Federal Aviation

Administration

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

INSTRUCTOR LESSON PLAN

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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	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)	⊙ Part-Task Exercise HO01_02 *(Print prior to class)* ⊙ TI 6110.108, ERAM Quick Reference Controller Card
Exercise / Activity	Refer to handout for: ⊙ Part-Task Exercise: Introduction to En Route Decision Support Tool (EDST), Part 1
Scenario	⊙ Run scenario 55054003_L02_S## in TTL
Assessments	⊙ YES - Written *(Refer to ELT01_L02, print prior to class)*
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

👉 *As you prep for this lesson, recall and be prepared to talk about examples and personal experiences that illustrate or explain the teaching points in the lesson.*
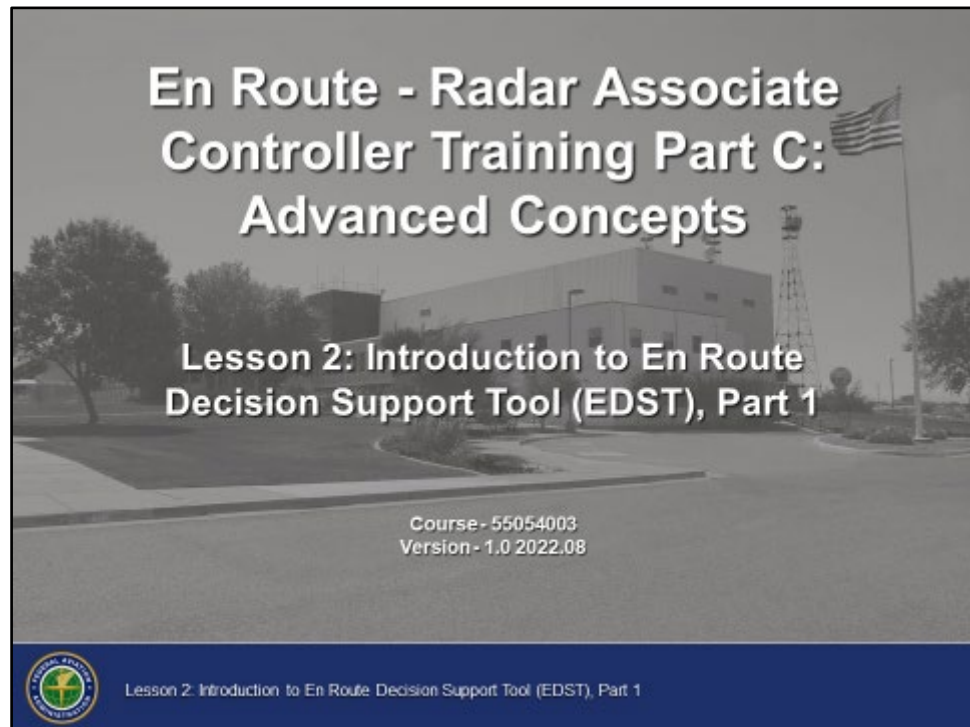
LESSON ICON LEGEND

	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

En Route - Radar Associate Controller Training Part C: Advanced Concepts

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

Course - 55054003
Version - 1.0 2022.08

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

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   1

Review the lesson objectives.

⊙ 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

RA Trackball

- **Left-Click**
    - Trackball pick (TBP)
- **Middle-Click**
    - Trackball enter (TBE)
- **Right-Click**
    - Trackball home (TBH)

TBP   TBE   TBH

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

👉 *Explain to the students that we are going to discuss the computer human interface (CHI) and interacting with the EDST.*

⊙ 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)

