise 1: Flight Strip Data Locations

- **Purpose**
 - Review computer generated flight strip data locations
- **Materials**
 - Practice exercise 1 from Lesson 1 handout
 - Pencil or pen
- **Directions**
 - Use the flight strip examples provided to answer the questions



Lesson 1: Recording Clearances and Control Information

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Purpose

Review computer generated flight strip data locations

Materials



Handout:


- ⦿ Practice exercise 1 from Lesson 1 handout
 - ⦿ Pen or pencil
-

Directions


This exercise takes approximately 30 minutes to complete. Use the flight strip examples provided to answer the questions.

PRACTICE EXERCISE 1: FLIGHT STRIP DATA LOCATIONS *(CONT'D)*

Practice Exercise 1					
N6264L BE35/G T130 G125 02 117 03	PRX 1401 KMLC	32 14 ↓ 80		KPRX V583 MLC KMLC/1435	1257
N215LJ LJ24/L T400 52 320 01	KMLC P1430	↑	FUZ 200	KMLC MLC J105 FUZ J131 EDNAS LLO V161 CSI KERV/0110	5611
LN43X PA42/G T220 G230 02 359 03	URH 1421 MLC	37 14 170	VIANE 1444	KDUK URH V63 SGF KSGF/1519	6621 ZME


Lesson 1: Recording Clearances and Control Information
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Practice Exercise 1 (Cont'd)					
CGFPL M20P/G T140 02 663 01	KMLC P1435	↑	BYP 120	KMLC MLC FINGR5 KDAL/0100	6336
N555SC C414/G T240 G242 02 276 03	MINGG 1414 MLC	27 14 170	FSM 1448	KAMA./BGD V272 FSM V74 LIT KLIT/1518	2113 ZME
FDX1726 H/B763/L T440 G445 02 527 01	LIT 1411 MLC	32 14 220	BYP	KMEM LIT J6 KLUBB J105 MLC FINGR5 KDFW	4227


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PRACTICE EXERCISE 1 FLIGHT STRIP DATA LOCATIONS *(CONT'D)*

1. What is N6264L's filed true airspeed?

2. What is the previous fix for N555SC?

3. What is the previous fix estimate for N555SC?

4. What is the ground speed for LN43X?

5. What is the next fix for N215LJ?

6. Which are proposal strips?

7. Which are arrival strips?

8. Which are en route strips?

9. What is the assigned altitude for N6264L?

10. What is the posted fix for FDX1726?

11. What is the center-estimated time over posted fix for LN43X?

12. Which aircraft is expected over MLC first?

13. If the time is 1400, how many minutes from now is FDX1726 expected to be over the posted fix?

14. Which departure(s) are filed with a lower requested altitude than FDX1726?

15. Which aircraft are filed with jet routes?

16. If CGFPL is ready to depart at the proposed time, will it depart before N6264L arrives at MLC?

GENERAL INFORMATION

Aircraft Reported at Assigned Altitude

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Aircraft Reported at Assigned Altitude

✓

DAL2370	BAYLI	15	49	360 ✓	SLN	KCVG LOVEY6 AXC SPI	4032
8738/L	1528	19		340 ✓	1606	J80 MCI J24 OATHE	
T447 G481						JAGGR3 KDEN	
287 04			MCI				

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360 ✓	SL
340 ✓	1606

✓

- ⦿ Aircraft reported at assigned altitude
 - Used in block 20
 - Pilot reported or observed Mode C

GENERAL INFORMATION (CONT'D)

Information Forwarded

JO 7110.65, FIG 2-3-2, FIG 2-3-8

Information Forwarded							
N92610	GULLI	16	49	110	RZC	KCSM BFV V140 ARG KARG/1840	2661
P32R/A T130 G145 15 083 04	1621	52	(1656)	(1130)	(1745)		
	TUL						
N501DT	MCL	10	(53)	70-110 X50 E FSM ±90	LRF	KOKC IRW V272 FSM V74 LIT V54 UJM KHEE/1137	4360
C441/G T240 G251 18 444 03	1033	52			1119		
	FSM						

49	110	RZC	KCSM
	(1130)	(1745)	KA
(1656)			

10	(53)	70-110 X50 E FSM ±90	LRF	KOKC IRW V272 FSM V74 LIT V54 UJM KHEE/1137	V532 FSM	4360
			1119			

⊙ Information forwarded

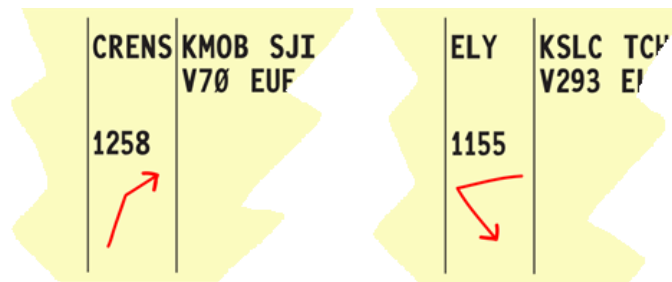
- Used in any block
- Circle control information in red when forwarded

GENERAL INFORMATION (CONT'D)

Direction of Flight

JO 7110.65, FIG 2-3-2

Direction of Flight									
N3088X P46T/A T215 G221 287 03	STETS	121 ⁴²	60✓	CRENS/	KMOB SJI V552 MVC V70 EUF KEUF/1314	1258	4610		
N915CD BE9L/A T230 G241 368 02	BVL	11 ³¹	140✓	ELY	KSLL TCH V32 BQU V293 ELY KELY/1154	1155	0765		



⦿ Direction of flight

- Used in block 23
- Represents a generalized flight path

GENERAL INFORMATION (CONT'D)

IAFDOF

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Inappropriate Altitude for Direction of Flight (<u>Alt.</u>)							
N4831M	CQO	16	58	80✓	VNA	KCHA G00 V243 AYS T207 OMN KDAB/1907	1025
BE36/G T156 G168 09	1628				1733		
019 02		HEFIN					

Lesson 1 Recording Clearances and Control Information 33

80✓	VNA
	1733

(Alt.)

- ⦿ Inappropriate Altitude for Direction of Flight (IAFDOF)
 - Used in blocks 20 or 24
 - Altitude underlined in red

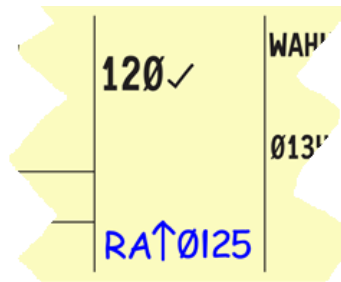
GENERAL INFORMATION (CONT'D)

Resolution Advisory

JO 7110.65, FIG 2-3-2

Resolution Advisory									
RA									
UAL1439	MNNOW	Ø1	29	120✓	WAHUU	KBOS./IOW	J1Ø	DSM	3572
8739/L					SPAWN	WAHUU2	KDEN		
T458 G390	Ø116				Ø134				
788	Ø4	GRRUB		RA↑Ø125					DE+

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RA(Pilot Reported Maneuver and Time)

- ⦿ Resolution Advisory to Traffic Alert and Collision Avoidance System (TCAS) event
 - Used in block 20a
 - RA followed by:
 - Climb or descent arrow and
 - Time event is reported

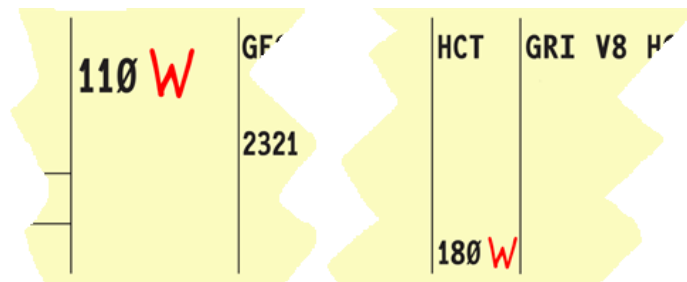
GENERAL INFORMATION (CONT'D)

Warning

JO 7110.65, FIG
2-3-2, FIG 2-3-8

Warning												
En Route Strip												
N171DC	BYI	23	03	110	W	GEGME	KTWF	TWF	V269	BYI	2607	
820/A	T240	G256	2247			2321	V4	CKW	V6	MBW	V100	
539	02		MLD				BFF	KBFF	0047			
Proposal Strip												
N83AJ				↑		HCT	GRI	V8	HCT	J60	DVV	2012
PC12/G	T230											
914	01		KGRI	P1125		180	W					

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W

Warning

- Used in block 20 or 24 to alert controller that action must be taken
- Usually adjacent to altitude
- Written in red
- If due to terrain, indicate the minimum altitude necessary for safe flight

GENERAL INFORMATION (CONT'D)

Emergency

JO 7110.65, FIG
2-3-2, FIG 2-3-8

Emergency

E

DAL1425	KELN	16 ⁴⁹	310✓	PEETT	KATL JACCC2 KELN Q58 PEETT THMP RAVNN6 KBWI	1025
MD88/L T438 G482 083 ³⁶ 04	1632	49 LUMAY		1658	E #1 ENGINE OUT	

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E

KATL JACCC2 KELN
Q58 PEETT THMP
RAVNN6 KBWI

E #1 ENGINE
OUT

E

⦿ Emergency

- Used in block 26, pertinent remarks
- Written in red
- Note the nature of emergency

GENERAL INFORMATION (CONT'D)

Tower Jurisdiction

JO 7110.65, FIG
2-3-2, Table 2-3-
11

Z

SWA818		BASAY	01 ¹⁰	130 ¹⁶⁰	KDAL ESNYE4 EAKER TUL	4352
8737/L	287	020				HZ 0112 20 SW
T430 G447	0057					
18		10				
864	03	TUL				

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ER | 4352

HZ
-SW
0112
20 SW

Z

- ⦿ Tower Jurisdiction
 - Used in block 28

GENERAL INFORMATION (CONT'D)

Knowledge Check

Knowledge Check



Which example indicates a pilot checking in at their assigned altitude?

A. B. C.

130 ✓ HC

130 HC

130 ☆ HC

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Question: Which example indicates a pilot checking in at their assigned altitude?

GENERAL INFORMATION (CONT'D)



Knowledge Check

Knowledge Check

How is a TCAS Resolution Advisory recorded?

