Federal Aviation Administration

Initial En Route Qualification Training

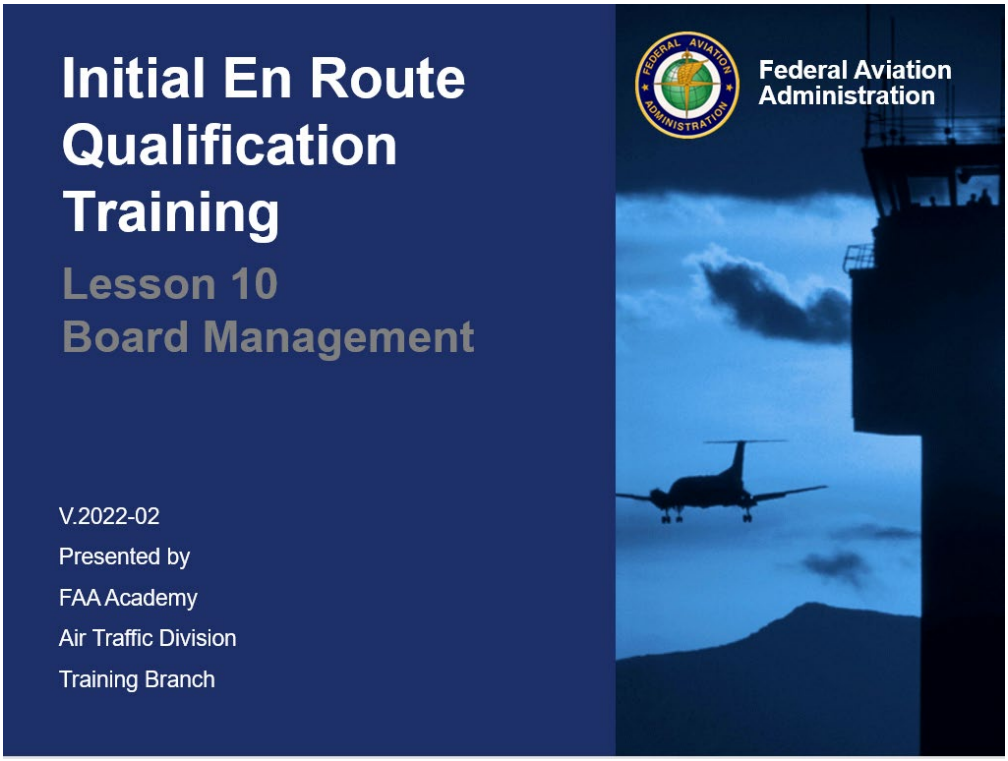
Lesson 10
Board Management

Course 50148001

LESSON PLAN DATA SHEET

COURSE NAME:	INITIAL EN ROUTE QUALIFICATION TRAINING
COURSE NUMBER:	50148001
LESSON TITLE:	BOARD MANAGEMENT
DURATION:	6+30 HOURS
DATE REVISED:	2022-02
VERSION:	V.2022-02
REFERENCE(S):	FAA ORDER JO 7110.65, AIR TRAFFIC CONTROL
HANDOUT(S):	brdmgmt.f2k - EXERCISE STRIPS AND BLANK STRIPS
EXERCISE(S)/ ACTIVITY(S):	ACTIVITY 1: SORTING AND SEQUENCING FLIGHT STRIPS ACTIVITY 2: DIRECTION ARROWS ACTIVITY 3: DIRECTION ARROWS QUIZ EXERCISE: STRIPMARKING
END-OF-LESSON TEST:	YES
PERFORMANCE TEST:	NONE
MATERIALS:	NONE
OTHER PERTINENT INFORMATION:	

INTRODUCTION



Board management involves sequencing strips and scanning and correctly interpreting the traffic situation, which will allow you to begin planning control instructions. Using knowledge and skills from previous lessons, you will begin to recognize operational priorities and procedural preferences necessary to operate a safe and efficient sector.

INTRODUCTION *(Continued)*

BOARD MANAGEMENT

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Purpose

Board management includes techniques for sector management. You will learn to scan and sequence strips and to determine flight direction by reading the spaces on the flight progress strips. You will also learn how to plan in conjunction with stripmarking, avoid conflicts, determine priorities, and apply procedures.

INTRODUCTION *(Continued)*

Lesson Objectives

LESSON OBJECTIVES

- On an End-of-Lesson Test and in accordance with FAA Order JO 7110.65, you will identify:
  - Procedures for sequencing, scanning, and removing flight progress strips
  - Procedure for nonreceipt of a position report

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BOARD MANAGEMENT

Fix Designators

FIX DESIGNATORS

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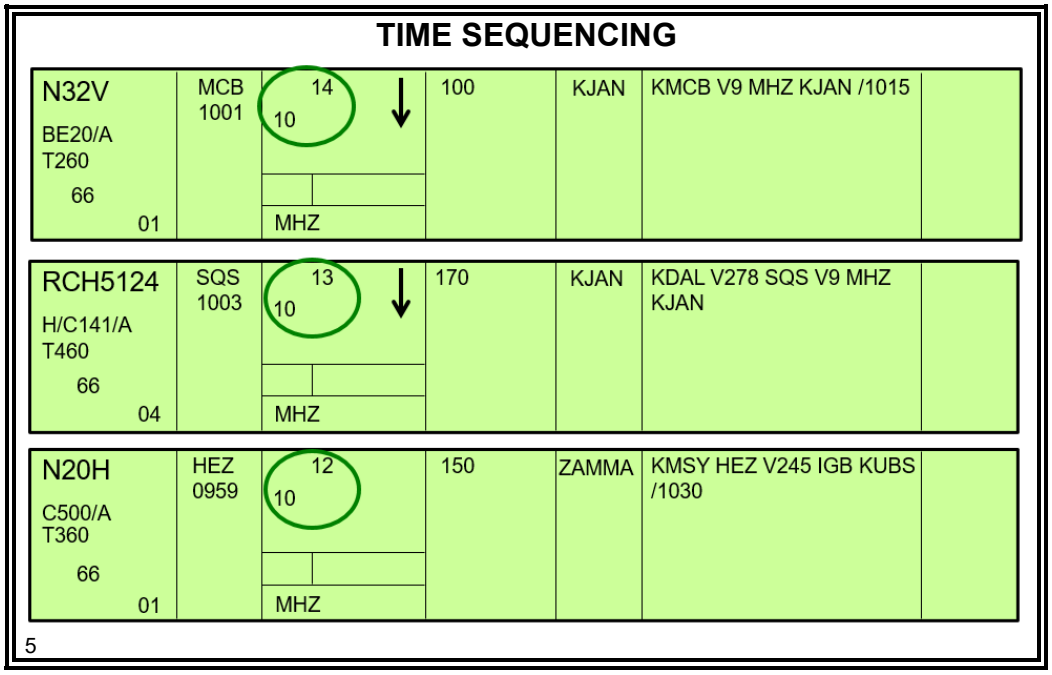
- Arrange strips under the appropriate fix designator.
- Proposal strips are placed in the Suspense Bay (at ZAE, the Suspense Bay is above each bay header).
  - For multiple strips on proposals, the first strip is placed below the second strip.
  - Strips are sequenced according to P Time in Suspense Bay.

