

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

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1

Version: 1.0 2022.08



## **LESSON PLAN DATA SHEET**

Course Name	En Route Radar Associate Controller Training Part C: Advanced Concepts
Course Number	55054003
Lesson Title	Introduction to En Route Decision Support Tool (EDST), Part 1
Duration	3 hours, 30 minutes (includes lesson, part-task, and ELT)
Version	1.0 2022.08
Reference(s)	TI 6110.101, En Route Automation Modernization RA-Position User Manual; TI 6110.108, En Route Automation Modernization Quick Reference Controller Card; ERAM ATCHI MISC 230.05, ERAM SRS Air Traffic Computer-Human Interface; ERAM CONFLICT AD 220.03, ERAM Conflict Management, Off-Line Problem Determination, and Utility Algorithms; FAA ICAO FPL Quick Guide 2018; Transport Canada COM-AIM-2013-1 ENG-3
Prerequisites	NONE
Handout(s)	<ul> <li>Part-Task Exercise HO01_02</li> <li>TI 6110.108, ERAM Quick Reference Controller Card</li> </ul>
Exercise / Activity	Refer to handout for:  O Part-Task Exercise: Introduction to En Route Decision Support Tool (EDST), Part 1
	⊙ Run scenario 55054003_L02_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
	<ul> <li>This lesson is based on ERAM EAE410</li> <li>The lesson has been reviewed and reflects current orders and manuals as of April 2022</li> </ul>

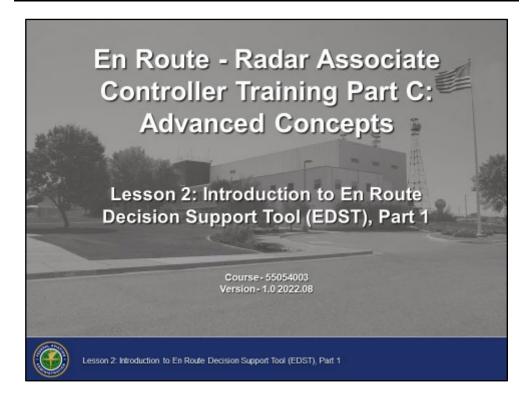
## **LESSON ICON LEGEND**

	Description
Y	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.
.4	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.
<b>†</b>	The Phraseology icon indicates that phraseology is in the content.
	The WBT icon indicates a component of web-based training.
W.	The Click icon indicates a PPT slide with click-based functionality to present additional information.
	The Definition icon indicates a published definition.



#### LESSON INTRODUCTION

#### Overview



En Route Decision Support Tool (EDST) is the interface at the Radar Associate (RA) position that is used by the sector team in performing its strategic planning responsibilities. EDST uses flight plan data, forecast winds, aircraft performance characteristics, and track data to derive expected aircraft trajectories, and to predict conflicts between aircraft and between aircraft and special use or designated airspace. It also provides trial planning and enhanced flight data management capabilities.

## LESSON INTRODUCTION (CONT'D)

#### Lesson Objectives

## **Lesson Objectives**

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

- Steps to manage the EDST
- Aircraft List (ACL) and Departure List (DL) layout, sort orders, and modes
- · ACL and DL columns, symbols, colors and coding
- · Steps to interact with flight plan entries
- Procedures for using templates to edit or create flight plans
- Hold Data Menu



Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1

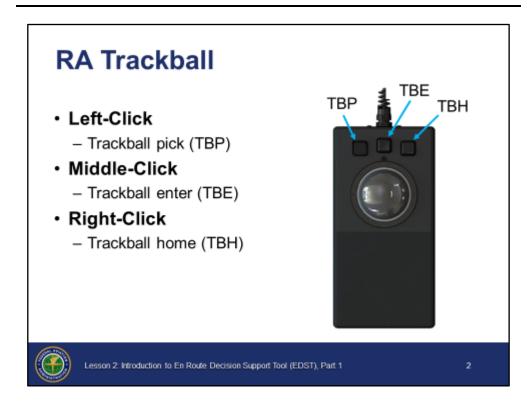
- At the end of this lesson, you be able to identify:
  - Steps to manage the EDST
  - Aircraft List (ACL) and Departure List (DL) layout, sort orders, and modes
  - ACL and DL columns, symbols, colors and coding
  - Steps to interact with flight plan entries
  - Procedures for using templates to edit or create flight plans
  - Hold Data Menu
- At the end of this lesson, you will complete a part-task exercise in which you will practice using EDST

**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.

#### **MANAGING THE EDST**

#### **RA Trackball**

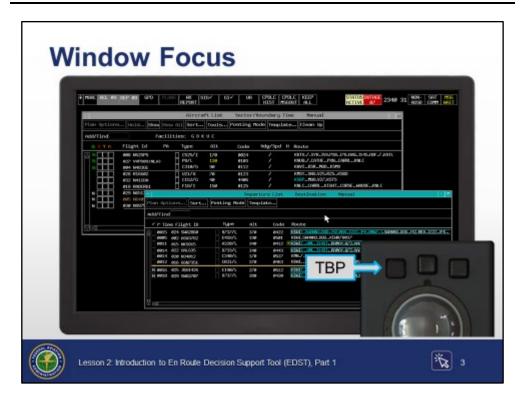
TI 6110.101, sec. 1.3.2



- The RA Position Trackball has the following buttons used to select items from displays and menus to initiate actions:
  - Left-Click
    - Trackball pick (TBP)
  - Middle-Click
    - Trackball enter (TBE)
  - Right-Click
    - Trackball home (TBH)

# Window Focus

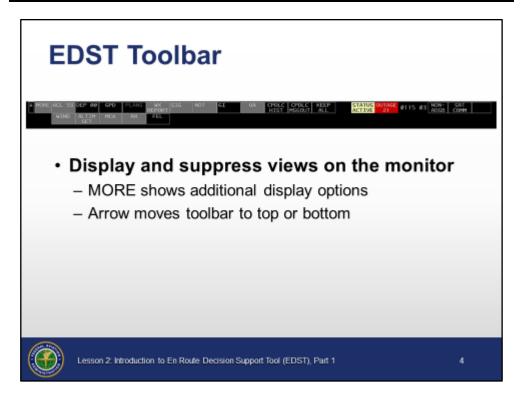
TI 6110.101, sec. 2.3



- Multiple windows can be displayed simultaneously on the RA Position flat panel display, but you can only interact with one window at a time
  - The window that has the trackball cursor within its boundaries has window focus
  - Only windows with focus can be manipulated
    - A window with focus has a cyan colored window title bar
    - The title bar is gray if the window does not have focus
  - To raise the window in the back to the front of the display:
    - TBP anywhere within the title bar of the view window, side edges, or bottom edge

#### **EDST Toolbar**

TI 6110.101, sec. 2.1



- The EDST toolbar enables the user to display and suppress views at the RA Position workstation
  - Selecting any item from the EDST toolbar will toggle the display or suppress:
    - ACL Aircraft List view
    - DEP Departure List view
    - GPD Graphic Plan Display view
    - PLANS Plans Display view
    - WX REPORT Weather Station Report view
    - SIG SIGMET view
    - NOT NOTAM view
    - GI General Information Messages view
    - UA Update Area view
    - CPDLC HIST Controller Pilot Data Link Communications (CPDLC) Message History view
    - CPDLC MSGOUT CPDLC Message Out view
    - KEEP ALL when selected, keeps all entries in the ACL and DEP

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# EDST Toolbar (Cont'd)

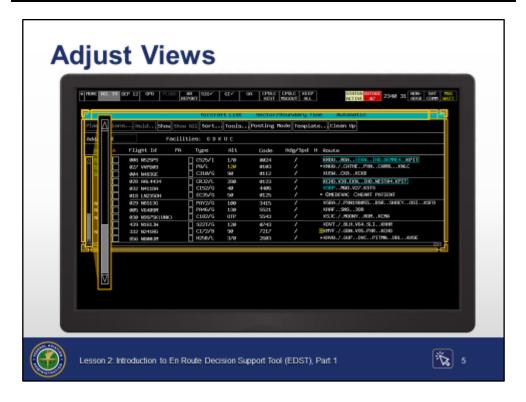
TI 6110.101, sec. 2.1

- Selecting the MORE button shows additional items that may be toggled to display or suppress:
  - WIND Wind Grid Display view
  - ALTIM SET Altimeter Settings view
  - MCA Message Composition Area view
  - RA Response Area view
  - FEL Flight Event List view
- Other toolbar buttons:
  - STATUS Status view
  - OUTAGE Outage view
  - TIME system time in UTC
  - NON-ADS-B displays or suppresses the non-Automatic Dependent Surveillance-Broadcast (ADS-B) Indicator in the ACL, GPD, and DEP views
  - SAT COMM enables or disables the display of the SatComm Indicator
    - Satellite communications
  - MSG WAIT accesses a queued message waiting in the Update Area view
- Selecting the arrow on the left moves toolbar to top or bottom of the RA Position display

#### **Adjust Views**

TI 6110.101, sec. 2.3

ERAM ATCHI MISC 230.05, par. 2.1.5



**NOTE:** The ACL is being displayed for demonstration purposes, but these commands work for all views.

- The top of the display has 3 buttons that can be used to change the window size and location
  - Window menu
    - Top left corner
      - o Restore
      - Minimize
      - Maximize
      - Lower

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# Adjust Views (Cont'd)

TI 6110.101, sec. 2.3

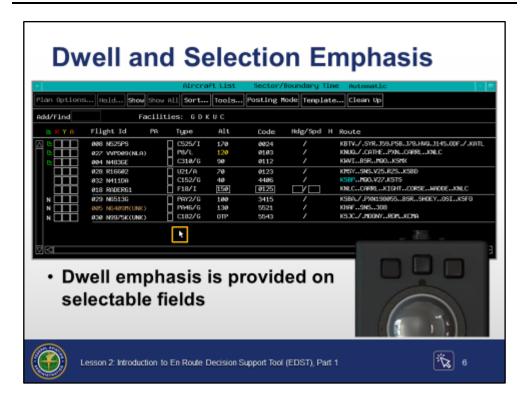
ERAM ATCHI MISC 230.05, par. 2.1.5

- Minimize
  - Top right corner
    - TBP removes the display
- Maximize
  - Top right corner
    - o TBP makes the display fill the entire screen
- To move a display, TBP the title bar, and drag and drop in the new location
- Windows that are scrollable contain two scroll bars
  - One scroll bar has a vertical orientation, and is located on the left side of the window
    - This scroll bar is used to move data up or down
  - The other scroll bar has a horizontal orientation, and is located at the bottom of the window
    - This scroll bar is used to move data to the left or right
  - If the view is too small for the information to be displayed, scroll bars will allow you to see that information by any of the following actions:
    - Click and drag black portion
    - Click arrows
    - Click gray areas
- To resize in any direction, TBP and drag along any edge or corner
- Keyboard command
  - UU R
    - Resets the locations and sizes of the Aircraft List, Departure List,
       Graphic Plan Display, Plans Display, and the Response Area

# Dwell and Selection Emphasis

TI 6110.101, sec. 1.3.2

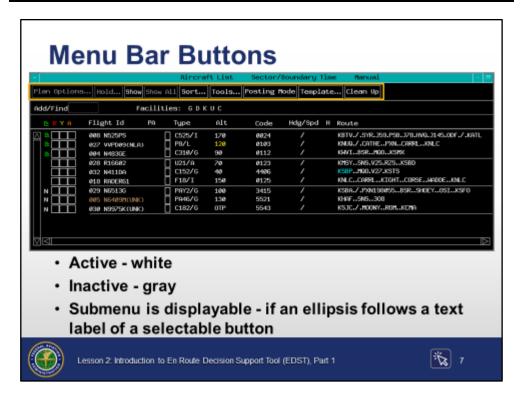
ERAM ATCHI MISC 230.05, par. 2.1.3



- When the cursor is positioned on a selectable object (e.g., Flight ID field in an Aircraft List entry, menu item, input boxes in menus and templates), it is highlighted with dwell emphasis
  - Dwell emphasis consists of surrounding the selectable item with a white box

