Federal Aviation Administration

55054003 EN ROUTE RADAR ASSOCIATE CONTROLLER TRAINING PART C: ADVANCED CONCEPTS

Lesson 9: Alerts and Airspace Status View

Version: 1.0 2022.08

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LESSON PLAN DATA SHEET

Course Name	En Route Radar Associate Controller Training Part C: Advanced Concepts
Course Number	55054003
Lesson Title	Alerts and Airspace Status View
Duration	2 hours, 15 minutes (includes lesson, part-task exercise, and ELT)
Version	1.0 2022.08
Reference(s)	JO 7110.65, Air Traffic Control; JO 7110.125, Controller Pilot Data Link Communications (CPDLC) in the ERAM Environment; TI 6110.100, En Route Automation Modernization R-Position User Manual; TI 6110.101, En Route Automation Modernization RA-Position User Manual; TI 6110.108, ERAM Reference Card; AT URET User Manual
Prerequisites	NONE
Handout(s)	⊙ Part-Task Exercise ⊙ TI 6110.108, ERAM Quick Reference Controller Card
Exercise / Activity	Refer to handout for: ⊙ Part-Task Exercise: Alerts and Airspace Status View
Scenario	⊙ Run scenario 55054003_L09_S## in TTL
Assessments	⊙ YES - Written
Materials and Equipment	⊙ Pencil and/or pen
Other Pertinent Information	⊙ **Ensure lesson materials are downloaded to the classroom computer** ⊙ This lesson is based on ERAM EAE410 ⊙ The lesson has been reviewed and reflects current orders and manuals as of April 2022

LESSON ICON LEGEND

	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates text that is for the instructor only.
	The Multimedia icon indicates a video or audio clip is in the presentation.
	The Phraseology icon indicates that phraseology is in the content.
	The WBT icon indicates a component of web-based training.
	The Click icon indicates a PPT slide with click-based functionality to present additional information.
	The Definition icon indicates a published definition.

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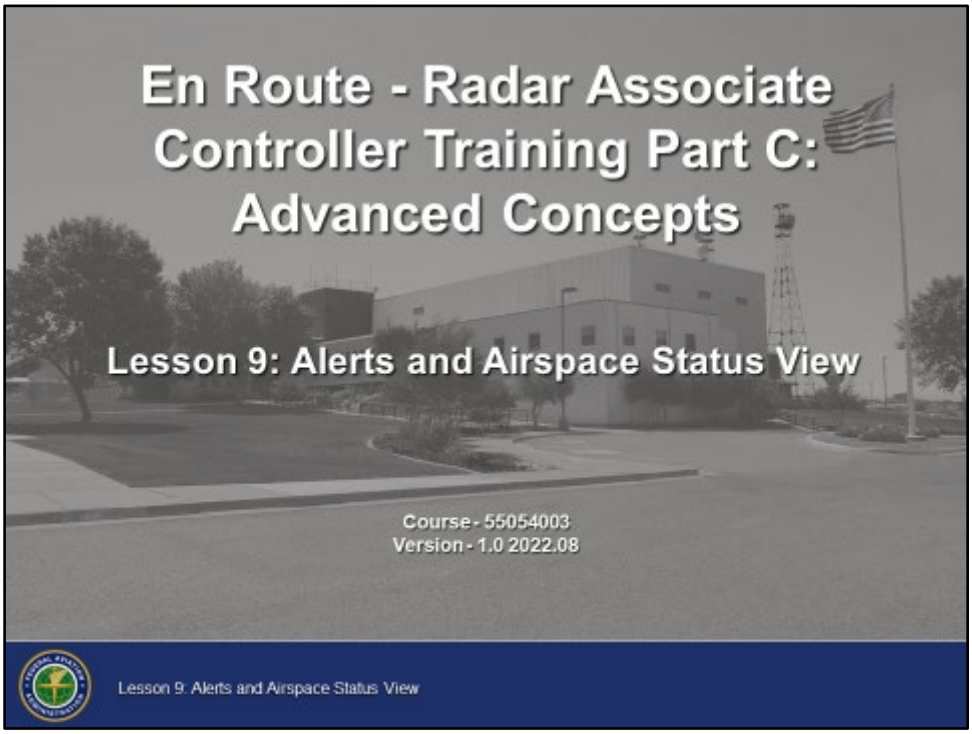
LESSON INTRODUCTION

Overview



This lesson introduces Alerts and Airspace Status View.

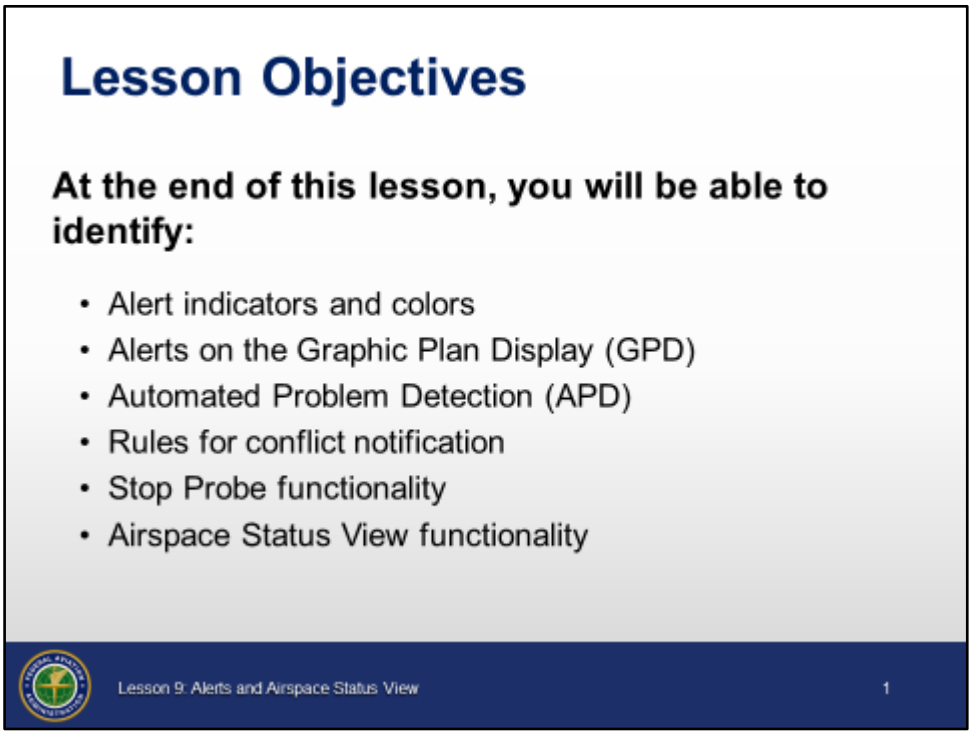
The EDST includes conflict probe planning tools to help avoid conflicts between two or more aircraft and between aircraft and protected airspace.

This lesson explains the colors and indicators for these alerts, how to display the indicators on the GPD, and how conflicts are processed.

The lesson also covers how airspace is configured to provide alerts between aircraft and airspace.

LESSON INTRODUCTION *(CONT'D)*

Lesson Objectives



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

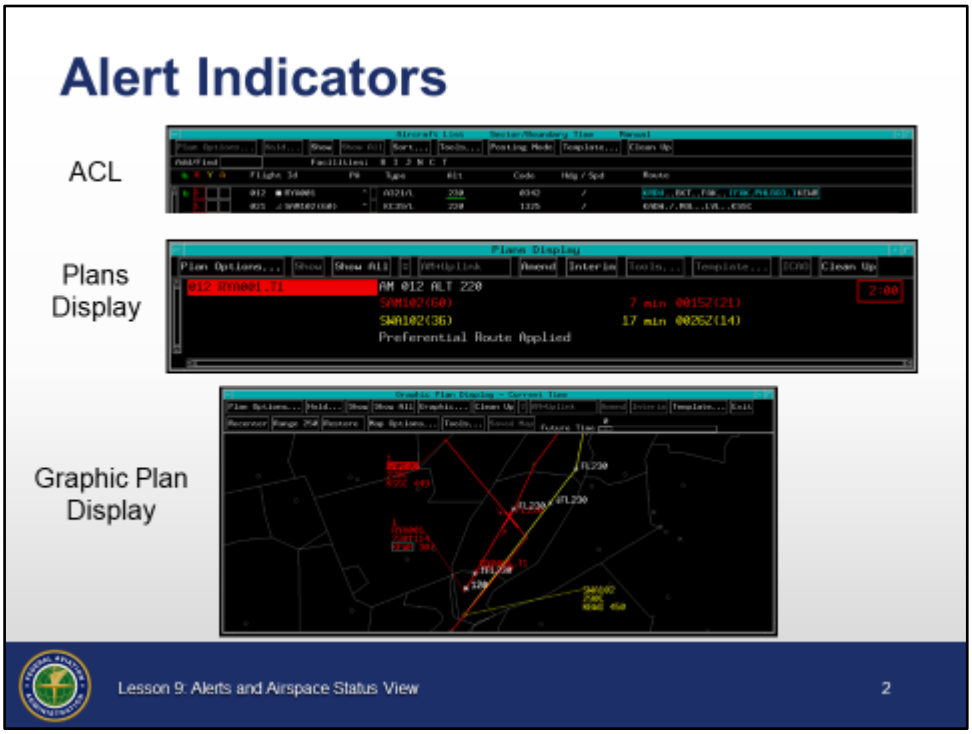
- Alert indicators and colors
- Alerts on the Graphic Plan Display (GPD)
- Automated Problem Detection (APD)
- Rules for conflict notification
- Stop Probe functionality
- Airspace Status View functionality

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.

ALERT INDICATORS AND COLORS

Alert Indicators

TI 6110.101, sec. 3

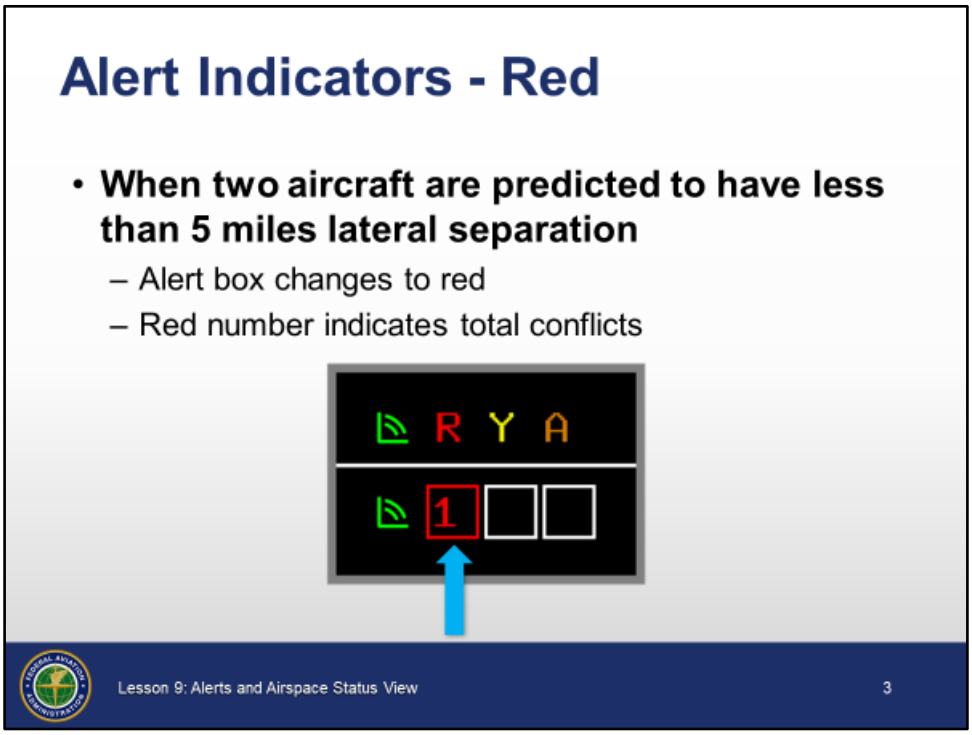


- Aircraft List (ACL), Plans Display, and Graphic Plan Display (GPD) all display alerts which result from conflict probe processing of aircraft trajectories
  - Color coding and indicators are similar on all three displays
- ACL alerts are displayed in the alert boxes to the left of each FLID

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - Red

TI 6110.101, sec. 5.2.2

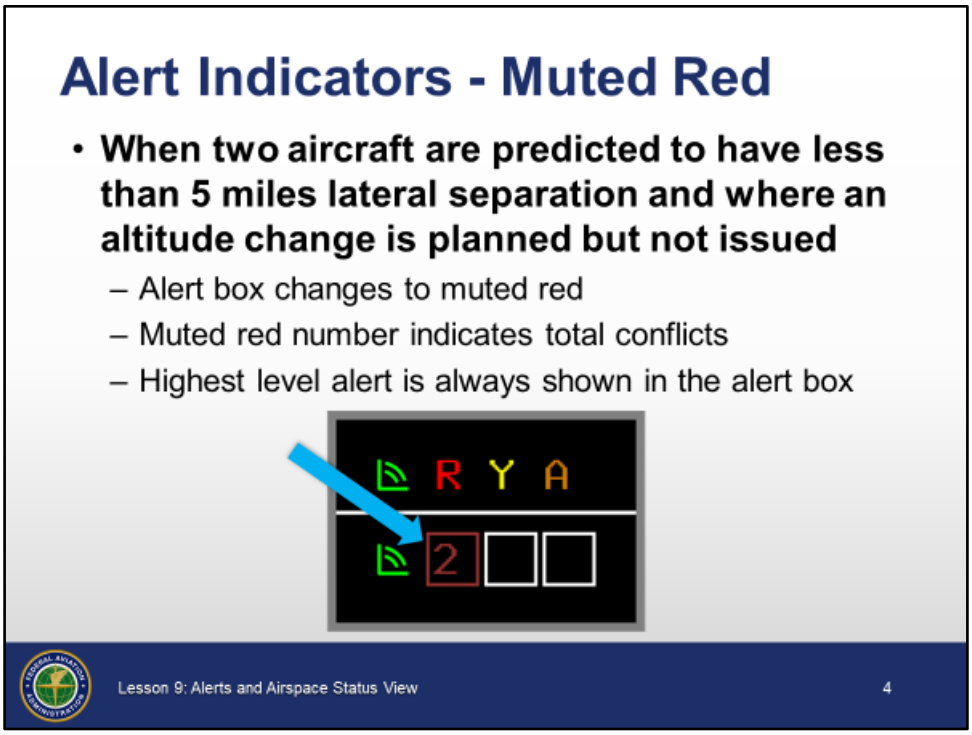


- When two aircraft are predicted to have less than 5 miles lateral separation
  - Alert box changes to red
  - Red number indicates the total number of conflicts of this type

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - Muted Red

TI 6110.101, sec. 5.2.2

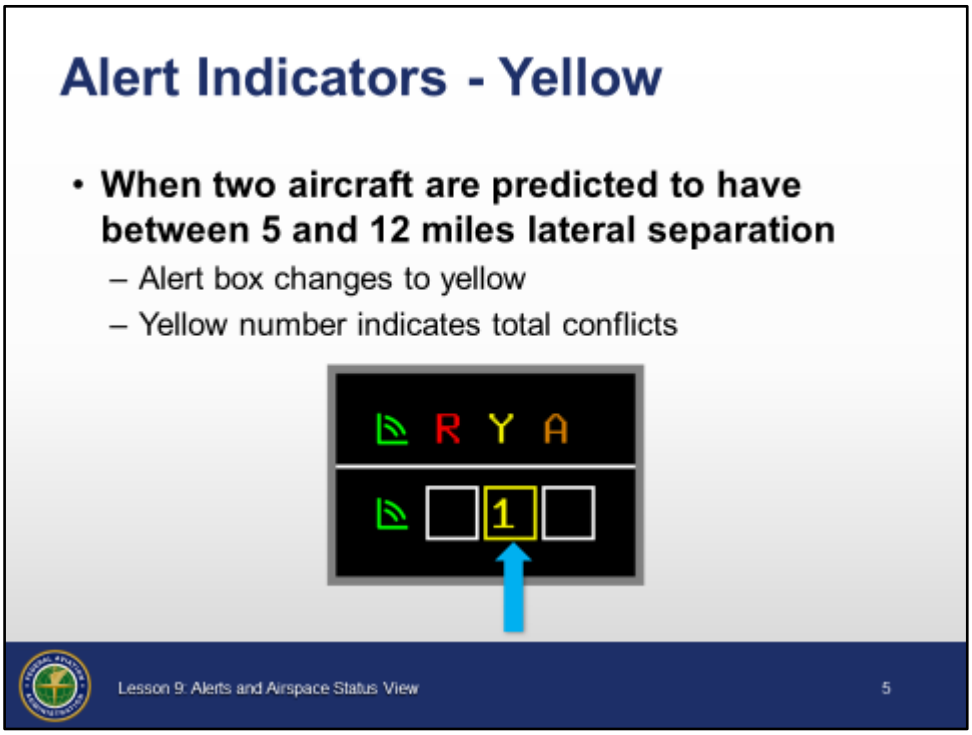


- When two aircraft are predicted to have less than 5 miles lateral separation and where an altitude change is planned but not issued
  - Alert box changes to muted red
  - The muted red number indicates the total number of conflicts of this type
  - The highest level alert is always shown in the box

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - Yellow

TI 6110.101, sec. 5.2.2

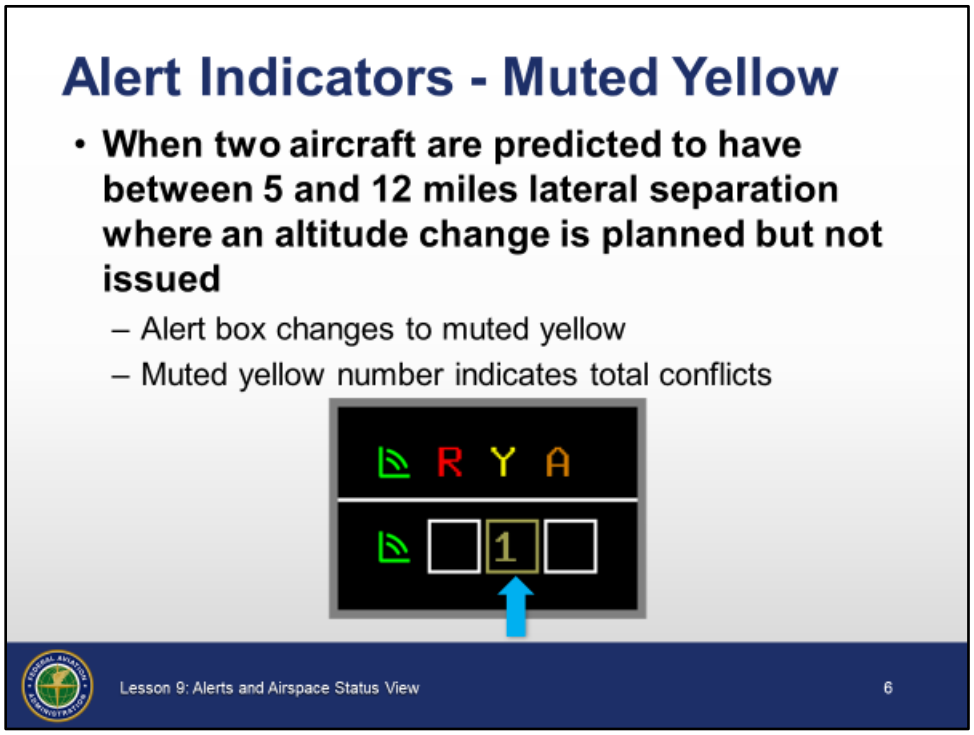


- When two aircraft are predicted to have between 5 and 12 miles lateral separation
  - Alert box changes to yellow
  - Yellow number indicates the total number of conflicts of this type

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - Muted Yellow

TI 6110.101, sec. 5.2.2

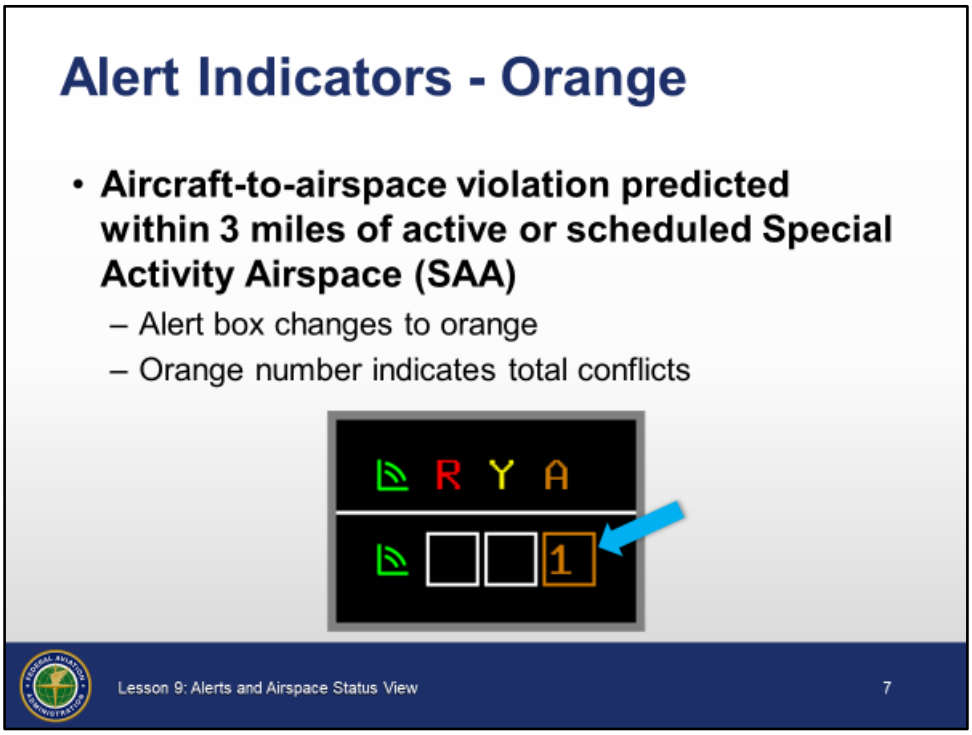


- When two aircraft are predicted to have between 5 and 12 miles lateral separation where an altitude change is planned but not issued
  - Alert box changes to muted yellow
  - Muted yellow number indicates the total number of conflicts of this type

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - Orange

TI 6110.101, sec. 5.2.2



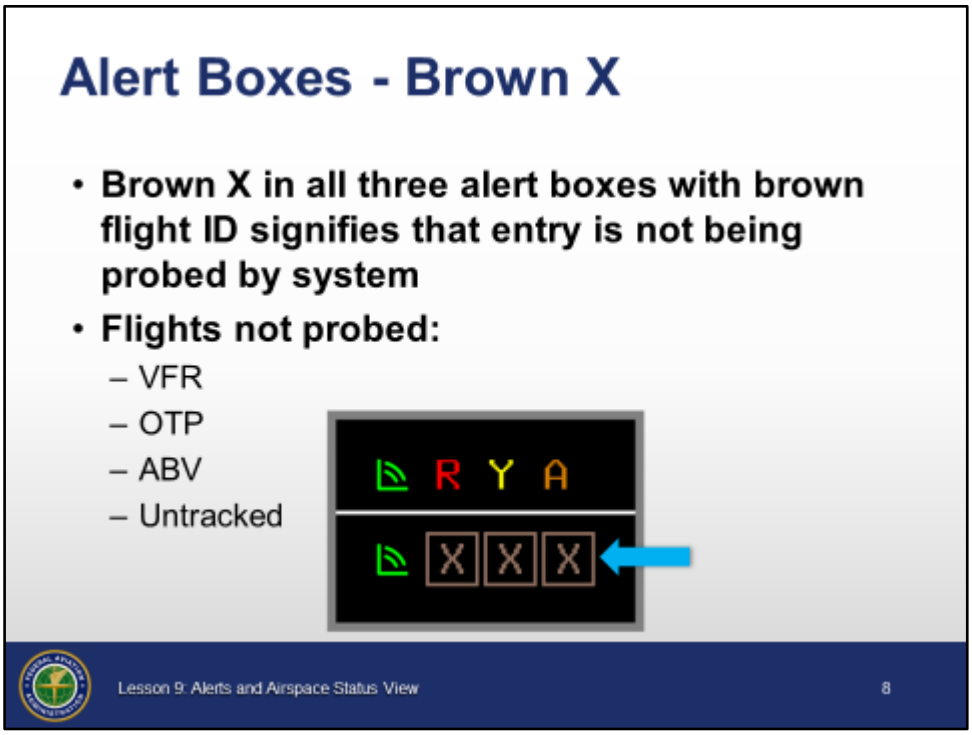
⊙ When an aircraft-to-airspace violation is predicted within 3 miles of active or scheduled Special Activity Airspace (SAA)