SEQUENCING FLIGHT STRIPS

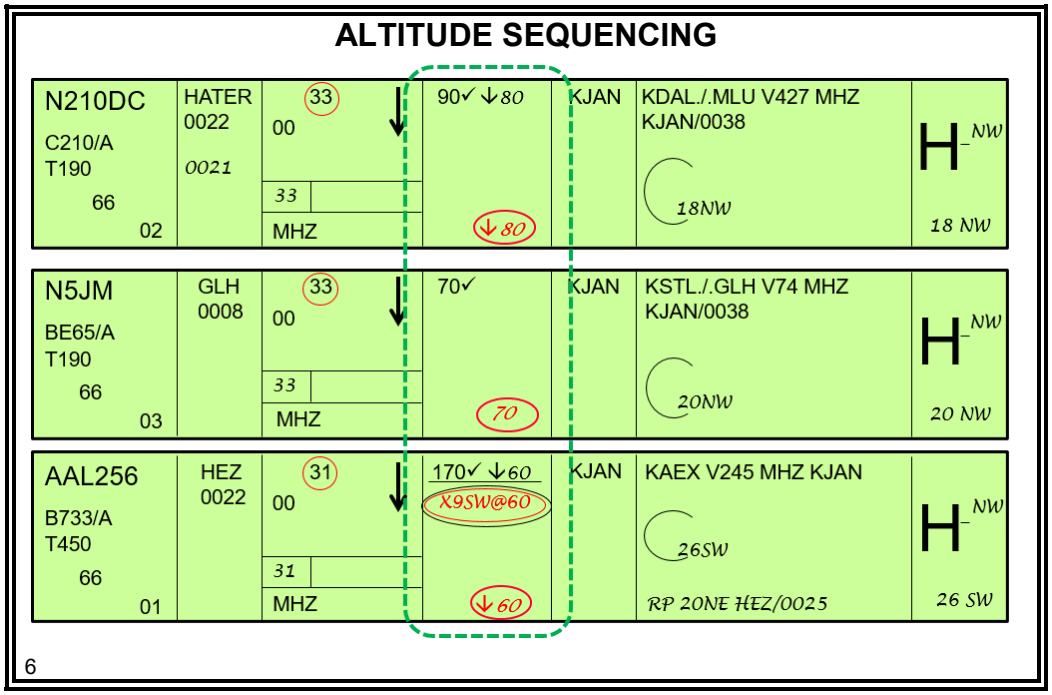
Time Sequencing



- Post strips in the appropriate low or high altitude sector according to altitude/flight level.
- Sequence strips in:
  - Chronological order of arrival over posted fix (time sequencing)
    - Earliest at the bottom
    - If times are the same, sequence strips by altitude with lower altitudes below higher altitudes

SEQUENCING FLIGHT STRIPS *(Continued)*

Altitude Sequencing



- Ascending order of altitudes over posted fix (altitude sequencing)
  - Lowest on the bottom
  - Most often used in holding stacks

ACTIVITY 1: SORTING AND SEQUENCING FLIGHT STRIPS

Activity 1

SORTING AND SEQUENCING ACTIVITY

Purpose: to practice sorting and sequencing flight strips

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Description

In this activity, you will be presented with four sets of flight strips. You will need to arrange each flight strip in the correct bay and in the correct sequence within each bay. Feedback will be given immediately.

Directions

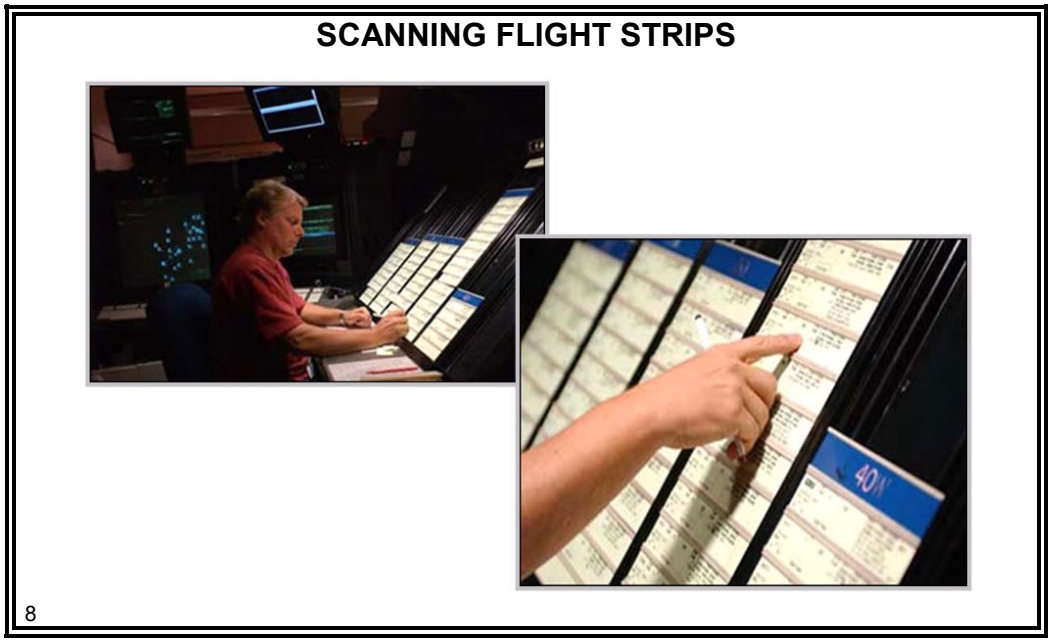
Access the IET eLearning menu. Select **Lesson 10 – Board Management**. Click **Sorting and Sequencing** activity.