#### Menu Bar Buttons

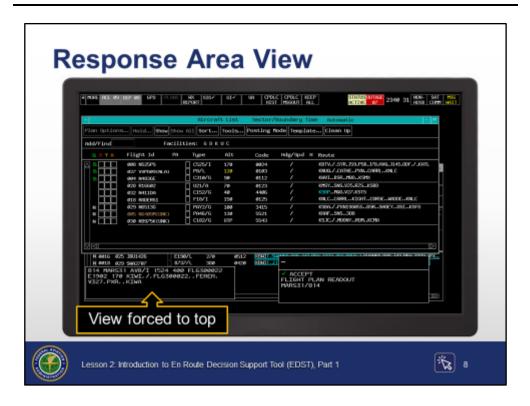
TI 6110.101, sec. 4.1.1.2



- Many views have a menu bar with buttons across the top
- Each menu bar button has an active and inactive state
  - If a button is active, it is selectable:
    - Text is white
  - If a button is inactive, that menu or option is not available:
    - Text is gray
  - If an ellipsis follows the text label of a menu bar button, it indicates a submenu is displayed when the button is selected

#### Response Area View

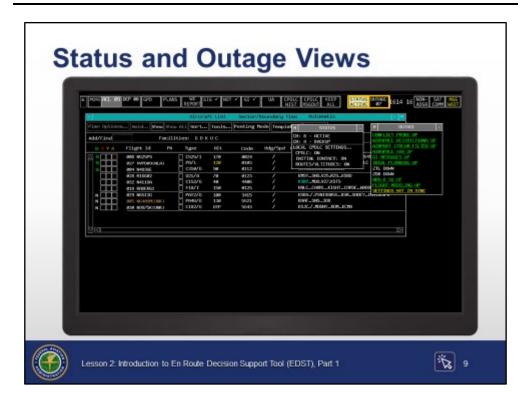
ERAM ATCHI MISC 230.05, par. 2.1



- The Response Area will be forced to the top of the display when you request information
  - The view will be displayed at:
    - The previous location or
    - The default location if the Response Area has not been displayed previously
  - The Response Area can be suppressed with the RA toolbar button

# Status and Outage Views

TI 6110.101, secs. 4.14, 4.15



- Status View displays information relevant to the sector
  - Current channel ID
    - A or B, or both
  - Channel mode information
    - ACTIVE
    - BACKUP
    - PENDING
    - TEST
  - TBP or TBE STATUS on the toolbar to open or suppress the view

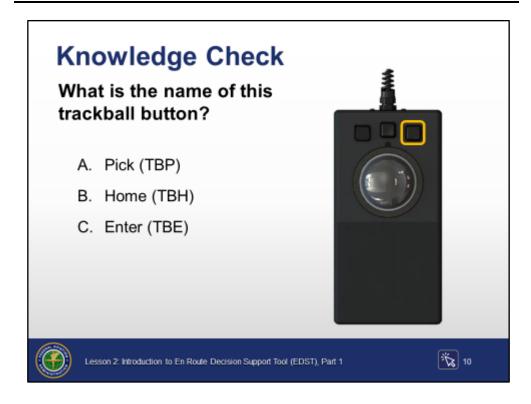
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#### Status and Outage Views (Cont'd)

TI 6110.101, secs. 4.14, 4.15

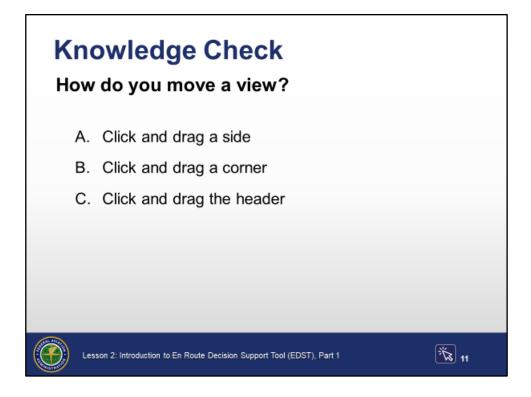
- Outage View provides current outages at the sector
  - Displays system information in different colors depending on the outage status
    - Green Outage returned to service
    - Yellow Unacknowledged normal outage
    - Red Unacknowledged critical outage
    - White Acknowledged outage
  - TBP or TBE the outage name to acknowledge the outage
    - Green entries will disappear
    - Yellow and red entries will turn white
  - Button contains the sector number
  - TBP or TBE OUTAGE on the toolbar to open or suppress the view

Knowledge Check



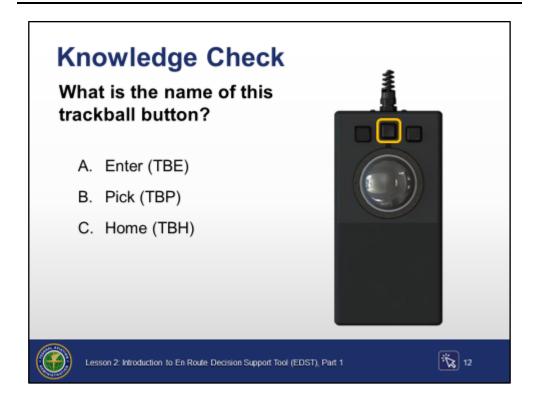
Question: What is the name of this trackball button?

#### Knowledge Check



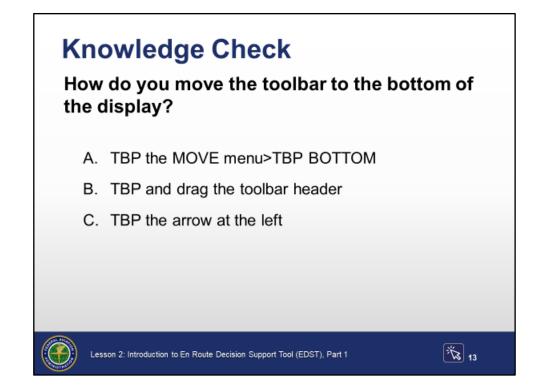
Question: How do you move a view?

Knowledge Check



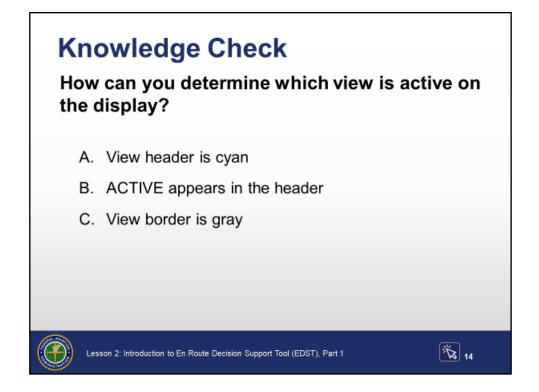
Question: What is the name of this trackball button?

Knowledge Check



Question: How do you move the toolbar to the bottom of the display?

Knowledge Check



Question: How can you determine which view is active on the display?

Knowledge Check

## **Knowledge Check**

What is the function of the MORE button on the toolbar?

- A. Displays more toolbar buttons
- B. Displays more flight entries in the active view
- C. Displays more of the message composition area

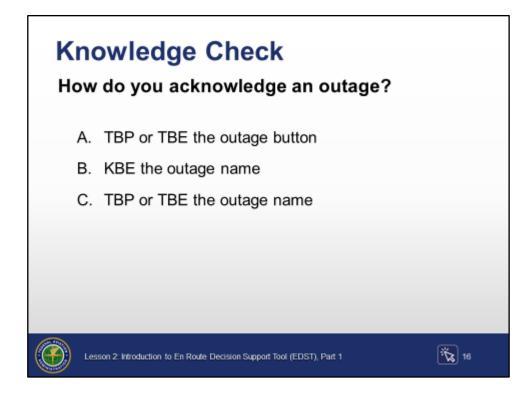


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Question: What is the function of the MORE button on the toolbar?

#### Knowledge Check



Question: How do you acknowledge an outage?

#### AIRCRAFT LIST AND DEPARTURE LIST

# Layout and Characteristics

TI 6110.101, sec. 4.1

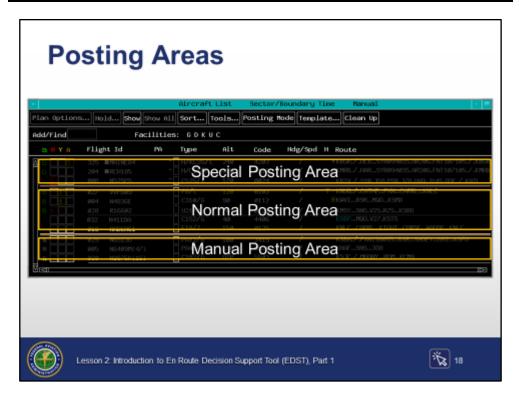
ERAM ATCHI MISC 230.05, pars. 3.4.1, 3.4.7, 7.4.1



- Components of the Aircraft List (ACL) include the:
  - Title Bar
    - Contains the title, the sort order, and the posting mode
  - Menu Bar
    - Contains buttons to enable the user to access various command options and menus
  - Main Display Area, including:
    - Add/Find Input Field
    - Facilities field, ACL only

#### **Posting Areas**

TI 6110.101, secs. 4.2.1.3, 4.2.3.2

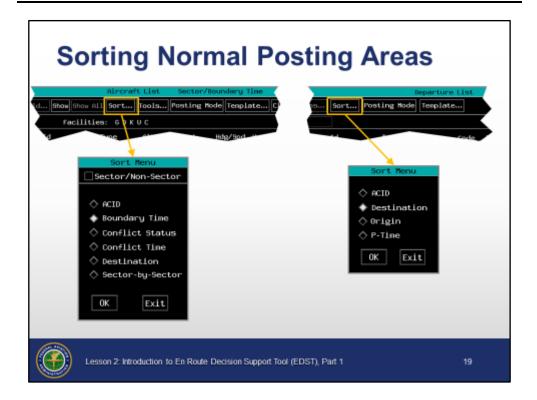


- There are three ACL posting areas
  - The Special Posting Area is separated from the Normal Posting Area by a single tan line and is located at the top of the ACL. It displays:
    - Aircraft selected by the user
    - Holding aircraft
    - Overdue aircraft
  - The Normal Posting Area is always present
    - Aircraft are sorted by the selected option from the Sort Menu
  - The Manual Posting Area is displayed at the bottom of the entry list
    - When displayed, is separated from the Normal Posting Area by two tan lines

#### Sorting Normal Posting Areas

TI 6110.101, sec. 4.20

ERAM ATCHI MISC 230.05, pars. 3.7.29 1, 7.7.9



- The Sort button on the ACL menu bar provides a method for specifying the order of entries in the Normal Posting Area
  - The first selection in the Sort Menu is Sector/Non-Sector
    - If Sector/Non-Sector is selected, the Aircraft List is primarily sorted by sector, and secondarily sorted by the other selected sort menu option
  - Other selections in the Sort Menu are listed alphabetically
    - ACID sorted in alphanumeric order based on the ACID
    - Boundary Time sorted with the first aircraft estimated to cross the sector boundary at the top of the list
    - Conflict Status red alerts are displayed at the top of the list, followed by yellow alerts, and then airspace alerts
      - Within each alert status group, the order is determined by the alert time with the earliest alert at the top
      - Conflict free aircraft are sorted at the bottom

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#### Sorting Normal Posting Areas (Cont'd)

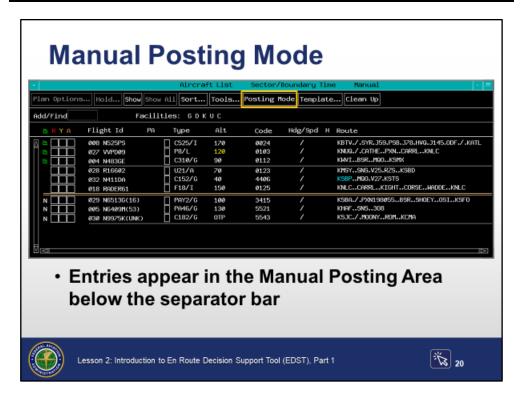
TI 6110.101, sec. 4.20

ERAM ATCHI MISC 230.05, pars. 3.7.29 1, 7.7.9

- Conflict Time sorted by alert time, with the entry predicted to have the earliest occurring alert displayed at the top
  - o Conflict-free aircraft are sorted at the bottom of the list
- Destination sorted alphanumerically according to each flight's destination
- Sector-by-Sector sorted based on the controlling sector number
  - Aircraft under your control are at the top of the list, followed by aircraft under another sector's control
- The Sort button on the DL menu bar provides a method for specifying the order of entries
  - ACID sorted in alphanumeric order based on the ACID
  - Destination sorted alphanumerically according to each flight's destination
  - Origin sorted alphanumerically according to each flight's origin
  - P-Time sorted by proposal time