- Alert box changes to orange
- Orange number indicates the total number of conflicts of this type

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Boxes - Brown X

TI 6110.101, sec. 5.2.2

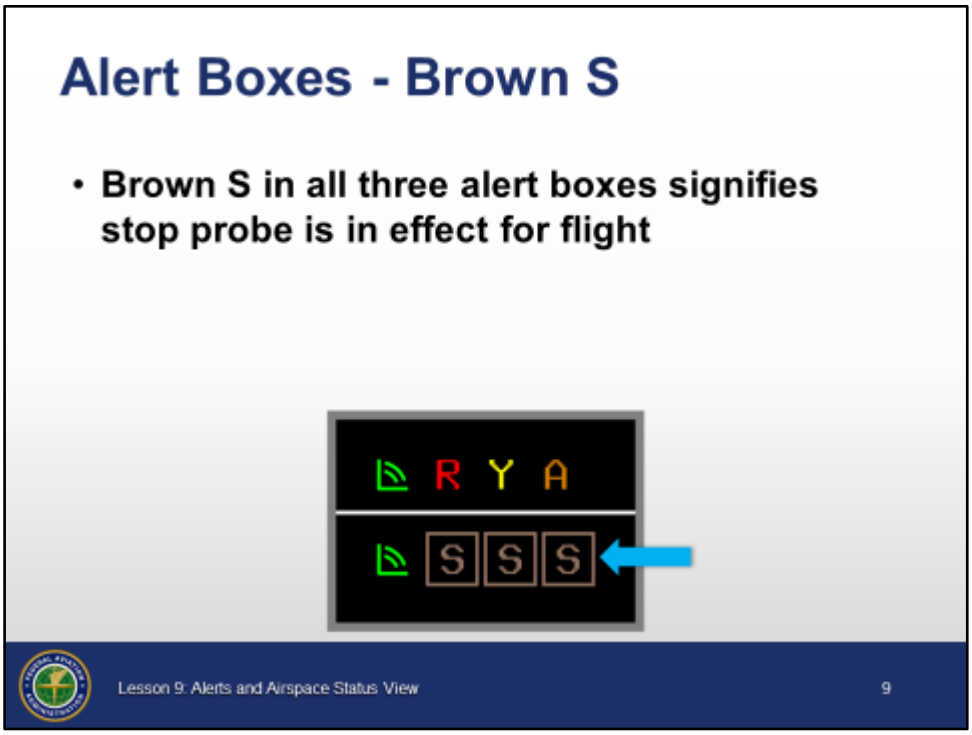


- A brown X in all three alert boxes with a brown flight ID signifies that the Aircraft List entry is not being probed by the system
- Flights not probed:
  - VFR
  - OTP
  - ABV
  - Untracked

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Boxes-Brown S

TI 6110.101, sec. 5.2.2

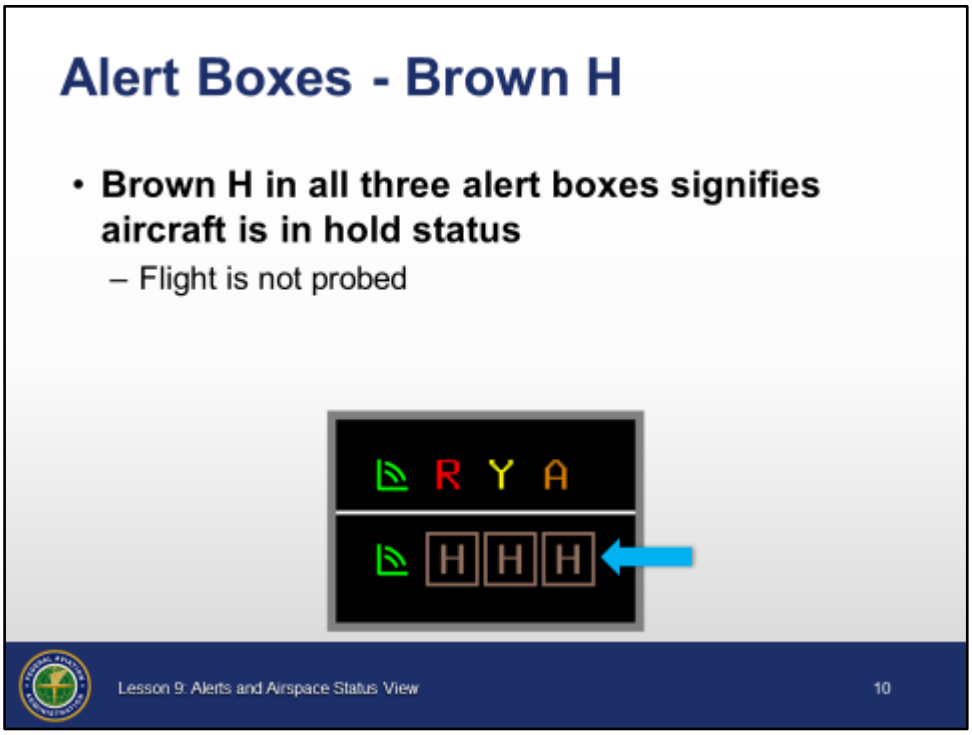


- A brown S in all three alert boxes signifies that a stop probe is in effect for the flight

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Boxes - Brown H

TI 6110.101, sec. 5.2.2

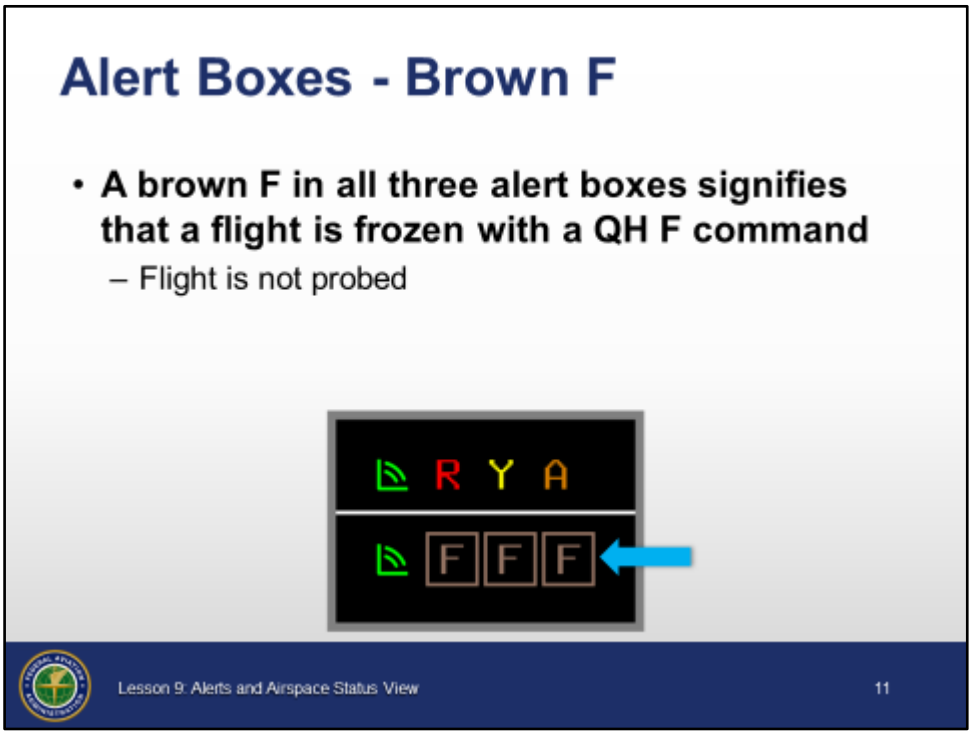


- A brown H in all three alert boxes signifies that an aircraft is in a hold status
  - Flight is not probed

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Boxes - Brown F

TI 6110.101, sec. 5.2.2

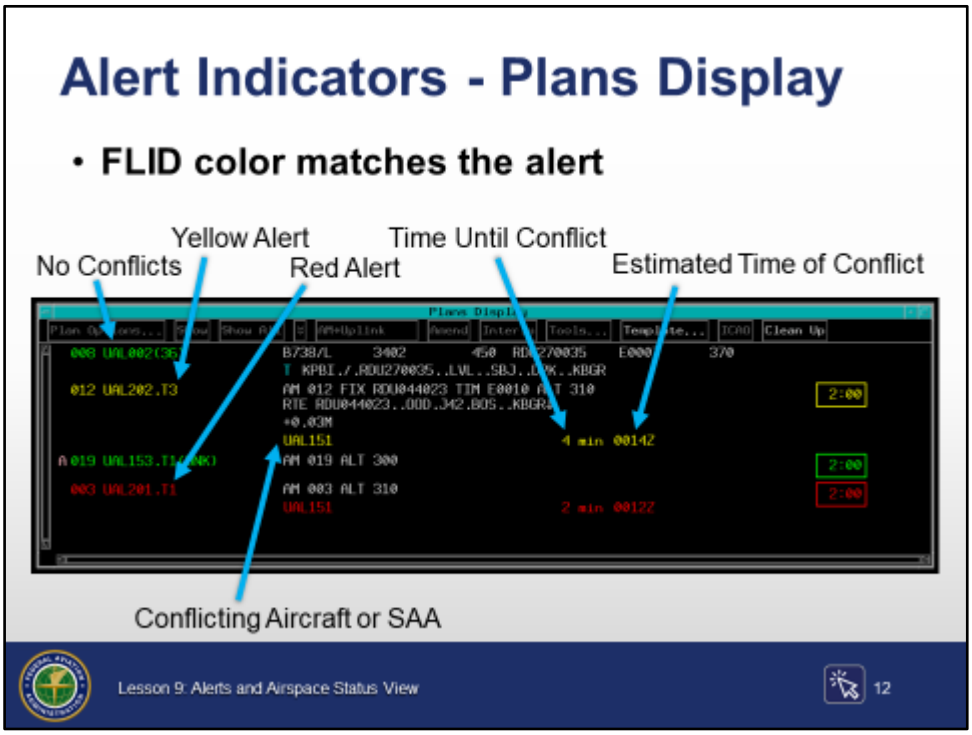


- A brown F in all three alert boxes signifies that a flight is frozen with a QH F command
  - Flight is not probed

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - Plans Display

TI 6110.101, sec. 3.2

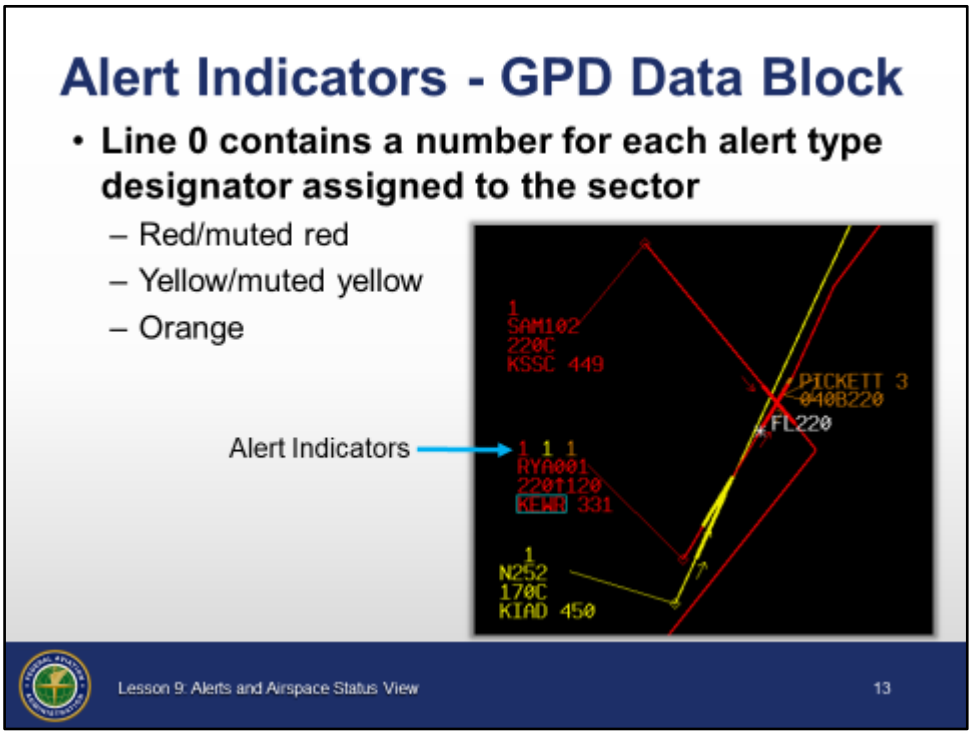


- The FLID color matches the alert
  - The alert will also display under the flight plan with the following data:
    - Conflicting aircraft or SAA
    - Time until the conflict
    - Estimated time of the conflict
- A FLID displayed in green indicates no potential conflicts

ALERT INDICATORS AND COLORS *(CONT'D)*

Alert Indicators - GPD Data Block

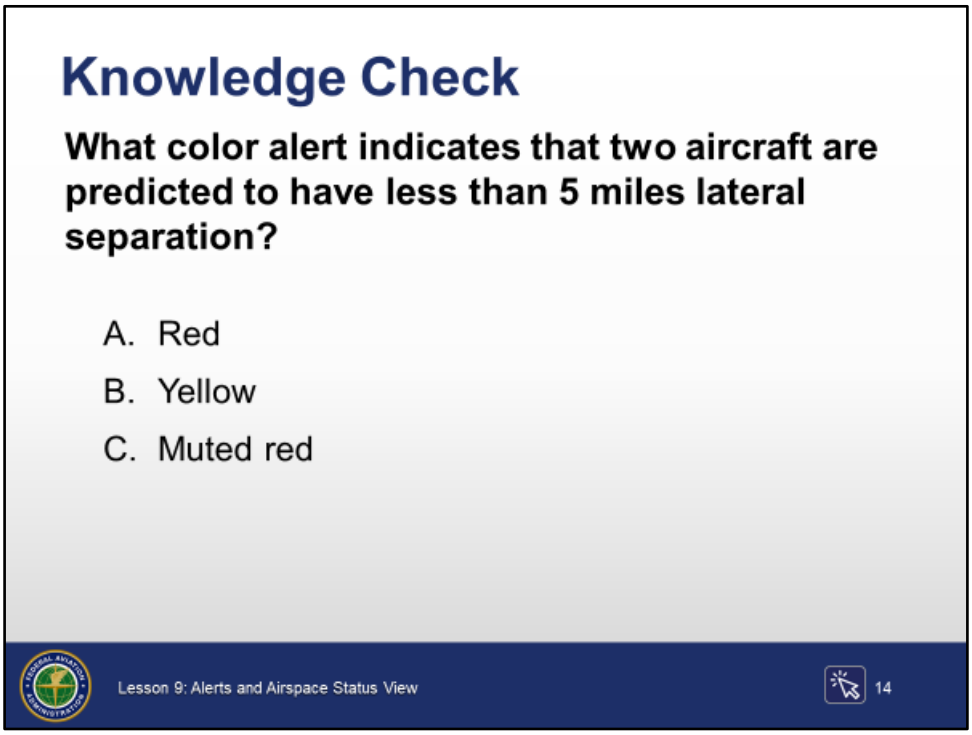
TI 6110.101, secs. 3.1.1, 5.2.2



- Line 0 contains a number for each alert type assigned to the sector
  - Red/muted red
  - Yellow/muted yellow
  - Orange
- Route line color indicates:
  - The most critical alert when GPD is opened by:
    - TBP on ACL Show button or Show ALL button
    - TBE on call sign of ACL entry
  - The alert selected by TBE on the specific alert type number in Line 0 of GPD data block or ACL entry
- Other symbols that may be shown in Line 0 include:
  - FFF - Frozen
  - HHH - Holding
  - SSS - Stop Probe
  - XXX - Not being probed

ALERT INDICATORS AND COLORS *(CONT'D)*

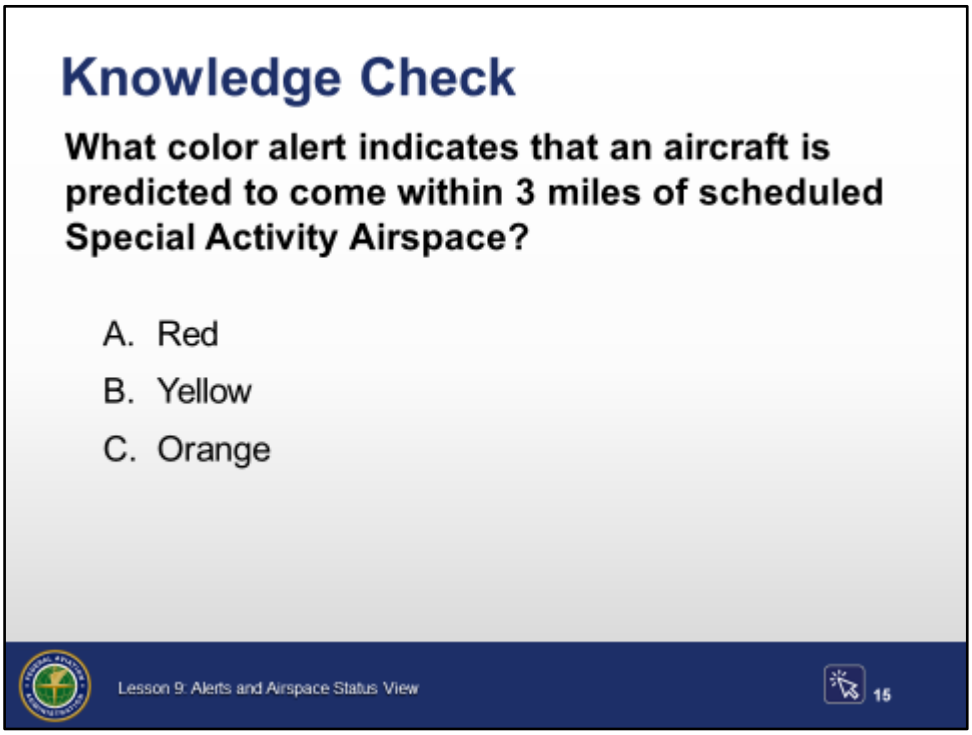
Knowledge Check



Question: What color alert indicates that two aircraft are predicted to have less than 5 miles lateral separation?

ALERT INDICATORS AND COLORS *(CONT'D)*

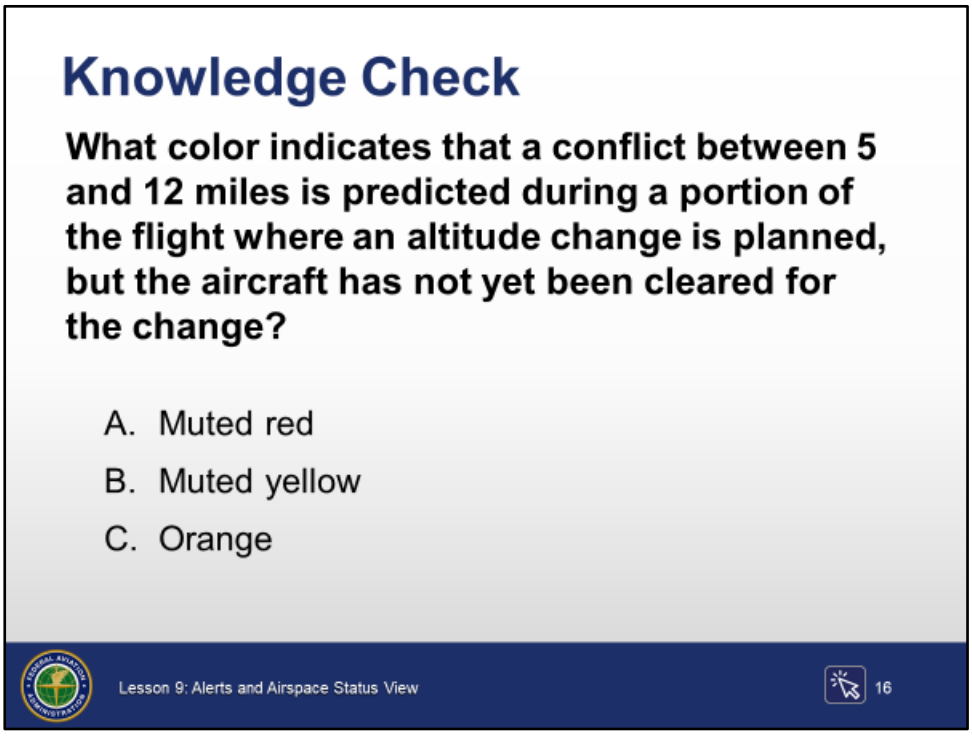
Knowledge Check



Question: What color alert indicates that an aircraft is predicted to come within 3 miles of scheduled Special Activity Airspace?

ALERT INDICATORS AND COLORS *(CONT'D)*

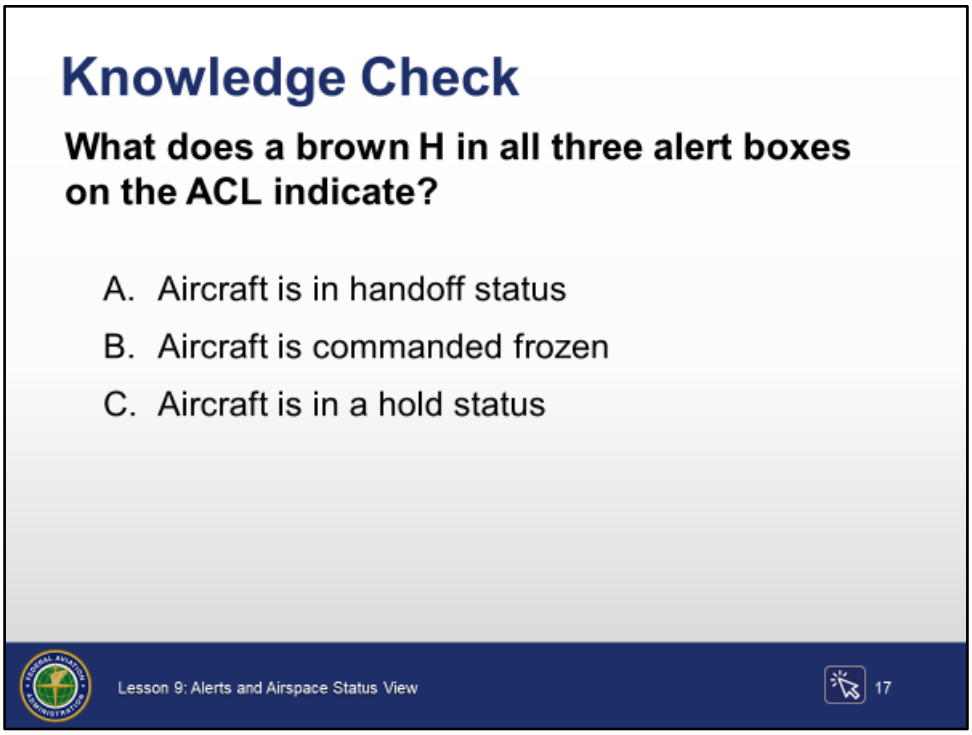
Knowledge Check



Question: What color indicates that a conflict between 5 and 12 miles is predicted during a portion of the flight where an altitude change is planned, but the aircraft has not yet been cleared for the change?