Time Allotted

30 minutes

SCANNING FLIGHT STRIPS

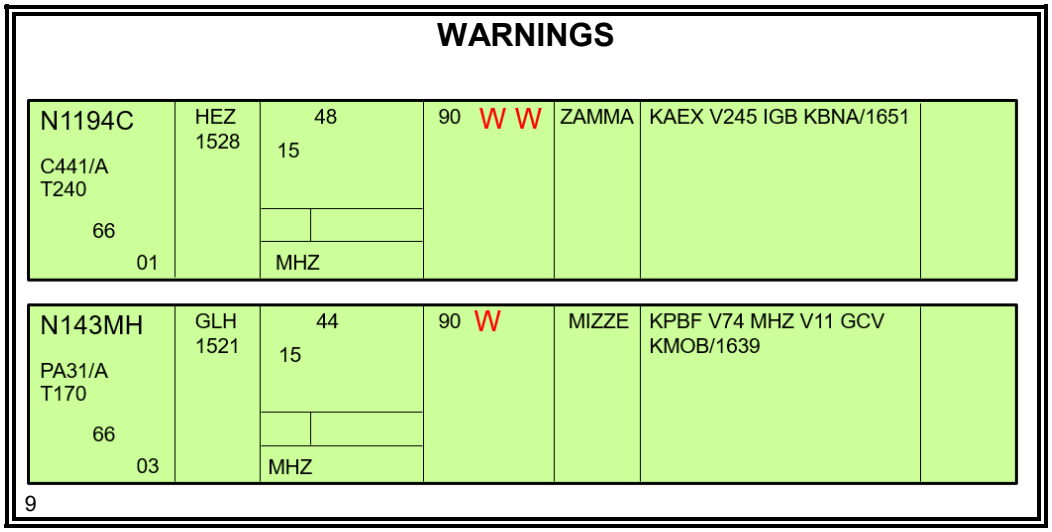
Scanning Flight Strips



- Scan flight progress strips for:
  - Proper sequence
  - Conflicts
  - Inappropriate Altitude For Direction Of Flight (IAFDOF)
  - Arrivals
  - MEA violations
  - Routing errors
  - Coordination functions
  - Type aircraft
    - Number of aircraft, if more than one
    - Category, if aircraft is heavy
  - Non-DME
  - Speed

SCANNING FLIGHT STRIPS *(Continued)*

Less-Than-Minimum Separation Situations
JO 7110.65, par. 2-3-10, fig. 2-3-8

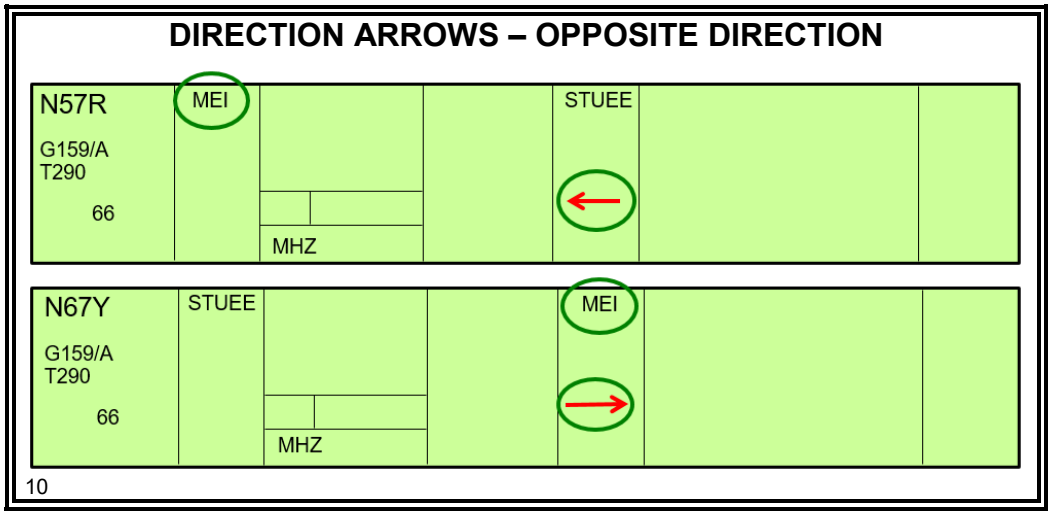


⊙ Red W (warning) on a strip indicates:

- Less than 10 minutes at the same fix and altitude
- Aircraft conflict
- MEA/MOCA violation
- Warning/Prohibited Area violation

DIRECTION ARROWS

Opposite Direction
JO 7110.65, par. 2-3-2

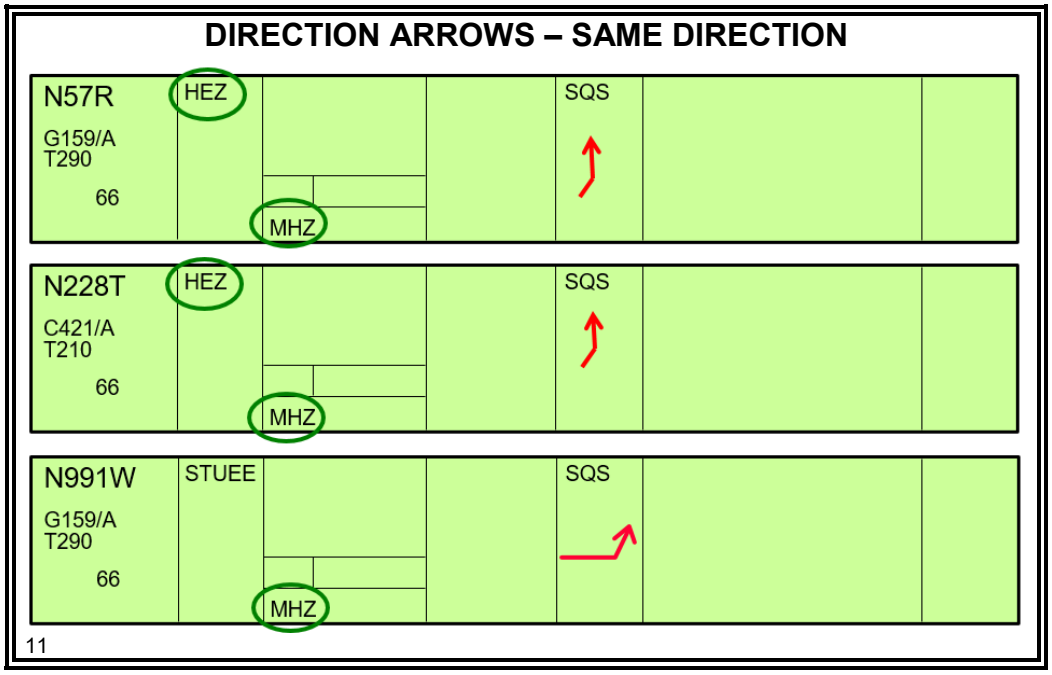


⊙ Use red direction arrows in space 23 to help determine:

- Opposite direction traffic
  - Previous fix (space 11) on one strip will be the same as next fix (space 21) on the other strip
  - Current fix (space 19) will usually be the same for both

DIRECTION ARROWS *(Continued)*

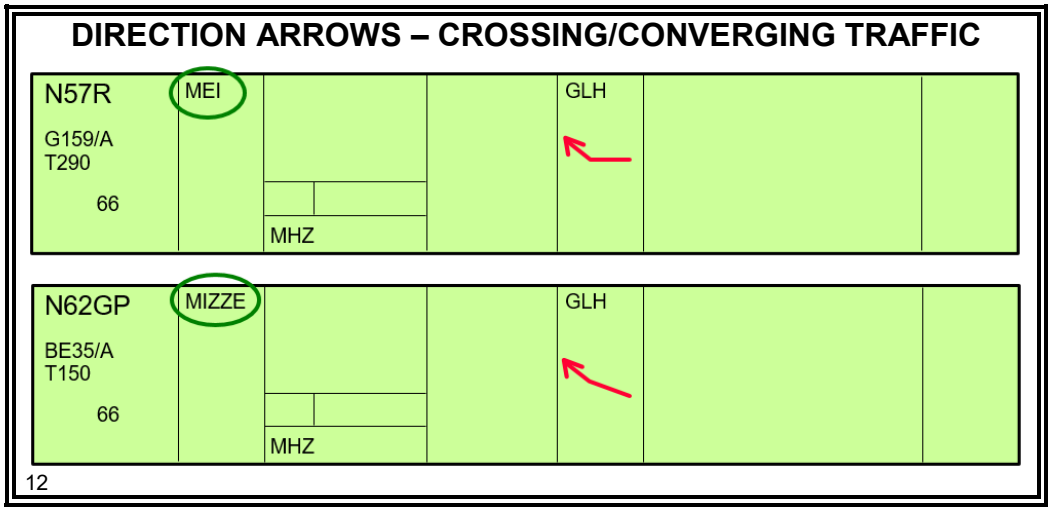
Same Direction
JO 7110.65, par. 2-3-2



- Same direction traffic
  - Previous fix (space 11) and next fix (space 21) will usually be the same on both strips

DIRECTION ARROWS *(Continued)*

Crossing/ Converging Traffic
JO 7110.65, par. 2-3-2

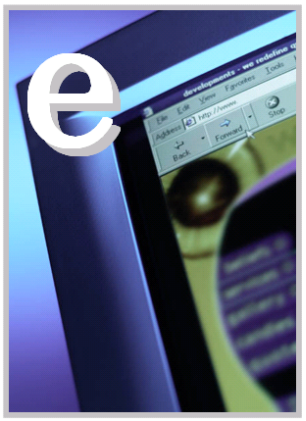


- Crossing/converging traffic
  - Previous fix (space 11) will be different, and next fix (space 21) may be the same or different

ACTIVITY 2: DIRECTION ARROWS

Activity 2

DIRECTION ARROWS ACTIVITY



Purpose: to practice using direction arrows on flight strips to identify conflictions

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Description

In this activity, you will be presented with seven sets of flight strips. Each set will mimic a bay in which the flight strips have already been sequenced and sorted. You will also be presented with a set of direction arrows. You will need to drag and drop the correct direction arrow to the correct location on each flight strip.

Directions

Access the IET eLearning menu. Select **Lesson 10 – Board Management**. Click **Direction Arrows** activity.

Time Allotted

15 minutes

ACTIVITY 3: DIRECTION ARROWS QUIZ

Activity 3

DIRECTION ARROWS QUIZ

Purpose: to test your knowledge of direction arrows

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Description

In this activity, you will apply your map knowledge and test your ability to place the correct direction arrows on flight progress strips. You will be given a total of 10 flight strips, which display one at a time. Along with each flight strip, you are given a table containing various direction arrows. You **must** click the correct direction arrow that applies to the given flight strip.

Directions

Access the IET eLearning menu. Select **Lesson 10 – Board Management**. Click **Direction Arrows Quiz** activity.

Time Allotted

10 minutes

SECTOR MANAGEMENT

Solutions to Traffic

⊙ Determine different solutions to traffic situations.

- Analyze the situation to determine alternative solutions based on:
  - Pilot's request
  - Other controller's request
  - Operational priorities
  - Operational advantage

NOTE: Solutions to traffic situations are taught in later lessons.

Removing Flight Progress Strips

JO 7110.65, par. 2-3-1

⊙ Remove flight progress strips when they are **no** longer required for control purposes.

Nonreceipt of Position Report

JO 7110.65, par. 6-1-2

⊙ Take action to obtain a position report affecting separation **no** later than 5 minutes after the aircraft is estimated over the fix.

SECTOR MANAGEMENT *(Continued)*

Taking Control of a Sector

⊙ Follow this suggested checklist when preplanning a problem or taking control of a sector:

PRE-PLANNING CHECKLIST	
✓	Stuff and sequence strips.
✓	Check for TUX aircraft.
✓	Check altitude if on frequency.
✓	Mark directions arrows.
✓	Check for IAFDOF.
✓	Mark all conflicts with red Ws.
✓	Resolve conflictions.
✓	Plan all arrival restrictions.
✓	Establish priorities.

EXERCISE: STRIPMARKING

Exercise, Part 1

STRIPMARKING EXERCISE, PART 1

Purpose: to practice marking flight progress strips

Directions: set up bays and bay headers; mark provided strips based on scripts read aloud by instructor

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Directions

This exercise is in three parts. In each part, your instructor will read the script of traffic situations. You will use bay headers for D66 (Magnolia), set up bays, and do the necessary stripmarking on the strips provided. At the end of each part, your instructor will stop and discuss your answers. If necessary, the instructor may stop the clock midway through a part in order to answer questions that may arise.