A. B. C.

<div>160✖</div> <div>↓50</div> <div>TCAS ↓</div> <div>1842</div>	<div>PN</div> <div>01</div>	<div>160✖</div> <div>↓50</div> <div>RA ↓ 1842</div>	<div>PN</div> <div>01</div>	<div>160✖</div> <div>↓50</div> <div>1842 ↓ RA</div>	<div>PN</div> <div>01</div>
--	-----------------------------	---	-----------------------------	---	-----------------------------

 Lesson 1: Recording Clearances and Control Information  39

Question: How is a TCAS Resolution Advisory recorded?

GENERAL INFORMATION *(CONT'D)*

Knowledge Check

Knowledge Check

What is the strip marking for aircraft emergencies?

A. B. C.

E SMOKE IN COCKPIT	W SMOKE IN COCKPIT	E SMOKE IN COCKPIT
------------------------------	------------------------------	------------------------------

Lesson 1: Recording Clearances and Control Information 40

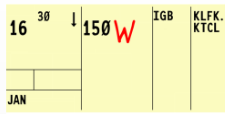
Question: What is the strip marking for aircraft emergencies?

GENERAL INFORMATION (CONT'D)

Knowledge Check

Knowledge Check

What does this strip marking represent?



A. The route of flight is a zig-zag pattern
B. A warning is associated with the current altitude
C. The route of flight is a general westerly direction

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Question: What does this strip marking represent?

GENERAL INFORMATION (CONT'D)

Knowledge Check

Knowledge Check

Which strip marking indicates altitude and restriction were coordinated?

A. B. C.

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Question: Which strip marking indicates altitude and restriction were coordinated?

CLEARANCE ABBREVIATIONS

Cleared to Depart From Fix

JO 7110.65, FIG 2-3-2, par. 2-3-10, Table. 2-3-11

Cleared to Depart From Fix

D

N838JS		1		KSUX SUX V159 OVR V307 PME GATTS CVE RIICES KIAH/0154	1405
C56X/L T410 14		1555			<i>D</i>
160 01		KSUX P0203	410		

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OVR CVE 154	1405 <i>D</i>
-------------------	------------------

D

- ⦿ Cleared to depart from the fix
 - Used in block 28 on originating IFR clearance strip only
 - Departing from airport
 - Airfile - Depart from fix
-

CLEARANCE ABBREVIATIONS (CONT'D)

Cleared to Destination Airport

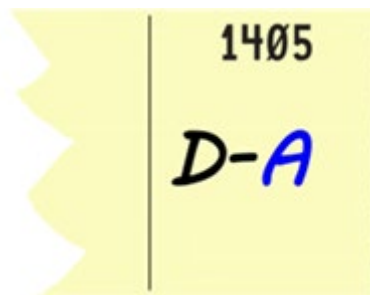
JO 7110.65, FIG
2-3-2, Table 2-3-
11

Cleared to Destination Airport

A

N838JS		1		KSUX SUX V159 OVR V307 PWE CATT5 CVE RIICE8 KIAH/0154	1405
C56X/L T410 14 160 01		ISSS			<i>D-A</i>
	KSUX P0203		410		

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A

- ⦿ Cleared to destination airport
 - Follows "D" in block 28

CLEARANCE ABBREVIATIONS (CONT'D)

Cleared to the Fix

JO 7110.65, FIG 2-3-2, Table 2-3-11

Cleared to Posted Fix or Other Fix					
F					
N773AG BE50/A T154 G168 10 019 04	CZI 1232 DDY	12 ⁵⁴ 110✓	MBW 1323	KBIL BIL V611 DDY V85 FIPSS KBJC/1458	4623 F
F (FIX)					
N223BB BE36/A T172 G186 13 439 03	ELLON 2041 MOL	20 ⁴⁴ 70✓	CSN 2115	KLYH LYH V143 MOL CSN KJYO/2126	1323 F-TIRGA

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12 ⁵⁴ 110✓ DDY	MBW 1323	KBIL BIL V611 DDY V85 FIPSS KBJC/1458	4623 F
ON 20 ⁴⁴ 70✓ MOL	CSN 2115	KLYH LYH V143 MOL CSN KJYO/2126	1323 F-TIRGA

F or F(Fix)

- ⊙ Cleared to the fix
 - Used in block 28
 - Fix need not be recorded if:
 - The aircraft is cleared to the posted fix
 - “F” followed by a fix/waypoint when clearance limit is other than the posted fix

CLEARANCE ABBREVIATIONS (CONT'D)

Depart

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Depart

T→

N3030G	T→N TR ↑ 060⇒V255	↑90	HYS	KGCK GCK V255 HYS V549 TKO V216 PWE V307 OVR V172 LINDE KPRO/0133	2012
BESL/A T260 16 338 01	1355/ KGCK P1250		160		D-A

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T→

N TR ↑
060⇒V255

↑90

H'

1355/

KGCK P1250

1.

T→

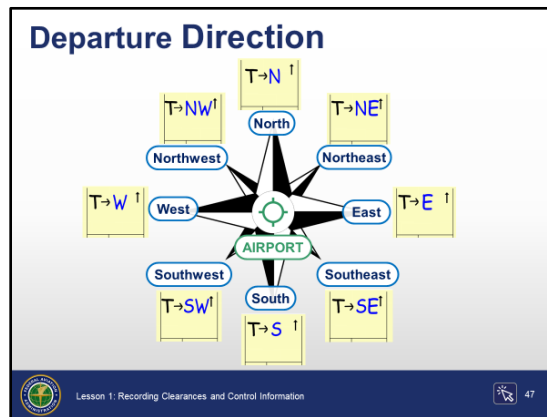
☉ Depart

- Used only at airports within Class D or E surface areas
- Used in block 15 on departure strip only

CLEARANCE ABBREVIATIONS *(CONT'D)*

Departure Direction

JO 7110.65, FIG
2-3-2, FIG 2-3-7



Departure Direction

T→(Compass Point)

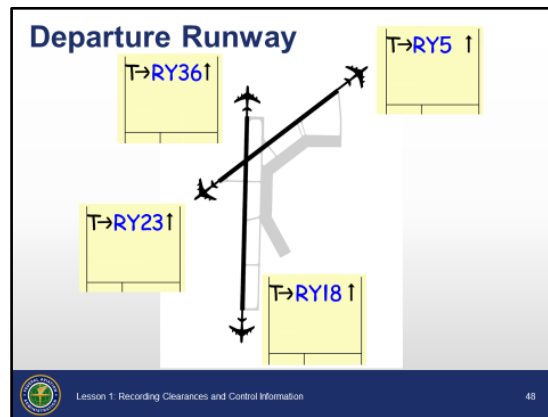
- ⊙ Departure direction
 - Specify direction of departure
 - Direction of departure follows **T→**
 - To provide separation
 - Use eight compass points

CLEARANCE ABBREVIATIONS *(CONT'D)*

Departure Runway

JO 7110.65, FIG
2-3-2, FIG 2-3-7

JO 7340.2



RY(Departure Runway)

- ⦿ Departure runway
 - Direction of departure follows **T→**
 - Specify the runway number
-

CLEARANCE ABBREVIATIONS (CONT'D)

Turn Left or Turn Right

JO 7110.65, FIG 2-3-2, Table 2-3-12

Turn Left or Turn Right			
TL or TR			
DAL338	T→S TL ↑	VV83578	T→RY18 ↑ TR
MD88/L		P8/L	
T420	I313/	T420	I320/
02		02	
567 01	KMLC P1315	987 01	KMLC P1325

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T→S TL ↑
I313/
KMLC P1315

T→RY18 ↑ TR
I320/
KMLC P1325

TL or TR

☉ Turn Left or Turn Right

- Used in block 15
- This clearance element must be followed by instructions to join a route or proceed to a NAVAID/fix/waypoint
- Left or Right turn follows direction or runway instructions

CLEARANCE ABBREVIATIONS (CONT'D)

Departure Heading

JO 7110.65, FIG
2-3-2, Table 2-3-
12

Departure Heading			
TR or TL (Heading)			
AAL63 B777/L T450 02 817 01	T→N TR 060 ↑ 1913/ KMLC P1915	N3721K C310/G T160 02 227 01	T→N TL 300 ↑ 1927/ KMLC P1930

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T→N TL 300 ↑	T→N TR 060 ↑
1927/ KMLC P1930	1913/ KMLC P1915

TL or TR (Heading)

☉ Turn Left or Turn Right (heading)

- Used in block 15
- Magnetic heading to be flown:
 - 001 through 360
- This clearance element must be followed by instructions to join a route

CLEARANCE ABBREVIATIONS *(CONT'D)*

Until

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Until

/

N462LT PA46/A T195 079 01	T→RYI7 ↑ TL 045/ =V6 I357/ KGRI P2024	↑ 90	KGRI GRI V6 OVR V172 LINDE KPRO/0105 180	1534 D-A
---	---	------	--	-----------------

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T→RYI7 ↑
TL 045/
=V6

I357/

KGRI P2024

↑ ↑

/

⦿ Until

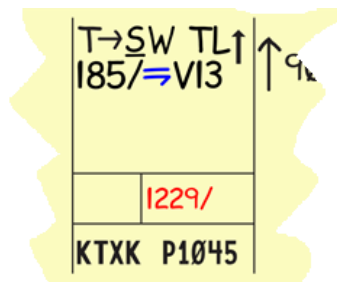
- Used in any block
- Follows departure instructions if a heading is specified
- May also be used with altitude restrictions associated with (time)/(fix)

CLEARANCE ABBREVIATIONS (CONT'D)

Join or Intercept Airway, Jet Route, Track, or Course

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Join or Intercept Airway, Jet Route, Track, or Course						
N69HE SR22/G T160 02 241 01	T→SW TL↑ I85/→VI3	↑90	EIC	KTXK TXK V13 EIC V566 AEX V114 LSU KREG/0145	3042	D-A
	I229/			CLV30		
	KTXK P1045		90			
N24981 C152/T 110 28 788 01	T→NE TR↑ 070/→ EAU103R	↑50	BELGO	KEAU EAU EAU103 BELGO KV10/0035	2731	D-VIQ
	I210/			CLV30		
	KEAU P1355		50			



⊙ Join or intercept airway, jet route, track, or course

- Used in block 15 or 25
- Typically follows "/" (until)

CLEARANCE ABBREVIATIONS (CONT'D)

Before and After

JO 7110.65, FIG 2-3-2, FIG 2-3-7

Before and After				>	<
N680DC	T→N TL 300/→V510	↑ 60	AXN	KSTC SIYON V510 AXN V2 FAR V181 GFK V430 MOT J483 YXE J515 YEG J510 YYD V301 XT R4 PR CYPR/0330	0743
C680/L 440 22 109 01	RLS I MIN<N2I 1644/	KSTC P1620	410	CLV30	D-A
"...RELEASE ONE MINUTE AFTER NOVEMBER TWO ONE..."					
N307RJ	TUL 16 20 80↓60	ANY	KFSM V74 KDDC/1806	1006	
T206/A T135 G148 36 009 03	1541 PER	60>1611	1653		
"...DESCEND TO REACH SIX THOUSAND AT OR BEFORE ONE SIX ONE ONE..."					