# Manual Posting Mode

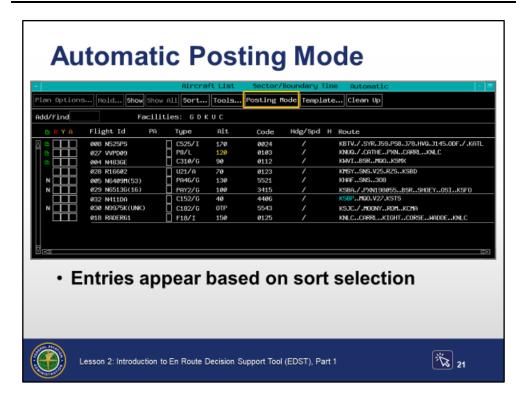
TI 6110.101, secs. 2.5.11, 5.4.8



- ⊙ The Posting Mode button toggles between manual and automatic
  - In manual posting mode:
    - New flight entries are posted below the double line
    - Entries are posted on the basis of the time they enter the ACL

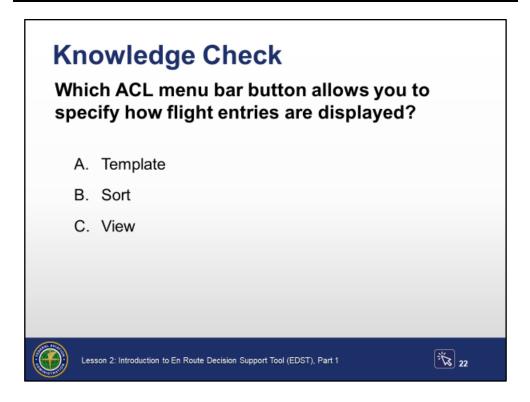
# Automatic Posting Mode

TI 6110.101, sec. 5.4.8



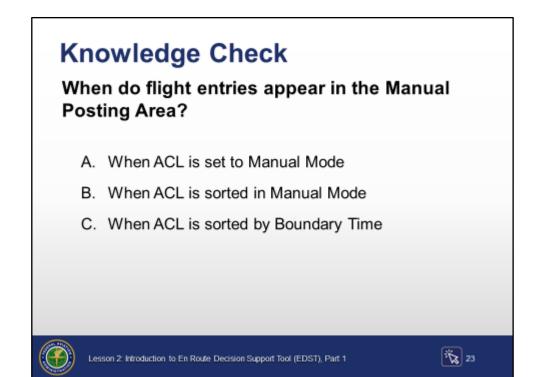
 In automatic posting mode, aircraft entries are posted in the Normal Posting Area based on sort selection

Knowledge Check



**Question:** Which ACL menu bar button allows you to specify how flight entries are displayed?

Knowledge Check

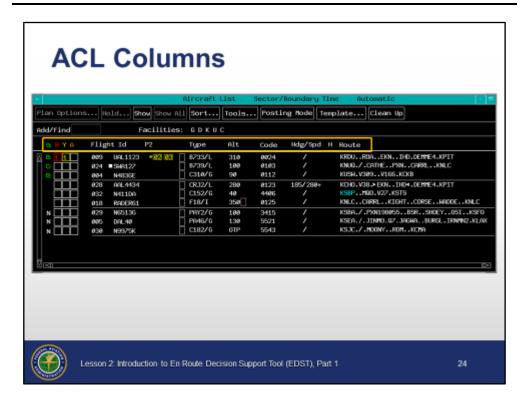


Question: When do flight entries appear in the Manual Posting Area?

## ACL AND DL COLUMNS, SYMBOLS, AND CODING

#### **ACL Columns**

TI 6110.101, secs. 2.5.1, 4.1.1.3



- The ACL is the primary view for active flights
  - Data is organized in tabular format of rows and columns
    - Some columns have headers that may be selected to expand or contract the information displayed
  - The ACL uses several coding techniques to draw your attention to a particular entry or one of its components
  - Keyboard command
    - UU
      - Raises the ACL to the top
      - If minimized when this command is entered, it is displayed in its previous size and location, unless the previous size was maximized
      - If the previous size was maximized, it is displayed in the size and location in use prior to the maximized size

# ACL AND DL COLUMNS, SYMBOLS, AND CODING (CONT'D)

## Bookkeeping Column

TI 6110.101, Table 5-1

ERAM ATCHI MISC 230.05, par. 3.4.2

## **Bookkeeping Column**

- · First column in the far left of the display
- Bookkeeping Box contains:
  - New entry coding "N"
    - > Indicates new entry in the ACL
  - Voice Communication Indicator (VCI)
    - Indicates aircraft is on frequency
  - Blank area
    - Indicates entry has been acknowledged





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2

- The Bookkeeping Column is the first column in the far left of the display. It contains a Bookkeeping Box for each ACL entry.
- The Bookkeeping Box contains:
  - New entry coding "N"
    - Indicates new entry in the ACL
    - TBP to remove new entry coding
  - Voice Communication Indicator (VCI)



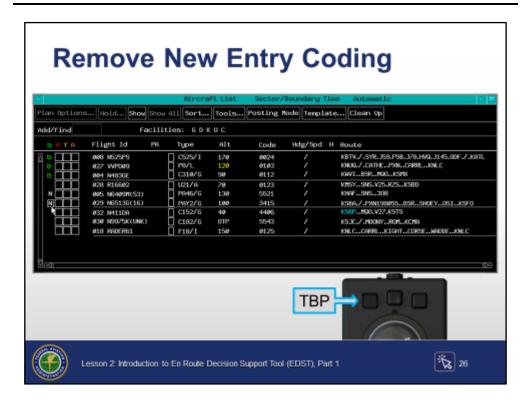


- Indicates aircraft is on frequency
- TBP/TBE or //<FLID> to:
  - Add manual VCI (double arc), or
  - Remove automatic VCI (single arc), or
  - Remove manual VCI, or
  - Replace new entry coding with manual VCI (except TBP)
- · Blank area
  - Indicates entry has been acknowledged
- Box outline is displayed with dwell emphasis when the cursor is over the box

# ACL AND DL COLUMNS, SYMBOLS, AND CODING (CONT'D)

# Remove New Entry Coding

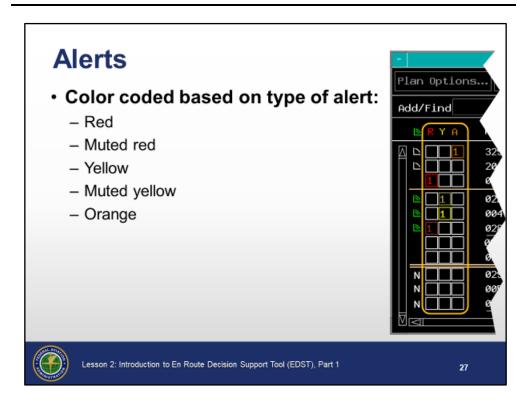
ERAM ATCHI MISC 230.05, pars. 3.8.62, 3.8.68



- For entries in the normal posting area displaying an "N" in the Bookkeeping Box:
  - Place the cursor on the "N" in the Bookkeeping Box or on any selectable field and TBP
    - "N" is removed from the box
- For entries in the manual posting area displaying an "N" in the Bookkeeping Box:
  - Place the cursor on the "N" within the Bookkeeping Box and TBP
    - "N" is removed from the Bookkeeping Box
    - Entry is moved from the manual posting area to the normal posting area and displayed according to the sort criteria selected

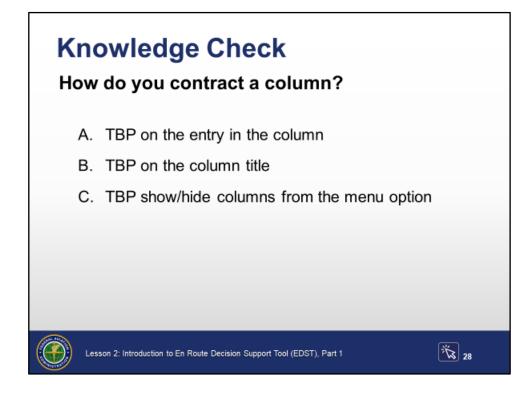
#### **Alerts**

TI 6110.101, sec. 5.2.2



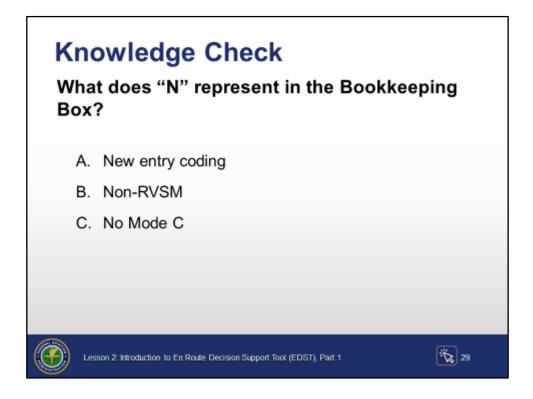
- Alerts are color-coded based on the type of alert:
  - Red
    - Aircraft-to-aircraft conflicts less than 5 miles
  - Muted red
    - Aircraft is cleared to an interim altitude and a conflict less than 5 miles would exist if the aircraft was cleared to the requested or anticipated altitude
  - Yellow
    - Aircraft-to-aircraft conflicts between 5 and 12 miles
  - Muted yellow
    - Aircraft is cleared to an interim altitude and a conflict of between 5 and 12 miles would exist if the aircraft was cleared to the requested or anticipated altitude
  - Orange
    - Aircraft is predicted to come within 3 miles of active or scheduled Special Activity Airspace

Knowledge Check



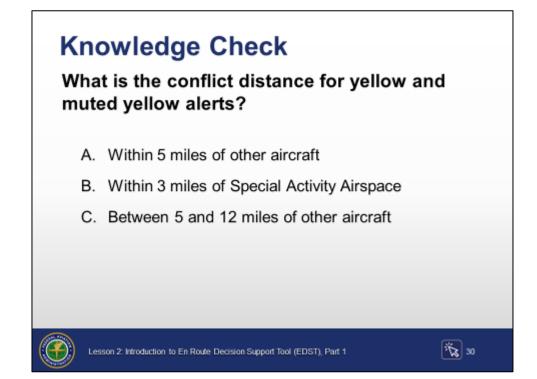
Question: How do you contract a column?

Knowledge Check



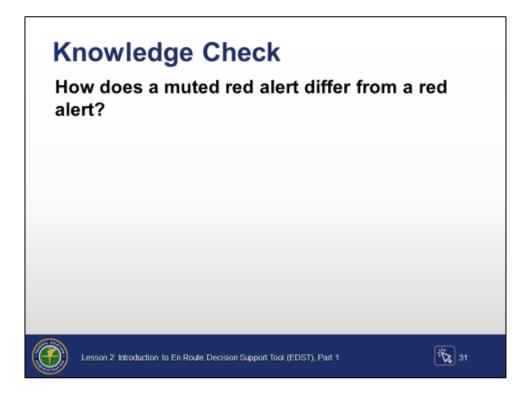
Question: What does "N" represent in the Bookkeeping Box?

Knowledge Check



Question: What is the conflict distance for yellow and muted yellow alerts?

Knowledge Check



Question: How does a muted red alert differ from a red alert?

#### Flight Information

TI 6110.101, secs. 5.2.3, 5.2.8, 5.2.9

ERAM ATCHI MISC 230.05, pars. 3.4.9, 3.6



- The main display area contains the following flight plan data:
  - Non-ADS-B Indicator
    - Coral A is displayed when:
      - Flight is not ADS-B supported
      - NON-ADSB button on toolbar is selected
  - Flight ID
    - CID and call sign for each ACL entry
    - TBP enables other menu options
    - An asterisk "★" before the CID indicates multiple flight plans
  - Type
    - Aircraft prefix, aircraft type, and equipment suffix

#### Flight Information (Cont'd)

TI 6110.101, secs. 4.21.3, 5.2.3, 5.2.8, 5.2.9, 5.2.10, 5.4.4, 10.1

- TBP activates the Plan Options..., Hold..., Show, and Show All menu bar buttons
- This field can be contracted to hide information

#### Altitude

- The Altitude field includes altitude data and altitude indicators when present
- Yellow coding of text indicates Inappropriate Altitude for Direction of Flight (IAFDOF) leaving the sector
- When IAFDOF coding is in automatic mode, you may remove the coding via TBH
  - Yellow becomes white
- When IAFDOF coding is in manual mode, you must apply or remove the coding via TBH
  - o White becomes yellow
  - Yellow becomes muted yellow
  - Muted yellow becomes white

**NOTE:** In automatic, the system will apply IAFDOF coding independently. In IAFDOF manual, IAFDOF will display in the ACL title bar and no IAFDOF coding will be applied by the system.