MANAGING THE EDST *(CONT'D)*

Window Focus

TI 6110.101, sec. 2.3
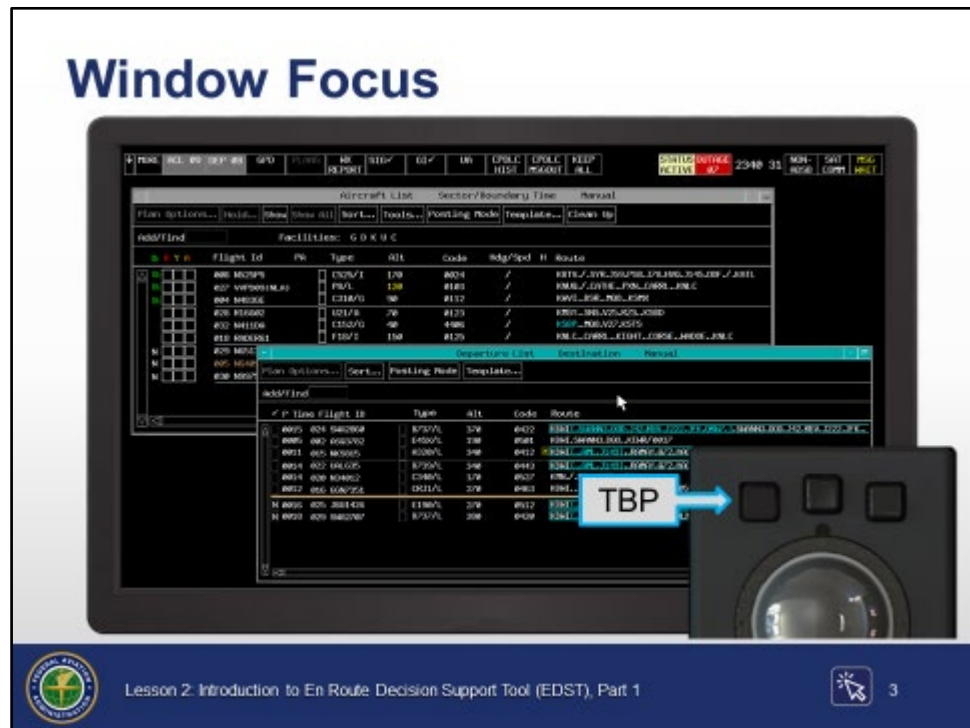
👉 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ 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

🖱 *Click to move cursor.*

- 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

🖱 *Click to raise the DL.*

MANAGING THE EDST *(CONT'D)*

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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MANAGING THE EDST *(CONT'D)*

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
    - o 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

MANAGING THE EDST *(CONT'D)*

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.

👉 *Slide is animated, 5 clicks. Click where indicated by click icon.*

🖱️ *Click to highlight view.*

⊙ 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
    - o Minimize
    - o Maximize
    - o Lower

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MANAGING THE EDST *(CONT'D)*

Adjust Views (Cont'd)

TI 6110.101, sec. 2.3

ERAM ATCHI MISC 230.05, par. 2.1.5

- Minimize
  - Top right corner
    - o TBP removes the display
- Maximize
  - Top right corner
    - o TBP makes the display fill the entire screen

Click to highlight title bar.

⊙ To move a display, TBP the title bar, and drag and drop in the new location

Click to highlight scroll bar.

⊙ 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

Click to highlight edge.

⊙ To resize in any direction, TBP and drag along any edge or corner

Click to highlight 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
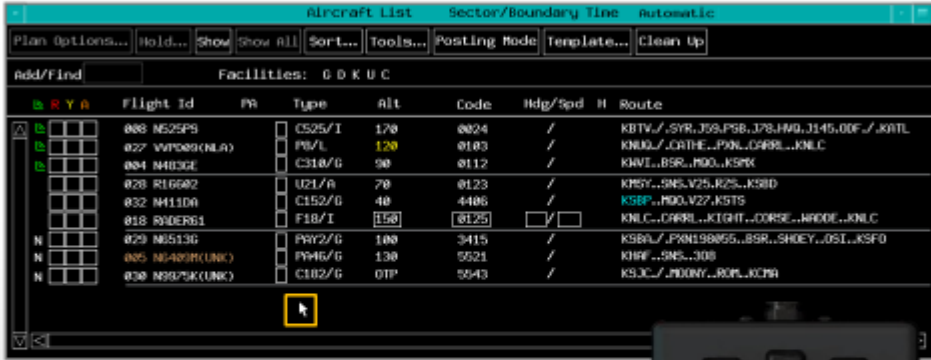
MANAGING THE EDST *(CONT'D)*

Dwell and Selection Emphasis

TI 6110.101, sec. 1.3.2

ERAM ATCHI MISC 230.05, par. 2.1.3

Slide is animated, 1 click. Click where indicated by click icon.

⊙ 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

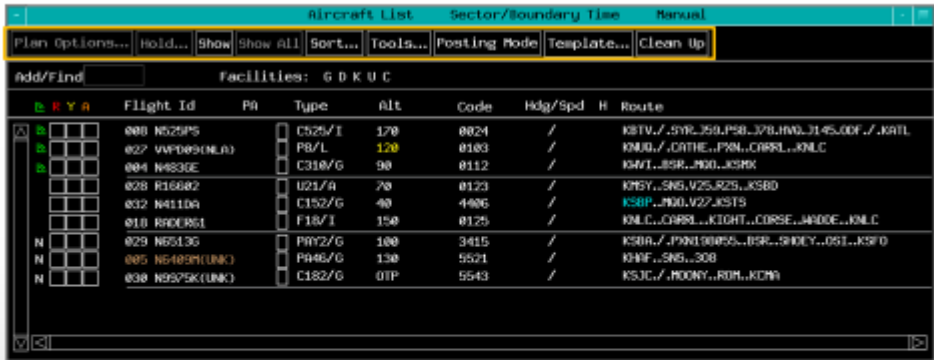- Dwell emphasis consists of surrounding the selectable item with a white box

Click to move cursor over selectable areas.