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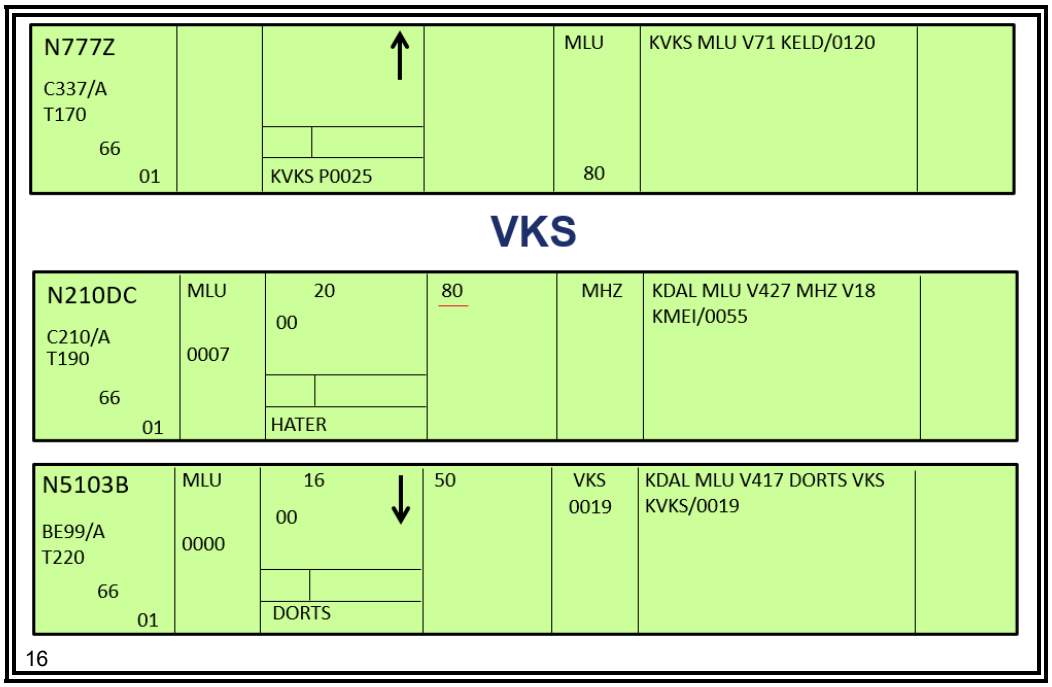
EXERCISE: STRIPMARKING *(Continued)*

Part 1
Strips



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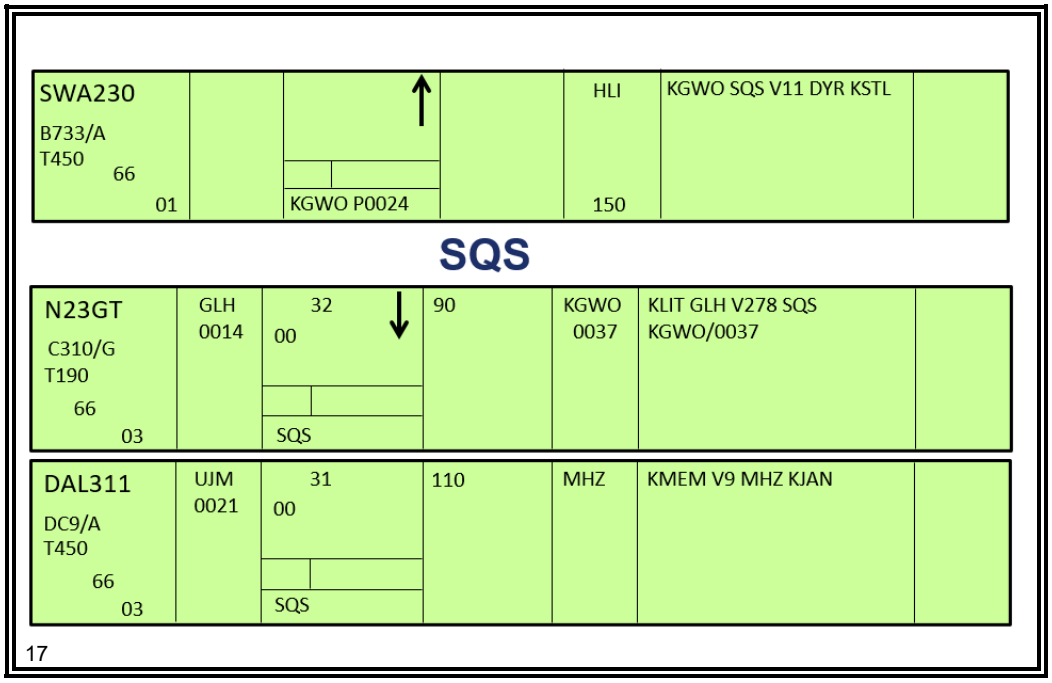
EXERCISE: STRIPMARKING *(Continued)*

Part 1
Strips
(Cont'd)



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EXERCISE: STRIPMARKING *(Continued)*

Exercise, Part 2

STRIPMARKING EXERCISE, PART 2

Purpose: to practice marking flight progress strips

Directions: set up bays and bay headers; mark provided strips based on scripts read aloud by instructor

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Part 2 Strips

N777Z C337/A T170 66 01		↑ KVKS P0025		MLU 80	KVKS MLU V71 KELD/0120	

VKS

N210DC C210/A T190 66 01	MLU 0007	20 00 20 HATER	~~80~~ 90✓	MHZ	KDAL MLU V427 MHZ V18 KMEI/0055	
N5103B BE99/A T220 66 01	MLU 0000	16 00 16 0016 DORTS	50 ✓ 50/31SE MLU	VKS 0019	KDAL MLU V417 DORTS VKS KVKS/0019	APCH 0011