ALERT INDICATORS AND COLORS *(CONT'D)*

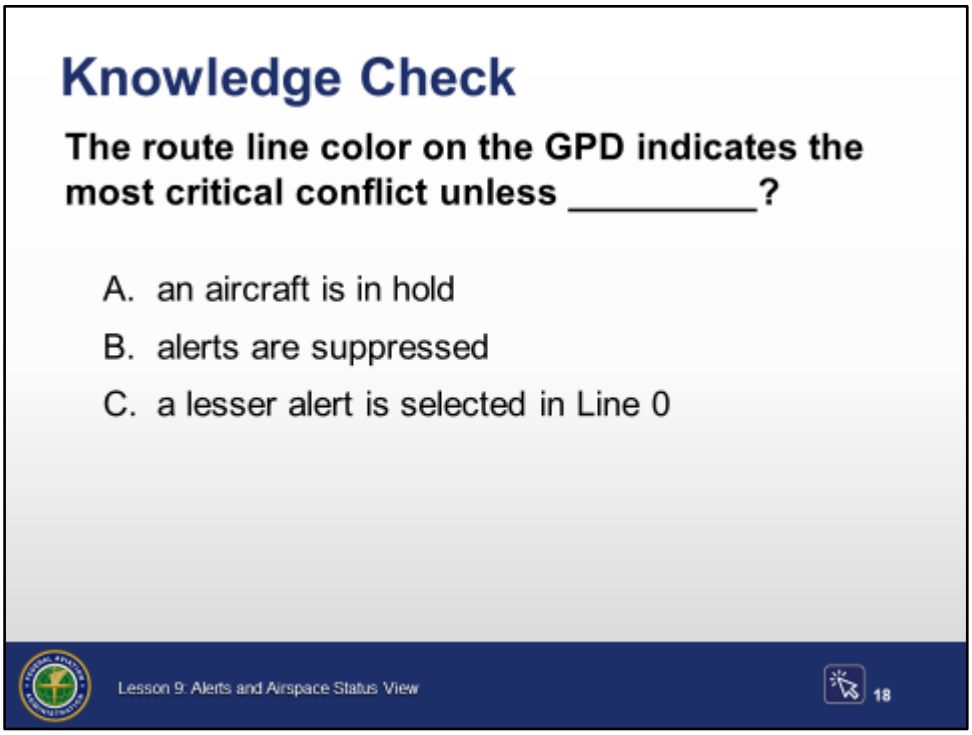
Knowledge Check



Question: What does a brown H in all three alert boxes on the ACL indicate?

ALERT INDICATORS AND COLORS *(CONT'D)*

Knowledge Check

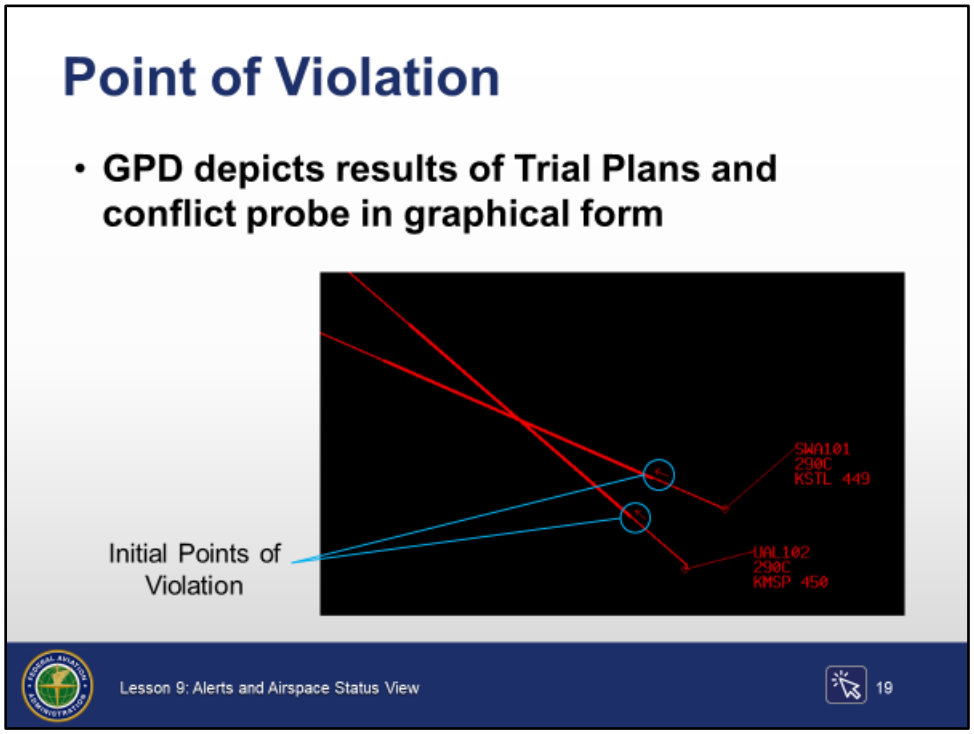


Question: The route line color on the GPD indicates the most critical conflict unless _____?

ALERTS ON THE GPD

Point of Violation

AT URET User Manual Ver. 5.0, p. 7-27



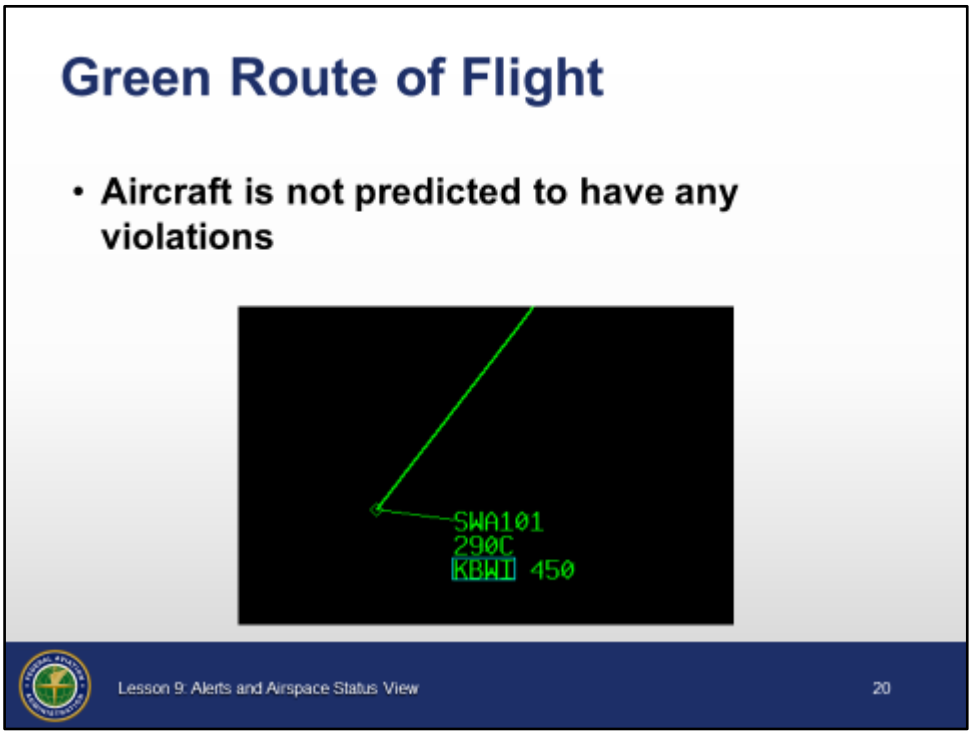
- The GPD depicts the results of Trial Plans and conflict probe in graphical form
  - Lines extending from data blocks indicate the direction of flight of aircraft
  - The route line is color coded to match the alert it represents
  - The line is thicker when there is less than:
    - 12 miles for aircraft-to-aircraft alerts
    - 3 miles for aircraft-to-airspace alerts
  - At the initial point of violation, an arrow indicates the direction of flight

  NOTE: Conflict probe alerts are based on standard radar separation. Conflict probe does not account for instances in which greater separation may be needed (e.g., non-standard formations, A380) or where reduced separation is permitted (e.g., 3 mile airspace).

ALERTS ON THE GPD *(CONT'D)*

Green Route of Flight

AT URET User Manual Ver. 5.0, Table 7-8



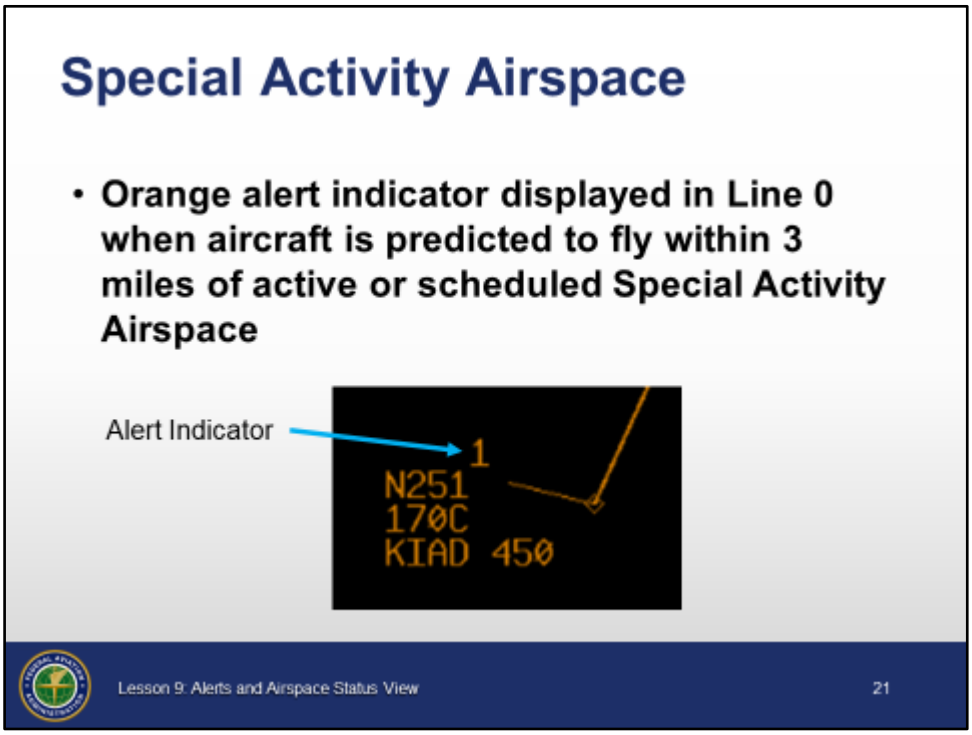
- A green route of flight shows that the aircraft is not predicted to have any violations

ALERTS ON THE GPD *(CONT'D)*

Special Activity Airspace

TI 6110.101, secs. 3.1.1, 5-2-2

AT URET User Manual Ver. 5.0, Table 7-8

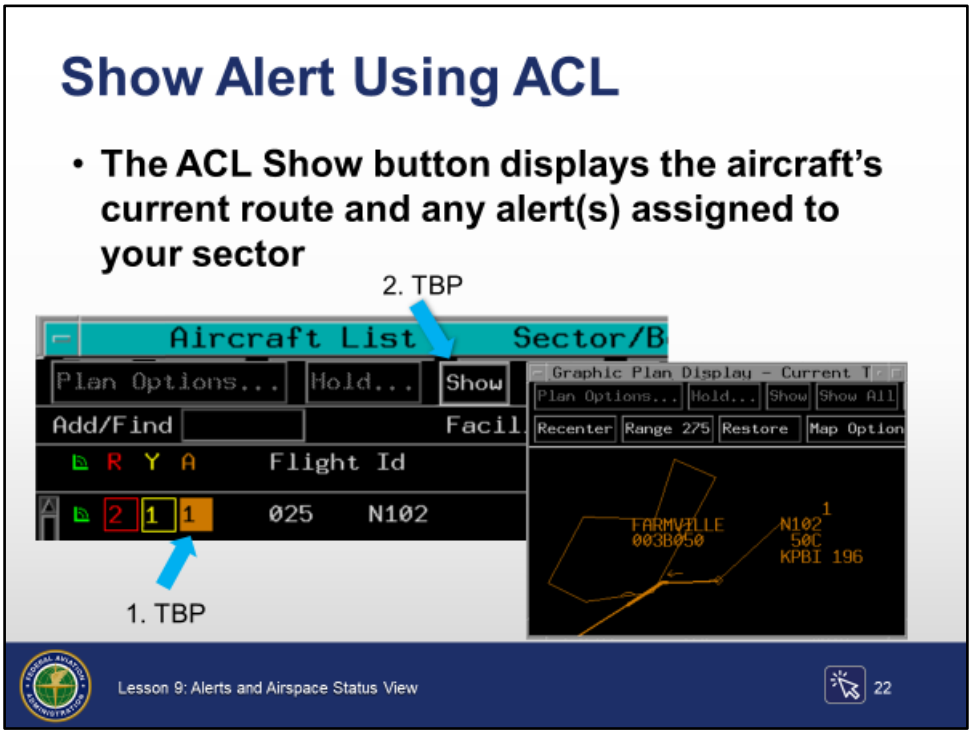


- An orange alert indicator is displayed in Line 0 when an aircraft is predicted to fly within 3 miles of active or scheduled Special Activity Airspace

ALERTS ON THE GPD *(CONT'D)*

Show Alert Using ACL

TI 6110.101, secs. 2.5.7, 3.2.3.20, 5.2.2

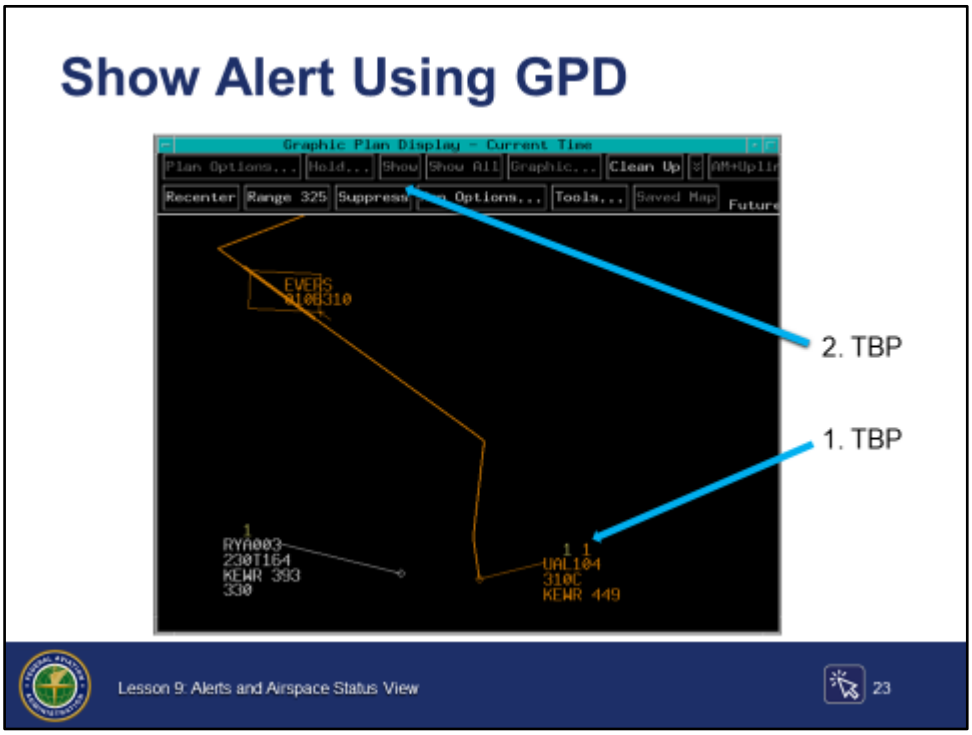


- The ACL Show button displays the aircraft's current route and any alert(s) assigned to your sector on the GPD
- To graphically display select alert(s) on the GPD:
  - TBP on the alert number in the ACL, then TBP the Show button
    - TBP the Show button again to remove displayed alert(s)
  - TBE on the alert number in the ACL to automatically open the GPD with the alert(s) displayed
    - TBE on the alert number again to remove displayed alert(s)

ALERTS ON THE GPD *(CONT'D)*

Show Alert Using GPD

TI 6110.101, secs. 2.5.7, 3.2.3.21, 5.2.2

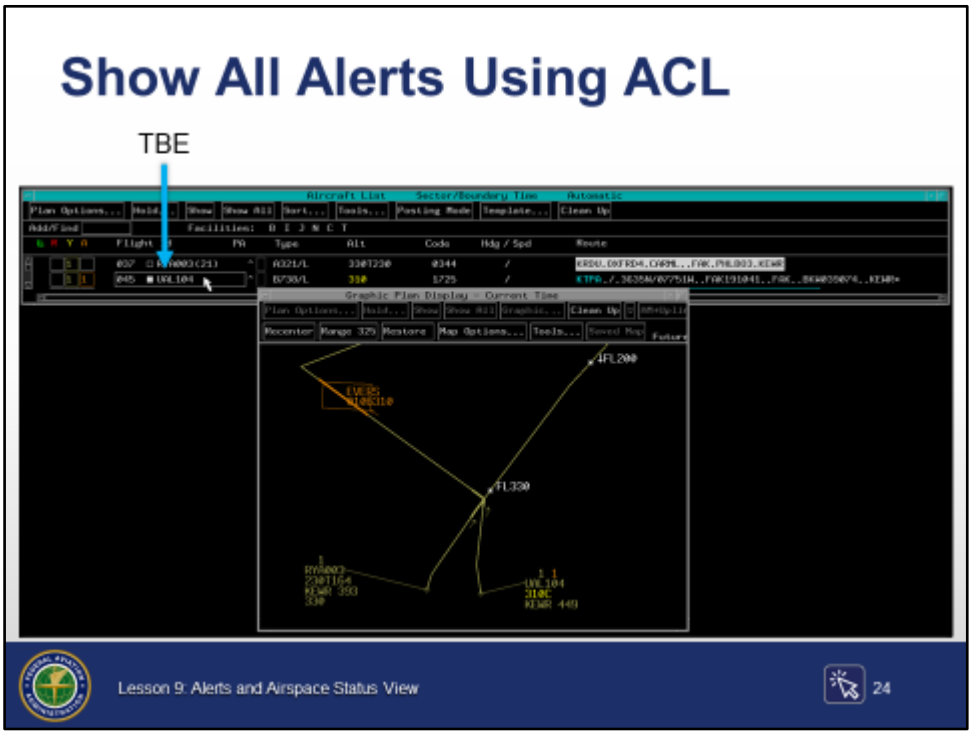


- The GPD Show button displays the aircraft's current route and any alert(s) assigned to the sector
  - TBP on an alert number in Line 0
    - Then TBP GPD Show button to display the specific alert(s)
    - Selecting Show button again will remove the display of the alert(s)
- TBE alert number in Line 0 to automatically display the specific alert(s)
  - TBE alert number again to remove the display of the alert(s)

ALERTS ON THE GPD *(CONT'D)*

Show All Alerts Using ACL

TI 6110.101, secs. 2.5.7, 3.2.3.20, 5.2.2

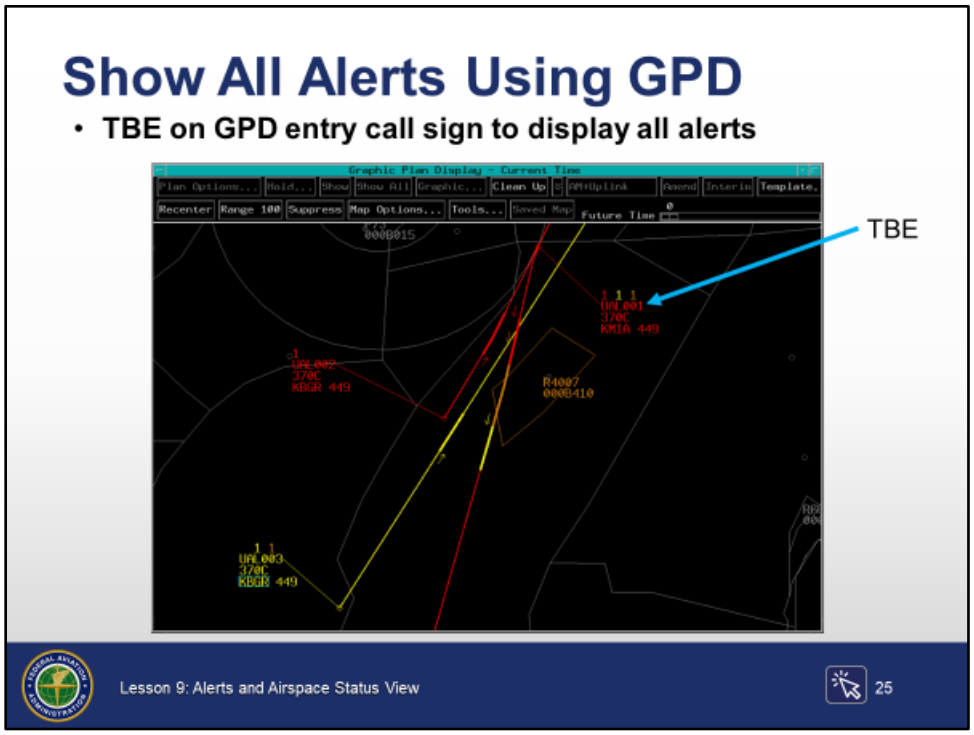


- Show All displays or removes a Current Plan and all associated alerts, regardless of sector, for a specific aircraft on the GPD
- ACL
  - TBE on the call sign to display all alerts
    - TBE on ACL or GPD call sign again to remove these alerts
  - TBP on a call sign, then TBP on Show All to display all alerts
    - TBP Show All a second time to remove the display of the alerts

ALERTS ON THE GPD *(CONT'D)*

Show All Alerts Using GPD

TI 6110.101, secs. 2.5.7, 3.2.3.20, 5.2.2



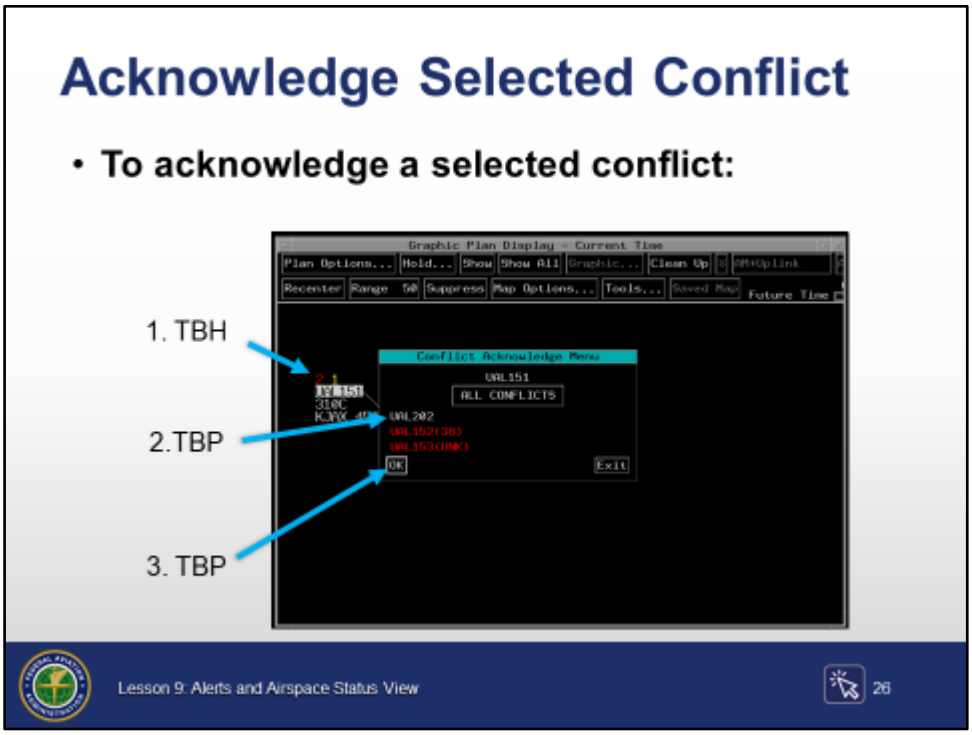
⊙ GPD

- TBE on call sign or position symbol to automatically display all alerts for that aircraft
  - TBE on call sign or position symbol again to remove these alerts
- TBP on call sign or position symbol, then TBP Show All to display all alerts for that aircraft
  - TBP Show All again to remove the display of the alerts