MANAGING THE EDST *(CONT'D)*

Menu Bar Buttons

TI 6110.101, sec. 4.1.1.2

Menu Bar Buttons

Aircraft List   Sector/Boundary Time   Manual

| Plan Options... | Hold... | Show | Show All | Sort... | Tools... | Posting Mode | Template... | Clean Up |

Add/Find [   ]   Facilities: G D K U C

B R Y A	Flight Id	PA	Type	Alt	Code	Hdg/Spd	H	Route
	008 N525PS		C525/I	170	0024	/		KBTV./.SYR.J59.PSB.J78.HVQ.J145.ODF./.KATL
	027 VVFD09(NLA)		P8/L	120	0103	/		KNUQ./.CATHE..PXN..CARRL..KNLC
	004 N483GE		C310/G	90	0112	/		K4VT..BSR..MQO..KSMX
	028 R16802		U21/A	70	0123	/		KMSY..SNS.V25.RZS..KSBD
	032 N411DA		C152/G	40	4406	/		KSBP..MQO.V27.KSTS
	010 RADER61		F18/I	150	0125	/		KNLC..CARRL..KIGHT..CORSE..JARDE..KNLC
N	029 N6513G		PAY2/G	100	3415	/		KSBA./.PXN19045S..BSR..SHOEY..OSI..KSFO
N	005 N6409M(UNK)		PA46/G	130	5521	/		KHAF..SNS..308
N	030 N9975K(UNK)		C182/G	OTP	5543	/		KSJC./.MOONY..ROM..KCMA

- **Active - white**
- **Inactive - gray**
- **Submenu is displayable - if an ellipsis follows a text label of a selectable button**

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   7

👉 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ 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

🖱 *Click to highlight inactive buttons.*

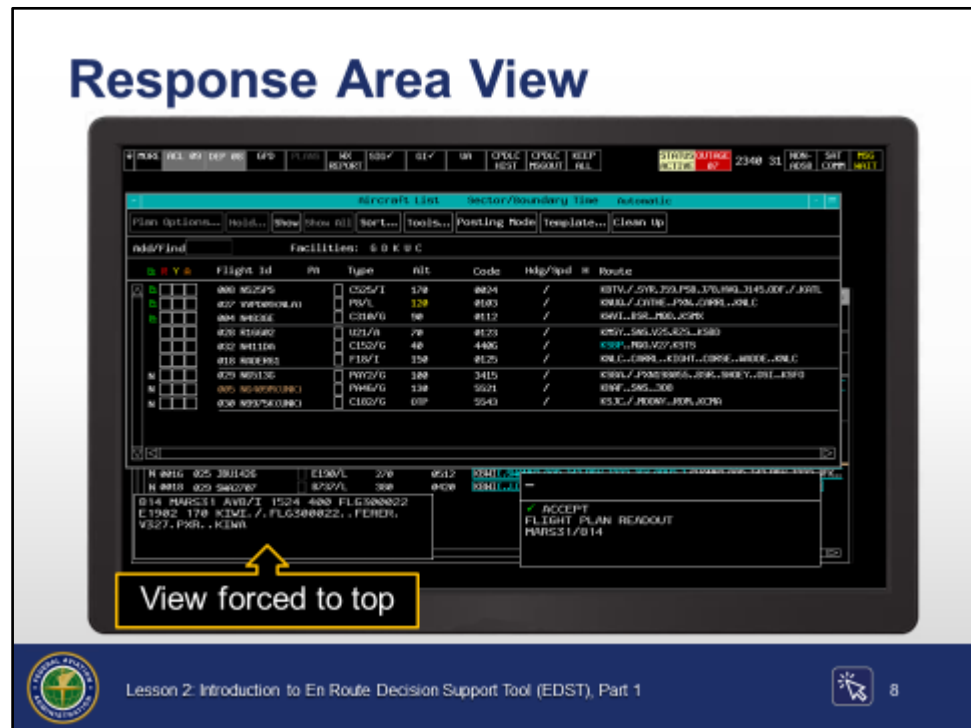- If a button is inactive, that menu or option is not available:
  - Text is gray