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T→N TL 300/→V510	↑↑
RLS I MIN<N2I	
1644/	
KSTC P1620	

80↓60	
60>1611	1

> <

⦿ Before and after

- Used in any block
- May be used with:
 - Successive departures
 - Altitude restrictions related to time/fix

Examples: "...RELEASE ONE MINUTE AFTER NOVEMBER TWO ONE..."

"...DESCEND TO REACH SIX THOUSAND AT OR BEFORE ONE SIX ONE ONE..."

CLEARANCE ABBREVIATIONS (CONT'D)

Hold for Release

JO 7110.65, par.
4-3-4.b, FIG 2-3-
2

Hold For Release					
HFR					
N520CE	T→S TL 130/⇒VII4 HFR	↑ 90	UIM	KGYI BYP V114 VEILS KFSM/0200	4616
SR22/G T190 573 01					D-A
	KGYI P1600		90		

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T→S TL 130/⇒VII4 HFR	↑ 90
KGYI P1600	

HFR

⊙ Hold for Release

- Used in block 15 in conjunction with departure clearances
- HFR instructions are used to inform a pilot or a controller that a departure clearance is not valid until additional instructions are received

CLEARANCE ABBREVIATIONS (CONT'D)

Release

JO 7110.65, FIG
2-3-2, Table 13-
1-3

Release		RLS	
N342GF	T→SW TR↑ 235/⇒V26	FGT	KEAU EAU V26 KRMF/0100
SR22/G	RLS 1 MIN< N667PC		3655
T160	I558/		D-A
788 01	KEAU P1600	90	CLV30
N667PC	T→SW TL↑ 145/⇒V129	ODI	KEAU EAU V129 SPI KSPI/0200
PA46/G	I557/		0623
T160	KEAU P1600	80	D-A
607 01			CLV30

"RELEASE CIRRUS TWO GOLF FOXTROT ONE MINUTE AFTER MALIBU SEVEN PAPA CHARLIE"

Lesson 1 Recording Clearances and Control Information

T→SW TR↑↑ 235/⇒V26
RLS 1 MIN< N667PC
I558/
KEAU P1600

RLS

⊙ Release

- Used in block 15 in conjunction with departure clearance
- Issued when aircraft can be released for departure if Hold For Release was previously issued
- May be used for successive departures with additional instructions
- Issued to tower

Example: "RELEASE CIRRUS TWO GOLF FOXTROT ONE MINUTE AFTER MALIBU SEVEN PAPA CHARLIE"


NOTE: The flight strips examples represent a traffic situation where 2 aircraft are released with a restriction for 1 minute separation for the second departure, N342GF.

CLEARANCE ABBREVIATIONS (CONT'D)

Released Your Discretion

JO 7110.65, FIG
2-3-2

JO 7340.2

Released Your Discretion				<u>SYD</u>	
N456	T→S -BFV	↑ 70	IRW	KCSM BFV V272 FSM KFSM/0130	4327
C310/A T180 02	SYD N234 (1651/)			CLV30	D-A
439 01	KCSM P1650	70			
NOTE: Indicates assumed departure time as being coordinated with next sector					
N234	IFI	16 50	80✓	KSMO GULLI V140 BFV KCSM/1654	4267
C172/G T115 G121 02	1615	50 1651		CPT	(APCH) APCH 1645
037 03	KCSM				
"VISUAL SEPARATION APPROVED BETWEEN TWIN CESSNA FOUR FIVE SIX AND SKYHAWK TWO THREE FOUR. TWIN CESSNA FOUR FIVE SIX RELEASED."					
 Lesson 1: Recording Clearances and Control Information 50					

T→S -BFV	↑ ↑ 70
SYD N234	
(1651/)	
KCSM P1650	

SYD

⊙ Released Subject Your Discretion

- Used in block 15
- Issued to tower when using visual separation

Example: "VISUAL SEPARATION APPROVED BETWEEN TWIN CESSNA FOUR FIVE SIX AND SKYHAWK TWO THREE FOUR. TWIN CESSNA FOUR FIVE SIX RELEASED." **NOTE:** The flight strip examples represent visual separation being applied by a tower with approval granted for the tower controller to release N456 when, in their judgement, they can provide separation by observing both aircraft.

CLEARANCE ABBREVIATIONS (CONT'D)

Clearance Void Time

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Clearance Void If Not Off By

V < (Time)

N2895L	T→N -AUW V<1805 (10)	↑ 70	GRB	KCWA AUW V26 GRB V420 TVC V320 PLN KMCD/0200	1006
P28T/G T130 52 219 01	I758/		70	CLV30	D-A
	KCWA P1800				

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T→N
-AUW
V<1805 (10)

↑ ↑

I758/

KCWA P1800

V<(Time)

- ⦿ Clearance void if aircraft not off by (time)
 - Used in block 15 followed by a time
 - Used to avoid delay for other traffic at airports:
 - Where communications with aircraft are difficult until airborne
 - Provide alternate instructions requiring pilots to advise ATC of intentions

CLEARANCE ABBREVIATIONS (CONT'D)

Altitude
Instructions
Climb/
Descend

JO 7110.65, FIG
2-3-2, FIG 2-3-7

Climb and Maintain *(altitude)*

Descend and Maintain *(altitude)*

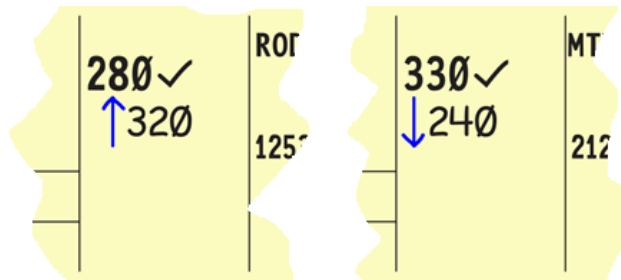
↑ OR ↓

UAL374	BENSH	12 32	280 ✓ ↑ 320	ROD	KIAD BUNZZ3 RAMAY Q72 HACKS J149 ROD WATSN3 KORD	1737
8739/L T435 G414 49 864	03	1221	HACKS	1253		ZAU

DAL2084	DENNI	21 15	330 ✓ ↓ 240	MTHW	KSTL DRUSE5 BNA NEWBB IHAVE MTHW CHPPRI KATL	1323
MD88/L T452 G478 16 607	03	2059	BNA	2121		

Lesson 1: Recording Clearances and Control Information

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⦿ Altitude Instructions

- Used in block 20
 - Climb/descend and maintain arrow (altitude)

CLEARANCE ABBREVIATIONS *(CONT'D)*

At

JO 7110.65, FIG
2-3-2, FIG 2-3-7

At

@

N52DW	SPS	16	48	↓	110	↓60	KGGG GGG V114 CDS KCDS/1654	1301
B36/G	1623							
T165 G172					X15W SPS			
02					@ 80			
130	02			KCDS				

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16 48 ↓ 110 ↓60

X15W SPS
@ 80

KCDS

@

⦿ At

- Used in block 20
- When a restriction occurs at a specific point
- Usually precedes altitude/speed

CLEARANCE ABBREVIATIONS *(CONT'D)*

At or Above/Below

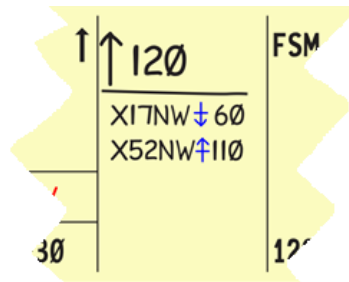
JO 7110.65, FIG 2-3-2, FIG 2-3-7

At or Above (altitude)
At or Below (altitude)

↑ OR ↓

N69HE	T→NW -TXK	↑ 120	FSM	KTXK TXK V289 FSM V74 BUTCH KSNL/0055	2603
SR22/G T180 23 137 01		X17NW↓60 X52NW↑110			D-A
	TXK P1430		120	CLV30	

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⦿ At or above/below arrows

- Used in block 20
- Includes a fix/radial/airway, followed by an altitude

CLEARANCE ABBREVIATIONS (CONT'D)

Block Altitude Assignment

JO 7110.65, FIG 2-3-2, FIG 2-3-7

Block Altitude Assignment									
(Alt.)B(Alt.)									
RCH245	ACH	18	16	2400260	PAYSO	KAMA	IWA	KIMA	6553
	068			157					
3/C17/L	038			2000220	031				
T467 G425	1803				1843				
38									
050	05								
		ONM	338/011						

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2400260	PAYS
2000220	157
	031
	1843
011	

(Alt.)B(Alt.)

- ⦿ Block altitude assignment
 - Used in block 20
 - Altitudes are inclusive
 - First altitude must be lower than the second

CLEARANCE ABBREVIATIONS *(CONT'D)*

Climb/ Descend at Pilot's Discretion

JO 7110.65, FIG
2-3-2, Table 2-3-
11

Climb/Descend at Pilot's Discretion									
PD									
AAL352	RSK	18	15	330✓	BGD	SJC. / ILC J58 FTI J8	2606		
8738/L				↓170 PD		BGD ROLLS CAMET3			
T455 G482	1756	52			1838	KOKC			
287	83	FTI							

"...DESCEND AT PILOT'S DISCRETION, MAINTAIN ONE SEVEN THOUSAND"

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330✓	BC
↓170 PD	1835

PD

- ⦿ Climb/descend at pilot's discretion
 - Used in block 20

Example: "...DESCEND AT PILOT'S DISCRETION, MAINTAIN ONE SEVEN THOUSAND"

CLEARANCE ABBREVIATIONS (CONT'D)

Reported Other Than Assigned Altitude

JO 7110.65, FIG
2-3-2, FIG 2-3-8

Reported Other Than Assigned Altitude							
Alt.							
N981SM	TOY	12 ⁴⁸	110	LUPCE	KEMP EMP V12 SHB	3461	
M20P/A			(120)✓	1310	KGEZ/1341		
T145 G153	1221						
Ø7							
Ø86 Ø4		BIB					

Aircraft was assigned 110 but reported on frequency level at 120

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110	LUP
(120)✓	131

Alt.