ALERTS ON THE GPD *(CONT'D)*

Acknowledge Selected Conflict

TI 6110.101, sec. 5.3.1

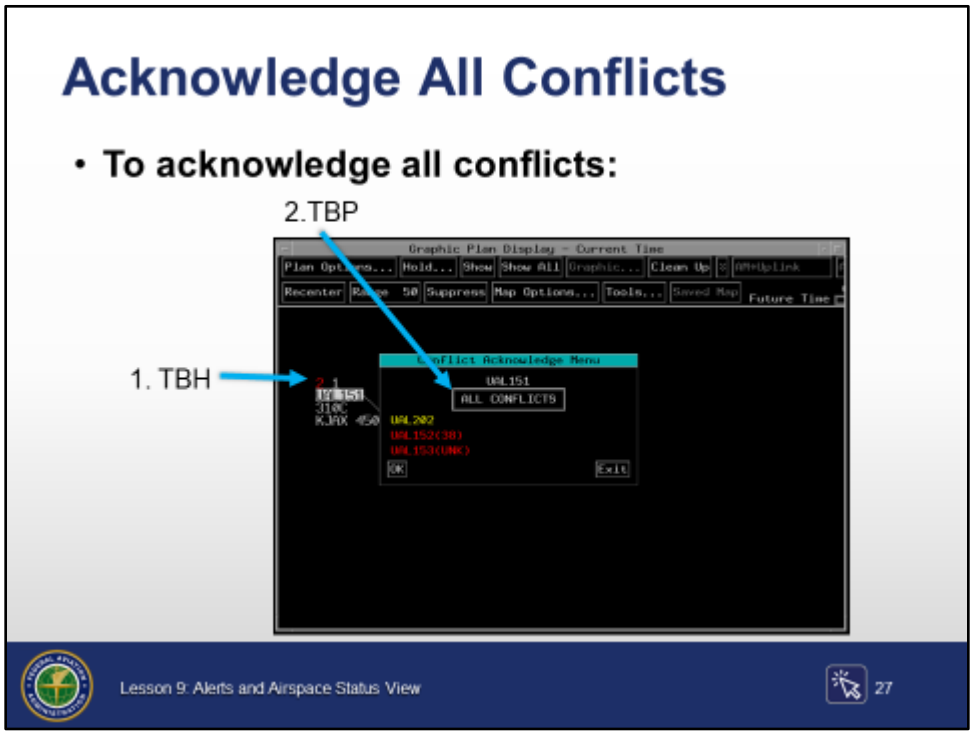


- To acknowledge a selected conflict:
  - TBH on an alert indicator, then
  - TBP on ACID in Conflict Acknowledge Menu
  - TBP on OK
- When all alerts within an alert type (red, muted red, yellow, muted yellow, and orange) are acknowledged:
  - GPD - Alert indicator on Line 0 of the data block changes to white
  - ACL - Alert box and number change to white
  - Plans Display - Problem ID(s) for selected flight and controlling sector IDs (if present) change to white

ALERTS ON THE GPD *(CONT'D)*

Acknowledge All Conflicts

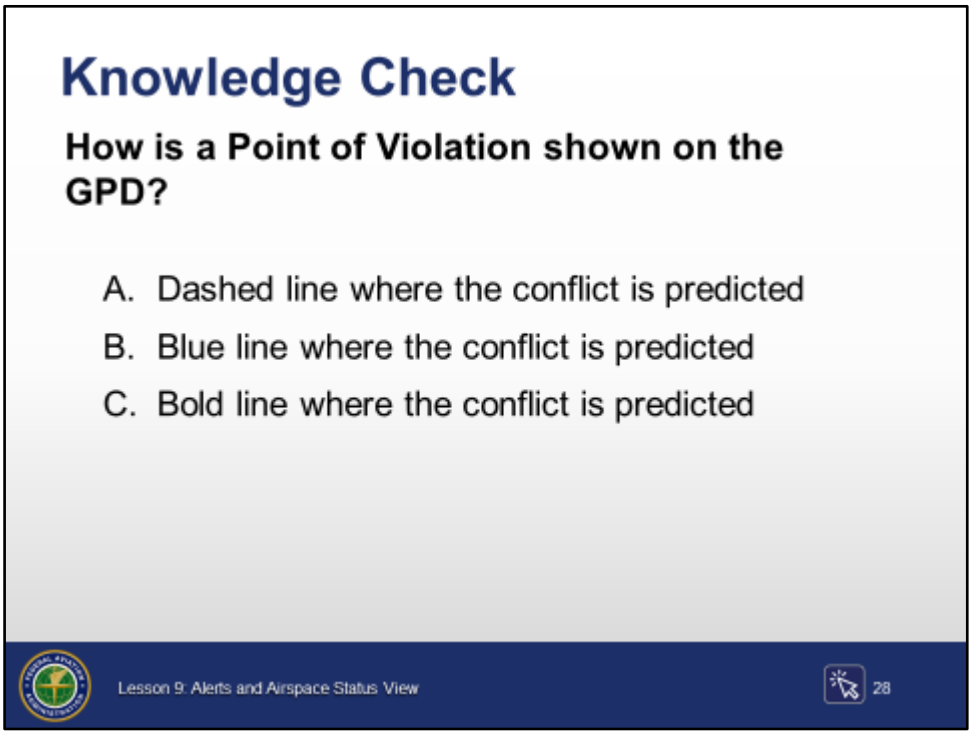
TI 6110.101, sec. 5.3.1



- To acknowledge all conflicts:
  - TBH on an alert indicator, then
  - TBP on ALL CONFLICTS in the Conflict Acknowledge Menu
- Results:
  - GPD - Alert indicators on Line 0 of the data block change to white
  - ACL - Alert boxes and numbers change to white
  - Plans Display - Problem IDs for all flight and controlling sector IDs (if present) change to white

ALERTS ON THE GPD *(CONT'D)*

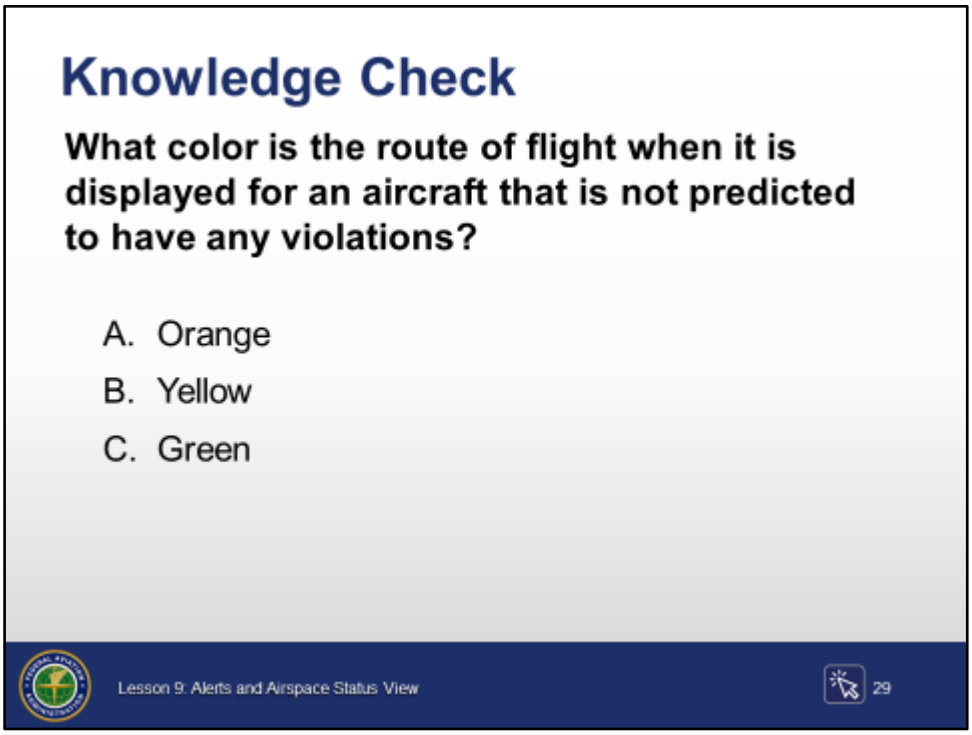
Knowledge Check



Question: How is a Point of Violation shown on the GPD?

ALERTS ON THE GPD *(CONT'D)*

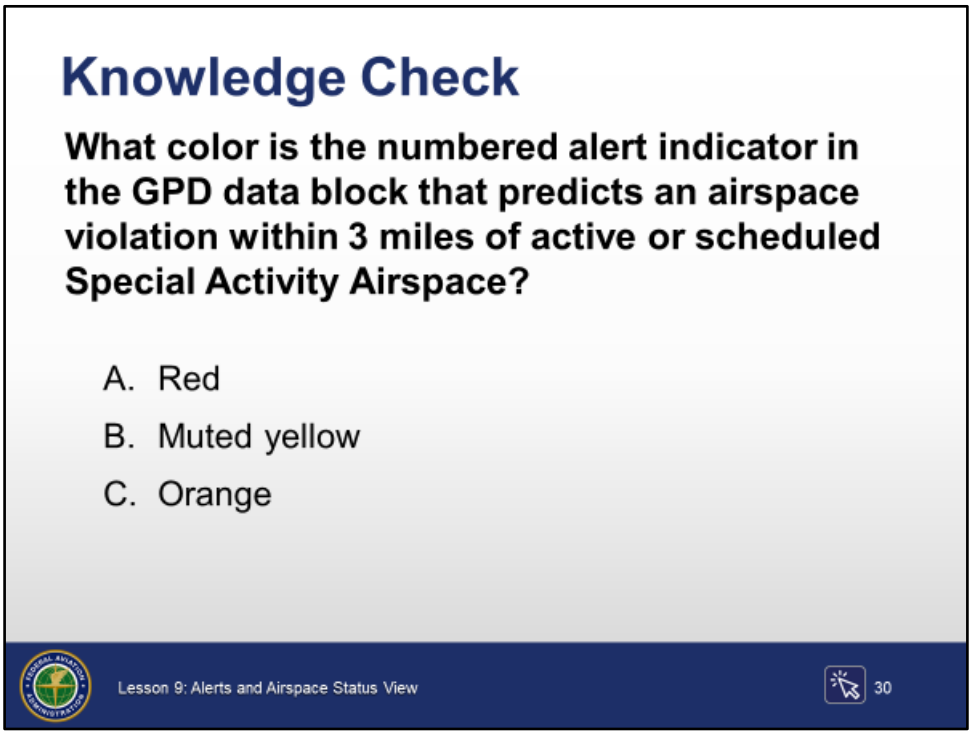
Knowledge Check



Question: What color is the route of flight when it is displayed for an aircraft that is not predicted to have any violations?

ALERTS ON THE GPD *(CONT'D)*

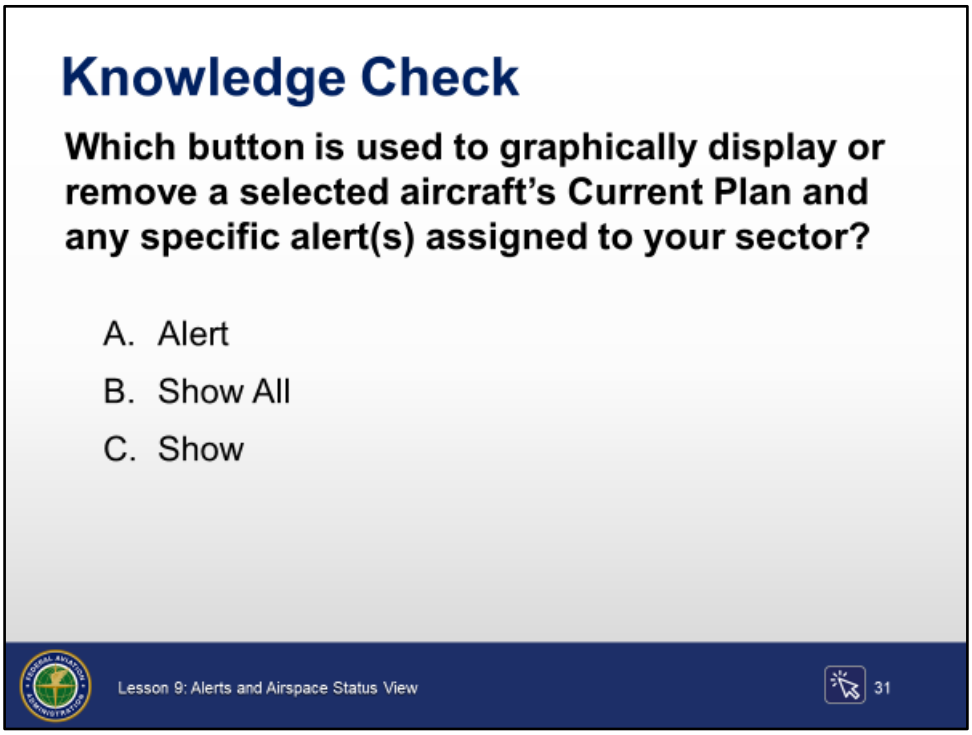
Knowledge Check



Question: What color is the numbered alert indicator in the GPD data block that predicts an airspace violation within 3 miles of active or schedules Special Activity Airspace?

ALERTS ON THE GPD *(CONT'D)*

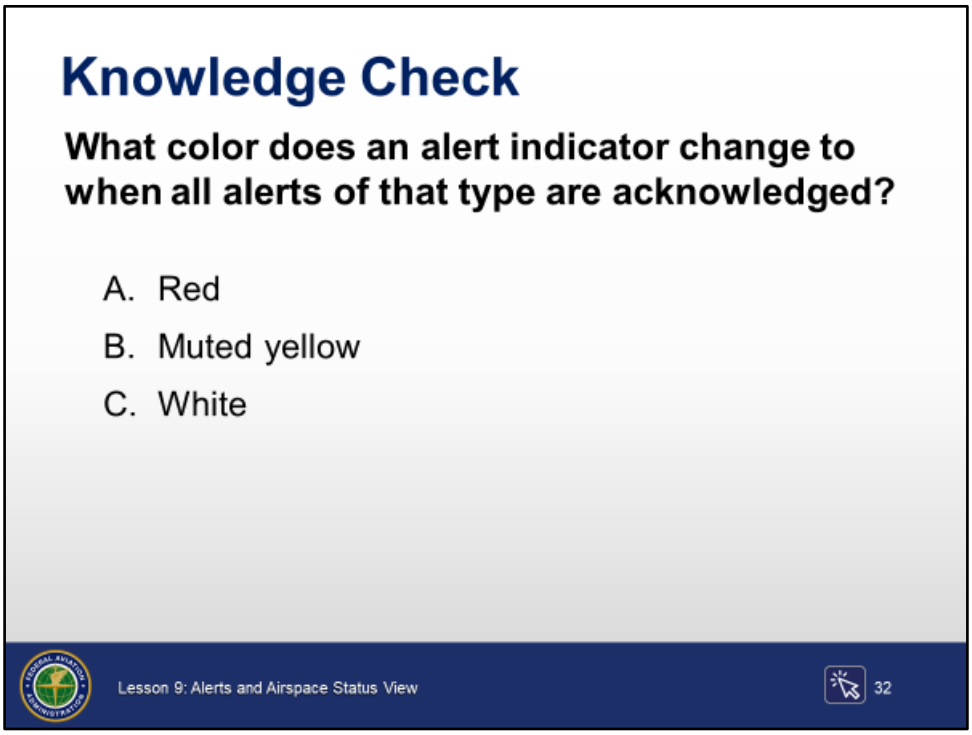
Knowledge Check



Question: Which button is used to graphically display or remove a selected aircraft's Current Plan and any specific alert(s) assigned to your sector?

ALERTS ON THE GPD *(CONT'D)*

Knowledge Check



Question: What color does an alert indicator change to when all alerts of that type are acknowledged?

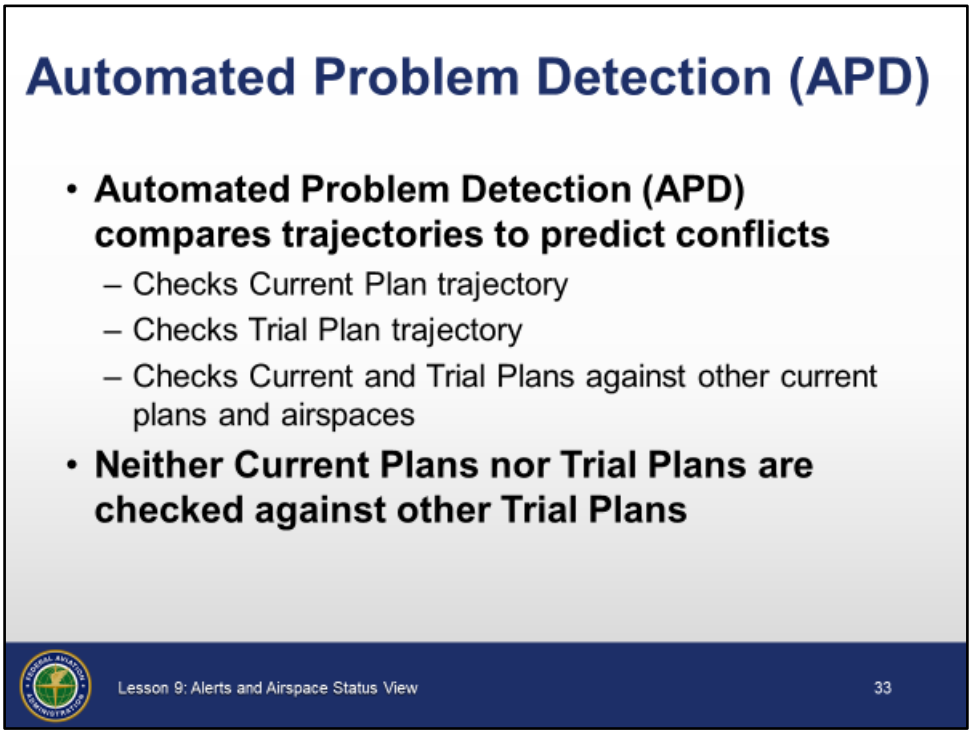
AUTOMATED PROBLEM DETECTION (APD)

Automated Problem Detection (APD)

JO 7110.65, Pilot/Controller Glossary

TI 6110.101, Glossary

AT URET User Manual Ver. 5.0, p. xxxvi



CURRENT PLAN - The plan an aircraft is currently expected by the En Route Automation System (EAS) to fly. A Current Plan is used for modeling the trajectory and, when APD eligible, for detecting conflicts.

TRIAL PLAN - A proposed amendment which utilizes automation to analyze and display potential conflicts along the predicted trajectory of the selected aircraft.

⊙ Automated Problem Detection (APD) compares trajectories to predict conflicts

- Checks Current Plan trajectory when trajectory is created, amended or flight plan is activated
- Checks Trial Plan trajectory when created
- Checks Current and Trial Plans against all other Current Plans and adapted airspaces

Continued on next page

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

Automated Problem Detection (APD) (Cont'd)

JO 7110.65, Pilot/Controller Glossary

AT URET User Manual Ver, 5.0, p. xxxvi

- Trajectories are modeled:
  - 20 minutes in advance for aircraft-to-aircraft conflicts
  - 40 minutes in advance for aircraft-to-airspace conflicts

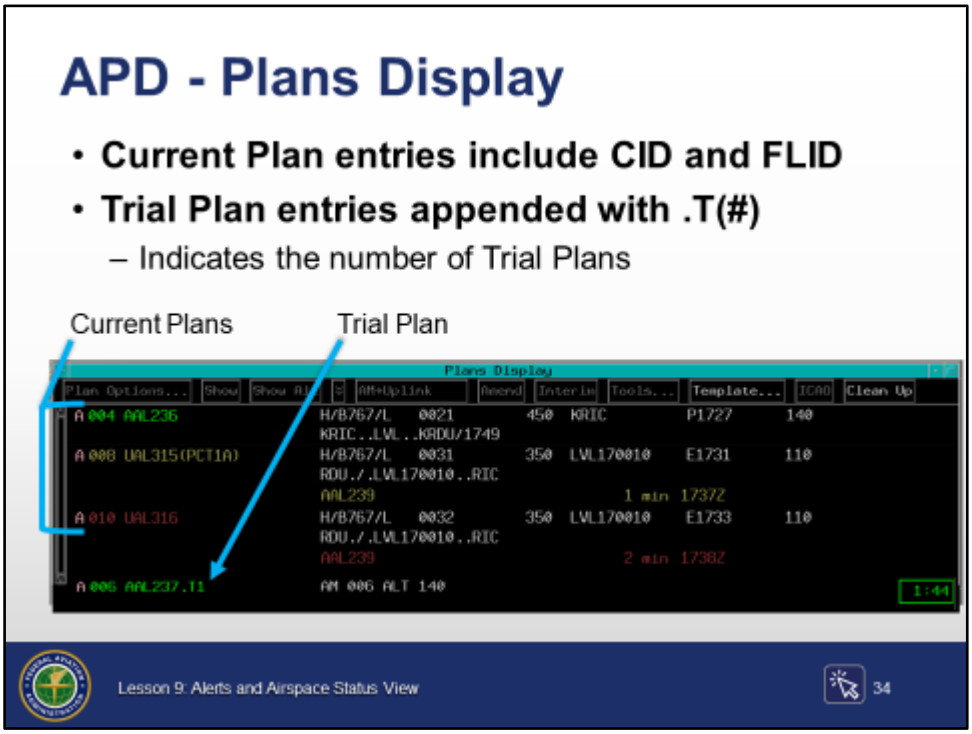
⊙ Neither Current Plans nor Trial Plans are checked against other Trial Plans

NOTE: A potential conflict is not detected beyond the 20 or 40-minute modeled trajectories. To probe the entire route of flight, do a Trial Plan on the aircraft at its current altitude.