🖱 *Click to highlight selectable buttons with an ellipsis.*

- If an ellipsis follows the text label of a menu bar button, it indicates a submenu is displayed when the button is selected

MANAGING THE EDST *(CONT'D)*

Response Area View

ERAM ATCHI MISC 230.05, par. 2.1

👉 *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ 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

👉 *Explain how a flight plan readout that is requested for MARS31 (FR 814) forces the Response Area View to the top.*

🖱 *Click to show the Response Area View forced to the top.*

MANAGING THE EDST *(CONT'D)*

Status and Outage Views

TI 6110.101, secs. 4.14, 4.15
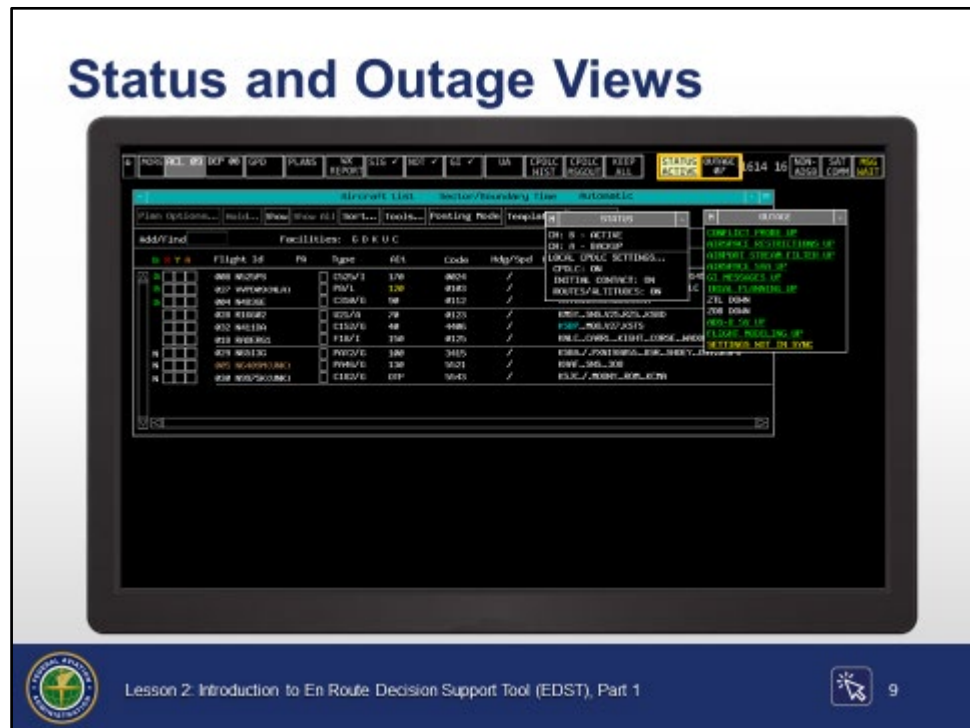
👆 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ Status View displays information relevant to the sector

🖱️ *Click to highlight STATUS button and open view.*

- 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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MANAGING THE EDST *(CONT'D)*

Status and Outage Views (Cont'd)

TI 6110.101, secs. 4.14, 4.15

Click to highlight OUTAGE button and open view.

⊙ 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

MANAGING THE EDST *(CONT'D)*

Knowledge Check

Question: What is the name of this trackball button?

 Answer: *B. Home (TBH)*

MANAGING THE EDST *(CONT'D)*

**Knowledge
Check**

Question: How do you move a view?

***Answer:** C. Click and drag the header*

MANAGING THE EDST *(CONT'D)*

Knowledge Check

Knowledge Check

What is the name of this trackball button?

A. Enter (TBE)

B. Pick (TBP)

C. Home (TBH)

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   12

Question: What is the name of this trackball button?

Answer: *A. Enter (TBE)*

MANAGING THE EDST *(CONT'D)*

**Knowledge
Check**

Knowledge Check

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

    A. TBP the MOVE menu>TBP BOTTOM

    B. TBP and drag the toolbar header

    C. TBP the arrow at the left

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   13

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

Answer: C. TBP the arrow at the left

MANAGING THE EDST *(CONT'D)*

**Knowledge
Check**

Knowledge Check

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

   A. View header is cyan

   B. ACTIVE appears in the header

   C. View border is gray

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

***Answer:** A. View header is cyan*

MANAGING THE EDST *(CONT'D)*

Knowledge Check

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

 Answer: *A. Displays more toolbar buttons*

MANAGING THE EDST *(CONT'D)*

Knowledge Check

Knowledge Check

How do you acknowledge an outage?