 A coral box to the right of the altitude indicates non-RVSM and the FP assigned altitude, interim altitude, or reported altitude (Mode-C or pilot reported) is at or above the lowest RVSM altitude, i.e., FL290

#### Beacon Code

- The Beacon Code field indicates the beacon code for each entry
- If there is a dual beacon code for a flight:
  - Inbound, the field is prefixed with an asterisk "★"
  - Outbound, the field is suffixed with an asterisk "\*"
  - The asterisk is used to toggle between the external code and the internal code
- An "E" prefix indicates an external code
- This field can be contracted to hide information
- When there is no beacon code for an entry, it is blank

#### Flight Information (Cont'd)

TI 6110.101, sec. 5.2.14, 10.1

#### Remarks Indicator

- A yellow asterisk "\*" and box indicates that remarks have not been viewed
- A white asterisk "★" indicates remarks have been viewed
- TBP on the asterisk "★" to toggle between remarks and route

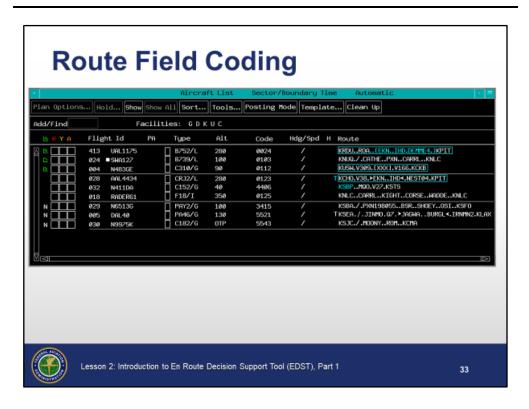
#### Route

- Displays one of the following at a time:
  - o Route data
  - Hold data that has been entered by the user
  - o Flight Plan Remarks/Reason for Special Handling

#### Route Field Coding

TI 6110.101, secs. 4.2.1.3.7, 10.1

ERAM ATCHI MISC 230.05, par. 3.6



- Route field of the ACL and DL provides information about several conditions associated with an aircraft's route, such as:
  - Embedded Route Text (ERT) Coding
    - Cyan coding
      - Indicates your sector has track control and a preferential route needs to be issued
      - Appears with a cyan box around the entire Route field combined with cyan brackets around the cyan embedded route
    - Muted (gray) coding
      - Indicates your sector is not eligible for cyan coded text
      - Appears with muted brackets around the muted embedded route
      - The preferential route cannot be acknowledged
  - Aircraft eligible for ATC Preferred Route (APR)
    - A cyan departure fix indicates that an aircraft is eligible for an APR

#### Route Field Coding (Cont'd)

TI 6110.101, secs. 4.2.1.3.6, 5.4.12.5, 10.4.2.1

ERAM ATCHI MISC 230.05, par. 3.6

- Next route element not recognized
  - A cyan box around the entire route field with white brackets around the white XXX in the route
  - The system processes an aircraft's route to the end of the route or to a point outside the National Airspace System (NAS)
  - If an element is in the route that is not recognized, the system will:
    - Stop route processing
    - Place XXX in the route at that point
- Traffic Flow Management (TFM) reroutes
  - Used by TFM to route aircraft around constraints in the NAS (severe weather, congestion, or other restrictions)
  - TFM can pass Pre-Departure Reroute (PDRR), Airborne Reroute (ABRR), or Coded Departure Route (CDR) routes to controllers
    - In addition to providing the reroutes to the controllers, TFM can also pass Field 11 remarks attached to the route changes
  - A cyan "T" indicates a flight has a TFM pending reroute notification
  - A white "T" (not pickable) replaces the cyan "T" when a TFM reroute is applied and the information is updated in all applicable views and menus
  - White chevrons will bracket the protected segment of an applied TFM reroute

Knowledge Check

#### **Knowledge Check**

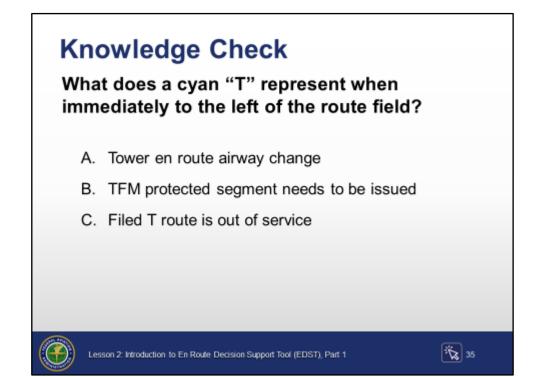
What does a white asterisk "\*" represent when immediately to the left of the route field?

- A. Entry has remarks that have been viewed
- B. Entry has a suppressed preferred route
- C. Entry has remarks that have not viewed



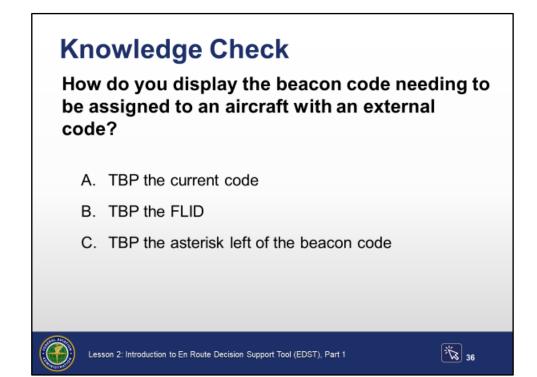
**Question:** What does a white asterisk "\*" represent when immediately to the left of the route field?

Knowledge Check



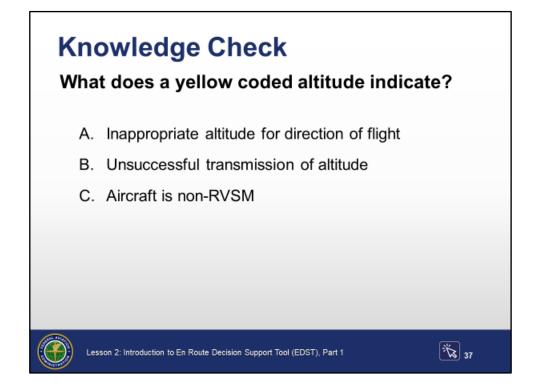
**Question:** What does a cyan "T" represent when immediately to the left of the route field?

Knowledge Check



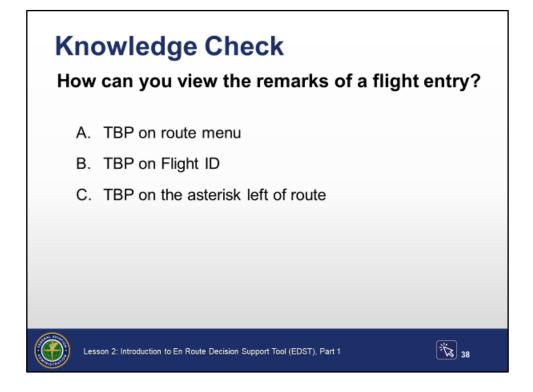
**Question:** How do you display the beacon code needing to be assigned to an aircraft with an external code?

Knowledge Check



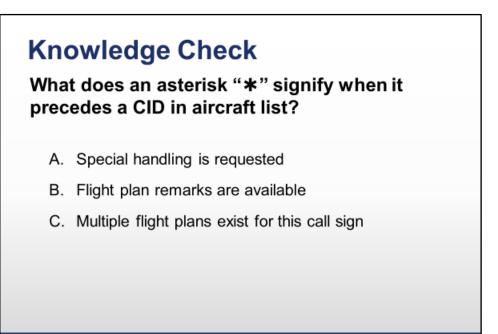
Question: What does a yellow coded altitude indicate?

Knowledge Check



Question: How can you view the remarks of a flight entry?

Knowledge Check

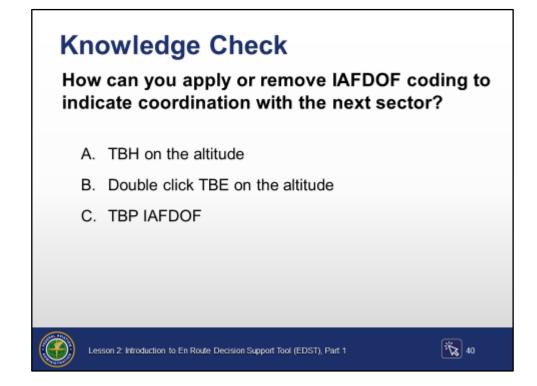


Question: What does an asterisk "\*" signify when it precedes a CID in aircraft list?

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1

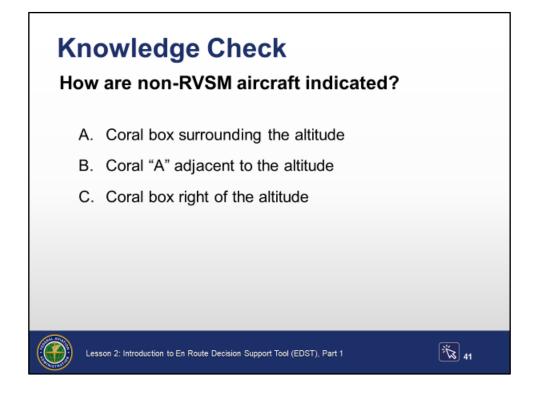
98 💥

Knowledge Check



**Question:** How can you apply or remove IAFDOF coding to indicate coordination with the next sector?

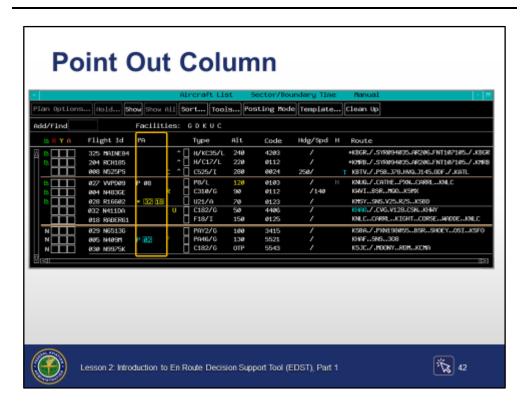
Knowledge Check



Question: How are non-RVSM aircraft indicated?