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

APD - Plans Display

TI 6110.101, sec. 3.2.1

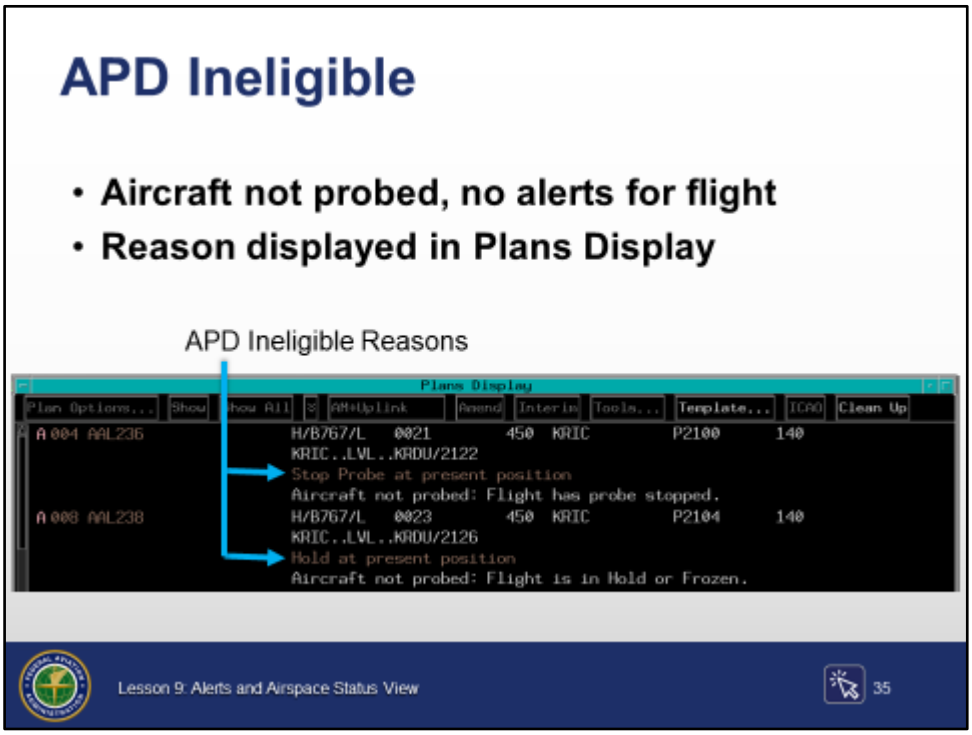


- Current Plan entries include CID and FLID
- Trial Plan entries are appended with .T(#)
  - Indicates the number of Trial Plans created for the flight

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

APD Ineligible

TI 6110.101,
sec. 3.2.1.3



- If APD does not probe for an aircraft, you will not receive any alerts for the flight
- When APD is ineligible, the reason is displayed in the Plans Display
  - The Plans Display does not open automatically when an APD ineligible reason code is posted
  - A variety of reasons can be displayed

  Examples:

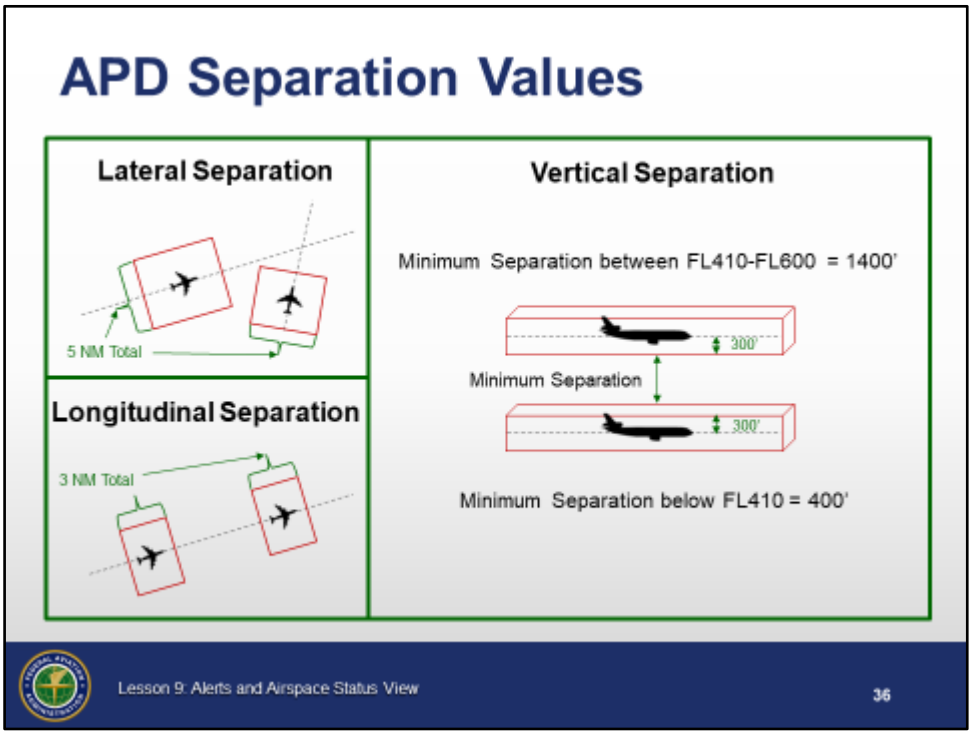
  Stop Probe at present position

  Hold at present position

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

APD Separation Values

AT URET User Manual Ver. 5.0, p. xxxvii

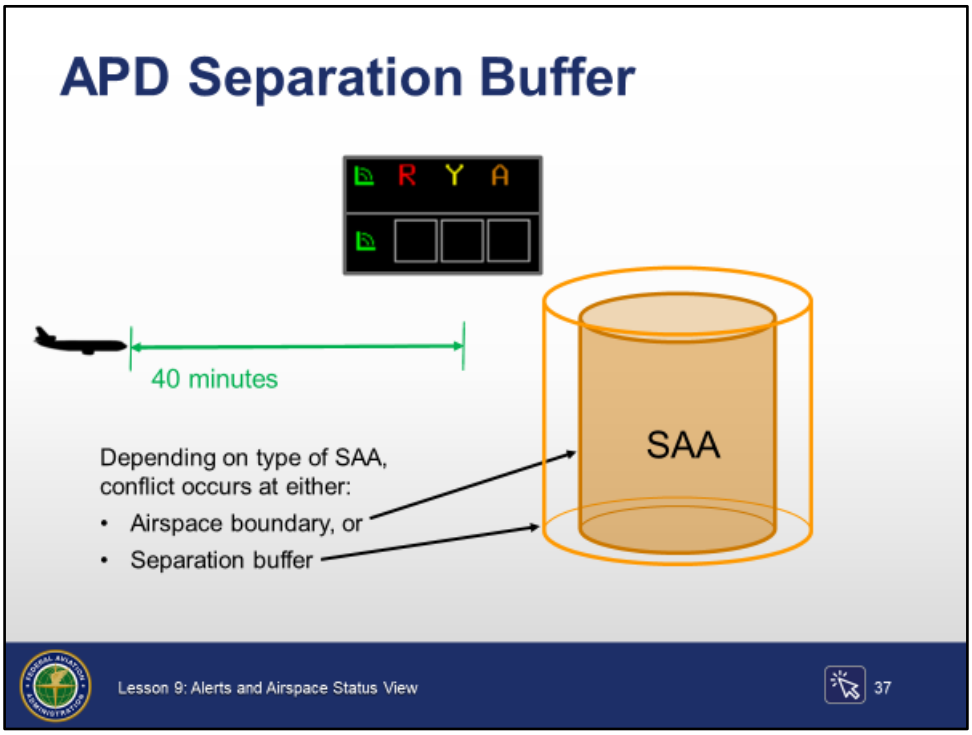


- Lateral, longitudinal, and vertical separation values are applied to modeled trajectories and are used by APD to determine whether a conflict exists between trajectories or between a trajectory and Special Activity Airspace (SAA)
- APD separation values are calculated by the system algorithms based on the minimum separation standards

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

APD Separation Buffer

AT URET User Manual Ver. 5.0, p. xxxvii

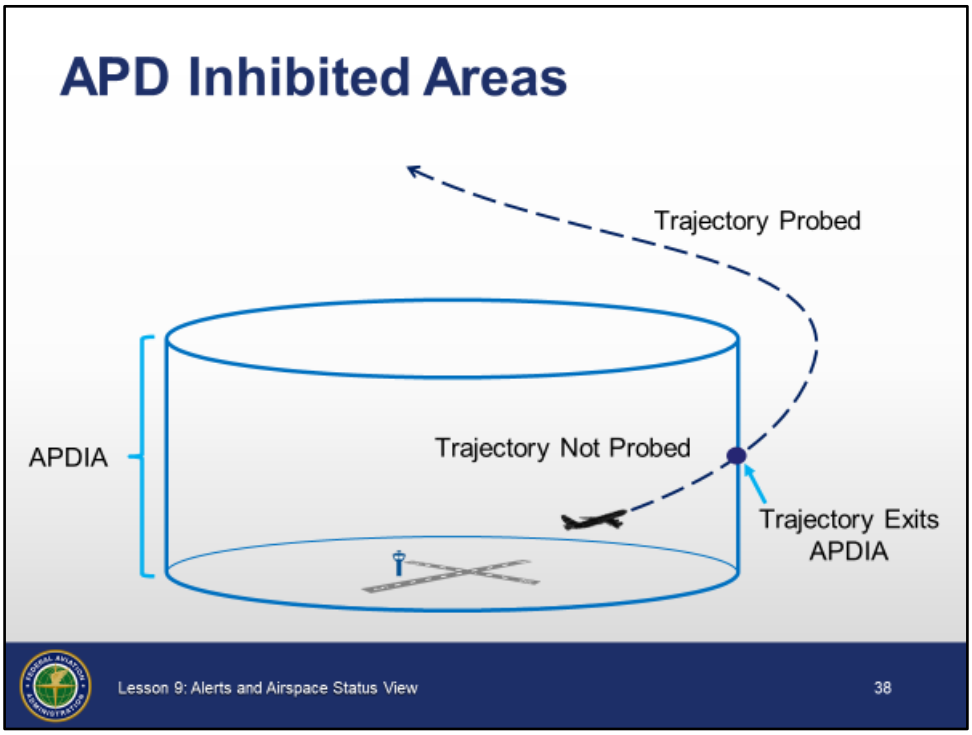


- Separation values used in checking for airspace conflicts are adapted based on the type of activity in the airspace
- A separation buffer is superimposed like a force field around airspace boundary
- APD can probe trajectories 40 minutes into the future to see if they violate active airspace
- Depending on type of SAA, conflict occurs at either:
  - Airspace boundary, or
  - Separation buffer

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

APD Inhibited Areas

AT URET User Manual Ver. 5.0, p. xxxviii

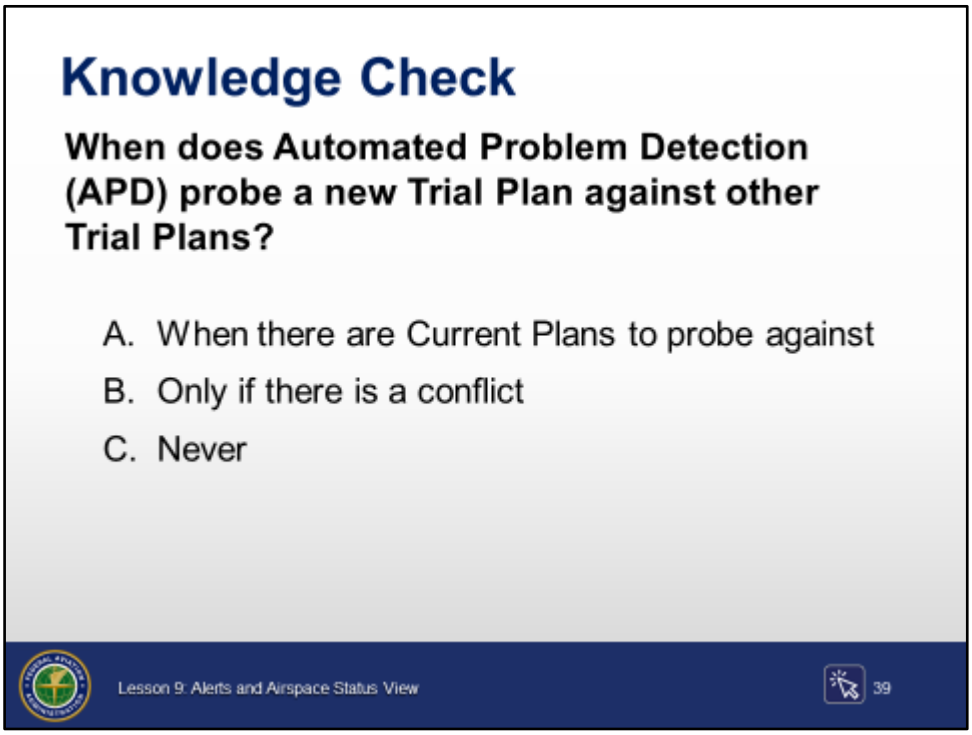


- System provides facilities the capability for determining when or where APD should not operate to reduce false alerts
- Occurs when a portion of the aircraft's trajectory is within airspace designated as an Automated Problem Detection Inhibited Area (APDIA)

  Example: Approach control airspace
- When the aircraft leaves APDIA airspace, its trajectory is then probed for conflicts

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

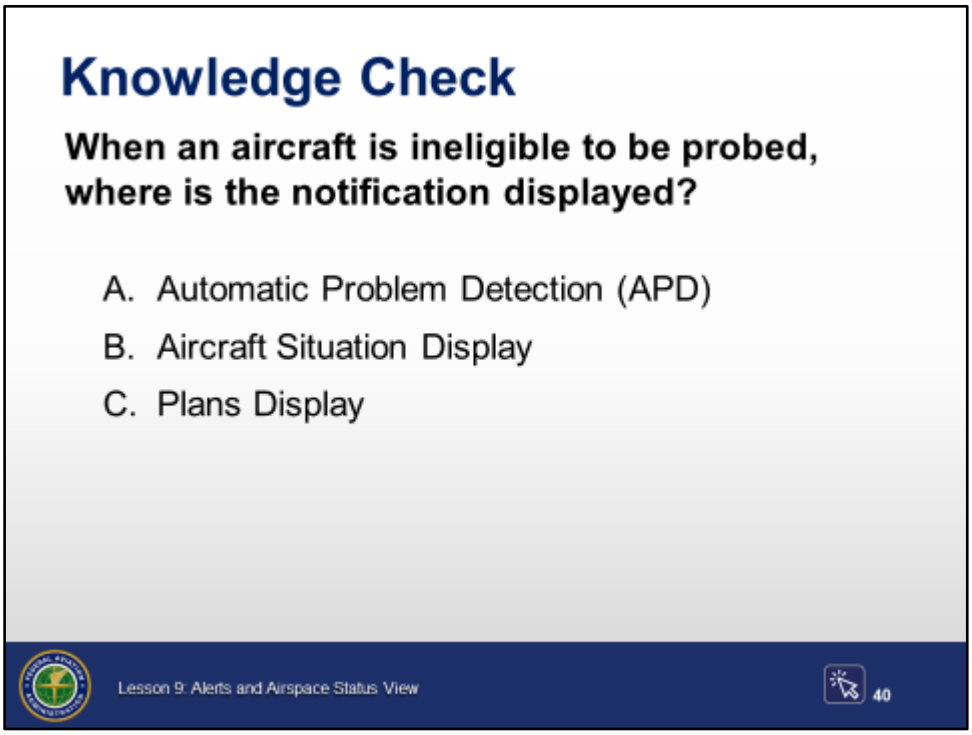
Knowledge Check



Question: When does Automated Problem Detection (APD) probe a new Trial Plan against other Trial Plans?

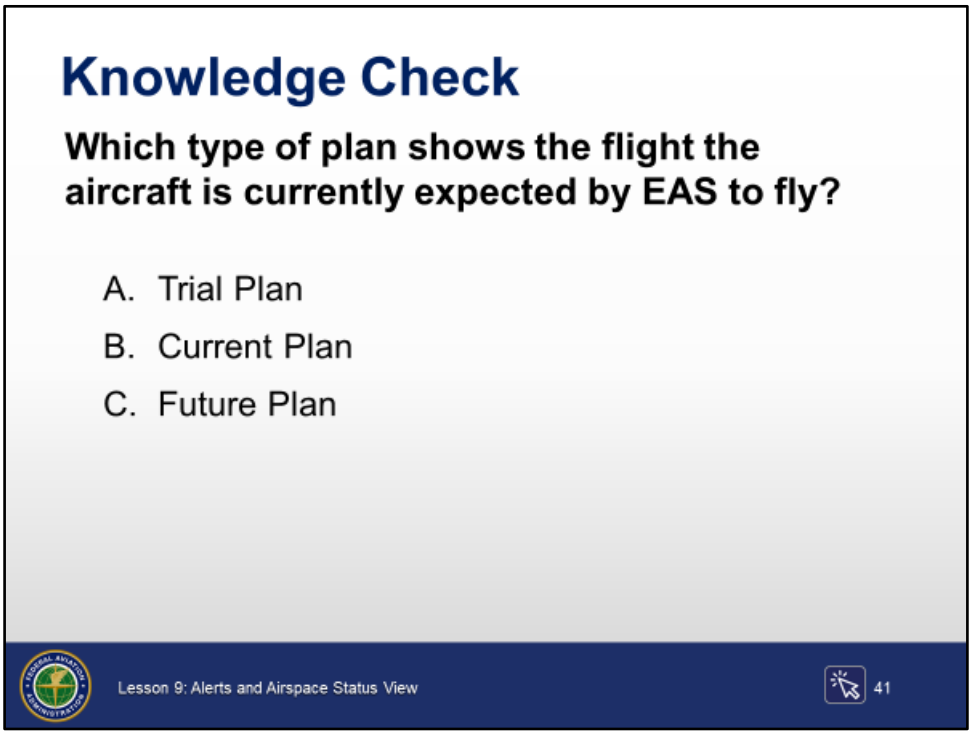
AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

Knowledge Check



Question: When an aircraft is ineligible to be probed, where is the notification displayed?

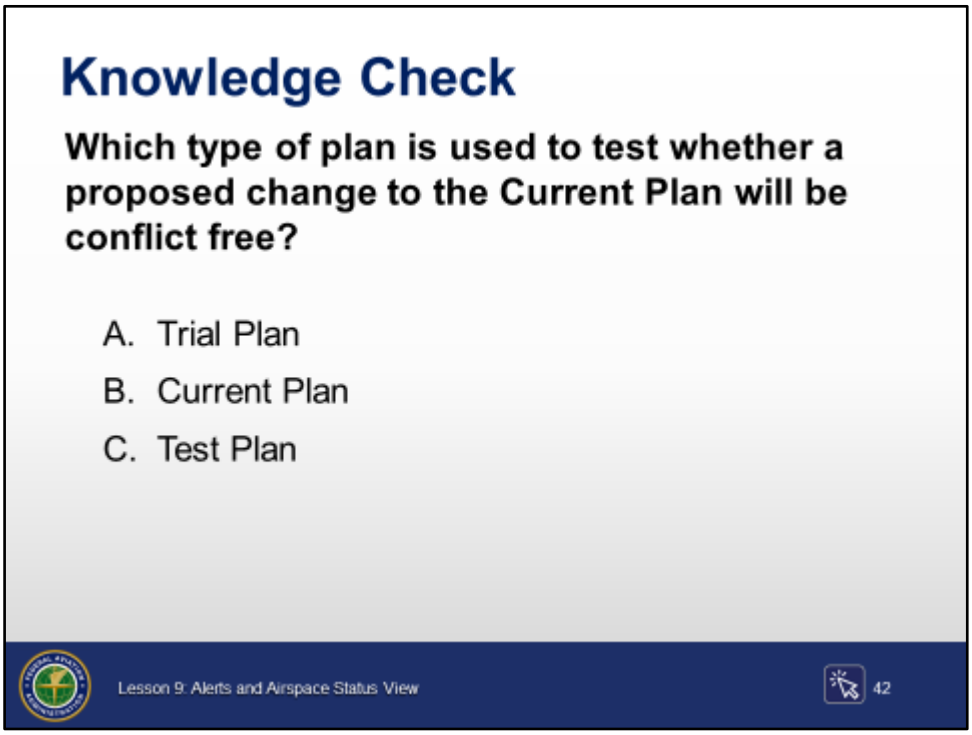
Knowledge Check



Question: Which type of plan shows the route the aircraft is currently expected by EAS to fly?

AUTOMATED PROBLEM DETECTION (APD) *(CONT'D)*

Knowledge Check



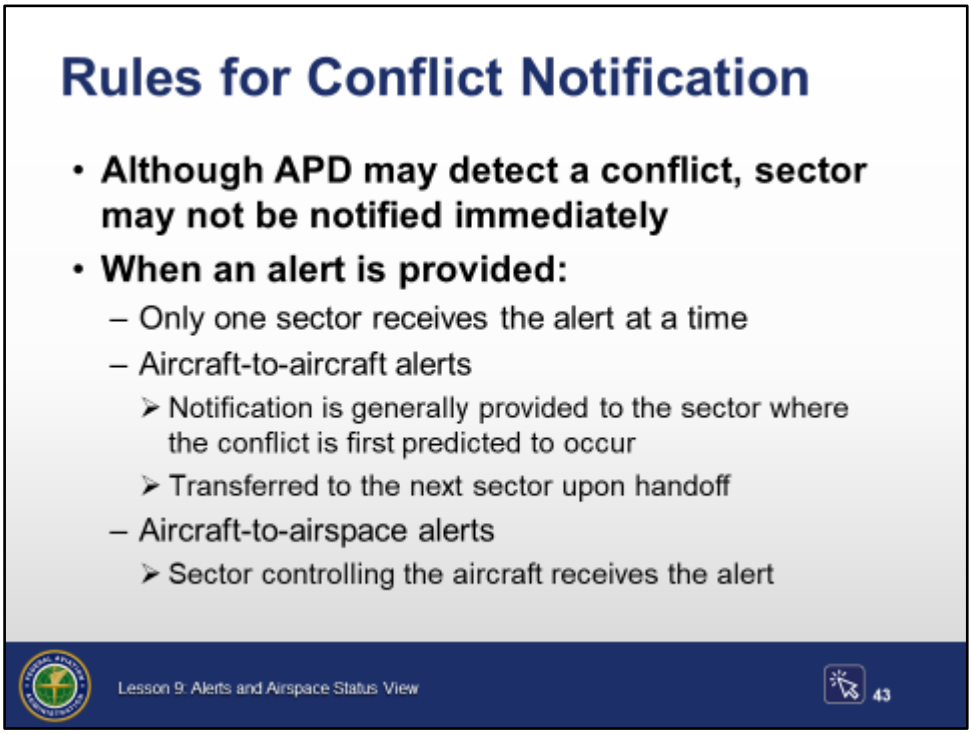
Question: Which type of plan is used to test whether a proposed change to the Current Plan will be conflict free?

RULES FOR CONFLICT NOTIFICATION

Rules for Conflict Notification

TI 6110.101, sec. 1.2.2

AT URET User Manual Ver 5.0, p. xxxix

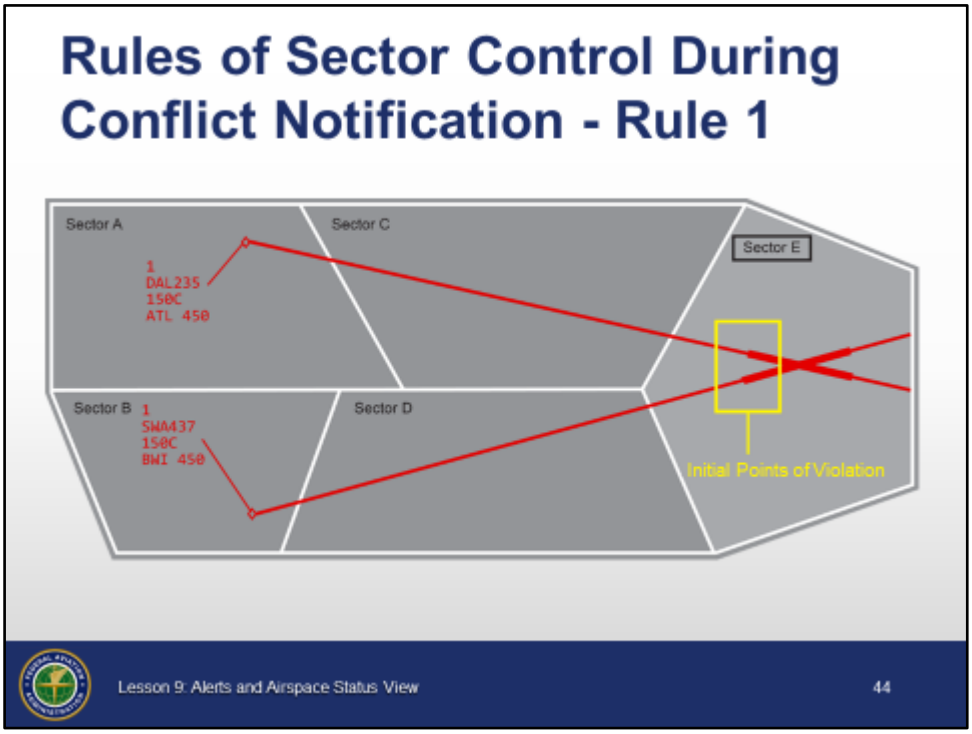


- Although APD may detect a conflict, sector may not be notified immediately
- When an alert is provided:
  - Only one sector receives the alert at a time
  - Aircraft-to-aircraft alerts
    - Notification is generally provided to the sector where the conflict is first predicted to occur
    - Transferred to the next sector upon handoff
  - Aircraft-to-airspace alerts
    - Sector controlling the aircraft receives the alert

RULES FOR CONFLICT NOTIFICATION *(CONT'D)*

Rules of Sector Control During Conflict Notification - Rule 1

AT URET User Manual Ver. 5.0, p. xxxix

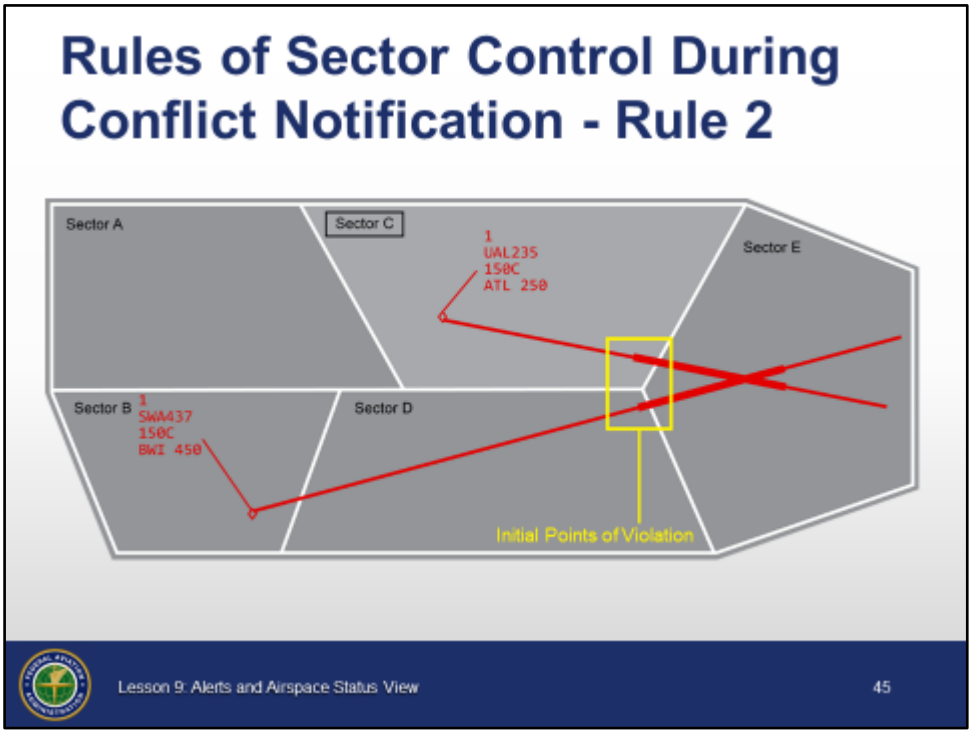


- At the predicted start time of the conflict, if both aircraft's points of violation are in the same sector, that sector will receive the conflict notification
- Although APD may detect a conflict, sector may not be notified immediately