- ⦿ Aircraft reported at other than assigned altitude
 - Used in block 20
 - Write reported altitude and circle it in black

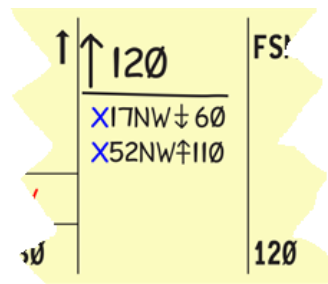
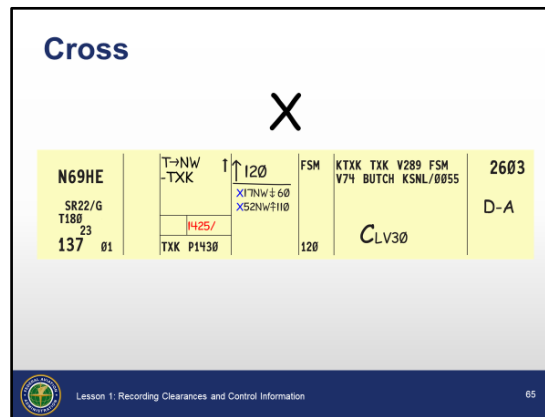
Example: Aircraft was assigned 110 but reported on frequency level at 120

NOTE: In some cases, an aircraft may have been assigned an altitude by another controller without proper coordination.

CLEARANCE ABBREVIATIONS (CONT'D)

Cross

JO 7110.65, FIG
2-3-2, FIG 2-3-7,
Table 2-3-11



X

⦿ Cross

- Used in block 20
- Cross a fix/radial/airway
- Followed by a restriction

NOTE: "X" to delete unwanted altitude information appears above the restriction bar and "X" as control symbology appears below.

CLEARANCE ABBREVIATIONS (CONT'D)

Cleared to Hold

JO 7110.65, FIG 2-3-2, Table 2-3-11

Cleared to Hold (Instructions Issued)

N783AL	HOLYO	16 ³⁹	140✓	OBH	KEIK AKO V80 LBF V172 OLU KOLU/1715	2131
BE20/G T266 G272 057 04	1623	39		1704		H-SW V80
		LBF				

"...CLEARED TO NORTH PLATTE VOR/DME. HOLD SOUTHWEST ON VICTOR EIGHTY. NO DELAY EXPECTED."

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0	16 ³⁹	140✓	OBH	KEIK AKO V80 LBF V172 OLU KOLU/1715	2131
			1704		H-SW V80
	39				
	LBF				

H

- ⦿ Cleared to hold and instructions issued
 - Used in block 28
 - Followed by a dash and detailed holding instructions, including:
 - Direction from fix
 - Holding fix, if not posted fix
 - Radial, course, azimuth, or route on which aircraft will hold
 - Leg length in minutes or miles if other than standard

Example: "...CLEARED TO NORTH PLATTE VOR/DME. HOLD SOUTHWEST ON VICTOR EIGHTY. NO DELAY EXPECTED."

NOTE: The holding fix may be omitted if it matches the point indicated in block 19.

CLEARANCE ABBREVIATIONS (CONT'D)

Hold - DME Fix

JO 7110.65, FIG
2-3-2, FIG 2-3-8

DME Holding and Instructions

N1625	TUL	16 ⁴¹	340✓	MIRME KOQU SANTT BWZ LAYED IIU BLANS TUL BGD MIRME FTI J8 1658 FLYBY PGS MARUE DSNEE1 KSNA/1838	7463
GLF4/L T480 G432 06 137 03	1603	41	BGD		

“...CLEARED TO BORGER ZERO NINER ZERO RADIAL TWO ZERO MILE FIX. HOLD EAST ON THE ZERO NINER ZERO RADIAL, ONE ZERO MILE LEGS. EXPECT FURTHER CLEARANCE ONE SEVEN ZERO ZERO.”

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16 ⁴¹	340✓	MIRME KOQU SANTT BWZ LAYED IIU BLANS TUL 1658 BGD MIRME FTI J8 FLYBY PGS MARUE DSNEE1 KSNA/1838	7463
41			
BGD			



⦿ DME Holding

- Used in block 28
- Upper portion of “H” indicates distance from the station to the fix
- Lower portion of “H” indicates length of holding pattern
 - Remember: legs are on the bottom, like your body
- Also, include radial, course, azimuth, or route on which aircraft will hold
- Expect Further Clearance (EFC) follows instructions


Example: “...CLEARED TO BORGER ZERO NINER ZERO RADIAL TWO ZERO MILE FIX. HOLD EAST ON THE ZERO NINER ZERO RADIAL, ONE ZERO MILE LEGS. EXPECT FURTHER CLEARANCE ONE SEVEN ZERO ZERO.”

NOTE: The holding fix may be omitted if it matches the point indicated in block 19.

CLEARANCE ABBREVIATIONS (CONT'D)

Cleared Over the Fix

JO 7110.65, FIG 2-3-2, Table 2-3-11

Cleared Over the Fix							
V							
AAL2860	HUDAD	16	41	200✓	DOGIN/KDFW CDS V114 PNH KAMA	HUDAD2 HUDAD	4174
MD83/L T460 G451 04	1633	41			1649		H ✓
642 04		CDS					
<p>"...CLEARED TO AMARILLO AIRPORT VIA VICTOR ONE FOURTEEN"</p> <p>or</p> <p>"...CLEARED TO AMARILLO AIRPORT VIA LAST ROUTING CLEARED"</p>							
 Lesson 1: Recording Clearances and Control Information 68							

IN KDFW HUDAD2 HUDAD CDS V114 PNH KAMA	4174
	H ✓

V

⦿ Cleared over the fix

- Used in block 28 to mark over:
 - F - Clearance limit, or
 - H - Holding instructions
- Cancels previously issued clearance limit and holding instructions

Examples: "...CLEARED TO AMARILLO AIRPORT VIA VICTOR ONE FOURTEEN"

or

"...CLEARED TO AMARILLO AIRPORT VIA LAST ROUTING CLEARED"

CLEARANCE ABBREVIATIONS (CONT'D)

DME Arc of NAVAID

JO 7110.65, FIG 2-3-2, FIG 2-3-8

DME ARC of NAVAID

(Miles) (Direction)

KMSO MSO V86 BZN
KBZN/1443 ^
⇒ 15 NW

1534

“...CLEARED TO JOIN ONE FIVE MILE ARC NORTHWEST OF BOZEMAN VOR/DME...”

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KMSO MSO V86 BZN
KBZN/1443 ^
⇒ 15 NW

1534

(Miles) (Direction)

☉ DME Arc

- Used in block 25
 - Miles on left
 - Direction on right

Example: “...CLEARED TO JOIN ONE FIVE MILE ARC NORTHWEST OF BOZEMAN VOR/DME...”

CLEARANCE ABBREVIATIONS (CONT'D)

Special VFR Operations Authorized

JO 7110.65, FIG 2-3-2, FIG 2-3-7

Special VFR Operations Authorized				
(W)				
N358CA PA28/G 110	↑ SVFR ↓ 35 MIO P1400	↑ SVFR ↓ 35	KMIO (W) KMIO	D-A

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↑ SVFR ↓ 35	KMIO (W) KMIO
-------------------	---------------



Special VFR operations

- Used in block 25
 - Block used may be locally adapted for each facility
- Used to authorize local Special VFR operations in the vicinity of an airport until a specified time
 - Instruct aircraft to maintain Special VFR conditions (altitude, if appropriate)

CLEARANCE ABBREVIATIONS (CONT'D)

Pilot Canceled Flight Plan

JO 7110.65, FIG
2-3-2, FIG 2-3-8

Pilot Canceled IFR

℄

N33083	GLASS	16 ²³	70✓	KVTH VTH V234 GLASS V335 MWA KHSB/1638	1737
P28A/G T105 G123 393 ¹⁴ 04	1551	23	℄ 1628		H ^S ₁₈₀
		MWA			

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℄

16 ²³	70✓
23	℄ 1628
MWA	

℄

- ⦿ Pilot canceled flight plan
 - Used in block 18
 - Include a four-digit time

CLEARANCE ABBREVIATIONS *(CONT'D)*



Knowledge Check

Knowledge Check

How is “depart” recorded in block 15?

A. B. C.

D→ ↑	Dept → ↑	T→ ↑

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Question: How is “depart” recorded in block 15?

CLEARANCE ABBREVIATIONS *(CONT'D)*

Knowledge Check

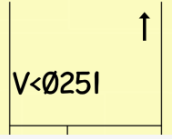
Knowledge Check

What does this strip marking represent?


A. "CLEARANCE VOID IF NOT OFF BY ZERO TWO FIVE ONE"

B. "JOIN VICTOR AIRWAY AFTER ZERO TWO FIVE ONE"


C. "VFR AFTER ZERO TWO FIVE ONE"



The image shows a yellow rectangular strip marking. Inside the rectangle, the text 'V<0251' is written in black. To the right of the text, there is a small black upward-pointing arrow.



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Question: What does this strip marking represent?

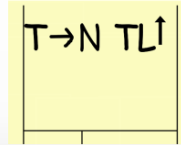
CLEARANCE ABBREVIATIONS *(CONT'D)*



Knowledge Check

Knowledge Check

What does this strip marking represent?

A. "TAKE OFF NORTH, TURN LEFT"
B. "DEPART NORTH, TURN LEFT"
C. "DEPART NOW, TURN LEFT"



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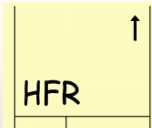
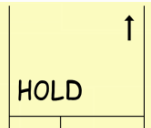
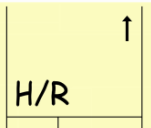
Question: What does this strip marking represent?