#### Point Out Column

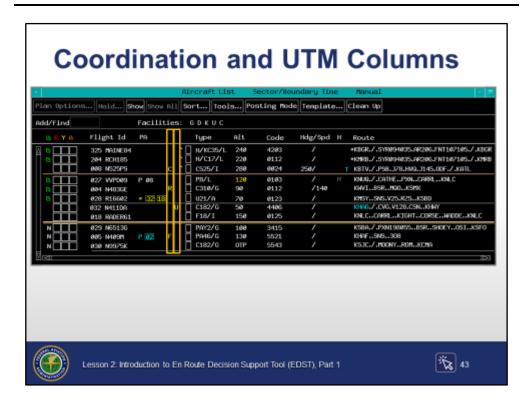
TI 6110.101, sec. 5.2.4



- The main display area contains columns that aid with coordination:
  - Point Out Indicator Field
    - Indicates an automated or manual point out and acknowledgement at both the initiating and receiving sectors
    - Up to five sectors can be displayed in the point out column
    - TBP the header to decrease and TBE the header to increase the set values
      - Cycles between P0, P1, P2, P3, P4, P5 and PA
      - "PA" will automatically expand and contract the column width from 0 to 5
      - 1-5 will give a fixed width of displayable entries

# Coordination and UTM Columns

TI 6110.101, secs. 4.2.1.3.3, 5.2.5, 5.2.6, 5.2.11, 5.2.12, 5.2.13, 10.1



- Coordination Column
  - Indicates if flight information has been or needs to be coordinated
  - The column has no header and is blank if there are no coordination annotations
  - Can be displayed or suppressed using the Display Coordination option in the Options Menu
  - Open Coordination Menu
    - o TBP in the Coordination Column

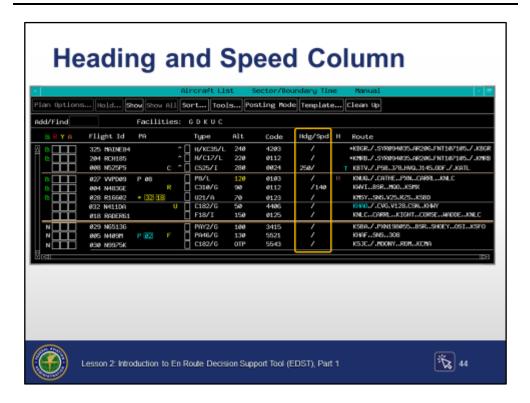
#### Coordination and UTM Columns (Cont'd)

TI 6110.101, secs. 4.2.1.3.3, 5.2.5, 5.2.6, 10.1

- Unsuccessful Transmission Message (UTM)
  - A yellow "U" will be displayed for the first occurrence of a UTM
  - The column automatically opens shifting all other columns to the right with no column header
  - This column continues to be displayed while there is at least one UTM Indicator
- Acknowledge UTM
  - TBP "U"
  - TBP facility ID
  - TBP ACCEPT
- To acknowledge all UTMs
  - TBP "U"
  - TBP ACKNOWLEDGE ALL
  - TBP ACCEPT

# Heading and Speed Column

TI 6110.101, sec. 5.2.11



#### Heading and Speed

- These fields offer a place to record this information when needed
  - Can be contracted to hide information
  - Heading
    - TBP Hdg box to open
    - Select Amend (default) or Scratchpad (in yellow text, does not coordinate with next sector)
    - TBP heading or type the heading then KBE

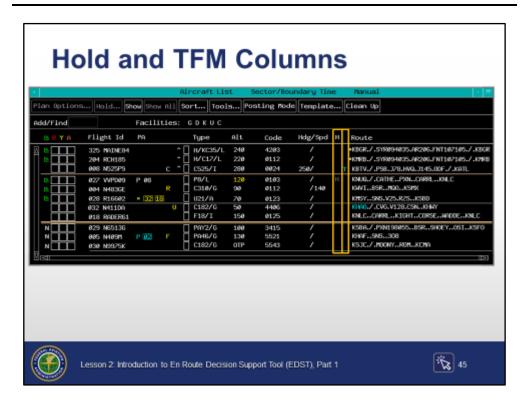
Heading	and
Speed	
Column	
(Cont'd)	

TI 6110.101, sec. 5.2.11

- Speed
  - o TBP Spd box to open
  - Select Amend (default) or Scratchpad (in yellow text, does not coordinate with next sector)
  - o TBP speed or type the speed, then KBE

#### Hold and TFM Columns

TI 6110.101, secs. 5.2.12, 5.2.13



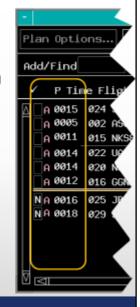
- Hold Column
  - Displays an "H" only when an aircraft has reached the holding fix or is placed in a present position hold
  - Opens and closes automatically
- Traffic Flow Management (TFM) Column
  - Displays a "T" when a TFM-protected segment reroute notification is received
  - Opens and closes automatically

#### DL Specific Columns

TI 6110.101, sec. 4.2.1.3.1 TI 6110.108

#### **DL Specific Columns**

- The P-Time column displays the proposed departure time for each Departure list entry
- To the right of the Bookkeeping column is the non-ADS-B Indicator
- The Bookkeeping column has a check mark "√" as a header





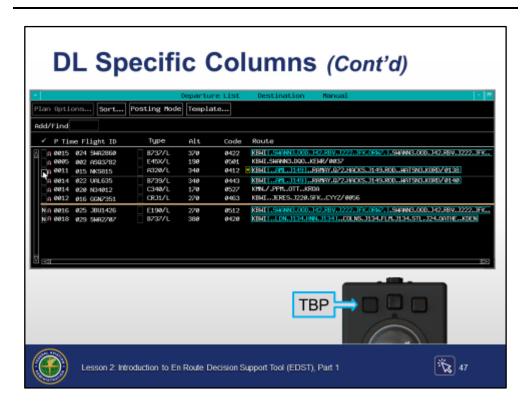
Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1

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- The P-Time column displays the proposed departure time for each Departure list entry
- To the right of the Bookkeeping column is the non-ADS-B Indicator
  - Coral "A" is displayed when the flight plan indicates that the aircraft is not ADS-B equipped
  - The column containing the non-ADS-B Indicator may be toggled opened or closed via the NON-ADS-B button on the toolbar
  - · Also displayed in the ACL
- ⊙ The Bookkeeping column has a check mark "√" as a header
  - Provides a way for noting an action or indicating the display of a new entry
  - Each new entry that is added to the Departure List will display an "N" in the Bookkeeping Box
- Keyboard command
  - UU D
    - Raises the DL to the top

DL Specific Columns (Cont'd)

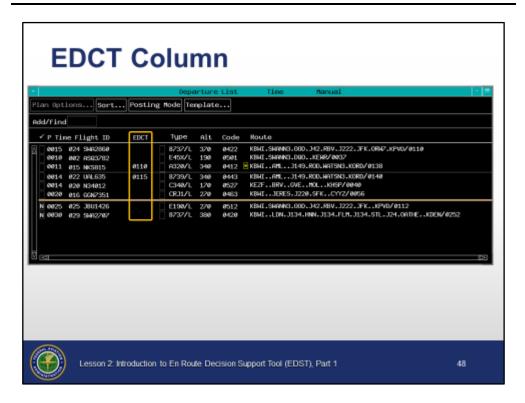
ERAM ATCHI MISC 230.05, par. 7.8.28



- The DL Bookkeeping Box provides a way for you to note an action taken by placing a check mark in the box
  - The check mark remains until you remove it
- To add or remove a check mark
  - Place the cursor on the Bookkeeping Box and TBP

DL Specific Columns (Cont'd)

TI 6110.101, 4.2.1.3.2

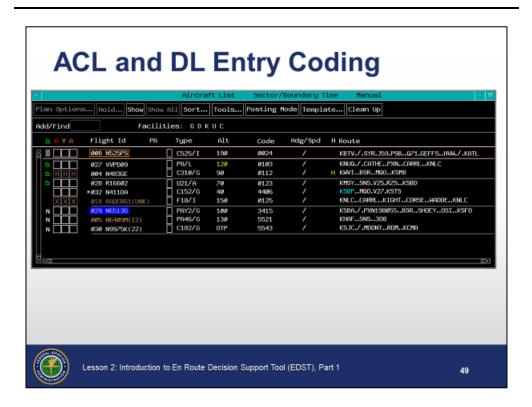


- Expect Departure Clearance Time (EDCT) Column
  - When a ground hold is in effect the EDCT time will be displayed in the column labeled EDCT
    - If a previous EDCT time is cancelled, CNCL in yellow will replace the time
  - This column will appear or disappear automatically on the display and data will be shifted to the left or right as necessary

#### ACL and DL Entry Coding

TI 6110.101, secs. 4.1.1.3, 4.2.3.2, 5.2.2, 5.2.5, 5.4.8

ERAM ATCHI MISC 230.05, pars. 2.1.3, 3.6, 11.4



- O ACL and DL view entries can be coded as follows:
  - Overdue aircraft
    - Orange box around Flight ID
    - Gray shading in Bookkeeping Box, entry is automatically kept
  - Not probed
    - Brown Flight ID
    - Brown "X" in each alert box, which is also brown
  - Sector does not have track control
    - Controlling sector ID after Flight ID
    - Gray flight entry will drop after a local time parameter
  - · Automatic Problem Detection (APD) unreliable
    - Tan Flight ID indicates aircraft that have inadequate track data

#### ACL and DL Entry Coding (Cont'd)

JO 7110.65, par. 13-1-9

TI 6110.101, sec. 4.1.1.3

ERAM ATCHI MISC 230.05, pars. 2.1.3, 3.6, 11.4

- Grayed out FP
  - Applied to an aircraft list entry for an adaptable time period prior to automatic removal
- Yellow text
  - "H" in Hold Data Indicator field
    - EFC time is less than an adapted number of minutes in the future
  - EFC label and time value
    - EFC time is less than an adapted number of minutes in the future
  - Altitude field of an Aircraft List entry
    - Altitude shown will be Inappropriate Altitude For Direction of Flight (IAFDOF) when exiting that sector
    - Completion of coordination for IAFDOF must be acknowledged on the ACL by removing the IAFDOF coding
  - "U" in the UTM column
    - One or more unacknowledged unsuccessful transmissions regarding the flight plan to a neighboring facility
    - You may remove color coding
  - Point out sent Indicator
    - Point out initiated, but not acknowledged
  - "E" prefixed to beacon code
    - Inbound flight has an external beacon code or requested beacon code displayed
- Yellow characters or symbols in Coordination Column
  - "F"
    - Fix in the coordination annotation is no longer on the projected route of flight
    - May also be displayed momentarily when a response is pending
  - "T"
    - Time in the coordination annotation differs from the projected time at the fix by more than 3 minutes
  - "A"
    - Altitude in the coordination annotation does not correspond to the current assigned altitude

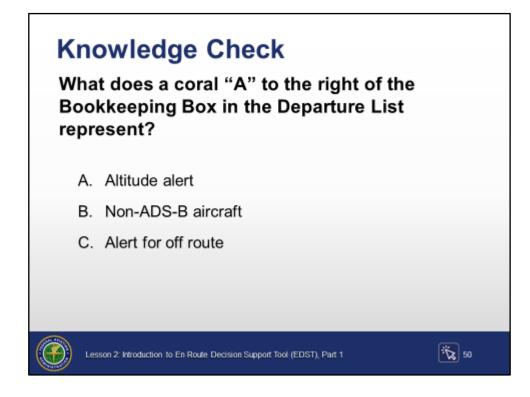
#### ACL and DL Entry Coding (Cont'd)

TI 6110.101, sec. 4.1.1.3

ERAM ATCHI MISC 230.05, pars. 2.1.3, 3.6, 11.4

- "B"
  - Beacon code in the coordination annotation does not correspond to the current assigned beacon code
- "R"
  - Route in the coordination annotation does not correspond to the current route
- \_ **\*\***"
  - Multiple alerts associated with the coordination annotation
- Coral box
  - A coral box to the right of the altitude field indicates the equipment coding shows the flight not capable to fly at Reduced Vertical Separation Minimum (RVSM) altitude, and
  - Flight plan assigned altitude, interim altitude or reported altitude is at or above FL290
- Gray Flight ID on dark blue background
  - System asserted control to you without a handoff
    - Route or altitude amendment is required
  - Entry is coded old

Knowledge Check



**Question:** What does a coral "A" to the right of the Bookkeeping Box in the Departure List represent?

Knowledge Check

#### **Knowledge Check**

#### What does PA indicate in the ACL Point Out Indicator header?

- A. Point outs to the sector are automatically approved by the system
- B. Point outs from approach controls are automatically suppressed
- Point out column will automatically expand and contract as needed



Question: What does PA indicate in the ACL Point Out Indicator header?

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Knowledge Check

#### **Knowledge Check**

When will an "H" appear in the Hold Column on the ACL?

- When a flight has reached the holding fix or is placed in a present position hold
- B. Ten minutes prior to a flight reaching the holding fix if the hold is published
- C. Only if a planned hold conflicts with a active military area



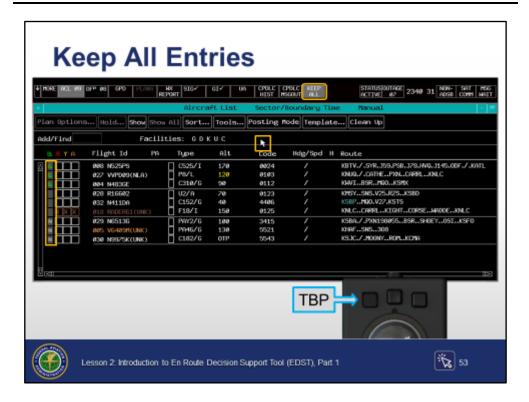
Question: When will an "H" appear in the Hold Column on the ACL?