    A. TBP or TBE the outage button

    B. KBE the outage name

    C. TBP or TBE the outage name

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   16

Question: How do you acknowledge an outage?

Answer: C. TBP or TBE the outage name

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

Slide is animated, 3 clicks. Click where indicated by click icon.

⊙ Components of the Aircraft List (ACL) include the:

- Title Bar
    - Contains the title, the sort order, and the posting mode

Click to highlight menu bar.

- Menu Bar
    - Contains buttons to enable the user to access various command options and menus

Click to highlight Add/Find.

- Main Display Area, including:
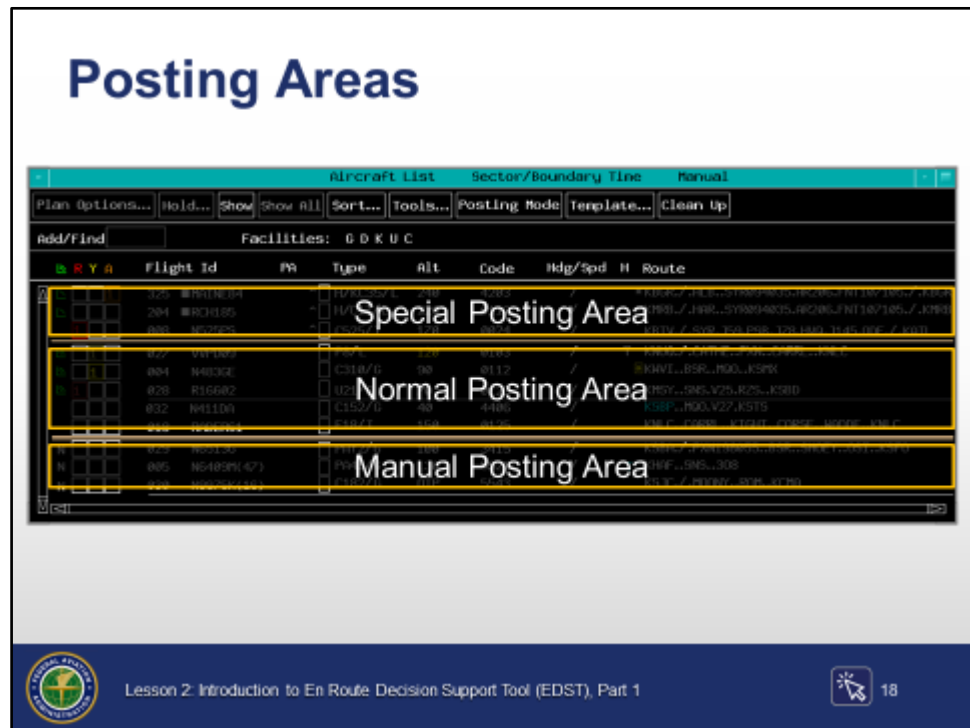   - Add/Find Input Field

Click to highlight Facilities field.

    - Facilities field, ACL only

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

Posting Areas

TI 6110.101,
secs. 4.2.1.3,
4.2.3.2

Slide is animated, 2 clicks. Click where indicated by click icon.

⊙ 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

Click to highlight the Normal Posting Area.

- The Normal Posting Area is always present
    – Aircraft are sorted by the selected option from the Sort Menu

Click to highlight the Manual Posting Area.