RULES FOR CONFLICT NOTIFICATION *(CONT'D)*

Rules of Sector Control During Conflict Notification - Rule 2

AT URET User Manual Ver. 5.0, p. xl

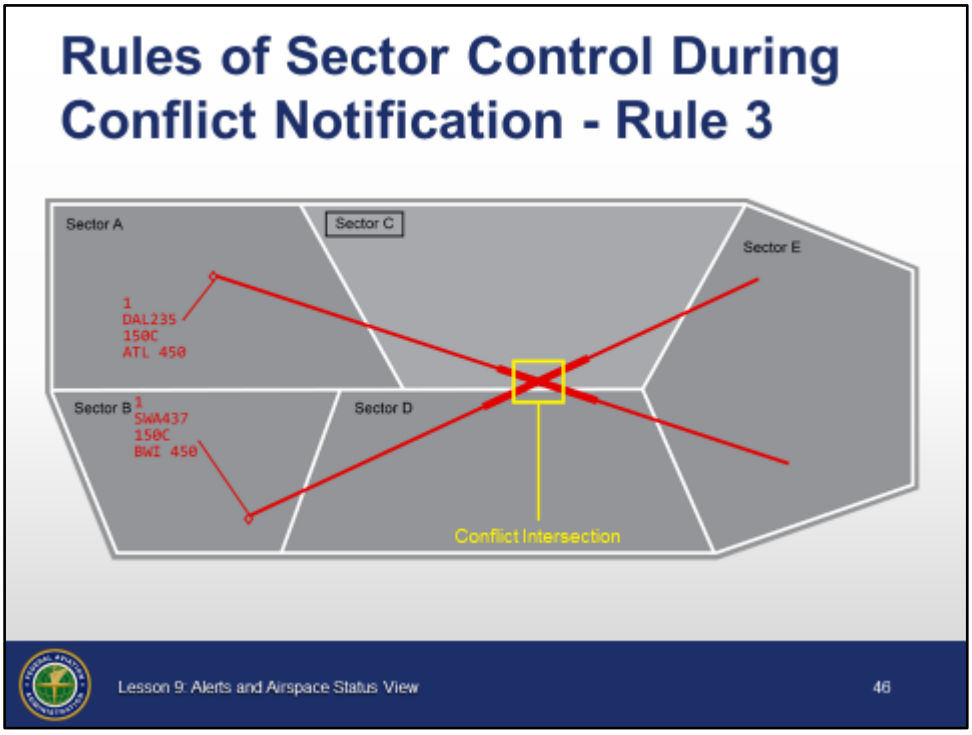


- At the predicted start time of the conflict, if the points of violation are located in different sectors, and only one of these sectors controls an aircraft involved in the conflict, the sector containing the point of violation and currently controlling one of the aircraft receives the conflict notification

RULES FOR CONFLICT NOTIFICATION *(CONT'D)*

Rules of Sector Control During Conflict Notification - Rule 3

AT URET User Manual Ver. 5.0, p. xl

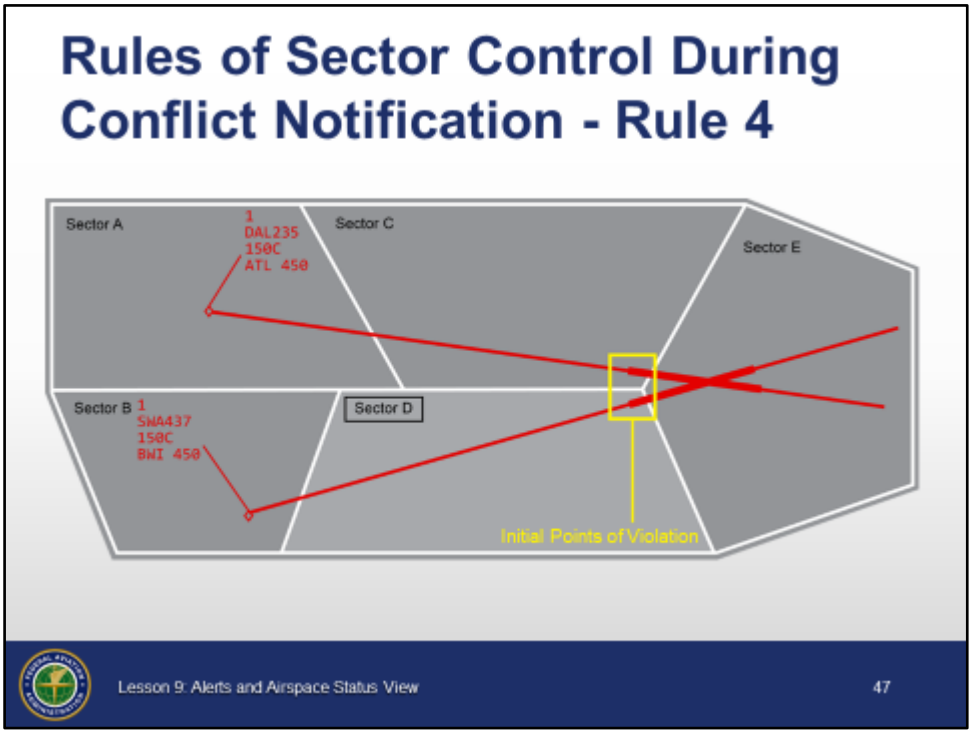


- At the predicted start time of the conflict, if each aircraft's point of violation is in a different sector and the conflict intersection is in only one of the sectors, then the sector controlling the airspace containing the conflict intersection will receive the notification

RULES FOR CONFLICT NOTIFICATION *(CONT'D)*

Rules of Sector Control During Conflict Notification - Rule 4

AT URET User Manual Ver. 5.0, p. xl

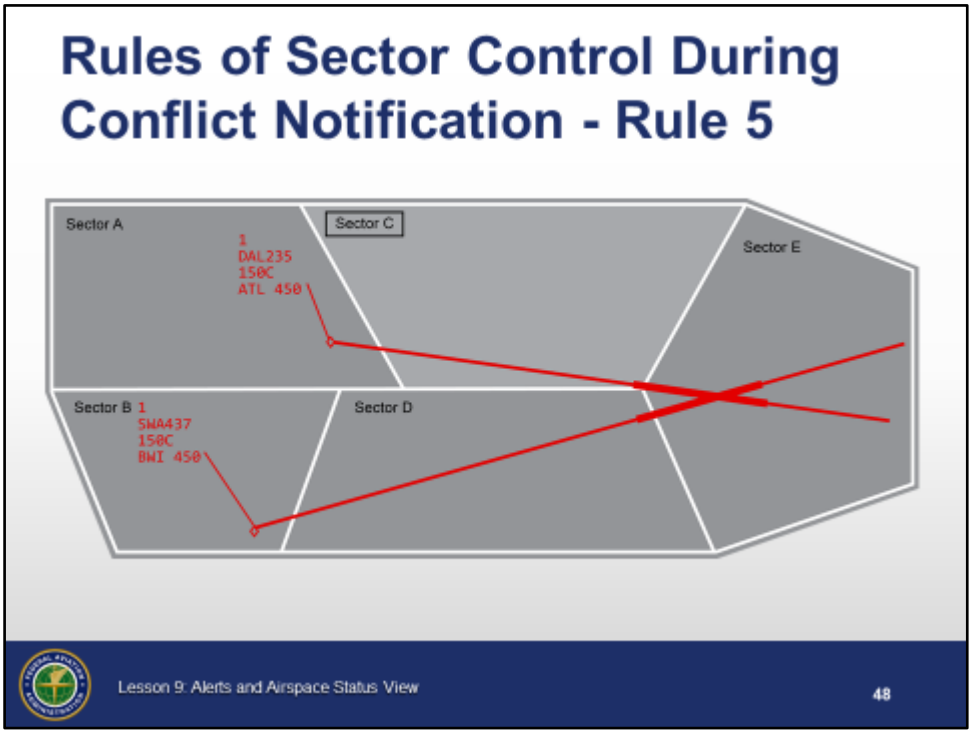


- At the predicted start time of the conflict, if both aircraft's points of violation are in different sectors, and one aircraft is predicted to reach the sector boundary before the other reaches a sector boundary, then the sector that is predicted to be reached first will receive conflict notification

RULES FOR CONFLICT NOTIFICATION *(CONT'D)*

Rules of Sector Control During Conflict Notification - Rule 5

AT URET User Manual Ver. 5.0, p. xli

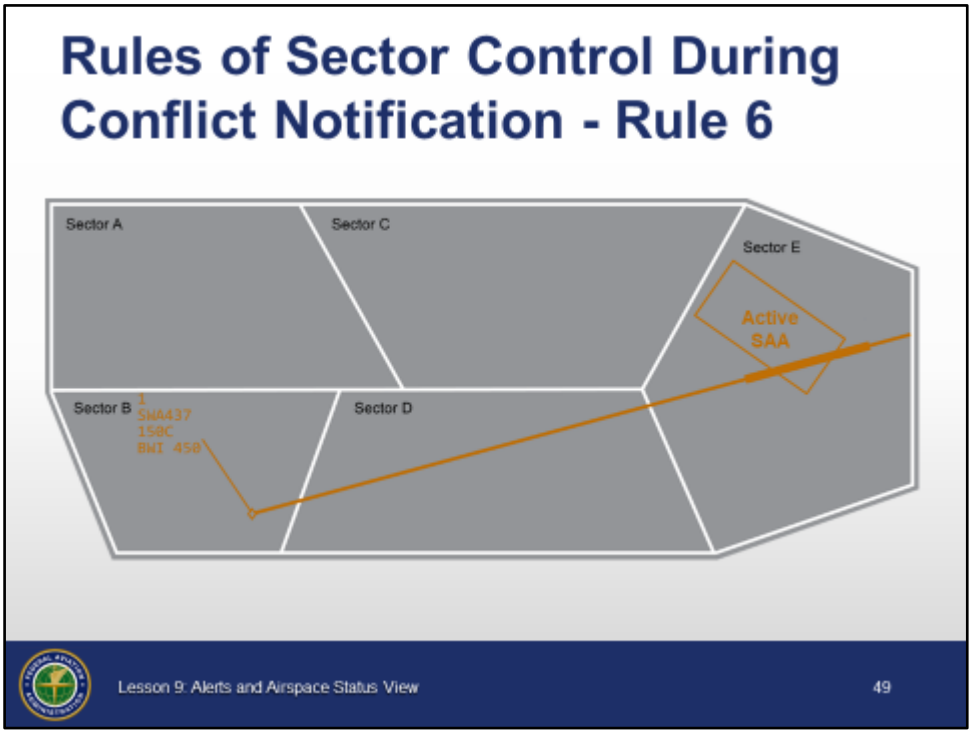


- If none of the previous rules apply, then the system arbitrarily assigns the alert to one of the sectors containing the initial points of violation

RULES FOR CONFLICT NOTIFICATION *(CONT'D)*

Rules of Sector Control During Conflict Notification - Rule 6

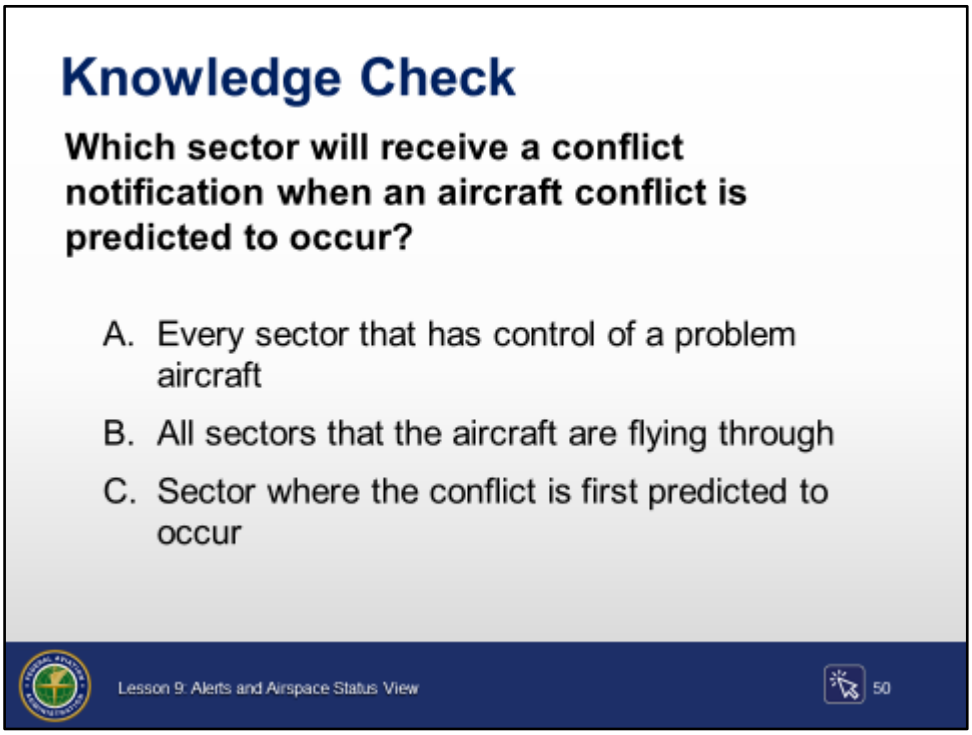
AT URET User Manual Ver. 5.0, p. xxxix



- For aircraft-to-airspace alerts, the sector that has track control of the aircraft receives the alert
  - These alerts are posted to the sector at a facility determined time, up to 40 minutes in advance

RULES OF CONFLICT NOTIFICATION *(CONT'D)*

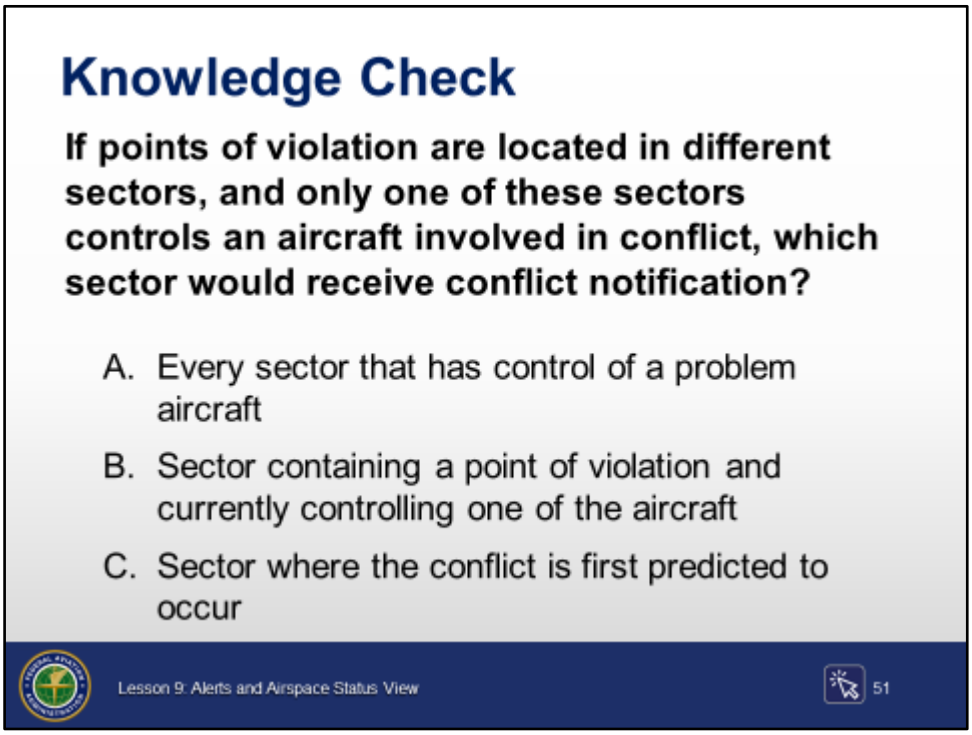
Knowledge Check



Question: Which sector will receive a conflict notification when an aircraft conflict is predicted to occur?

RULES OF CONFLICT NOTIFICATION *(CONT'D)*

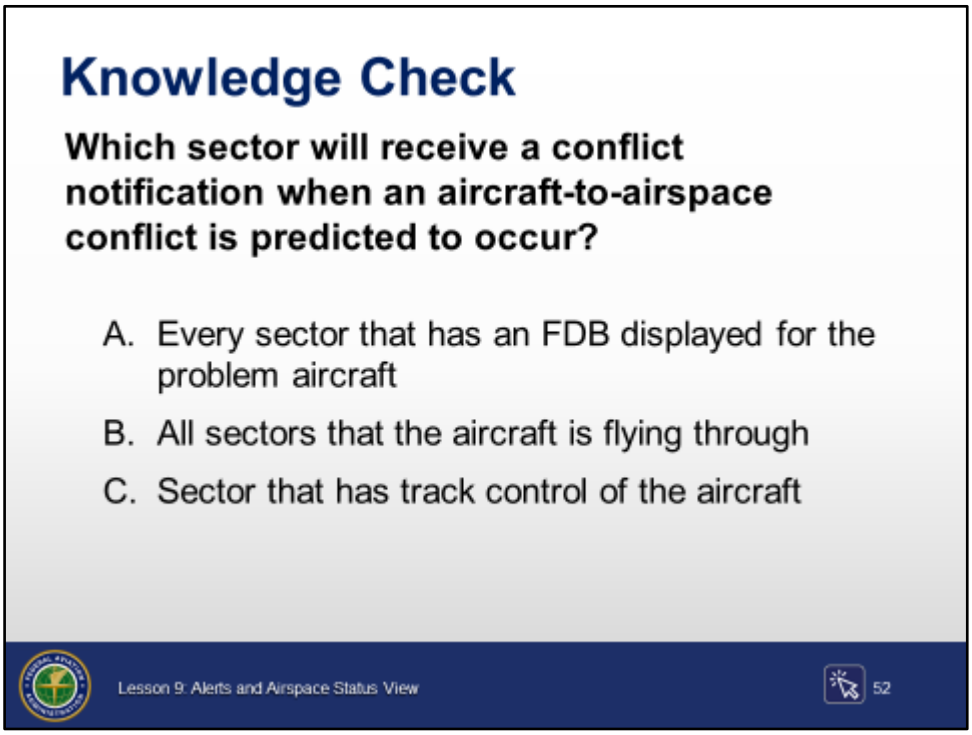
Knowledge Check



Question: If points of violation are located in different sectors, and only one of these sectors controls an aircraft involved in conflict, which sector would receive conflict notification?

RULES OF CONFLICT NOTIFICATION *(CONT'D)*

Knowledge Check

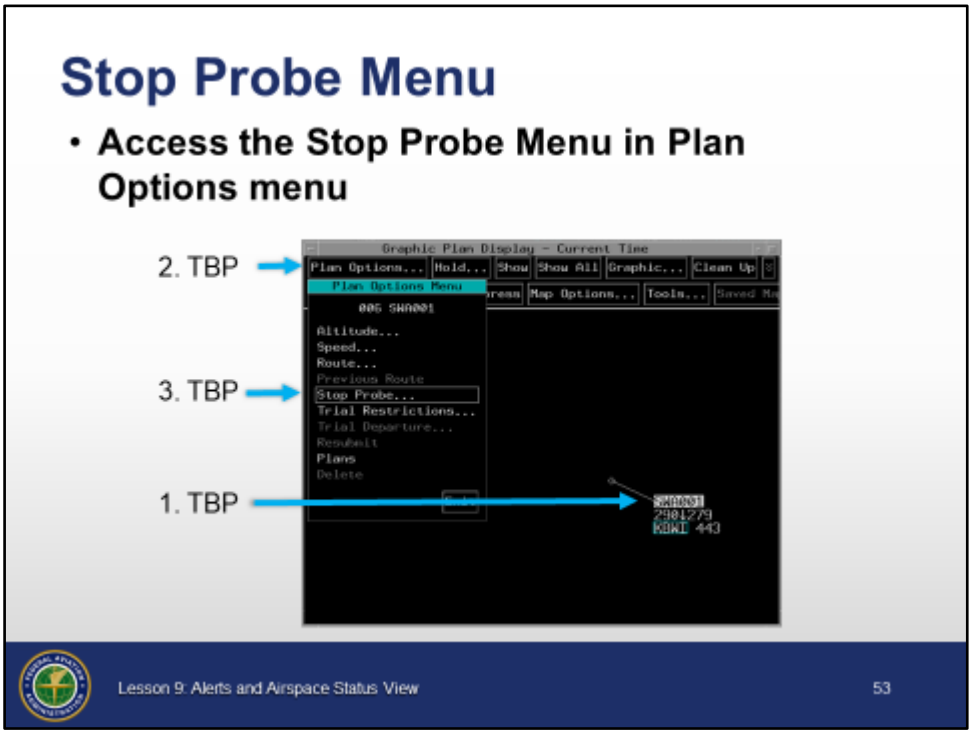


Question: Which sector will receive a conflict notification when an aircraft-to-airspace conflict is predicted to occur?