#### INTERACTING WITH FLIGHT PLAN ENTRIES

#### Keep All Entries

TI 6110.101, secs. 4.1.2, 5.3.16

ERAM ATCHI MISC 230.05, par. 3.8.61



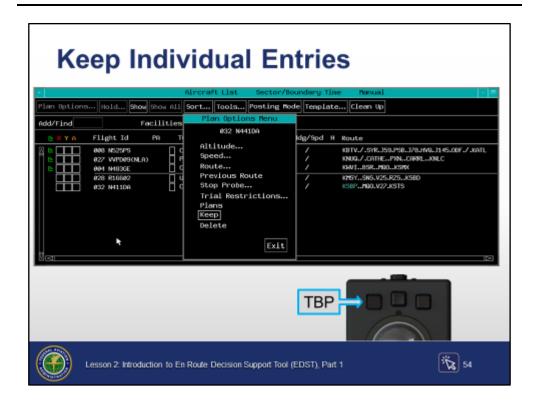
- To keep all entries in the ACL and DL
  - TBP the KEEP ALL button in the toolbar
- To remove Keep All
  - TBP the active KEEP ALL button in the toolbar
    - Gray shading is removed from the Bookkeeping Box of every entry that does not have an adapted timer
    - Current Bookkeeping Box setting is restored for each entry

#### INTERACTING WITH FLIGHT PLAN ENTRIES (CONT'D)

#### Keep Individual Entries

TI 6110.101, secs. 4.1.2, 4.2.2.1

ERAM ATCHI MISC 230.05, par. 3.8.61



#### To keep individual entries:

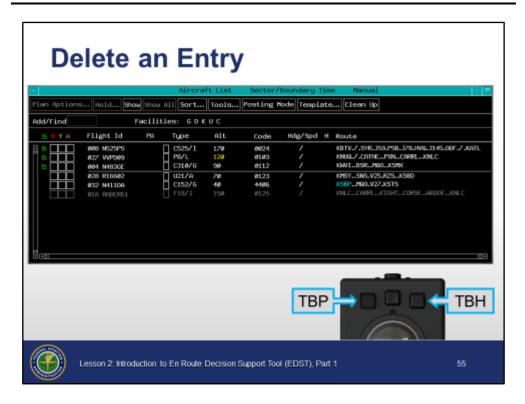
- Place trackball cursor on the Flight ID field of entry and TBP
  - The Flight ID is highlighted
- Place the cursor on the Plan Options... button and TBP
  - Plan Options... Menu is displayed
- Place the cursor on the Keep menu option and TBP
  - Plan Options... Menu is removed
  - Bookkeeping Box will display keep coding, as gray box

#### INTERACTING WITH FLIGHT PLAN ENTRIES (CONT'D)

#### Delete an Entry

TI 6110.101, secs. 4.1.2, 4.2.2.1, 5.1.1.9

ERAM ATCHI MISC 230.05, par. 3.8.25



#### Implied Delete

- The entry has been coded gray
- The system has determined the entry is no longer needed and will be removed from the Aircraft List after an adapted period of time
- Entry may be deleted from the Aircraft List manually
  - Place the cursor on the Flight ID and TBH
    - The aircraft entry is removed from the display

#### User Delete

- Individual entries that have no red or yellow alerts may be deleted:
  - Position the trackball cursor on the Flight ID and TBP
    - Flight ID is highlighted
    - Menu bar buttons are displayed as active

## Delete an Entry (Cont'd)

TI 6110.101, secs. 4.1.2, 4.2.2.1, 5.1.1.9

ERAM ATCHI MISC 230.05, par. 3.8.25

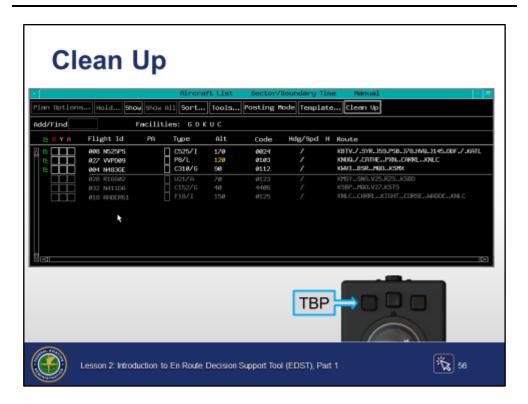
- Place the cursor on the Plan Options... button and TBP
  - o The Plan Options... Menu is displayed
- Place the cursor on the Delete menu option and TBP
  - o The Plan Options... Menu is removed
  - The aircraft entry is removed from the display
  - o Plan Options... buttons revert to an inactive state

#### Clean Up

TI 6110.101, 5.4.9

TI 6110.108, p. 25

ERAM ATCHI MISC 230.05, par. 3.8.19

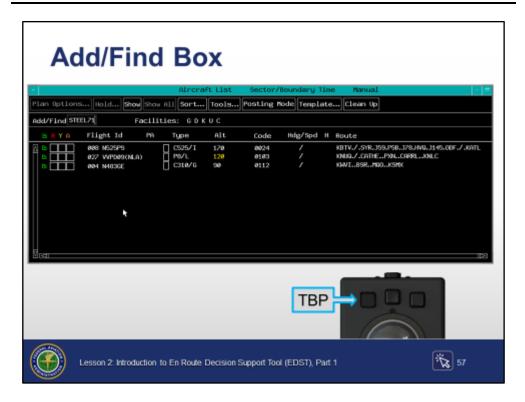


- The Clean Up command removes aircraft list entries that are coded for deletion except for those that have been Kept by the user or the system, or those that have overdue status
- To clean up the display:
  - Place the cursor on the Clean Up menu bar button and TBP
    - All grayed entries are removed from the ACL, except for those that are Kept or coded as Overdue
  - Keyboard command
    - UU C

#### Add/Find Box

TI 6110.101, sec. 4.2.3.1

ERAM ATCHI MISC 230.05, par. 3.8.11



- The following method may be used to display and apply emphasis to a specific entry:
  - Place the cursor in the Add/Find box and TBP
  - Type Aircraft ID, CID, or beacon code
  - Press KBE
    - If the aircraft is in the ACL or DL:
      - The Flight ID will be highlighted
      - The list will scroll if needed
    - If the aircraft is not in the ACL or DL:
      - The flight plan entry will be added
      - The Flight ID will be highlighted

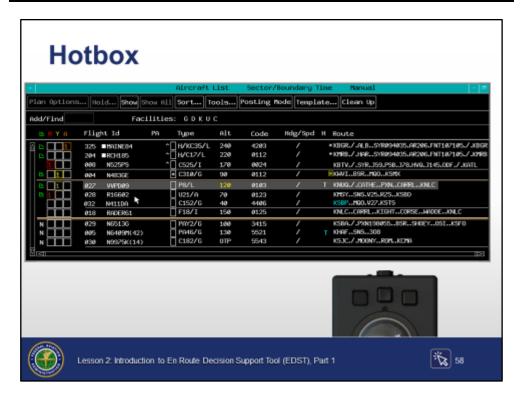
## Add/Find Box (Cont'd)

ERAM ATCHI MISC 230.05, par. 3.8.11

- If the ACL or DL is not active:
  - The window will be become active and move to the front
- When the posting mode is set to automatic
  - The entry is displayed in the normal posting area in sorted order without "N" coding
- When the posting mode is set to manual
  - The entry is displayed in the manual posting area with "N" coding
- If the specified aircraft has more than one active flight plan:
  - The list of flight plans is displayed on the Plans Display
  - The first entry appearing on the Aircraft List in sorted order is displayed with selection emphasis
- If the specified aircraft has more than one Departure Plan:
  - All flight plans are posted to the Departure List in sorted order
- If the specified entry is not found in the active or proposed flight database, an error message is displayed in the Response Area View
- The Flight ID may also be added using the UU command
  - UU <FLID>

#### **Hotbox**

TI 6110.101, sec. 5.2.7



- The Hotbox is located before the type field for each entry
- Actions that can be initiated from the Hotbox:
  - TBP the Hotbox
    - Opens and closes the free form text area
      - Edit, create, and delete free form text
    - TBP again hides the free form text area
    - An asterisk "★" appears when text is hidden

**NOTE:** Approved free form text control information entries are addressed in a later lesson.

## Hotbox (Cont'd)

TI 6110.101, sec. 5.2.7

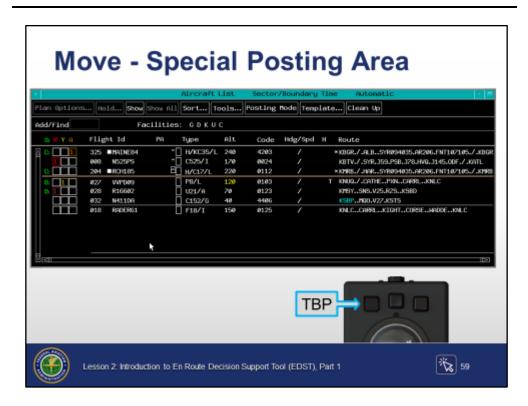
- TBE the Hotbox
  - Toggle the ACL entry between:
    - Normal Posting Area and the Special Posting Area
    - o Manual Posting Area and the Special Posting Area

**NOTE:** If the entry is new, the "N" is removed from the Bookkeeping Box and the entry is moved from the Manual or Normal Posting Area to the Special Posting Area.

- TBH in the Hotbox
  - Highlights the aircraft list entry
    - o Highlighted entries are also kept
  - Keyboard command
    - O UU H <FLID>

Move -Special Posting Area

ERAM ATCHI MISC 230.05, par. 3.8.63



- To manually sort aircraft in the special posting area:
  - Place the cursor on the Move symbol "^" in the entry
    - Dwell emphasis is applied to the Move symbol
  - TBP
    - Move symbol is highlighted

# Move, Special Posting Area (Cont'd)

ERAM ATCHI MISC 230.05, par. 3.8.63

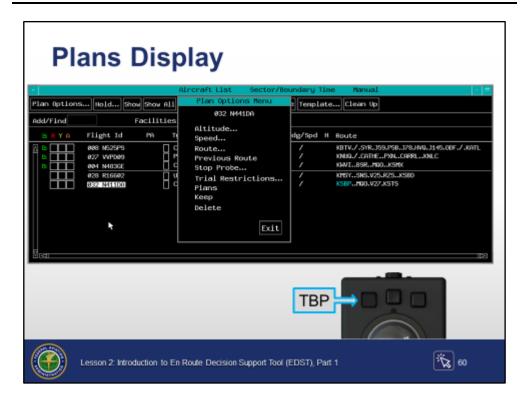
- Place the cursor where you want the entry to be inserted
  - White line appears
    - If the cursor rests in the top entry, then the white line separates the entries from the headers
    - If the cursor rests in the bottom entry, then the white line separates the entries from the special posting area separator bar
- TBP
  - Highlighting is removed from the Move symbol
  - White line is removed
  - Entry selected moves to where the white line appeared

#### Or to cancel the move:

- Place the cursor on a selectable field outside of the special posting area and TBP
  - Highlighting is removed from the Move symbol
  - White line is removed
  - Move command is cancelled

#### **Plans Display**

TI 6110.101, sec. 3.2



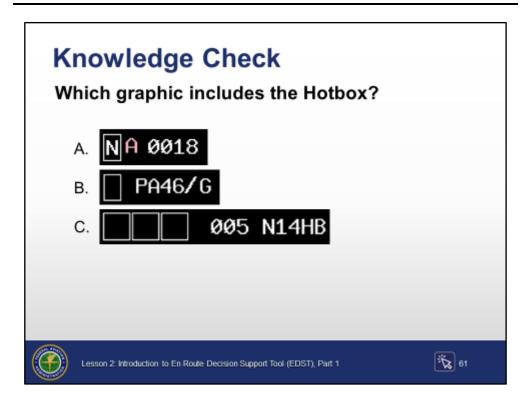
- Accessing the Plans Display requires multiple steps
- To display a flight plan in the Plans Display
  - Place the cursor on the Flight ID and select TBP
    - The selected Flight ID is highlighted
  - TBP Plan Options...
    - The Plan Options Menu is displayed and has the Flight ID displayed below the menu
  - Place the cursor on the Altitude, Speed, or Route menu options and TRP
    - The Plan Options Menu is removed from display
      - Altitude, Speed, or Route Menu is displayed which contains an editable field containing the current value