CLEARANCE ABBREVIATIONS *(CONT'D)*

Knowledge Check

Knowledge Check

How is "HOLD FOR RELEASE" recorded in block 15?

A.  B.  C. 

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Question: How is "HOLD FOR RELEASE" recorded in block 15?

CLEARANCE ABBREVIATIONS (CONT'D)

Knowledge Check

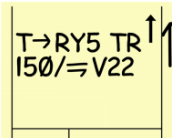
Knowledge Check



What does this strip marking represent?

A. "DEPART RUNWAY FIVE TILL REACHING ONE FIVE THOUSAND THEN CROSS VICTOR TWENTY-TWO"

B. "DEPART RUNWAY FIVE TURN RIGHT HEADING ONE FIVE ZERO UNTIL JOINING VICTOR TWENTY-TWO"

C. "DEPART RUNWAY FIVE TO REACH ONE HUNDRED FIFTY FEET BY JOINING VICTOR TWENTY-TWO"



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Question: What does this strip marking represent?

CLEARANCE ABBREVIATIONS (CONT'D)

Knowledge Check

Knowledge Check

Which strip marking indicates the aircraft checked in at an altitude other than its assigned altitude?

A. B. C.

110 FY 110 FY 110 FY

(120)✓ 120✓ 120✓

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Question: Which strip marking indicates the aircraft checked in at an altitude other than its assigned altitude?

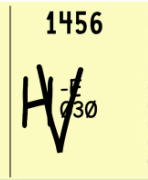
CLEARANCE ABBREVIATIONS *(CONT'D)*

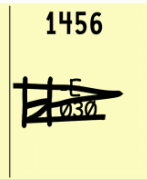
Knowledge Check

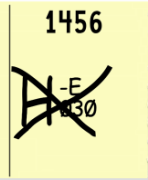
Knowledge Check

Which strip marking indicates cleared over fix?

A. B. C.

1456


1456


1456


FAA Logo Lesson 1: Recording Clearances and Control Information 78

Question: Which strip marking indicates cleared over fix?

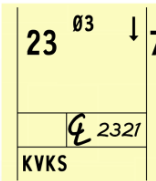
CLEARANCE ABBREVIATIONS (CONT'D)

Knowledge Check

Knowledge Check

What does this strip marking represent?


A. Pilot canceled IFR at 2321
B. Pilot reported over the clearance limit at 2321
C. Pilot called leaving assigned altitude at 2321




23 03 ↓

2321

KVKS



Lesson 1: Recording Clearances and Control Information



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Question: What does this strip marking represent?

CLEARANCE ABBREVIATIONS (CONT'D)

Knowledge Check



Knowledge Check

How would you record: "CLEARED TO JACKSON TWO FIVE ONE RADIAL TWO ZERO MILE FIX, HOLD SOUTHWEST ON TWO FIVE ONE RADIAL, ONE FIVE MILE LEGS, EXPECT FURTHER CLEARANCE AT ONE ONE TWO ZERO"?

A. 3425
H 251-SW
20 15
1120

B. 3425
H 20-SW
15 251
1120

C. 3425
H 15-SW
20 251
1120

 Lesson 1: Recording Clearances and Control Information  80

Question: How would you record: "CLEARED TO JACKSON TWO FIVE ONE RADIAL TWO ZERO MILE FIX, HOLD SOUTHWEST ON TWO FIVE ONE RADIAL, ONE FIVE MILE LEGS, EXPECT FURTHER CLEARANCE AT ONE ONE TWO ZERO"?



CLEARANCE ABBREVIATIONS *(CONT'D)*

Knowledge Check

Knowledge Check

How do you record "IF NOT OFF BY 2235, ADVISE (*facility*) NO LATER THAN 2245 OF INTENTIONS"?

A.	B.	C.
<div>↑ V<2235/45</div>	<div>↑ V<2245</div>	<div>↑ V<2235 (45)</div>

 Lesson 1: Recording Clearances and Control Information  B1

Question: How do you record: "IF NOT OFF BY 2235, ADVISE (*facility*) NO LATER THAN 2245 OF INTENTIONS"?

MISCELLANEOUS ABBREVIATIONS

Report Leaving

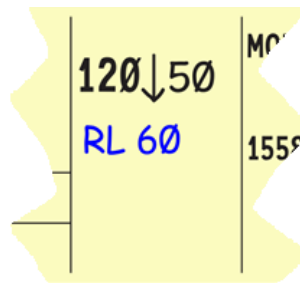
JO 7110.65, FIG
2-3-2

JO 7340.2

Report Leaving									
RL									
N8887B	ABR	15	35	120↓50	MOT	KFSD FSD ABR V15			2012
BESL/A				RL 60	1558	MOT KMOT/1600			
T265 G241	1504	34							
864	05	BIS							

“...REPORT LEAVING SIX THOUSAND”

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RL

⊙ Report Leaving

- Used in block 20
- With altitude reports

Example: “...REPORT LEAVING SIX THOUSAND”

MISCELLANEOUS ABBREVIATIONS (CONT'D)

Report Reaching

JO 7110.65, FIG
2-3-2

JO 7340.2

Report Reaching						
RR						
N719CS	MLT	16	12	110	KSFM ENE V93 BGR V471 MLT KPQI/1612	4673
SR22/G	1545	12		↓60 RR		
T154 G161						
137 03	KPQI					

“...REPORT REACHING SIX THOUSAND”

Lesson 1: Recording Clearances and Control Information 83



RR

⦿ Report Reaching

- Used in block 20
- With altitude reports

Example: “...REPORT REACHING SIX THOUSAND”

MISCELLANEOUS ABBREVIATIONS (CONT'D)

Report Passing, Report Crossing

JO 7110.65, FIG
2-3-2, Table 2-3-
12

**Report Passing (fix/altitude),
Report Crossing (radial bearing,
etc.)**

RP, RX

N8787P	FSD	16 21	90✓	CNG	KFSD FSD V15 SUX V175 VIH FAM V540 CNG KPAH/1637	1572
PA24/A T135 G141 15 439 04	1602			1632	RX MW A238R RP ALING	ZME
<p>“...REPORT CROSSING MARION TWO THREE EIGHT RADIAL, REPORT PASSING ALING”</p>						

Lesson 1 Recording Clearances and Control Information

32	KFSD FSD V15 SUX V175 VIH FAM V540 CNG KPAH/1637 RX MW A238R RP ALING	ZME
----	---	-----

RP, RX

⊙ Report Passing, Report Crossing

- Used in block 26
- With fix, radial, or DME reports

Example: “...REPORT CROSSING MARION TWO THREE EIGHT RADIAL, REPORT PASSING ALING”

NOTE: When the report is received, record the time.

MISCELLANEOUS ABBREVIATIONS (CONT'D)

Communications Transfer

JO 7110.65, FIG 2-3-2, FIG 2-3-8

Communication Transfer							
C (Time/Fix/Altitude)							
N353GS	ZEDDI	16 ⁴⁶	80✓	YOHER	3DW	SGF	V132 CNU
C172/G	1617			1722	V350	YOHER	KBEC/1725
T115 G105		45	1645				
137 ¹⁵	04	CNU					C47W
							3561

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16 ⁴⁶	80✓	YOHER	3DW	SGF	V132 CNU
		1722	V350	YOHER	KBEC/
45	1645				
CNU					C47W

C(Time/Fix/Altitude)

⊙ Communications transfer

- Used in block 26
 - Include time, fix, or altitude, unless compliance is expected upon receipt
- Insert frequency when other than standard
 - Unless covered in an LOA, frequency is assigned when clearance is issued through:
 - FSS
 - Tower

MISCELLANEOUS ABBREVIATIONS (CONT'D)

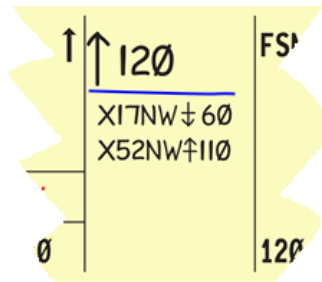
Restriction Bar

JO 7110.65, FIG 2-3-2, FIG 2-3-7

Restriction Bar

N69HE	T→NW -TXK	↑ 120	FSM	KTXK TXK V289 FSM V74 BUTCH KSNL/0055	2603
SR22/G T180 23 137 01	X17NW±60 X52NW±110	1425/	120	CLV30	D-A
TXK P1430					

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⦿ Restriction bar

- Used in block 20
- Separates altitude assignments from altitude restrictions
- Restrictions modify how to get to assigned altitude

MISCELLANEOUS ABBREVIATIONS (CONT'D)

Knowledge Check

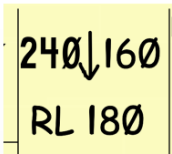
Knowledge Check



What does this strip marking represent?

A. "DESCEND AND MAINTAIN ONE SIX THOUSAND ROUTE LEFT TO FLIGHT LEVEL ONE EIGHT ZERO"

B. "DESCEND AND MAINTAIN FLIGHT LEVEL ONE EIGHT ZERO REACH LOWER TO ONE SIX THOUSAND"

C. "DESCEND AND MAINTAIN ONE SIX THOUSAND REPORT LEAVING FLIGHT LEVEL ONE EIGHT ZERO"



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Question: What does this strip marking represent?

MISCELLANEOUS ABBREVIATIONS *(CONT'D)*

Knowledge Check



Knowledge Check

What does this strip marking represent?

KLIT./..GLH V74 JAN
KJAN/1640

RP JELMI

A. "RADAR POINTOUT AT JELMI"
B. "REPORT PRIOR TO JELMI"
C. "REPORT PASSING JELMI"

 Lesson 1: Recording Clearances and Control Information  88

Question: What does this strip marking represent?

MISCELLANEOUS ABBREVIATIONS (CONT'D)

Knowledge Check

Knowledge Check

What does this strip marking represent?


A. "CLIMB TO (*requested altitude*) ONE FIVE MILES EAST OF MONROE "

B. "CONTACT (*next facility/sector*) ONE FIVE MILES EAST OF MONROE"


C. "CLEARED TO HOLD ONE FIVE MILES EAST OF MONROE"

K JAN JAN V18 MLU
V94 GGG KGGG/1736

C15E MLU



Lesson 1: Recording Clearances and Control Information



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Question: What does this strip marking represent?