STOP PROBE FUNCTIONS

Stop Probe Menu

TI 6110.101, sec. 5.1.1.5.1

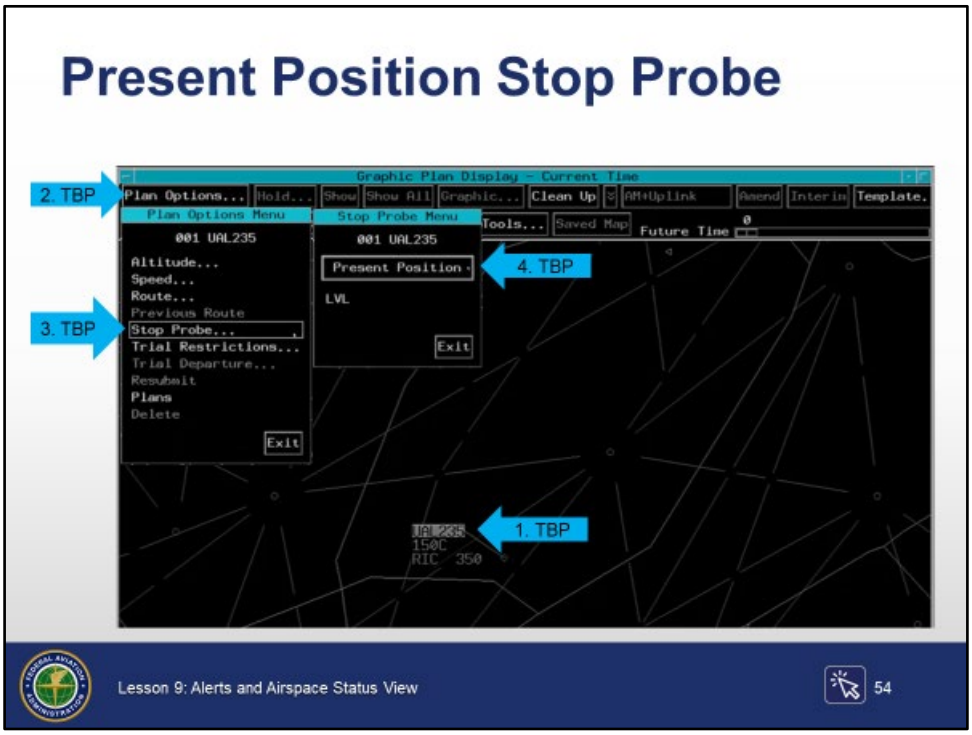


- Conflict probing can be suspended for a selected flight
- Access the Stop Probe Menu from the Plan Options Menu in ACL, Departure List (DL), GPD, or Plans Display
- To access the Stop Probe Menu:
  - TBP a call sign in the ACL, Departure List (DL), GPD, or Plans Display, then
  - TBP the Plan Options… button in the same list or display, then
  - TBP Stop Probe… in the Plan Options Menu
- The Stop Probe Menu provides a method to suspend conflict probing at:
  - Present position, or
  - Future fix

STOP PROBE FUNCTIONS *(CONT'D)*

Present Position Stop Probe

TI 6110.101, sec. 5.1.1.5

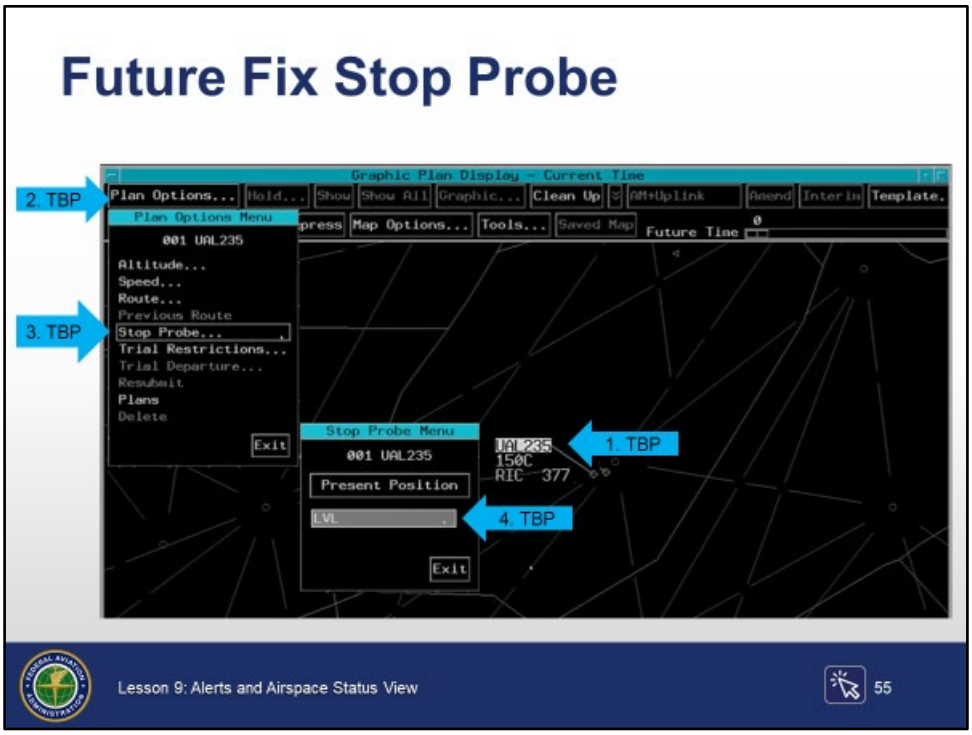


- To enter a Present Position Stop Probe:
  - TBP FLID
    - The Plan Options… Menu bar button becomes selectable
  - TBP Plan Options… Menu bar button
    - The Plan Options Menu opens
  - TBP Stop Probe…
    - The Stop Probe Menu opens
  - TBP Present Position

STOP PROBE FUNCTIONS *(CONT'D)*

Future Fix Stop Probe

TI 6110.101, sec. 5.1.1.5

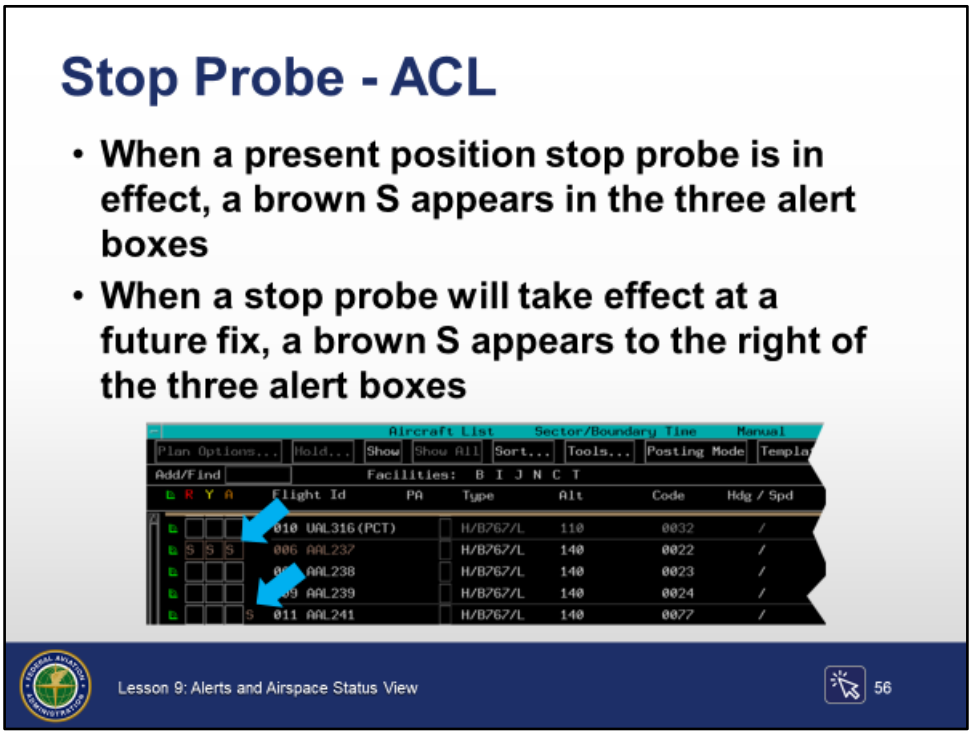


- To stop probe at a future fix:
  - TBP FLID
    - The Plan Options… Menu bar button becomes selectable
  - TBP Plan Options… Menu bar button
    - The Plan Options Menu opens
  - TBP Stop Probe…
    - The Plan Options Menu closes
    - The Stop Probe Menu opens
  - TBP a future fix

STOP PROBE FUNCTIONS *(CONT'D)*

Stop Probe - ACL

TI 6110.101, sec. 3.2.3.22

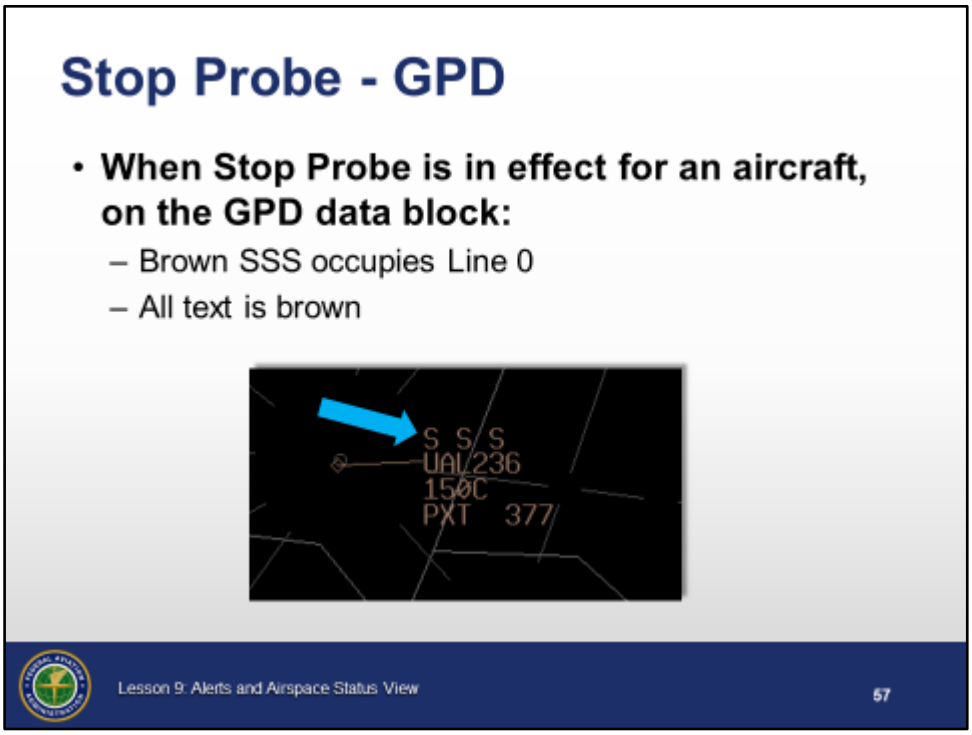


- When a present position stop probe is in effect for an aircraft, on the ACL:
  - A brown S appears in each of the three alert boxes
  - Flight ID is brown
- When a stop probe will take effect at a future fix, on the ACL:
  - A brown S appears to the right of the three alert boxes
  - Flight ID is white

STOP PROBE FUNCTIONS *(CONT'D)*

Stop Probe - GPD

TI 6110.101, sec. 3.2.3.22



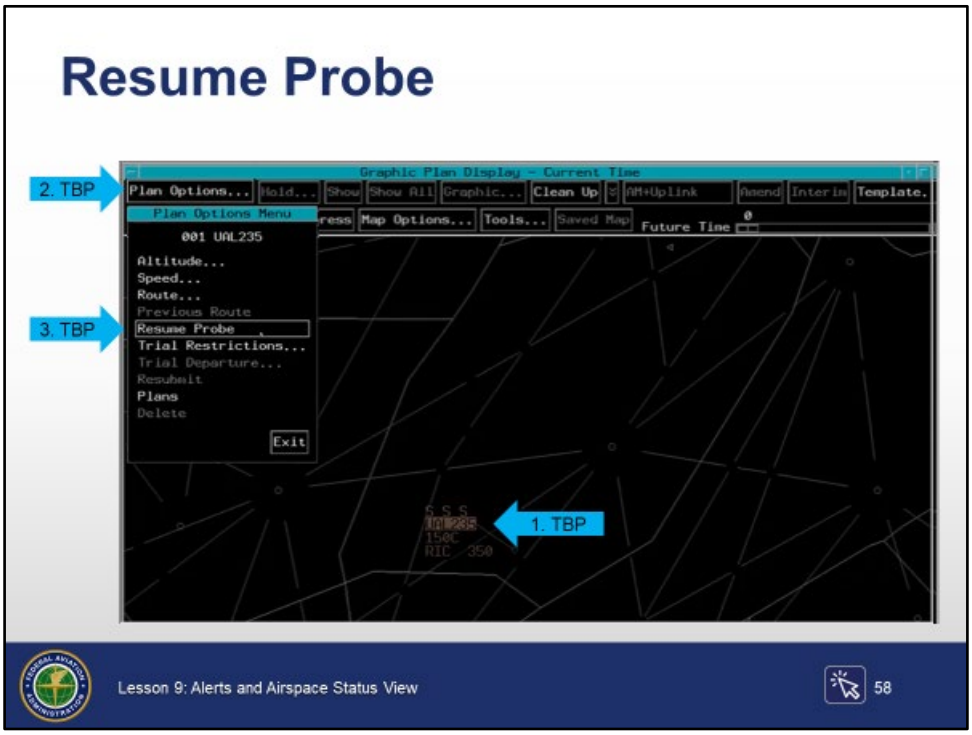
⊙ When Stop Probe is in effect for an aircraft, on the GPD data block:

- Brown SSS occupies Line 0
- All text is brown

STOP PROBE FUNCTIONS *(CONT'D)*

Resume Probe

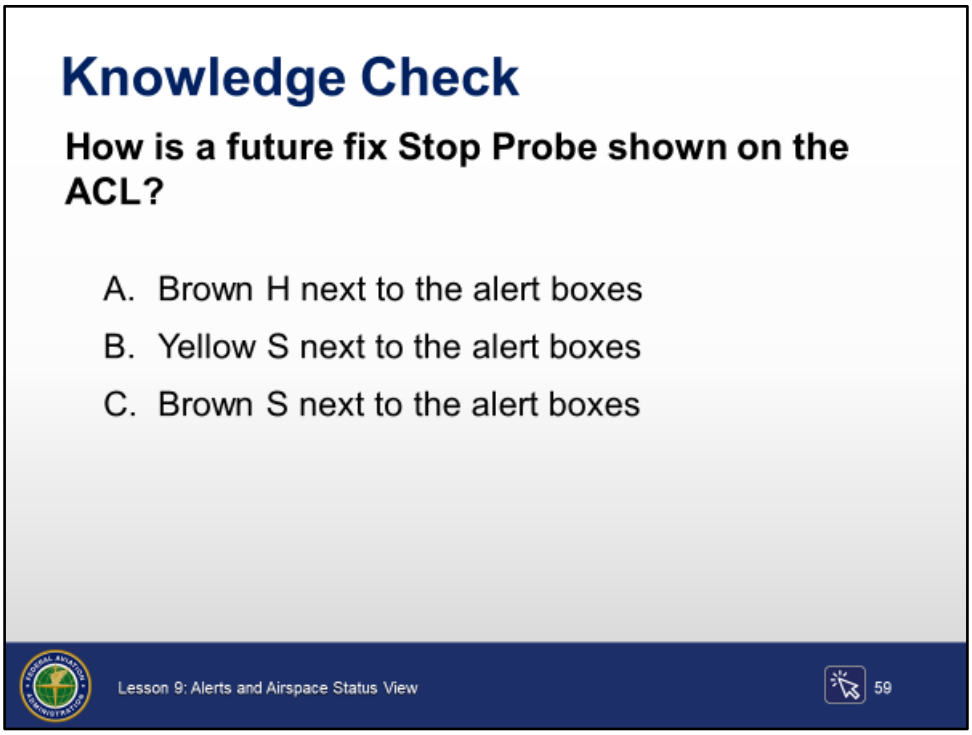
TI 6110.101, secs. 3.2.3.18, 5.1.1.5



- To resume probe:
  - TBP FLID
    - The Plan Options Menu bar button becomes selectable
  - TBP Plan Options Menu bar button
    - The Plan Options Menu opens
  - TBP Resume Probe
    - Conflict probing resumes
    - ACL flight ID turns white
    - GPD data block brown coding is removed

STOP PROBE FUNCTIONS *(CONT'D)*

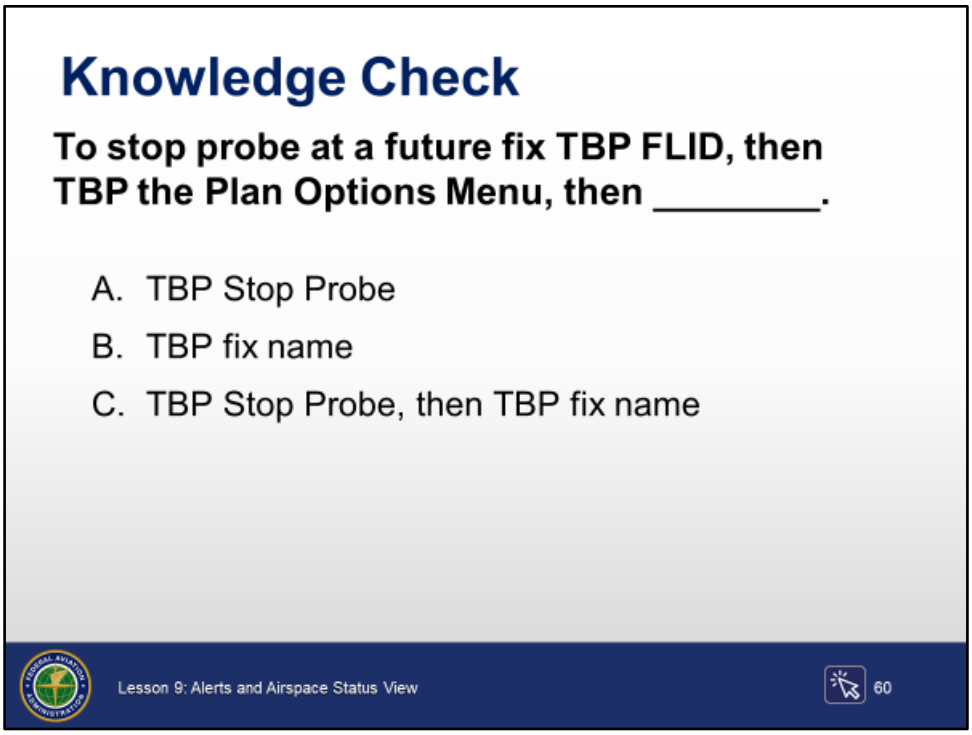
Knowledge Check



Question: How is a future fix Stop Probe shown on the ACL?

STOP PROBE FUNCTIONS *(CONT'D)*

Knowledge Check

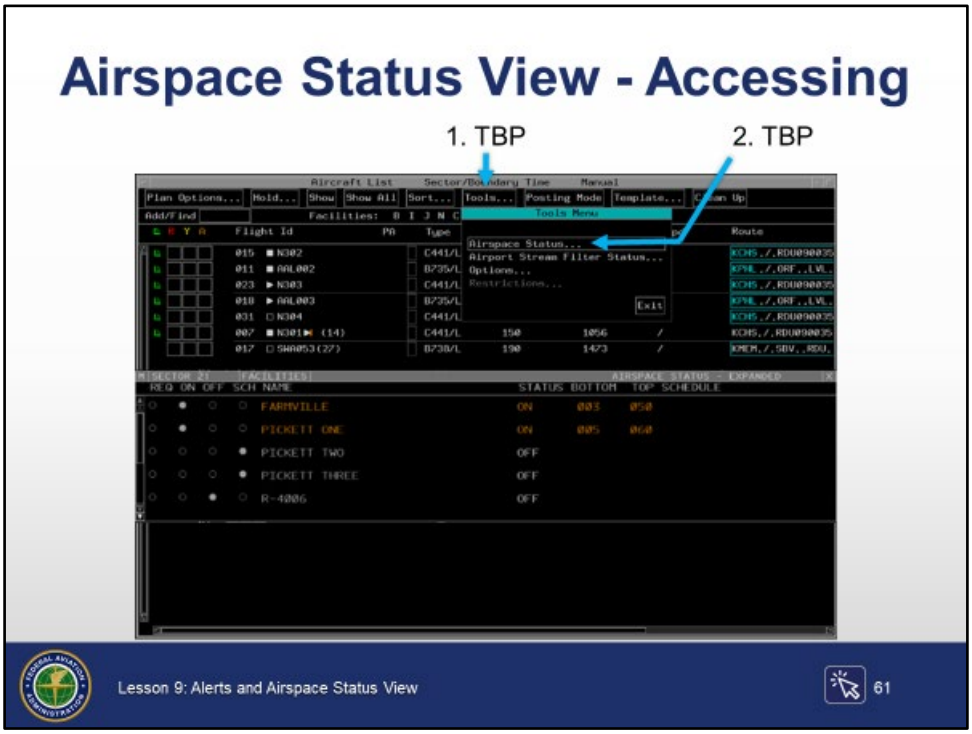


Question: To stop probe at a future fix TBP FLID, then TBP the Plan Options Menu, then _____.

AIRSPACE STATUS VIEW

Airspace Status View - Accessing

TI 6110.101, sec. 4.21.1

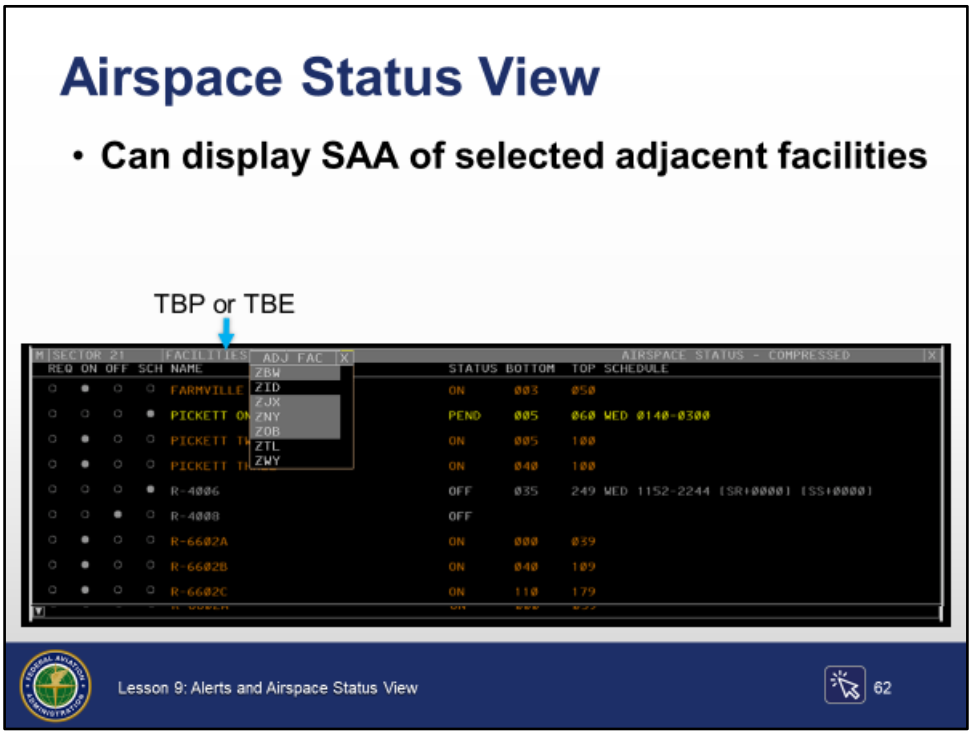


- Displays the current and planned use of SAAs
  - Up to 48 hours in advance
- To access the Airspace Status View through either the ACL or GPD:
  - TBP the Tools… button
    - The Tools Menu opens
  - TBP Airspace Status…
    - The Airspace Status View opens

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View

TI 6110.101, sec. 4.21.1



⊙ RA positions can:

- Change the status of designated SAAs
- Modify the schedule of designated SAAs
- Change the altitude limits of designated SAAs
- Filter the display between SAAs that are of operational interest to the sector and all the SAAs in the facility
- Display SAA of selected adjacent facilities
  - TBP or TBE FACILITIES in the menu header to open menu for selection of adjacent facility SAA

NOTE: Only certain sectors are designated with the responsibility to change status of specific SAAs.