- 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

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

**Sorting
Normal
Posting Areas**

TI 6110.101,
sec. 4.20

ERAM ATCHI
MISC 230.05,
pars. 3.7.29 1,
7.7.9

Sorting Normal Posting Areas

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   19
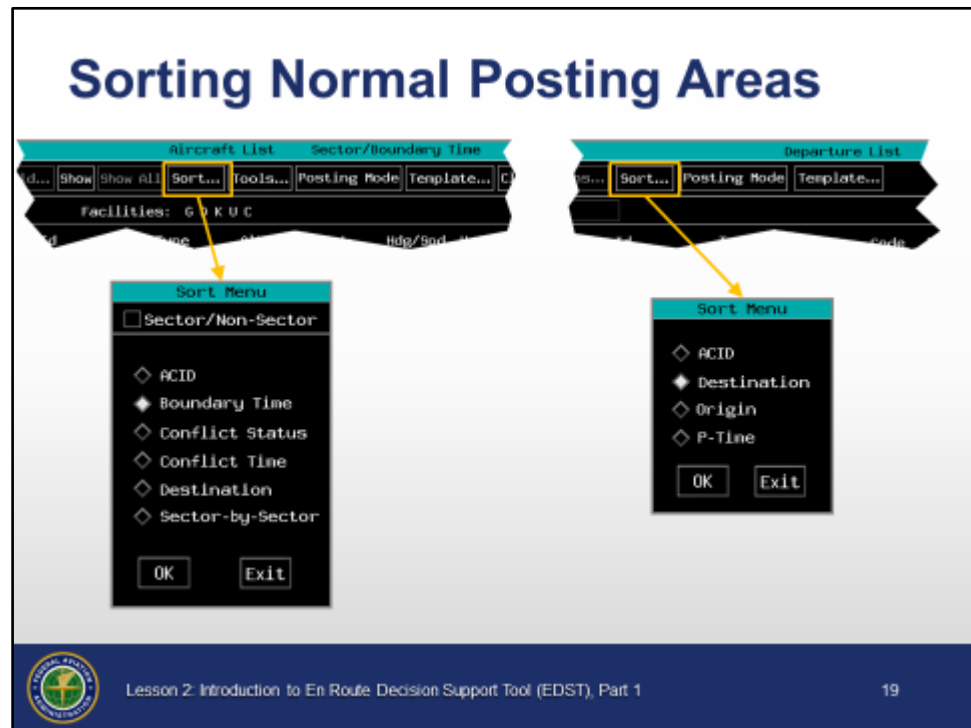
⊙ The Sort button on the ACL menu bar provides a method for specifying the order of entries in the Normal Posting Area

- 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

    o Within each alert status group, the order is determined by the alert time with the earliest alert at the top

    o Conflict free aircraft are sorted at the bottom

Continued on next page

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

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
  - 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

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

**Manual
Posting Mode**

TI 6110.101,
secs. 2.5.11,
5.4.8

> 👆 *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ 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

> 🖱 *Click to show 3 new flight entries posting in the Manual Posting Area. Animation will take 4 seconds to complete.*

> 👆 *Explain how this posting mode allows you to separate new entries from existing entries.*

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

Automatic Posting Mode

TI 6110.101, sec. 5.4.8

Automatic Posting Mode

* **Entries appear based on sort selection**

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

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👉 *Slide is animated, 1 click. Click where indicated by click icon.*

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

🖱 *Click to show 3 new flight entries populate within the existing entries. Animation will take 4 seconds to complete.*

👉 *Explain how new entries are scattered within the aircraft list.*

**Knowledge
Check**

> **Knowledge Check**
>
> **Which ACL menu bar button allows you to specify how flight entries are displayed?**
>
> A. Template
>
> B. Sort
>
> C. View
>
> Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   22

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

 Answer: B. Sort

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

Knowledge Check

Knowledge Check

When do flight entries appear in the Manual Posting Area?

    A. When ACL is set to Manual Mode

    B. When ACL is sorted in Manual Mode

    C. When ACL is sorted by Boundary Time

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   23

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

Answer: A. When ACL is set to Manual Mode

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

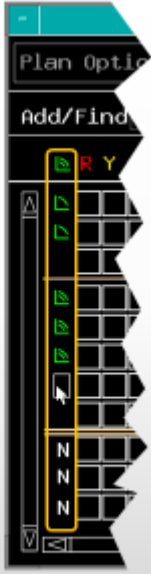# ACL AND DL COLUMNS, SYMBOLS, AND CODING
(CONT'D)

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

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   25

⊙ 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:
    - o Add manual VCI (double arc), or
    - o Remove automatic VCI (single arc), or
    - o Remove manual VCI, or
    - o 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
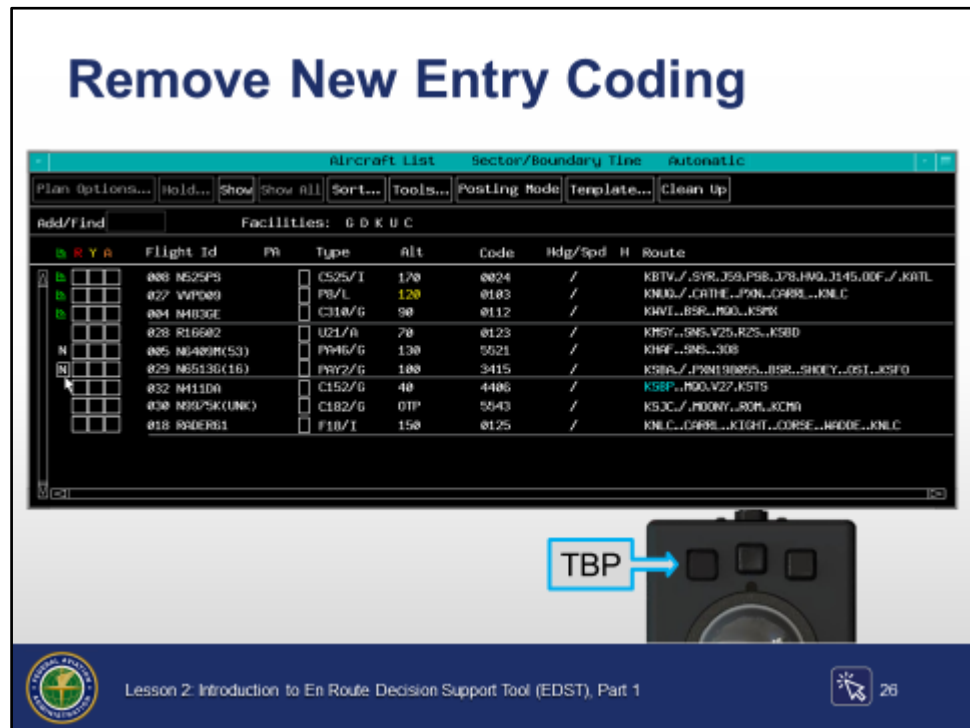
👉 *Slide is animated, 4 clicks. Click where indicated by click icon.*