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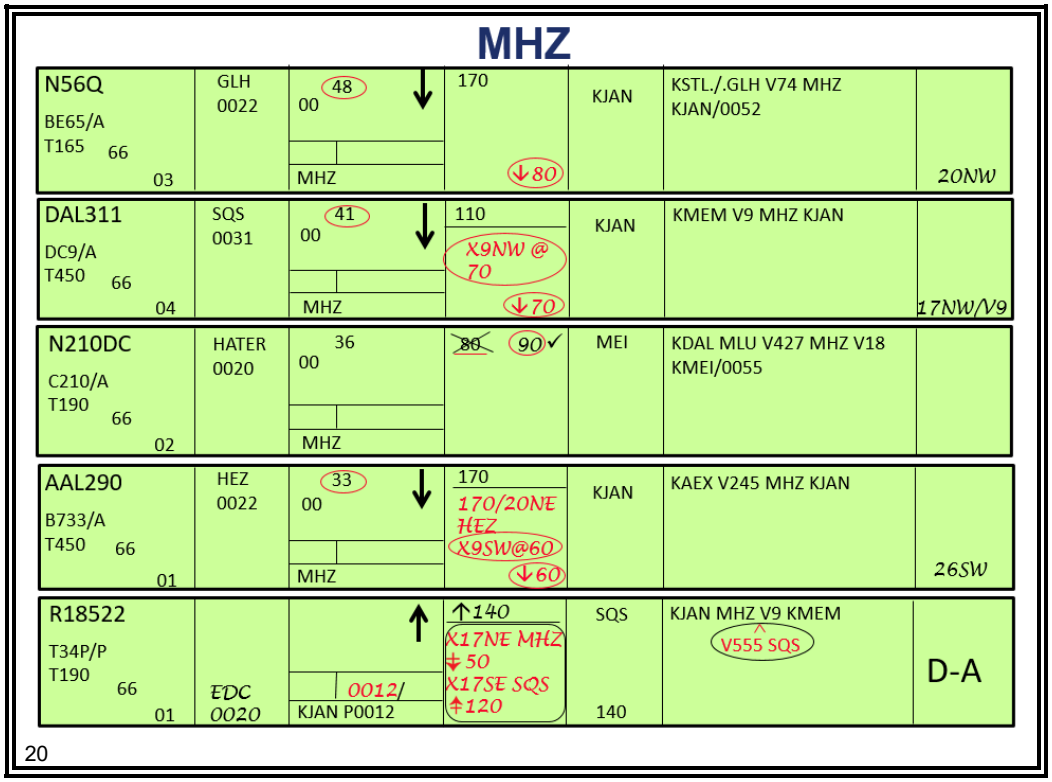
EXERCISE: STRIPMARKING *(Continued)*

Part 2 Strips (Cont'd)



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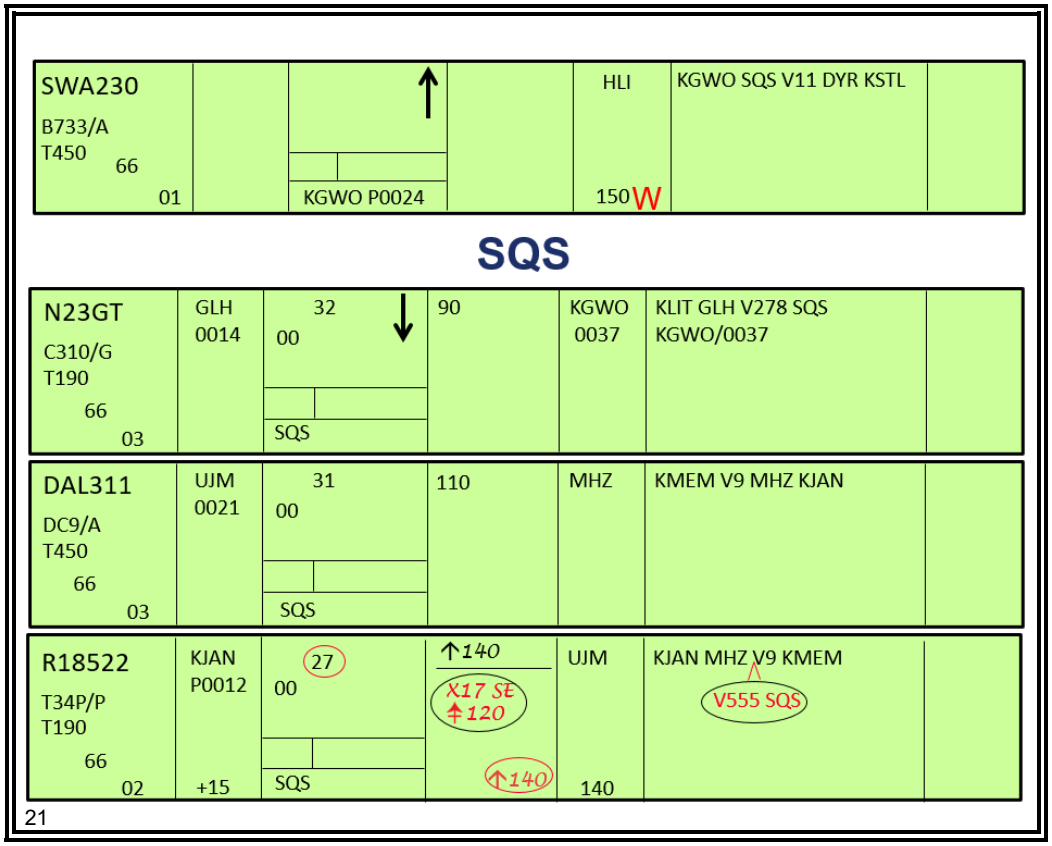
EXERCISE: STRIPMARKING *(Continued)*

Part 2
Strips
(Cont'd)



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EXERCISE: STRIPMARKING *(Continued)*

Exercise, Part 3

STRIPMARKING EXERCISE, PART 3

Purpose: to practice marking flight progress strips

Directions: set up bays and bay headers; mark provided strips based on scripts read aloud by instructor

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Part 3 Strips

VKS

N210DC C210/A T190 66 01	MLU 0007	20 00 20 0019 HATER	~~80~~ 90✓	MHZ 0034	KDAL MLU V427 MHZ V18 KMEI/0055	
N5103B BE99/A T220 66 01	MLU 0000	16 00 ℄ 0018 16 0016 DORTS	50✓ 50/31SE MLU	VKS 0019	KDAL MLU V417 DORTS VKS KVKS/0019	APCH 0011
N777Z C337/A T170 66 01	EDC 0027	KVKS P0025		MLU 80	KVKS MLU V71 KELD/0120	