## Plans Display (Cont'd)

TI 6110.101, sec, 3.2, 3.2.3.14

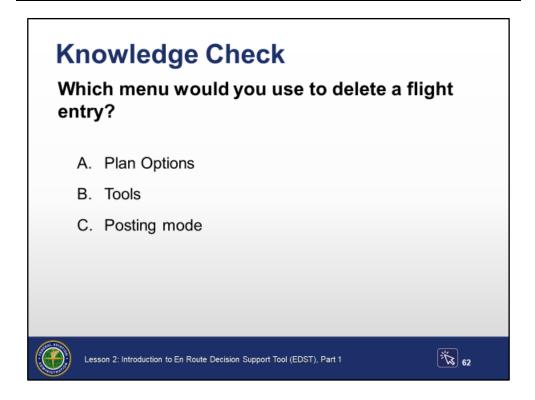
- Select an altitude, speed, or route
  - The Plans Display appears
- Display a proposal in the Plans Display
  - Select a proposed plan to create a trial departure plan
    - Displays the graphical route on the GPD and the addition of a Trial Departure Plan entry to the Plans Display
- Display ICAO Flight Plan in the Plans Display (i.e., use ICAO button on the Plans Display toolbar)
  - When ICAO information is available for a FP, you can display the ICAO information in addition to the FP information by using the following steps:
    - Place the cursor on the Flight ID in the Plans Display and TBP
      - Flight ID is highlighted
      - o ICAO button is enabled
    - Place the cursor on the ICAO button and TBP
      - o ICAO information appears after the non-ICAO FP data

Knowledge Check



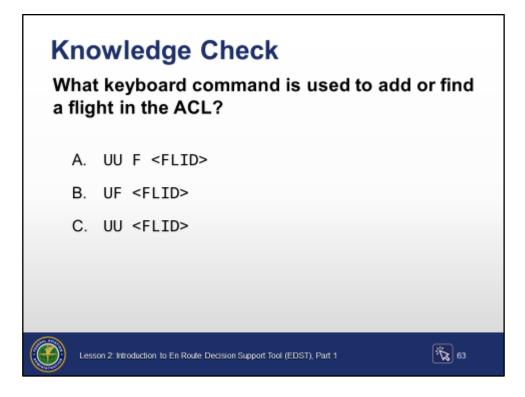
Question: Which graphic includes the Hotbox?

Knowledge Check



Question: Which menu would you use to delete a flight entry?

Knowledge Check



**Question:** What keyboard command is used to add or find a flight in the ACL?

Knowledge Check

### **Knowledge Check**

How do you move an entry within the Special Posting Area?

- A. TBP move symbol>Place cursor at new location>TBP
- B. TBP move symbol>Press up/down arrows to move entry>TBP
- C. TBP move symbol>Scroll trackball to move entry>TBP



**Question:** How do you move an entry within the Special Posting Area?

Knowledge Check

### **Knowledge Check**

How do you keep an individual flight plan entry?

- A. TBP on the Flight ID>TBP Keep in the Plan Options Menu
- B. TBP on the "K" in Bookkeeping Box
- C. TBP on the Hotbox>TBP Keep in the Plan Options Menu

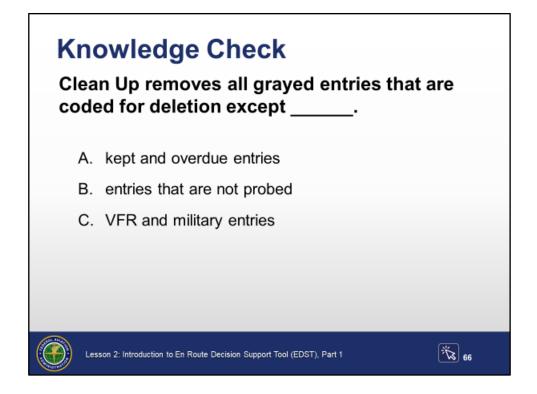


Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1



Question: How do you keep an individual flight plan entry?

Knowledge Check



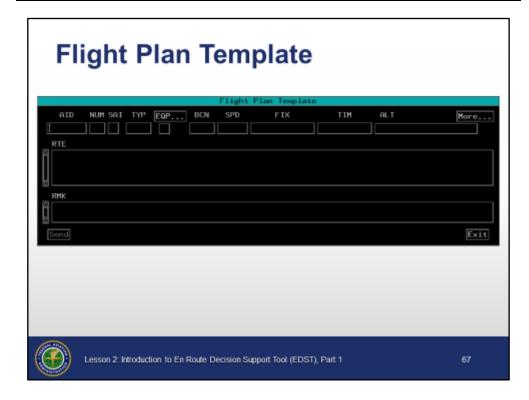
**Question:** Clean Up removes all grayed entries that are coded for deletion except \_\_\_\_\_.

#### **TEMPLATES**

#### Flight Plan Template

TI 6110.101, sec. 4.22

ERAM ATCHI MISC 230.05, par. 3.7.15.1



- Open the Flight Plan Template with Template... on the menu bar of the ACL and DL
  - The EQP... and More... buttons provide access to other templates
- Provides a method for entering a new flight plan with multiple fields containing the flight information
  - · AID aircraft identifier
  - NUM number of aircraft
  - SAI special aircraft indicator
  - TYP aircraft type
  - EQP equipment qualifier
  - EQP... button
    - When selected, provides access to four equipment template tabs displaying ICAO format FP information
  - BCN beacon code
  - · SPD filed true airspeed
  - FIX coordination fix
  - TIM time
    - P, D, or E time at the coordination fix

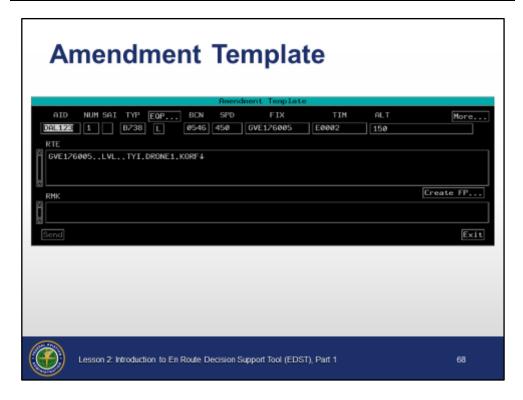
#### Flight Plan Template (Cont'd)

TI 6110.101, sec. 4.22

- ALT requested or assigned altitude
- More... button
  - Opens the Amendment (More) Template
    - Display, enter or edit standard ICAO FP information that is not included in the Flight Plan Template
- RTE route of flight
  - TFM Reroute Indicator
    - If the route includes a TFM-protected segment, the protected segment chevrons are displayed in yellow next to RTE above the Route input box
- RMK optional remarks as needed
- Send button
  - Sends the prepared FP for processing
- Exit button
  - Closes the Flight Plan Template without sending the FP

## Amendment Template

TI 6110.101, sec. 4.23



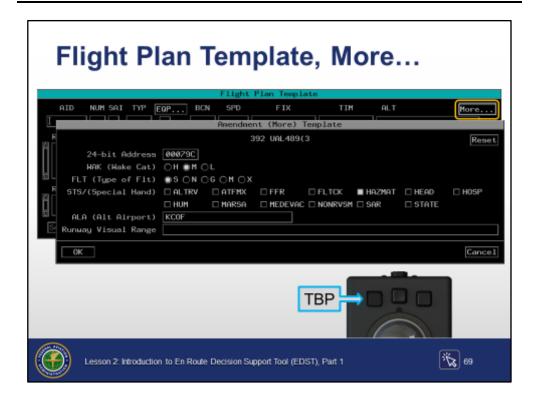
- The Amendment Template is similar to the Flight Plan Template with the addition of the Create FP... button which opens the Flight Plan Template and populates it with the amendment template's information allowing you to create a new flight plan
- If a selectable field of an entry is highlighted on the ACL or DL and Template... is selected the Amendment Template will open populated with that flight's information:
  - Editing the data in the template and pressing Send amends the flight plan
  - The Amendment Template may be used to create flight plans similar to the source flight plan
    - 1. TBP a Flight ID
    - 2. TBP Template...
    - 3. Edit the fields as necessary
    - 4. TBP Create FP...
    - 5. TBP Send

**NOTE:** This feature is valuable if a military flight breakup requires flight plans for other aircraft departing the same formation.

#### Flight Plan Template, More...

TI 6110.101, sec. 3.2.3.13

ERAM ATCHI MISC 230.05, par. 3.7.16

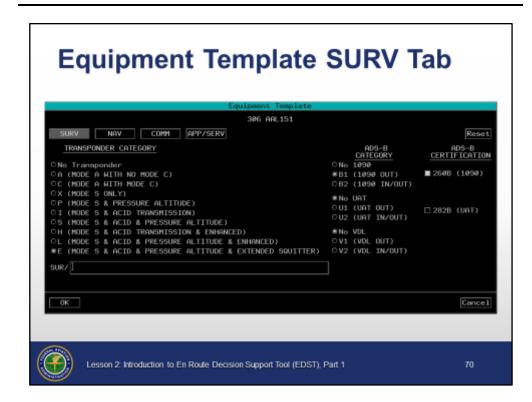


- Selecting the More... button will display additional ICAO flight plan options
  - 24-Bit Address
    - Characters representing the aircraft's unique 24-bit address
  - WAK (Wake Cat)
    - Wake Turbulence Category
  - FLT (Type of Flt)
    - Type of Flight
  - STS/(Special Handling)
    - Reasons for Special Handling
    - These selections will display with the scattered weather symbol
      - " $\mathbb{O}$ " in field 11 RMK of the flight plan
  - ALA (Alt Airport)
    - Alternate Airport
  - Runway Visual Range

#### Equipment Template SURV Tab

TI 6110.101, sec. 4.23.1, 4.23.1.1

ERAM ATCHI MISC 230.05, par. 2.1.2.1



- ⊙ Selecting EQP... provides access to four equipment template views
- Equipment template views provide a method for displaying, entering, or modifying a flight's ICAO equipment qualifiers by entering specific information on four tabs:
  - SURV Surveillance
  - NAV Navigation
  - COMM Communication
  - APP/SERV Approach and Services
- Template views contain three different data entry formats:
  - Radio buttons
    - Only one radio button may be selected at a time
  - Check boxes
    - Multiple checkboxes may be selected
  - Text input boxes
    - Allows keyboard entry of data

#### Equipment Template SURV Tab (Cont'd)

TI 6110.101, sec. 4.23.1, 4.23.1.1

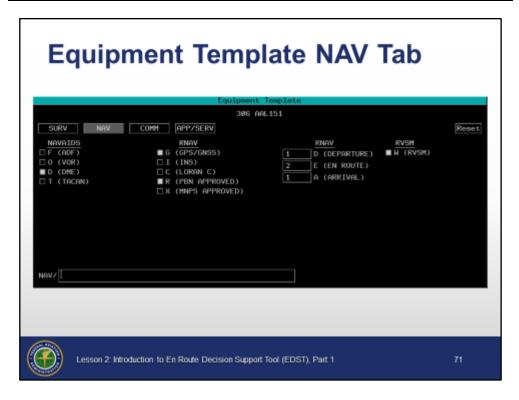
- SURV tab contains data about transponder and ADS-B capability
  - The single letters in the transponder category are ICAO codes that do not correlate with NAS equipment data in field 03 TYP of the NAS flight plan

**Example:** "X" in this view indicates Mode S only but /X in a NAS flight plan indicates no transponder

- SUR/ Surveillance
  - Text input box that allows direct entry of surveillance equipment data from ICAO Field 918
- OK button
  - Closes the Equipment Template
  - Flight Plan is updated and displayed such that the equipment qualifier text entry box cannot be edited (grayed out) and the cursor rests over the Send button
- Reset button
  - Changes to the template are discarded and the displayed data reverts to its initial state
- Cancel button
  - Closes the Equipment Template
  - Any changes are not retained
  - Flight Plan Template is displayed with the cursor positioned over the Exit button

#### Equipment Template NAV Tab

TI 6110.101, sec. 4.23.1.2



- Equipment Template NAV tab contains data about the navigation capabilities of the flight under four columns:
  - NAVAIDS
    - F (ADF) Automatic Direction Finding
    - O (VOR) Very High Frequency Omni-directional (radio) Range
    - D (DME) Distance Measuring Equipment
    - T (TACAN) Tactical Air Navigation
  - RNAV
    - G (GPS/GNSS) Global Positioning System/Global Navigation Satellite System
    - I (INS) Internal Navigational System
    - C (LORAN C) Long Range Navigation
    - R (RNP APPROVED) Required Navigation Performance
    - X (MNPS APPROVED) Minimum Navigation Performance Specification Airspace