⊙ 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

🖱 *Click to move cursor to N9975K Bookkeeping Box, emphasize the dwell.*

🖱 *Click to remove "N".*

🖱 *Click to move cursor to N6513G Bookkeeping Box.*

🖱 *Click to remove "N".*

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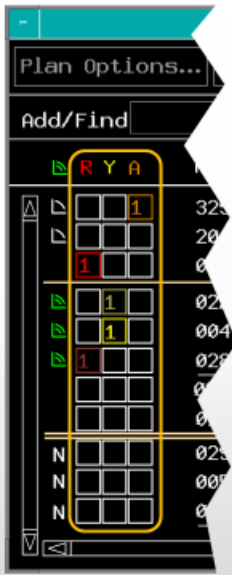
ACL AND DL COLUMNS, SYMBOLS, AND CODING
(CONT'D)

Alerts

TI 6110.101, sec. 5.2.2

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1 — 27

⊙ 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

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

Knowledge Check

Question: How do you contract a column?

Answer: B. TBP on the column title

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

Knowledge Check

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

Answer: *A. New entry coding*

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

Knowledge Check

Knowledge Check

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

    A. Within 5 miles of other aircraft

    B. Within 3 miles of Special Activity Airspace

    C. Between 5 and 12 miles of other aircraft

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   30

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

Answer: C. Between 5 and 12 miles of other aircraft

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

Knowledge Check

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

 Answer: *A muted red alert indicates an aircraft is cleared to an interim altitude and a conflict of less than 5 miles would exist if the aircraft was cleared to the requested or anticipated altitude.*

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

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

👉 *Slide is animated, 5 clicks for each flight plan field.*

⊙ The main display area contains the following flight plan data:

- Non-ADS-B Indicator
  - Coral A is displayed when:
    - o Flight is not ADS-B supported
    - o NON-ADSB button on toolbar is selected

🖱 *Click to highlight Flight ID.*

- Flight ID
  - CID and call sign for each ACL entry
  - TBP enables other menu options
  - An asterisk "✳" before the CID indicates multiple flight plans

🖱 *Click to highlight flight type column.*

- Type
  - Aircraft prefix, aircraft type, and equipment suffix

Continued on next page

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

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

Click to highlight altitude column.

- 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
    - o Yellow becomes white
  - – When IAFDOF coding is in manual mode, you must apply or remove the coding via TBH
    - o White becomes yellow
    - o Yellow becomes muted yellow
    - o 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

Click to highlight beacon code column.

- Beacon Code
  - – The Beacon Code field indicates the beacon code for each entry
  - – If there is a dual beacon code for a flight:
    - o Inbound, the field is prefixed with an asterisk "✱"
    - o Outbound, the field is suffixed with an asterisk "✱"
    - o 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

Continued on next page

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

Flight Information (Cont'd)

TI 6110.101, sec. 5.2.14, 10.1

Click to highlight remarks column.

- 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

Click to highlight route column.

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

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

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

        o Indicates your sector has track control and a preferential route needs to be issued

        o Appears with a cyan box around the entire Route field combined with cyan brackets around the cyan embedded route

    - Muted (gray) coding

        o Indicates your sector is not eligible for cyan coded text

        o Appears with muted brackets around the muted embedded route

        o 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

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

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

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

**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

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   34

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

***Answer:** A. Entry has remarks that have been viewed*

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

Knowledge Check

Knowledge Check

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

A. Tower en route airway change

B. TFM protected segment needs to be issued

C. Filed T route is out of service

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   35

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

Answer: *B. TFM protected segment needs to be issued*

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

Knowledge Check

Knowledge Check

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

    A. TBP the current code

    B. TBP the FLID

    C. TBP the asterisk left of the beacon code

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   36

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

Answer: C. TBP the asterisk left of the beacon code

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

Knowledge Check

Question: What does a yellow coded altitude indicate?