CONTROL INFORMATION SYMBOLS

Radar Contact

JO 7110.65, FIG 2-3-2, FIG 2-3-8

JO 7210.3, par. 6-1-6

Radar Contact

R

UAL586	ARLYN	17 ⁴⁸	360	FSM	KORD ACITO ADELL ARLYN STL FSM KOMMA RRNET SEEVR4 KDFW	1323
A319/L T475 G431 15 587 04	1731			1827 <i>R</i>		
	STL					

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FSM	KORD ACITO
1827	ARLYN STL
<i>R</i>	RRNET SF

R

⊙ Radar contact

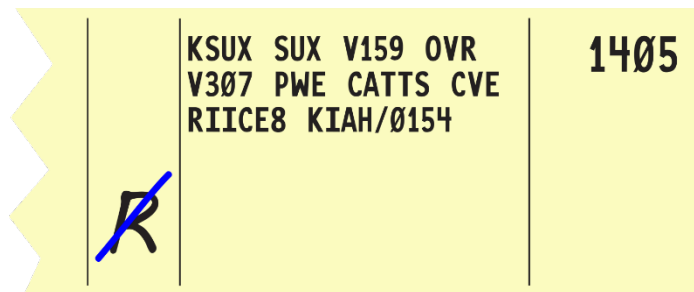
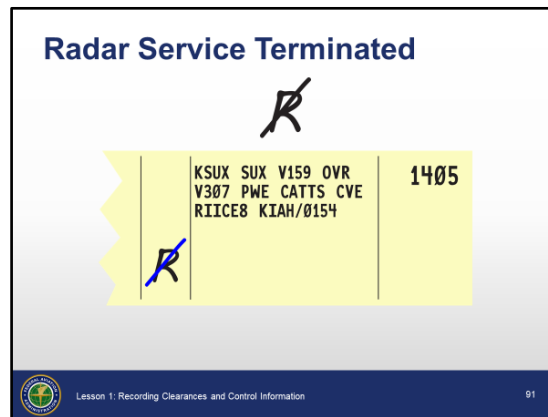
- Used in block 24
- Block may be locally adapted for each facility

NOTE: Facility air traffic managers may authorize the optional use of block 13, 14, 14a, 22, 23, 24, or 28 for transfer of control data.

CONTROL INFORMATION SYMBOLS (CONT'D)

Radar Service Terminated

JO 7110.65, FIG 2-3-2, FIG 2-3-8

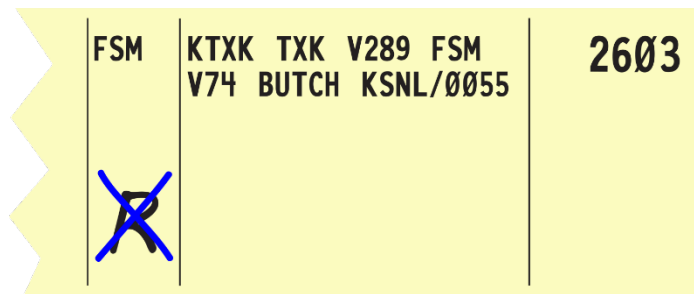
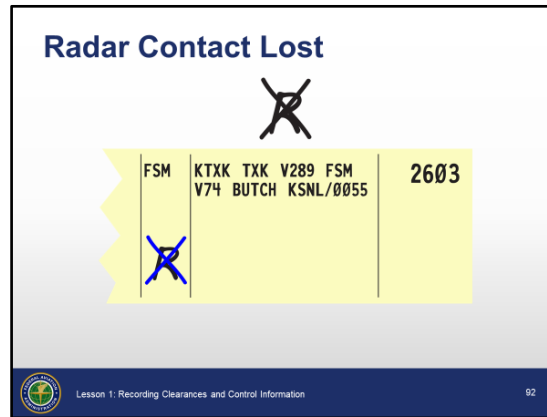


- ⦿ Radar service terminated
 - Place a slash through the R
-

CONTROL INFORMATION SYMBOLS *(CONT'D)*

Radar Contact Lost

JO 7110.65, FIG
2-3-2, FIG 2-3-8

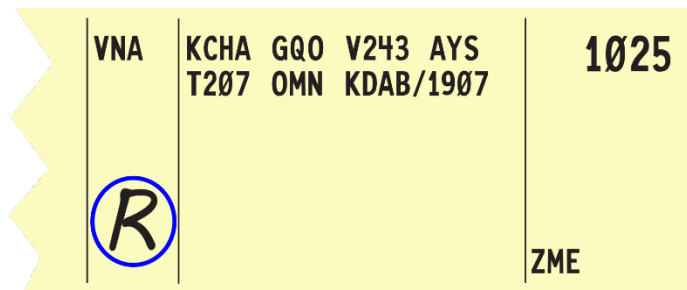
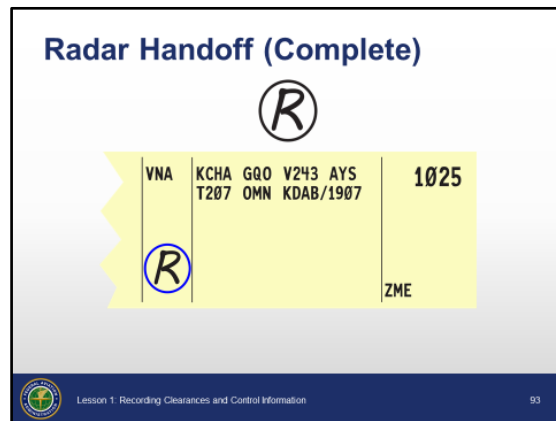


- ⦿ Radar contact lost
 - Used in block 24
 - Place an X over the R
 - Possibly caused by:
 - Terrain
 - Radar outage
 - Transponder failure
-

CONTROL INFORMATION SYMBOLS (CONT'D)

Radar Handoff Complete

JO 7110.65, FIG
2-3-2, FIG 2-3-8



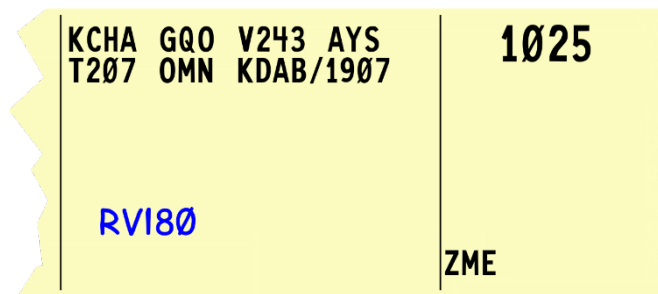
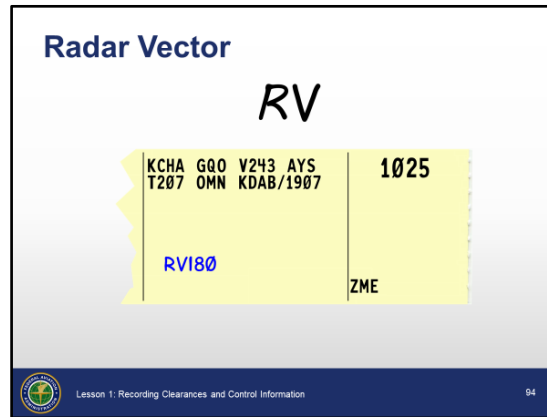
- ⦿ Radar handoff complete
 - Circle R in black when handoff is completed

CONTROL INFORMATION SYMBOLS *(CONT'D)*

Radar Vector

JO 7110.65,
Table 2-3-1, FIG
2-3-2, FIG 2-3-8

JO 7210.3, par.
6-1-6



RV

⦿ Radar vector

- Used when assigning a vector to an aircraft
- Assigned heading follows the V

NOTE: Facility air traffic managers may authorize the optional use of block 13, 14, 14a, 22, 23, 24, or 28 for radar vector information.

CONTROL INFORMATION SYMBOLS (CONT'D)


Pilot Resumed Own Navigation

JO 7110.65, FIG
2-3-2, FIG 2-3-8

Pilot Resumed Own Navigation

RX

KCHA GQO V243 AYS T207 OMN KDAB/1907	1025
RV180	ZME

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KCHA GQO V243 AYS T207 OMN KDAB/1907	1025
RV180	ZME

RX

⦿ Pilot resumed own navigation

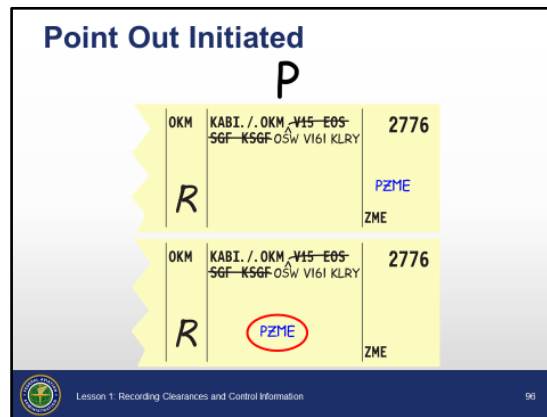
- Cross out "V" and heading when the aircraft has returned to its own navigation

CONTROL INFORMATION SYMBOLS (CONT'D)

Point Out Initiated

JO 7110.65, FIG 2-3-2, FIG 2-3-8

JO 7210.3, par. 6-1-6



P(Facility/Sector)

⦿ Point out initiated

- Used in block 26
 - May be locally adapted
 - Indicate facility, sector, or position to which aircraft is pointed out
 - Circle in red when point out is completed

NOTE: The caret symbol (^) indicates inserted route elements.

NOTE: Facility air traffic managers may authorize the optional use of block 13, 14, 14a, 22, 23, 24, or 28 for point out information.

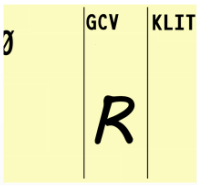
CONTROL INFORMATION SYMBOLS (CONT'D)



Knowledge Check

Knowledge Check

What does this strip marking represent?

- A. The aircraft is ready to depart
- B. The route of flight was revised
- C. The flight is radar identified

	GCV	KLIT
		

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Question: What does this strip marking represent?

CONTROL INFORMATION SYMBOLS *(CONT'D)*



Knowledge Check

Knowledge Check

How would you indicate "RADAR CONTACT LOST"?

A. B. C.

20	HLI	KGWO	20	HLI	KGWO	20	HLI	KGWO
	R			R			RL	

 Lesson 1: Recording Clearances and Control Information  98

Question: How would you indicate "RADAR CONTACT LOST"?