Continued on next page

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View (Cont'd)

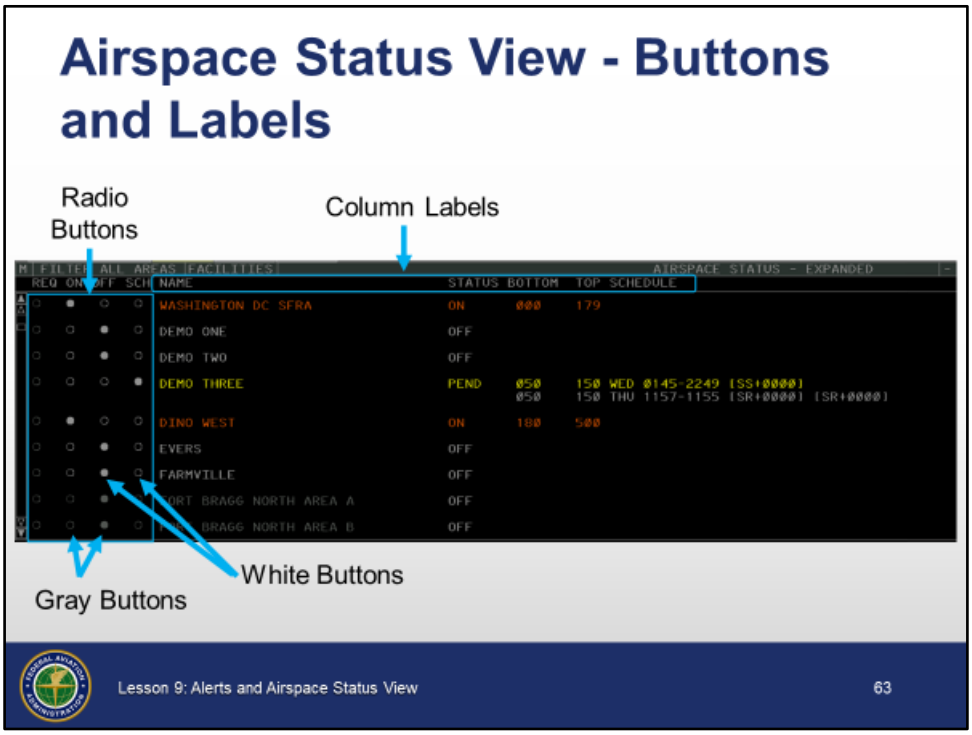
TI 6110.101, sec. 4.21.1

- View can be expanded or compressed from the Airspace Status View menu
  - Expanded view displays all scheduled SAA (excluding postponed schedules) for the next 48 hours
  - Compressed view displays only the first line of each SAA's data
    - Includes current status of ON, OFF, or PEND

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View - Buttons and Labels

TI 6110.101, sec. 4.21.1

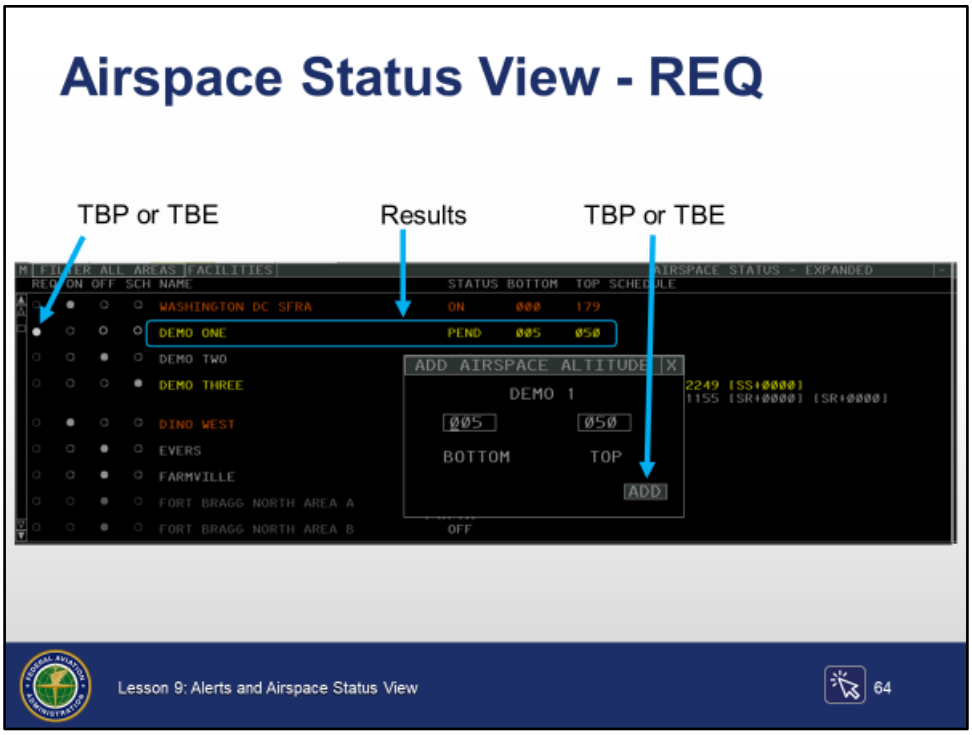


- White buttons are selectable
- Gray buttons are not selectable
- Radio buttons show the status of the respective SAA
  - REQ - Pending
  - ON - Active
  - OFF - Not Pending, Active, or Scheduled
  - SCH - Scheduled
- Column Labels
  - NAME - Name of SAA
  - STATUS - Current status of SAA
  - BOTTOM - Lower altitude boundary
  - TOP - Top altitude boundary
  - SCHEDULE - Active & scheduled times

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View - REQ

TI 6110.101, sec. 4.21.1

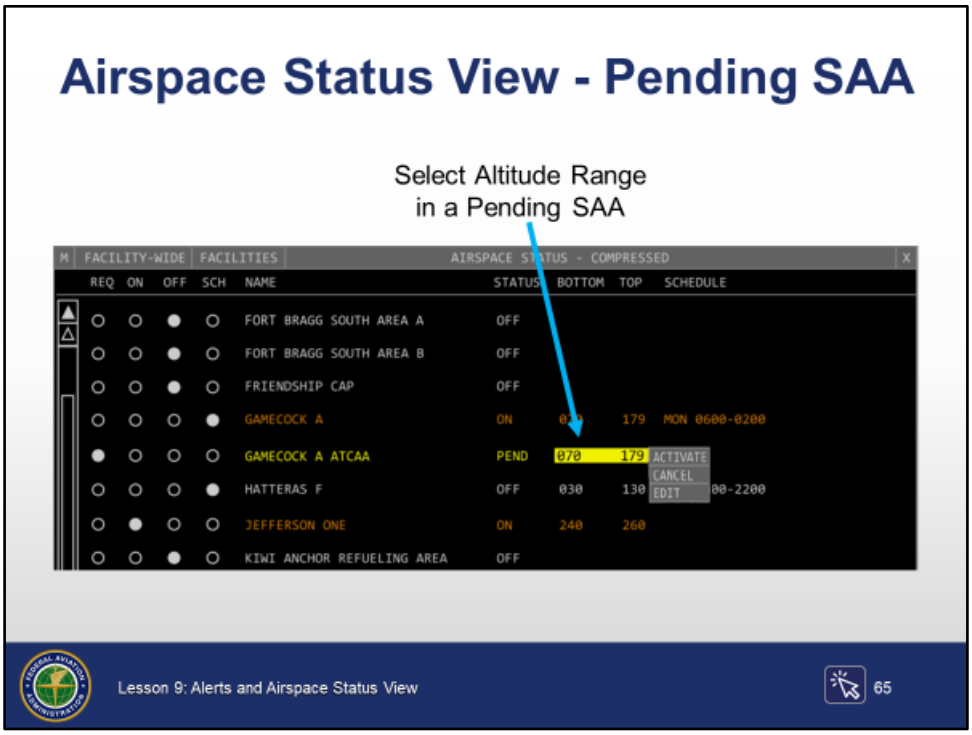


- TBP or TBE the REQ (Request) radio button to invoke the Add Airspace Altitude menu
- The user then selects an altitude range
- TBP or TBE the ADD button to change the SAA status to Pending
  - Yellow coding is applied to the SAA information on the Airspace Status View, SAA Filter View, and the Situation Display

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View - Pending SAA

TI 6110.101, sec. 4.21.1

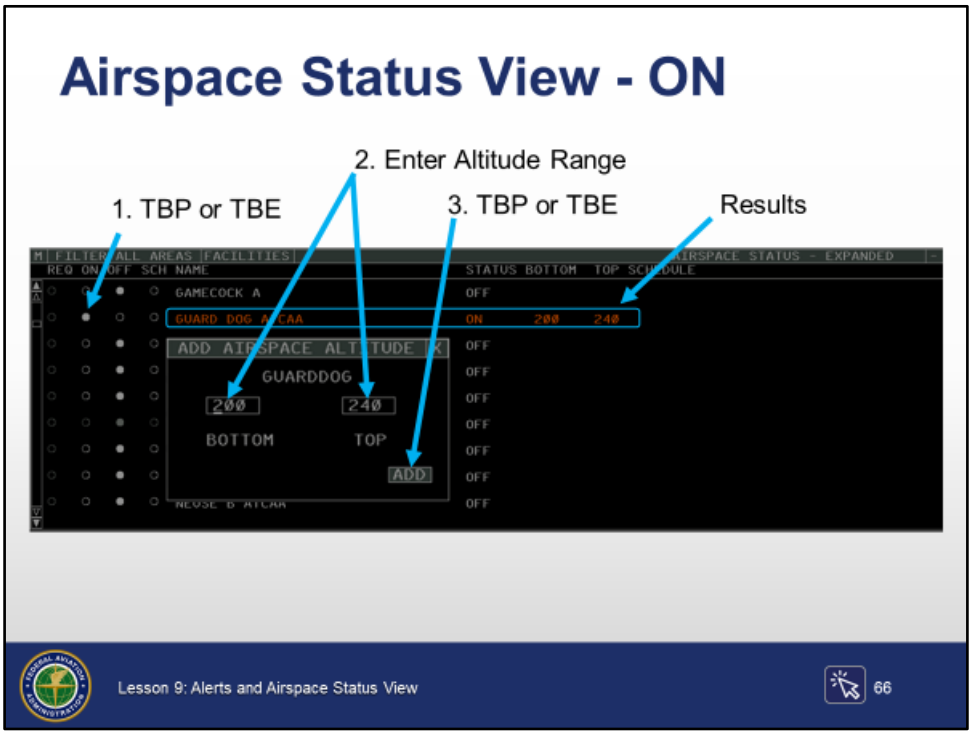


- When the altitude range is selected in a Pending SAA, a sub view is displayed that allows the user to Activate, Cancel, or Edit that SAA

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View - ON Button

TI 6110.101, sec. 4.21.1

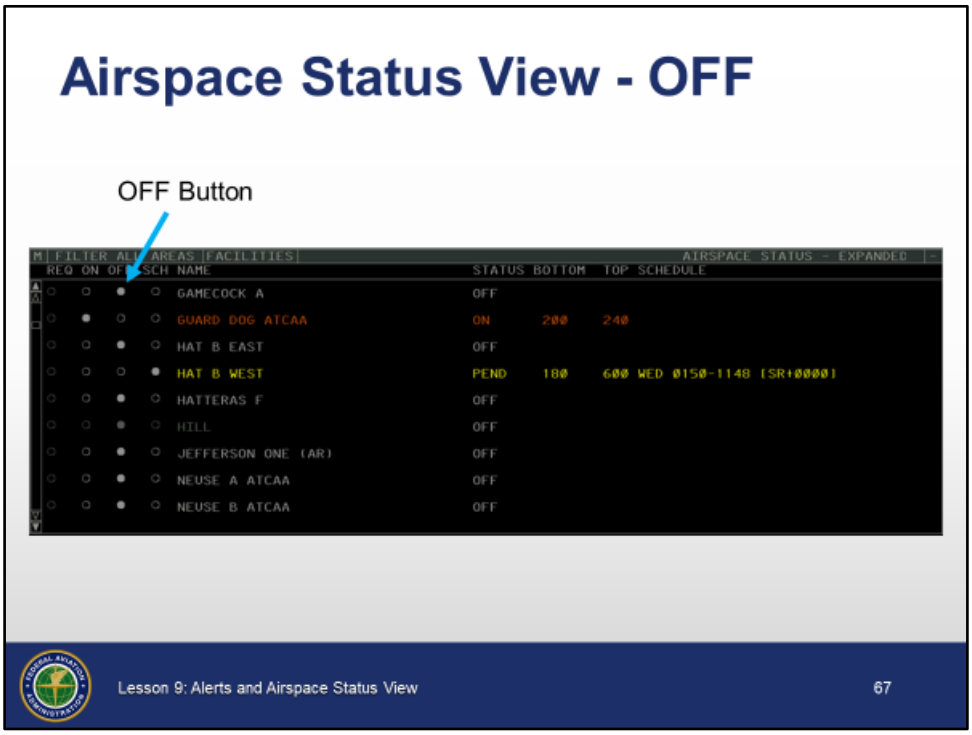


- The ON radio button is automatically filled in when a scheduled SAA goes active or can be manually selected to activate an SAA immediately using the scheduled altitude range
- TBP or TBE the ON button to invoke the Add Airspace Altitude menu
- To manually enter the active altitude range, select either the BOTTOM or TOP entry box and enter the altitude range, then TBP or TBE the ADD button
- Manually selected ON SAAs remain active until a user action is taken to change the status
- Orange coded text is used for Active SAAs

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View - OFF Button

TI 6110.101, sec. 4.21.1

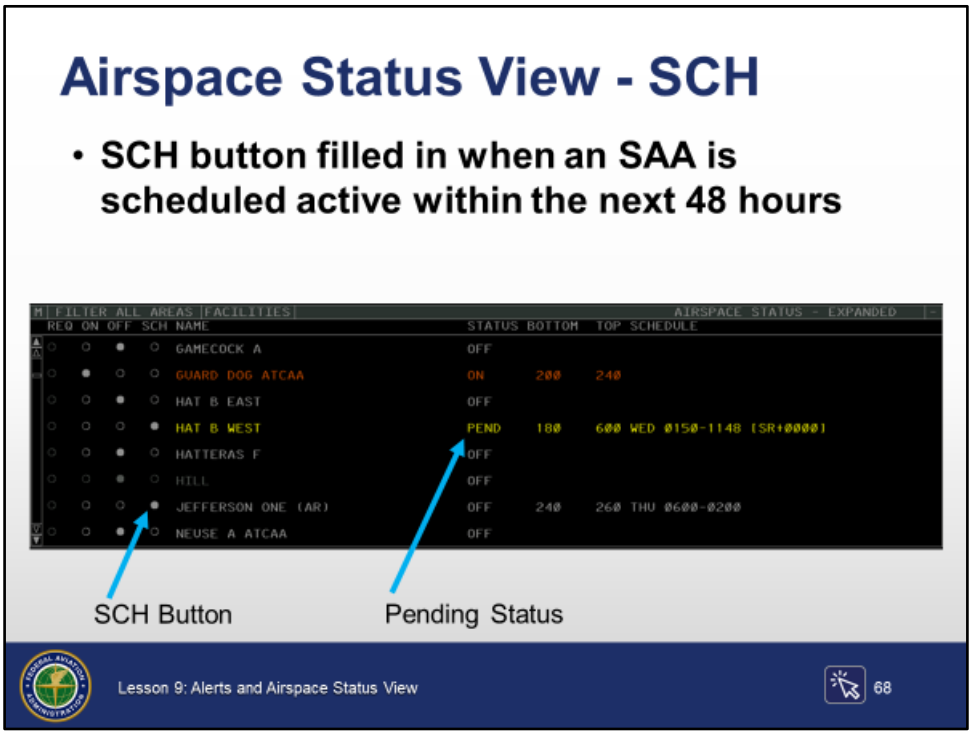


- The OFF radio button:
  - Is filled in when an SAA is not Pending, Active or Scheduled
  - Can be manually selected to override (deactivate) any Requested, Active or Scheduled SAA
- Applying another status deselects the OFF button
- White coded text is used for inactive SAAs

AIRSPACE STATUS VIEW *(CONT'D)*

Airspace Status View - SCH Button

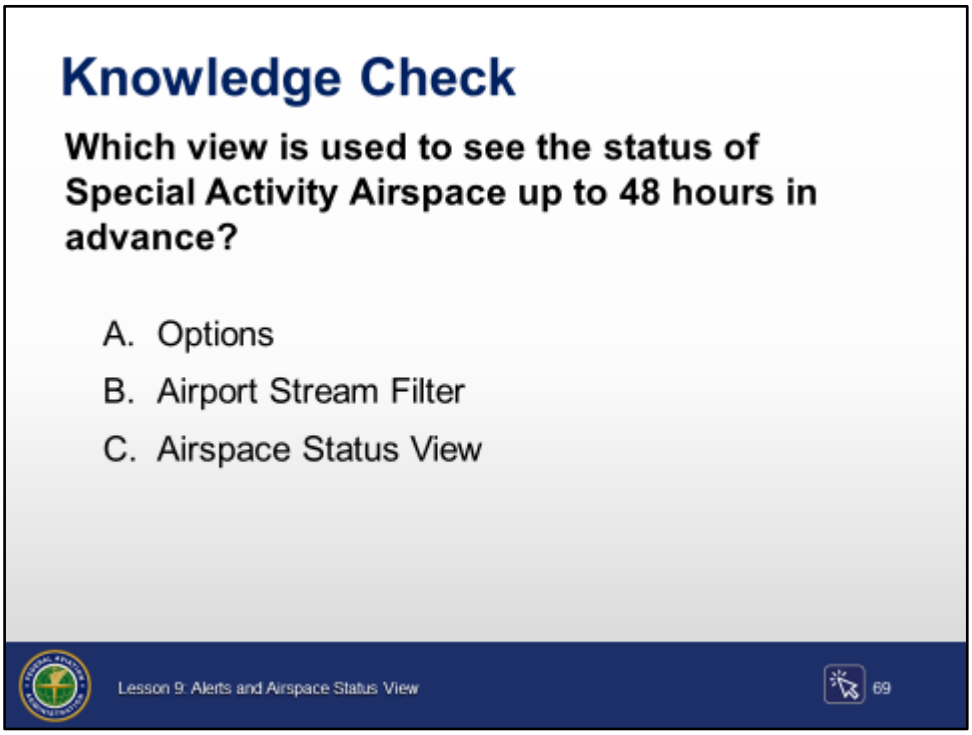
TI 6110.101, sec. 4.21.1



- The SCH button is filled in when an SAA is scheduled to be active within the next 48 hours
- Scheduled SAAs change to Pending (yellow) coded text when a facility adapted time prior to SAA activation is reached

AIRSPACE STATUS VIEW *(CONT'D)*

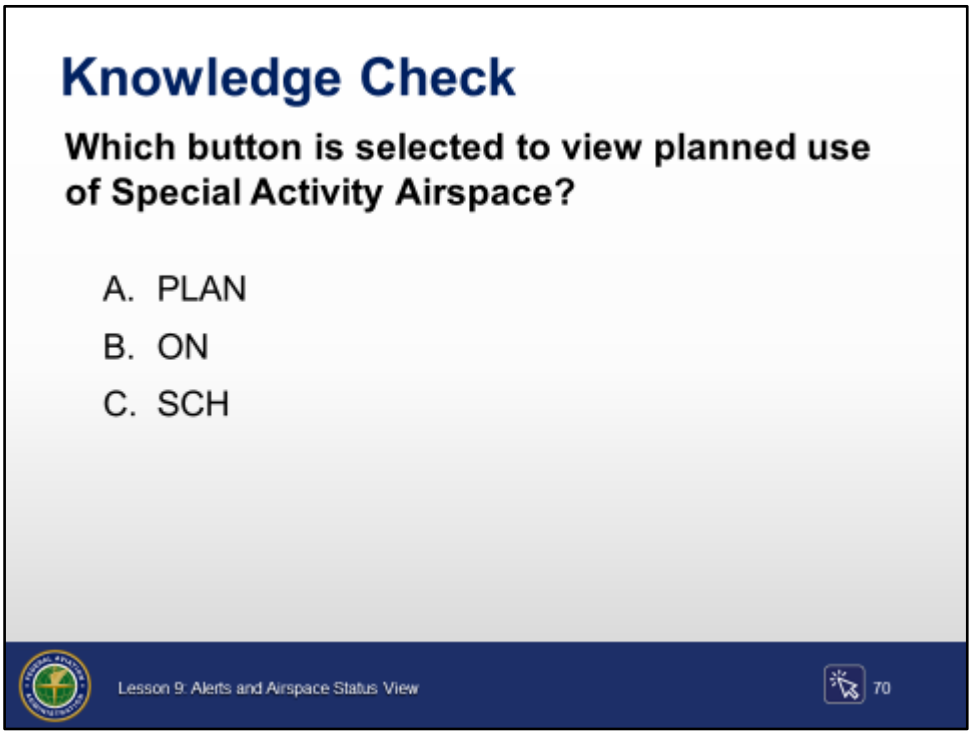
Knowledge Check



Question: Which view is used to see the status of Special Activity Airspace up to 48 hours in advance?

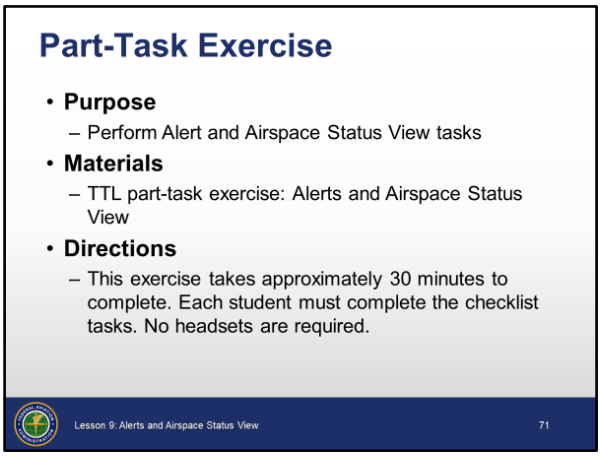
AIRSPACE STATUS VIEW *(CONT'D)*

Knowledge Check



Question: Which button is selected to view planned use of Special Activity Airspace?

PART-TASK EXERCISE: ALERTS AND AIRSPACE STATUS VIEW



Purpose

Perform Alert and Airspace Status View tasks.

Materials

Handout:

- TTL part-task exercise: Alerts and Airspace Status View

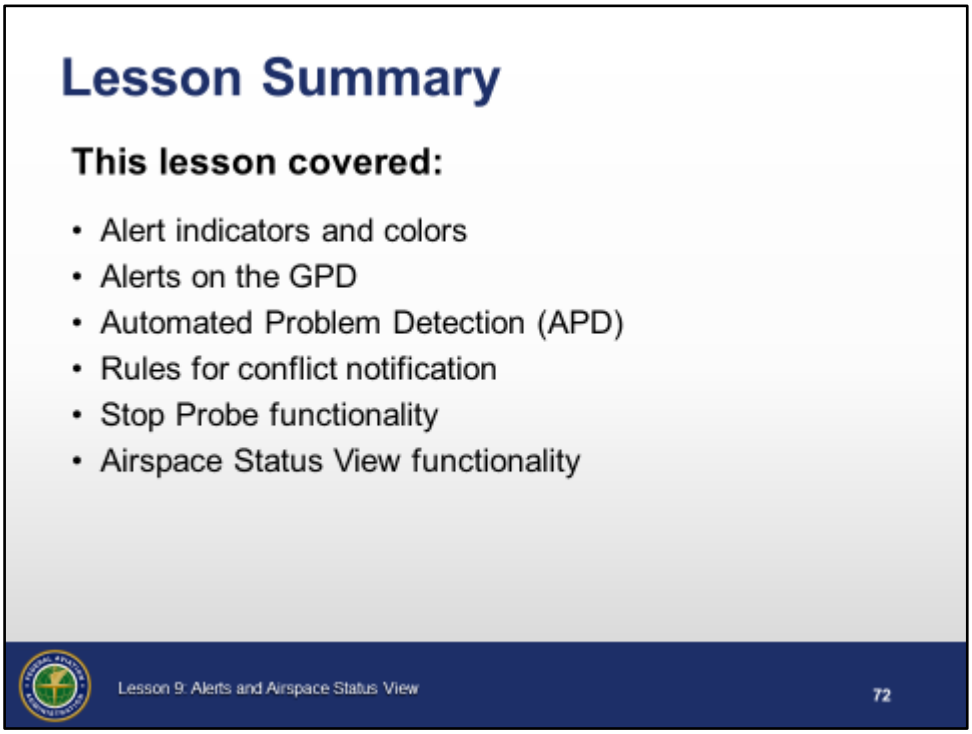
TTL scenario

Directions

This exercise takes approximately 30 minutes to complete. Each student must complete the checklist tasks. No headsets are required.

CONCLUSION

Lesson Summary



This lesson covered:

- Alert indicators and colors
  - Red
  - Muted red
  - Yellow
  - Muted yellow
  - Orange
  - Alert Boxes
    - Brown X
    - Brown S
    - Brown H
    - Brown F
  - Alert indicators in the Plans Display and GPD

Continued on next page

CONCLUSION *(CONT'D)*

Lesson Summary (Cont'd)

- Alerts on the GPD
  - Point of violation
  - Green route of flight
  - Special Activity Airspace
  - Show/Remove Alerts ACL and GPD
  - Show All/Remove All Alerts ACL and GPD
  - Acknowledge selected conflict
  - Acknowledge all conflicts
- Automated Problem Detection
  - Compares trajectories to predict conflicts
  - Results displayed in Plans Display
  - Ineligible
  - Separation Values
  - Separation Buffer
  - Inhibiting areas
- Rules for conflict notification
  - Only one sector gets an alert at a time
  - Aircraft-to-aircraft alerts
  - Aircraft-to-airspace alerts
- Stop Probe functionality
  - Menu
  - Present position Stop Probe
  - Future fix Stop Probe
  - Display in ACL
  - Display in GPD
  - Resume Probe

Continued on next page

CONCLUSION *(CONT'D)*

Lesson Summary (Cont'd)

- Airspace Status View functionality
  - Accessing
  - Buttons/Labels
  - Request airspace
  - Pending SAA
  - ON button
  - OFF button
  - SCH button