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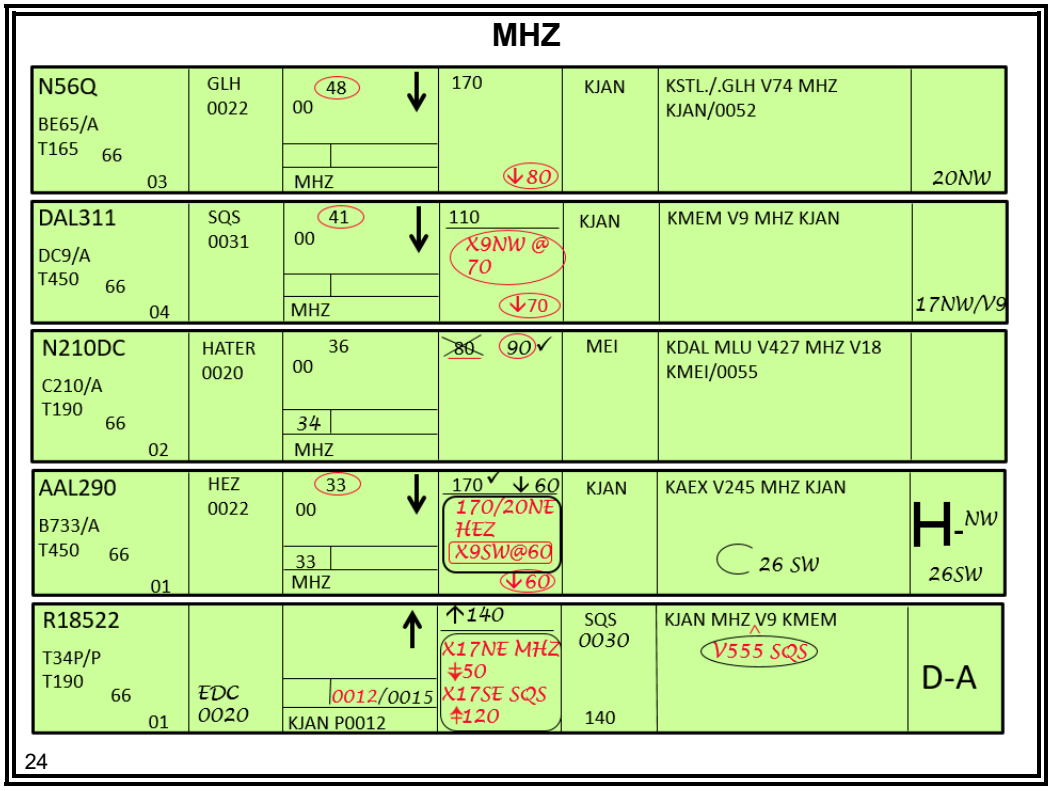
EXERCISE: STRIPMARKING *(Continued)*

Part 3
Strips
(Cont'd)



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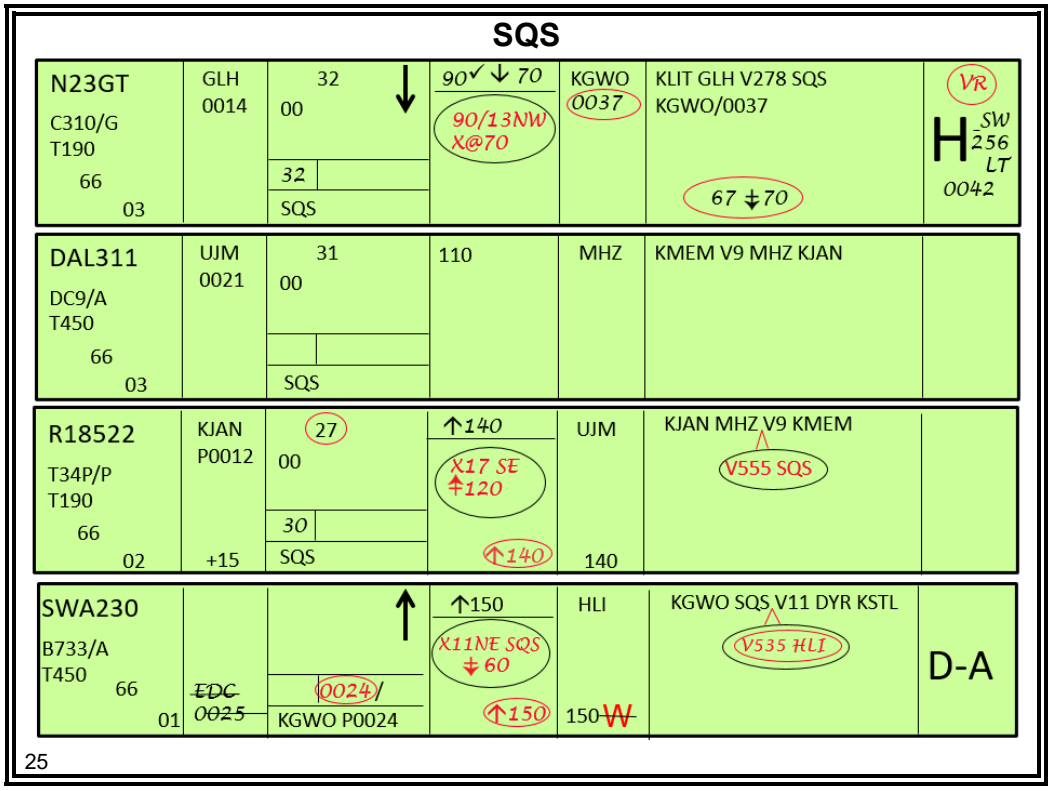
EXERCISE: STRIPMARKING *(Continued)*

Part 3
Strips
(Cont'd)



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EXERCISE: STRIPMARKING *(Continued)*

Final Answers

FINAL ANSWERS

Purpose: to practice marking flight progress strips

Directions: set up bays and bay headers; mark provided strips based on scripts read aloud by instructor

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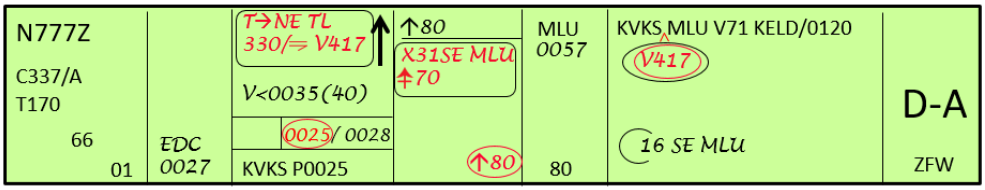
Final Answers Strips