#### Equipment Template NAV Tab (cont'd)

TI 6110.101, sec. 4.23.1.2

- RNAV/RNP
  - RNAV
    - Area navigation
  - RNP
    - o Required Navigational Performance
    - Aircraft has on-board monitoring of RNAV
    - When the RNP radio button is selected, chevrons are displayed in yellow next to the RTE field label, above the Route input box
  - D (DEPARTURE)
  - E (EN ROUTE)
  - A (ARRIVAL)
  - G (GLOBAL OCEAN)
  - L (LANDING)
  - S (SPECIAL)
- W (RVSM)
  - Reduced Vertical Separation Minimum

# Equipment Template COMM Tab

TI 6110.101, sec. 4.23.1.3

Transport Canada COM-AIM-2013-1 ENG-3, par. 5.3



- Equipment Template COMM tab contains data about the communication capabilities of the flight under four columns:
  - VOICE CATEGORY
    - H (HF) High Frequency Communications
      - Air to ground voice communication in overseas operations
    - V (VHF) Very High Frequency
      - Civil air to ground voice communications
    - U (UHF) Ultrahigh Frequency
      - Military air to ground voice communications
    - Y (8.33 KHZ)
      - Used in Europe
      - Channel spacing reduced to 8.33 KHZ
  - CPDLC CATEGORY
    - J1 (ATN VDL Mode 2)
    - J2 (FANS1/A HF)
    - J3 (FANS1/A VDL MODE A)
    - J4 (FANS1/A VDL MODE 2)
    - J5 (FANS1/A INMARSAT)

#### Equipment Template COMM Tab (Cont'd)

TI 6110.101, sec. 4.23.1.3

FAA ICAO FPL Quick Guide 2018

- J6 (FANS1/A MTSAT)
- J7 (FANS1/A IRIDIUM)
- ACARS CATEGORY
  - E1 (FMCWPR)
  - E2 (D-FIS)
  - E3 (PDC)

**NOTE:** ACARS (Aircraft Communications Addressing and Reporting System)

- SATELLITE RTF
  - M1 (INMARSAT)
  - M2 (MTSAT)
  - M3 (IRIDIUM)

**NOTE:** Satellite voice communications capabilities

#### Equipment Template APP/SERV Tab

TI 6110.101, sec. 4.23.1.4



- Equipment Template APP/SERV tab contains data about the approach capabilities of the flight
  - L (ILS) Instrument Landing System
  - K (MLS) Microwave Landing System
  - A (GBAS) Ground Based Augmentation System
    - Transmits locally corrected GNSS data to improve approach accuracy
  - B (LPV) Localizer Performance with Vertical Guidance
    - Provides precise lateral guidance for GPS approaches
  - S (STANDARD)

#### Knowledge Check

## **Knowledge Check**

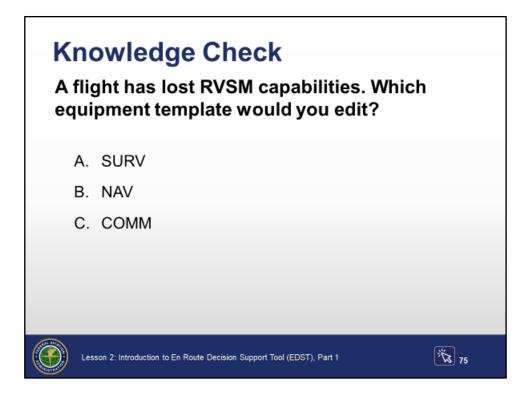
How do you edit the equipment qualifier of an ICAO flight plan?

- A. TBP Flight ID>Template...>EQP...>SURV
- B. TBP Template...>type Flight ID>EQP...
- C. TBP SURV>Template...>EQP...



Question: How do you edit the equipment qualifier of an ICAO flight plan?

Knowledge Check



**Question:** A flight has lost RVSM capabilities. Which equipment template would you edit?

#### Knowledge Check

### **Knowledge Check**

What is the first step to remove or edit flight plan remarks preceded with the scattered weather symbol?

- A. Amend field 11 of the flight plan
- B. TBP and edit in the route fields of the ACL or DL
- C. Select More... button in the Flight Plan Template

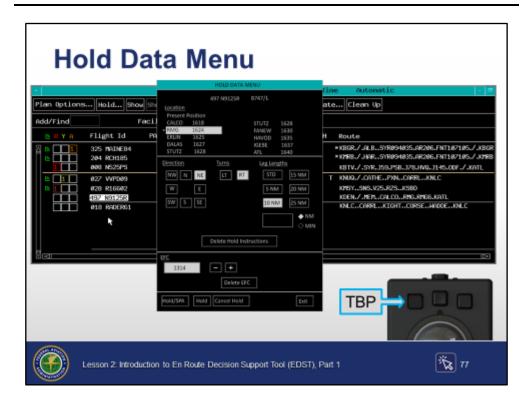


**Question:** What is the first step to remove or edit flight plan remarks preceded with the scattered weather symbol?

#### **HOLD DATA MENU**

#### Hold Data Menu

TI 6110.101, sec. 4.18



- The purpose of the Hold Data Menu is to provide you with a method for:
  - Placing a flight in present position hold
  - Placing a flight in hold at a specified fix
  - Changing the holding fix, if the flight has not reached the fix
  - Canceling a hold
  - Entering, modifying, and deleting:
    - Hold instructions
      - o Direction
      - o Turns
      - Leg lengths
    - Expect Further Clearance (EFC) time

#### Hold Data Menu (Cont'd)

TI 6110.101, sec. 4.18

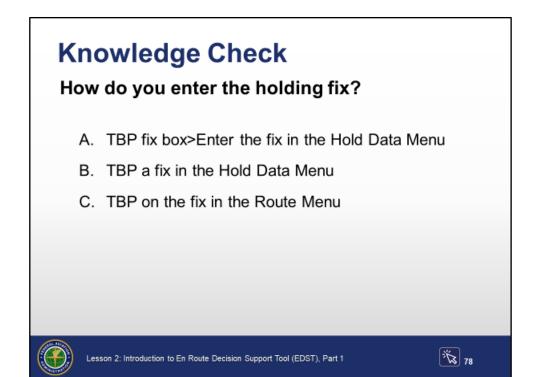
- Hold Data Menu is accessed by ACL menu bar
  - TBP the Flight ID
    - Hold... button becomes active in the menu bar
  - TBP Hold... button to open the Hold Data Menu
- Enter holding data in the following fields
  - Location
    - Select the holding fix from the menu
    - Hold fix must be on the flight plan route
    - Time adjacent to fix
      - Expected time at fixes based on the aircraft's current position and the estimated time of arrival at those fixes
  - Direction
    - Choose one of eight cardinal directions of the compass corresponding to the holding area orientation
      - o N, NE, E, SE, S, SW, W, or NW
  - Turns
    - Select LT or RT (left or right) turns
  - · Leg Lengths
    - Select STD (standard leg lengths), or
    - Specify a value in nautical miles (NM) or minutes (MIN)
  - Delete Hold Instructions
    - Existing hold instructions (direction, turns, and leg lengths) for the flight are deselected
  - EFC time
    - Enter time the aircraft is expected to be cleared from holding, or
    - Click minus "-" or plus "+" to decrease or increase EFC time
  - Delete EFC
    - Deletes existing EFC time from the input box

#### Hold Data Menu (Cont'd)

TI 6110.101, sec. 4.18

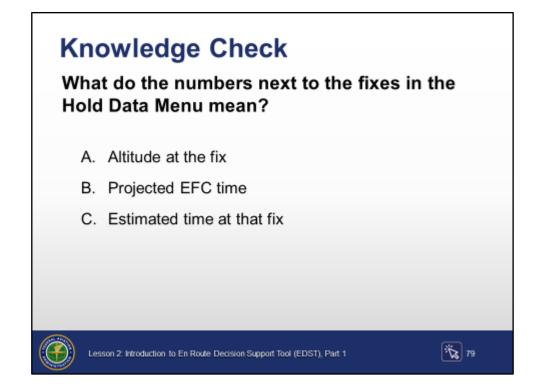
- Hold/SPA
  - When selected:
    - Hold Data Menu is closed
    - Hold Data Indicator (brown H in the hold data indicator field) is displayed
    - Flight entry is moved to the special posting area
- Hold
  - When selected:
    - Hold Data Menu is closed
    - o Hold Data Indicator is displayed
- Cancel Hold
  - Hold Data Menu is closed
- Exit
  - Hold Data Menu is closed
  - Changes (if any) are not retained
- A holding fix preceded by an asterisk indicates published and adapted holding pattern
  - Selecting this holding fix will populate the appropriate fields with the adapted values

#### Knowledge Check



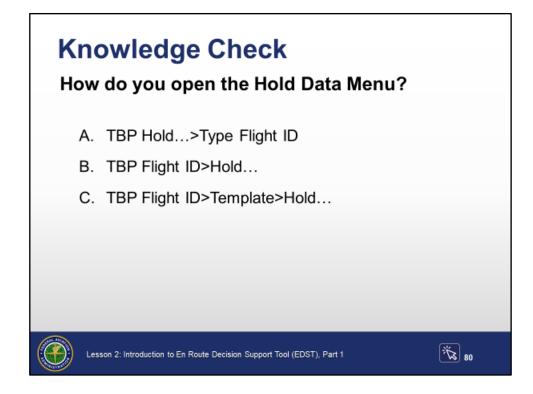
Question: How do you enter the holding fix?

#### Knowledge Check



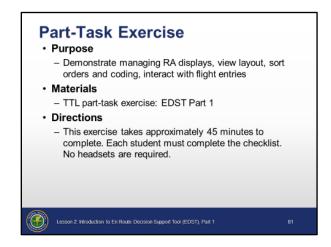
**Question:** What do the numbers next to the fixes in the Hold Data Menu mean?

#### Knowledge Check



Question: How do you open the Hold Data Menu?

#### **PART-TASK EXERCISE: EDST PART 1**



#### **Purpose**

Demonstrate managing RA displays, view layout, sort orders and coding, interact with flight entries

#### **Materials**



⊙ TTL part-task exercise: EDST Part 1



TTL Scenario

#### **Directions**

This exercise takes approximately 45 minutes to complete. Each student must complete the checklist. No headsets are required.

#### Lesson Summary

### **Lesson Summary**

#### This lesson covered:

- Steps to manage the EDST
- Aircraft List (ACL) and Departure List (DL) layout, sort orders, and modes
- · ACL and DL columns, symbols, colors and coding
- · Steps to interact with flight plan entries
- Procedures for using templates to edit or create flight plans
- · The Hold Data Menu



Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1

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#### This lesson covered:

- Managing the EDST
  - · RA trackball
  - · Window focus
  - EDST Toolbar
  - Adjust Views
  - Dwell & selection emphasis
  - Menu bar buttons
  - Response Area view
  - Status and Outage views

### **CONCLUSION** (CONT'D)

#### Lesson Summary (Cont'd)

- Aircraft List (ACL) and Departure List (DL) layout, sort orders, and modes
  - · Layout and characteristics
  - Posting areas
  - Sorting posting areas
  - Manual posting mode
  - Automatic posting mode
- ACL and DL columns, symbols, colors and coding
  - ACL columns
  - ACL Bookkeeping Box
  - Remove new entry coding
  - Alerts
  - Flight information
  - Route field coding
  - Coordination and UTM columns
  - · Heading and speed column
  - Hold and TFM Columns
  - DL specific columns
  - ACL and DL entry coding
- Steps to interact with flight plan entries
  - Keep all entries
  - Keep individual entries
  - Delete an entry
  - Clean up
  - Add/Find box
  - Hotbox
  - Move Special Posting Area
  - Plans Display

### **CONCLUSION** (CONT'D)

#### Lesson Summary (Cont'd)

- Procedures for using templates to edit or create flight plans
  - Flight Plan Template
  - Amendment Template
  - Flight Plan Template, More...
  - Equipment Template SURV tab
  - Equipment Template NAV tab
  - Equipment Template COMM tab
  - Equipment Template APP/SERV tab
- The Hold Data Menu