CONTROL INFORMATION SYMBOLS *(CONT'D)*

Knowledge Check


Knowledge Check


What does this strip marking represent?


- A. Radar vector is coordinated
- B. Radar service terminated
- C. Radar handoff is complete

60

KJAN



Lesson 1: Recording Clearances and Control Information

99

Question: What does this strip marking represent?

APPROACH ABBREVIATIONS

Approach Information

JO 7110.65, FIG 2-3-2

JO 7340.2

Approach Clearance			
APCH			
N916MH C172/G T115 G121 605 03	OSW 1640 50 KMIO	16 ⁵⁰ ↓ 70 ↓	KTOP TOP V131 CNU V307 OSW KMIO/1650 CPT
4360 APCH APCH 1645			
"...CLEARED APPROACH MIAMI AIRPORT"			

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16 ⁵⁰ ↓ 70 ↓	KTOP TOP V131 CNU V307 OSW KMIO/1650 CPT	4360 APCH APCH 1645
----------------------------	--	------------------------------

APCH

⊙ Approach Clearance

- Used in block 28
 - Write and circle in red when coordinated
 - Write in black when aircraft is cleared for approach
 - Include runway, if needed
 - Including four-digit time when aircraft was cleared for approach
- Implies pilot may execute approach of his/her choice

Example: "...CLEARED APPROACH MIAMI AIRPORT"

Continued on next page

APPROACH ABBREVIATIONS *(CONT'D)*

Approach Information (Cont'd)

JO 7110.65,
Table 2-3-12

JO 7340.2

-
- ⊙ The following specific approach procedure abbreviations are entered in block 28:
 - CT - Contact approach
 - TA - TACAN approach
 - GPS - GPS approach
 - RNAV - RNAV approach
 - VR - VOR approach
 - ILS - ILS approach
 - SI - Straight-in approach
 - NDB - Nondirectional radio beacon approach
 - VA - Visual approach
 - ⊙ The following approach segment abbreviations are entered where appropriate:
 - Used when the pilot reports position(s) during the approach
 - I - Initial approach
 - PT - Procedure turn
 - FAF - Final approach fix
 - FA - Final approach
 - MA - Missed approach
 - ⊙ You may need additional reports to provide separation
 - If requested, record in block 26
 - When pilot reports position, mark the time next to the request
-

APPROACH ABBREVIATIONS (CONT'D)

Cruise Clearance

JO 7110.65, FIG 2-3-2, FIG 2-3-7

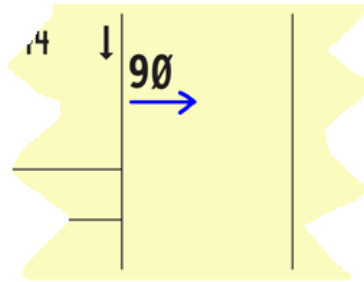
Cruise Clearance

→

N235SL	ZUN	02 ⁴⁴	1	90	KPRC DRK V12 ZUN KXNI/0247	4240
COL 4/G T175 G188 49 539	0244					
02	KXNI					

"...CLEARED TO PERRY AIRPORT, CRUISE SIX THOUSAND"

Lesson 1: Recording Clearances and Control Information
101



⦿ Cruise Clearance

- Used in block 20
- Also clears the aircraft for approach

Example: "...CLEARED TO PERRY AIRPORT, CRUISE NINER THOUSAND"

APPROACH ABBREVIATIONS (CONT'D)

Through Clearance

JO 7110.65,
pars. FIG 2-3-2,
4-2-6, Table 2-3-
11

Through Clearance					
N619PA BE20/G T300 6284 02 505 03	OSUYE 0435 0451 KTXK	48 1 70	KAFW./OSUYE V573 TXK KTXK/1653 CPT	4012 APCH 0439	
N619PA BE20/G T300 02 293 01	V<0515 (20) 0510/ KTXK P0505	1 ↑ 50	PBF KTXK TXK V16 UJM KREE/0048 CLV30	4231 T-A ZME	
"...CLEARED THROUGH TEXARKANA AIRPORT TO HELENA AIRPORT VIA..."					

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T

⊙ Through Clearance

- Used in block 28
- You may clear an aircraft through intermediate stops
- Typically follows an approach clearance

Example: "...CLEARED THROUGH TEXARKANA AIRPORT TO
HELENA AIRPORT VIA..."



APPROACH ABBREVIATIONS (CONT'D)

Knowledge Check

Knowledge Check

How do you record "CLEARED VOR APPROACH"?

A.	B.	C.
4012	4012	4012
V-APCH 0439	VOR 0439	VR 0439

 Lesson 1: Recording Clearances and Control Information  103

Question: How do you record "CLEARED VOR APPROACH"?

APPROACH ABBREVIATIONS (CONT'D)

Knowledge Check



Knowledge Check

What does this strip marking represent?

- A. "CLEARED TO TRANSIT (destination) AIRPORT"
- B. "CLEARED THROUGH TO (destination) AIRPORT"
- C. "CLEARED TO TRAIN AT (destination) AIRPORT"

3176

T-A

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Question: What does this strip marking represent?


APPROACH ABBREVIATIONS *(CONT'D)*

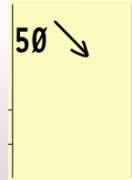
Knowledge Check



Knowledge Check

How do you record "CRUISE FIVE THOUSAND"?

A. 

B. 

C. 


 Lesson 1: Recording Clearances and Control Information  105

Question: How do you record "CRUISE FIVE THOUSAND"?

PRACTICE EXERCISE 2: STRIP MARKING SYMBOLS

Practice Exercise 2: Strip Marking Symbols

- **Purpose**
 - Review strip marking symbols
- **Materials**
 - Practice exercise 2 from Lesson 1 handout
 - Pencil and/or pen in black and red
- **Directions**
 - Write the proper symbol for each clearance item. Use the appropriate color if necessary.

 Lesson 1: Recording Clearances and Control Information 106

Purpose

Review strip marking symbols

Materials



Handout:

- ⦿ Practice exercise 2 from Lesson 1 handout
 - ⦿ Pencil and/or pen in black and red
-

Directions

This exercise takes approximately 30 minutes to complete. Write the proper symbol for each clearance item. Use the appropriate color if necessary.

Continued on next page

PRACTICE EXERCISE 2: STRIP MARKING SYMBOLS

(CONT'D)

- | | | |
|-----|--|-------|
| 1. | At or above | _____ |
| 2. | Alternate instruction | _____ |
| 3. | IAFDOF altitude | _____ |
| 4. | Clearance void | _____ |
| 5. | Depart | _____ |
| 6. | Cruise | _____ |
| 7. | Aircraft reported at assigned altitude | _____ |
| 8. | Until | _____ |
| 9. | Direction of flight indicator | _____ |
| 10. | Communications transfer | _____ |
| 11. | Join/intercept | _____ |
| 12. | At or below | _____ |
| 13. | Emergency | _____ |
| 14. | Restriction bar | _____ |
| 15. | Information forwarded | _____ |
| 16. | Radar contact | _____ |
| 17. | Report at other than assigned altitude | _____ |
| 18. | Radar handoff completed | _____ |
| 19. | Pilot canceled flight plan | _____ |
| 20. | Cross | _____ |
-

PRACTICE EXERCISE 2: STRIP MARKING SYMBOLS

(CONT'D)

-
- | | | |
|-----|------------------------------|-------|
| 21. | Radar Service Terminated | _____ |
| 22. | Local SVFR | _____ |
| 23. | Radar Vector | _____ |
| 24. | Before | _____ |
| 25. | Radar Contact Lost | _____ |
| 26. | Point Out Initiated | _____ |
| 27. | Pilot Resumed Own Navigation | _____ |
| 28. | Block Altitude Assignment | _____ |
| 29. | After | _____ |
| 30. | Arc | _____ |
| 31. | Warning | _____ |
-

PRACTICE EXERCISE 2: STRIP MARKING SYMBOLS

(CONT'D)

Exercise Review

The instructor will review Exercise 2 answers.

PRACTICE EXERCISE 2: STRIP MARKING SYMBOLS

(CONT'D)

**Exercise
Review
(Cont'd)**

The instructor will continue review of Exercise 2 answers.

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION

Practice Exercise 3: Recording Clearances and Control Information

- **Purpose**

- Review and practice strip marking on flight strips using proper characters and symbols in the correct locations

- **Materials**

- Practice exercise 3 from Lesson 1 handout
- Appendix: Location Identifiers
- Pencil and/or pen in black and red

- **Directions**

- Record the clearances and control information on the flight progress strips as per the clearance/request read by the instructor



Lesson 1: Recording Clearances and Control Information

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Purpose

Review and practice strip marking on flight strips using proper characters and symbols in the correct locations

Materials



Handout:

- ⦿ Practice exercise 3 from Lesson 1 handout
 - ⦿ Appendix: Location Identifiers
 - ⦿ Pencil and/or pen in black and red
-

Directions


This exercise takes approximately 30 minutes to complete. Record the clearances and control information on the flight progress strips as per the clearance/request read by the instructor.

Continued on next page

1.

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2.

N234 C210/G T185 Ø2 163 Ø1		IRW 70	KCSM BFV V272 MLC KMLC/Ø100	5361
	<div></div>			
	KCSM P1630			

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*

3.

N256Q PAY2/G T245 Ø2 692 Ø1			↑		0T0	KSAF SAF V83 CME KROW/ØØ4Ø	4612
			KSAF		13Ø		

4.

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PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION (CONT'D)

5.

DAL21 H/B763/L T445 G453 Ø2 511 Ø1	ARG	Ø3 ⁴¹ ↓		180	KATL./ARG J46 TUL KTUL	2633
	Ø310					
		KTUL				
						TUL

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*

6.

N2911E M2ØP/G T145 G153 Ø2 964 Ø3	TUL	21 ^{1Ø}		9Ø	SGF	KOKC IRW V14 SGF KSGF/2139	2633
	2Ø41				2134		
		EØS					

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*

7.

SWA3312 B737/L T437 G449 37 226 03	TCC	23 00		390✓	RUSTS	KLAS./ZUN J6 PNH RUSTS GHOST3 KOKC	1770 F
	2224	30			2348		
		PNH					

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*

8.