VKS



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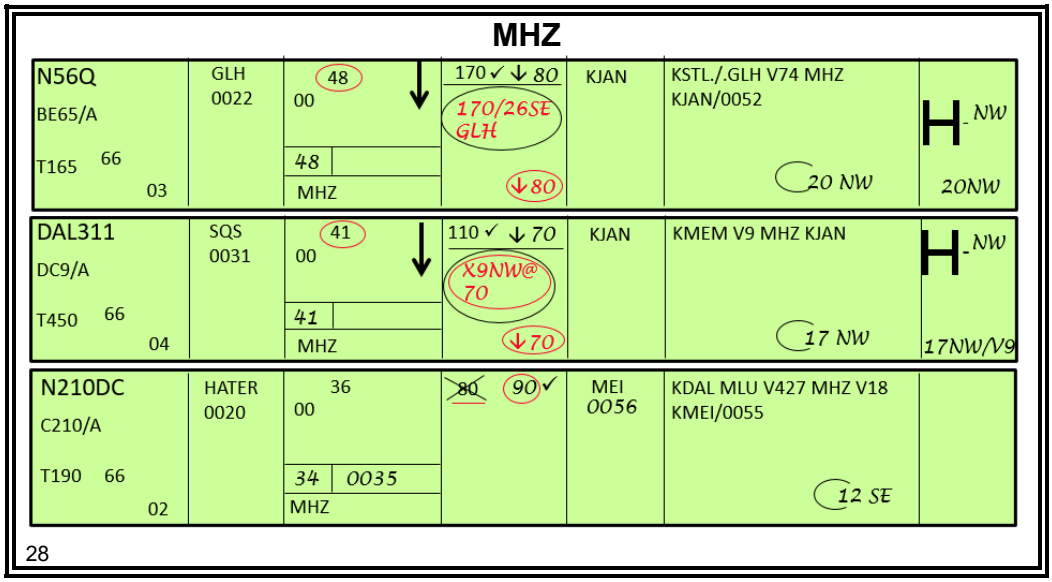
EXERCISE: STRIPMARKING *(Continued)*

Final Answers Strips (Cont'd)



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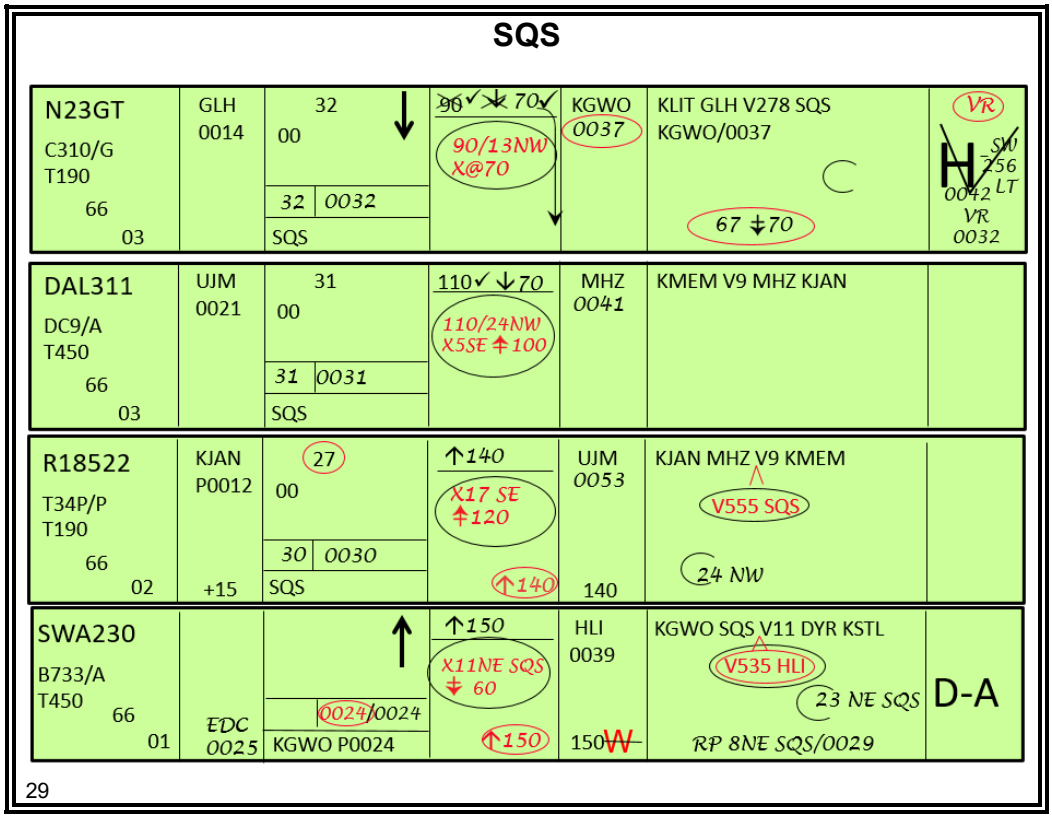
EXERCISE: STRIPMARKING *(Continued)*

Final Answers Strips (Cont'd)



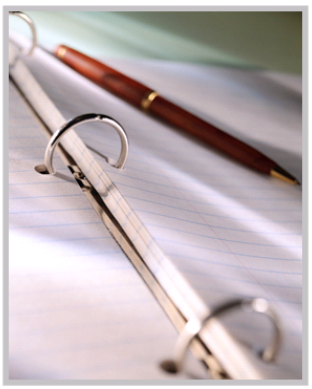
IN CONCLUSION

Lesson Review

LESSON REVIEW

The following topics were covered in this lesson:

- Sequencing of flight strips
- Scanning of flight strips
- Direction arrows
- Sector Management



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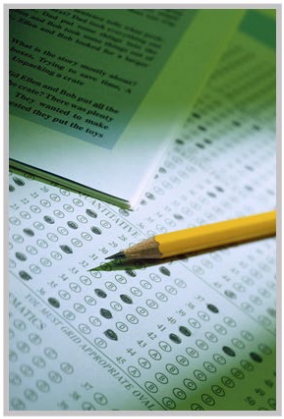
End-of-Lesson Test

END-OF-LESSON TEST

Board Management



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