MARS31 2/AV8/I T400 G391 45 814 03	ABI	19 ⁴²		140B150✓	TCS	KABI ABI J65 PXR	7221
	1904	30			2002	KIWA	
		CME					

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION (CONT'D)

9.

N62114 C182/G T125 06 009 01			↑		EOS	KMIO EOS V13 BOYLE KFYV/0050	2233					
			KMIO P1900		90	○PICKUP OVER KMIO						

10.

N92DZ PC12/G T260 32 057 01			BUTCH KTUL TUL V74 FSM KFSM/0030 170	4162 ZME
		↑		

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*

11.

N914DC P46T/G T150 G141 12 759 04	YOZLE	01 ³⁵ ↓		120	KLNK LNK V138 GRI V6 LBF KLBF/0138	4306
	0113	33				
		KLBF				

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*

12.

N8169R BE35/G T165 G135 16 906 04	AIA	10 ¹⁵ ↓ 120✓		KCKP SUX V100 BFF KBFF/1017	3115
	1001	I4			
		KBFF			

PRACTICE EXERCISE 3: RECORDING CLEARANCES AND CONTROL INFORMATION *(CONT'D)*


13.

N9697B C208/G T175 22 442 01		↑		URH	KMLC MLC V63 UKW V17 MQP KMWL/0100	1126
		KMLC P0100		120		

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

Practice Exercise 4: Flight Strip Marking

- **Purpose**
 - Review and practice strip marking on flight strips using proper characters and symbols in the correct locations
- **Materials**
 - Practice Exercise Handout: Flight Strip Marking
 - Appendix: Location Identifiers
 - Pencil and/or pen in black and red
- **Directions**
 - Record the clearances and control information on the flight progress strips as per the clearance/request read by the instructor

 Lesson 1: Recording Clearances and Control Information 132

Purpose	Review and practice strip marking on flight strips using proper characters and symbols in the correct locations
----------------	---

Materials



Handout:

- ⦿ Practice exercise 4 from Lesson 1 handout
 - ⦿ Appendix: Location Identifiers
 - ⦿ Pencil and/or pen in black and red
-

Directions

This exercise takes approximately 30 minutes to complete. Record the clearances and control information on the flight progress strips as per the clearance/request read by the instructor.

Continued on next page

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

1.

AAL1092 B738/L T465 39 100 01		<div>↑</div> <div></div> <div>KTUL P1200</div>		PEJAY 160	KTUL PEJAY AXXEE SEEVR4 KDFW	1001
---	--	--	--	--------------------------	---------------------------------	-------------

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

2.

N986AC		↑		ONL	KICR ISD V71 TOP KTOP/Ø11Ø	1ØØ2
PC12/G						
T265						
46						
1Ø2 Ø1		KICR P12ØØ		15Ø		

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

3.

N79172		↑	LNR	KLSE CDI V97 JVL KJVL/Ø115	1003
C172/G T115 32 102 01					
		KLSE P1600	90		

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

4.

N156 PA27/G T180 G162 02 103 04	JNC	16 ³²		100	TCH	KBMC CAUSE V484 HBU KGUC/1757	1004
	1557				1706		
		MTU					

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

5.

N234 BE23/G T115 G110 02 104 04	ROACH	16 ³⁰		80	EMP	KEFS. /. ROACH V234 HUT KHUT/1735	1005
	1600				1659		
		BUM					

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

6.

N147 BE36/G T165 G172 Ø7 105 Ø4	BEVEE	16 ³⁰	150	LOZ	KHZD BEVEE V140 AZQ V115 HVQ KCRW/1728	1006
	1603			1650		
		LVT				

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

7.

<div>AAL2410</div> <div> <div>A319/L</div> <div>T468 G455</div> <div>33</div> <div>106 05</div> </div>	LIT	16 ²⁷	300	FEWW	KMEM./LIT J66 MEEOW	1007
	1603			1634	FEWW SEEVR4 KDFW	
		MEEOW				

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

8.

N253T C414/G T210 G243 15 109 03	SNY	21 ³⁰		170	GRI	KRWL EDIFY V6 DSM KDSE/2252	1102
	2105				2157		
		LBF					

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

9.

N16S BE35/G T165 G170 22 110 04	STEER	16 ³⁰		120	SGF 1702	KCPS STL V14 IRW KOKC/1807	1103
	1617						
		VIH					

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

10.

N521 BE36/G T165 G172 37 110 04	OKM	16 ⁴⁸		110	RIGYA	KEOS EOS V15 ACT KACT/1808	1301
	1630				1707		
		MLC					

PRACTICE EXERCISE 4 FLIGHT STRIP MARKING

(CONT'D)

11.

N45T BE50/G T154 10 Ø19 Ø4	CZI	12 ⁵⁴		110	MBW	KBIL BIL V611 DDY V85 FIPSS KBJC/1458	4623
	1232				1323		
		DDY					

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

12.

N686AU BE24/G T148 31 113 01		↑		MWA	KPAH CNG V67 IOW KIOW/0210	1501
		KPAH P1800		80		

PRACTICE EXERCISE 4: FLIGHT STRIP MARKING

(CONT'D)

13.

N2911E M2ØP/G T145 G153 Ø2 964 Ø3	TUL	13 ^{Ø5}		9Ø	SGF	KOKC IRW V14 SGF KSGF/2139	2633
	1236	Ø5					
		EOS					


CONCLUSION

Lesson Summary

Lesson Summary

This lesson covered:

- Purpose of strip marking
- Post current data
- Record clearances
- Standard characters
- Corrections and amendments

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Summary


- ⦿ Purpose of strip marking
 - Flight progress strips are official records of control data
- ⦿ Post current data
- ⦿ Record clearances
 - Ensure data placed in the proper location
 - Manually prepared strips shall conform to the same format as machine-generated strips
- ⦿ Standard characters
 - Use characters and symbols that are properly formed and legible
- ⦿ Corrections and amendments
 - Corrections, amendments and/or preplanning must be distinguished from the current ATC clearance
 - Do not erase or overwrite

CONCLUSION *(CONT'D)*

Lesson Summary (Cont'd)

Lesson Summary (Cont'd)

- Types of flight strips
- Flight strip data entries
- General information
- Clearance abbreviations
- Miscellaneous abbreviations
- Control information symbols
- Approach abbreviations

Lesson 1: Recording Clearances and Control Information147

- ⊙ Types of flight strips
 - Proposal strips
 - Departure strips
 - En Route strips
 - Arrival strips
- ⊙ Flight strip data entries
 - Computer programmed blocks
 - Flight strip data locations
- ⊙ General information
 - Report level
 - Coordinated
 - Direction arrow
 - IAFDOF
 - Resolution advisory (pilot reported TCAS event)
 - Warning
 - Emergency
 - Tower jurisdiction

Continued on next page

CONCLUSION *(CONT'D)*

Lesson Summary (Cont'd)

- ⊙ Clearance abbreviations
 - Cleared to depart from the fix
 - Cleared to airport (point of intended landing)
 - Depart
 - Cleared to the fix
 - Turn left, turn right
 - Until
 - Join
 - After, before
 - Hold for release
 - Release
 - Released your discretion
 - Void after
 - Climb and maintain, Descend and maintain
 - At
 - At or above, at or below
 - Block altitude
 - Cleared to climb/descend at pilot's discretion
 - Report at other than assigned altitude
 - Cleared to cross: airway, fix, radial, airway
 - Hold
 - Cleared over the fix
 - DME arc
 - SVFR
 - Cancel IFR

Continued on next page

CONCLUSION *(CONT'D)*

Lesson Summary (Cont'd)

-
- ⊙ Miscellaneous abbreviations
 - Report leaving
 - Report reaching
 - Report crossing
 - Report passing (fix/altitude)
 - Alternate instructions
 - Communications transfer
 - Restriction bar
 - ⊙ Control information symbols
 - Radar contact
 - Radar service terminated
 - Radar contact lost
 - Radar handoff complete
 - Radar vectors
 - Resume own navigation
 - Point out
 - ⊙ Approach abbreviations
 - Procedure abbreviation
 - Approach segment abbreviations
 - Cruise clearance
 - Through clearance
-

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APPENDIX: LOCATION IDENTIFIERS

Alphabetical By ID	
ID	Name
AIA	Alliance
BFF	Scottsbluff
BFV	Burns Flat
BUM	Butler
CME	Chisum
EAU	Eau Claire
EMP	Emporia
EOS	Neosho
FSM	Fort Smith
HON	Huron
HVE	Hanksville
IRW	Will Rogers
ISD	Winner
JNC	Grand Junction
KBCE	Bryce Canyon Airport
KDFW	Dallas-Fort Worth Airport
KFSM	Fort Smith Airport
KFYV	Drake Field Airport
KGJT	Grand Junction Airport
KIOW	Iowa City Airport
KJVL	Janesville Airport
KLBF	North Platte Airport
KMWL	Mineral Wells Airport
KOKC	Will Rogers World Airport
KROW	Roswell Airport
KTOP	Topeka Airport
LVT	Livingston
MLC	McAlester
MTU	Myton
OKM	Okmulgee
PGO	Rich Mountain
PRX	Paris
SAF	Santa Fe
SGF	Springfield
SNY	Sidney
TUL	Tulsa
VIH	Vichy

Alphabetical by Name	
Name	ID
Alliance	AIA
Bryce Canyon Airport	KBCE
Burns Flat	BFV
Butler	BUM
Chisum	CME
Dallas-Fort Worth Airport	KDFW
Drake Field Airport	KFYV
Eau Claire	EAU
Emporia	EMP
Fort Smith	FSM
Fort Smith Airport	KFSM
Grand Junction Airport	KGJT
Grand Junction	JNC
Hanksville	HVE
Huron	HON
Iowa City Airport	KIOW
Janesville Airport	KJVL
Livingston	LVT
McAlester	MLC
Mineral Wells Airport	KMWL
Myton	MTU
Neosho	EOS
North Platte Airport	KLBF
Okmulgee	OKM
Paris	PRX
Rich Mountain	PGO
Roswell	KROW
Santa Fe	SAF
Scottsbluff	BFF
Sidney	SNY
Springfield	SGF
Topeka Airport	KTOP
Tulsa	TUL
Vichy	VIH
Will Rogers	IRW
Will Rogers World Airport	KOKC
Winner	ISD