 Answer: *A. Inappropriate altitude for direction of flight*

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

Knowledge Check

Knowledge Check

How can you view the remarks of a flight entry?

A. TBP on route menu

B. TBP on Flight ID

C. TBP on the asterisk left of route

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   38

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

Answer: C. TBP on the asterisk left of route

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

Knowledge Check

Knowledge Check

What does an asterisk "✳" signify when it precedes a CID in aircraft list?

    A. Special handling is requested

    B. Flight plan remarks are available

    C. Multiple flight plans exist for this call sign

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   39

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

Answer: *C. Multiple flight plans exist for this call sign*

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

Knowledge Check

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

 Answer: *A. TBH on the altitude*

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

Knowledge Check

Question: How are non-RVSM aircraft indicated?

Answer: C. Coral box right of the altitude

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

Point Out Column

TI 6110.101, sec. 5.2.4

👉 *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ The main display area contains columns that aid with coordination:

🖱 *Click to highlight point out column.*

- 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

        o Cycles between P0, P1, P2, P3, P4, P5 and PA

        o "PA" will automatically expand and contract the column width from 0 to 5

        o 1-5 will give a fixed width of displayable entries

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

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

Slide is animated 3 clicks. Click where indicated by click icon.

- 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

Click to display Coordination Menu.

  – Open Coordination Menu

    o TBP in the Coordination Column

Continued on next page

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

Coordination and UTM Columns (Cont'd)

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

Click to highlight UTM column.

- 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

Click to display UTM View.

- Acknowledge UTM
    - TBP "U"
    - TBP facility ID
    - TBP ACCEPT
- To acknowledge all UTMs
    - TBP "U"
    - TBP ACKNOWLEDGE ALL
    - TBP ACCEPT

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

Heading and Speed Column

TI 6110.101, sec. 5.2.11

Slide is animated, 2 clicks. Click where indicated by click icon.

⊙ Heading and Speed

- These fields offer a place to record this information when needed
  - Can be contracted to hide information

Click to display Heading Information view.

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

Continued on next page

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

Heading and Speed Column (Cont'd)

TI 6110.101, sec. 5.2.11

Click to display Speed Information view.

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

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

Hold and TFM Columns

TI 6110.101, secs. 5.2.12, 5.2.13

👆 *Slide is animated, 1 click. Click where indicated by click icon.*

- 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

🖱 *Click to highlight TFM Indicator column.*

- Traffic Flow Management (TFM) Column
  - Displays a "T" when a TFM-protected segment reroute notification is received
  - Opens and closes automatically

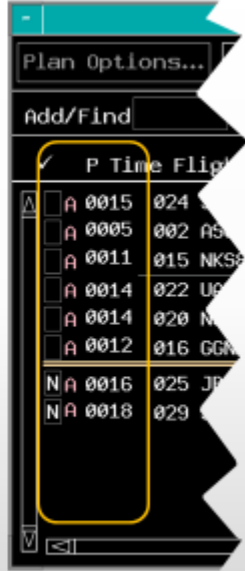# ACL AND DL COLUMNS, SYMBOLS, AND CODING
(CONT'D)

- ⊙ 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

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

DL Specific Columns (Cont'd)

ERAM ATCHI MISC 230.05, par. 7.8.28

DL Specific Columns (Cont'd)

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   47

👉 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ 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

Click to move cursor to NKS815 Bookkeeping Box.

Click to add check.

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

- ⊙ 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 COLUMNS, SYMBOLS, AND CODING
(CONT'D)

⊙ 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

Continued on next page

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

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

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"
    - o Beacon code in the coordination annotation does not correspond to the current assigned beacon code
- – "R"
    - o Route in the coordination annotation does not correspond to the current route
- – "✱"
    - o 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
        - o Route or altitude amendment is required
    - – Entry is coded old

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

Knowledge Check

Knowledge Check

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

    A. Altitude alert

    B. Non-ADS-B aircraft

    C. Alert for off route

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   50

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

Answer: B. Non-ADS-B aircraft

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

Knowledge Check

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

Answer: C. Point out column will automatically expand and contract as needed

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

**Knowledge
Check**

Question: When will an "H" appear in the Hold Column on the ACL?
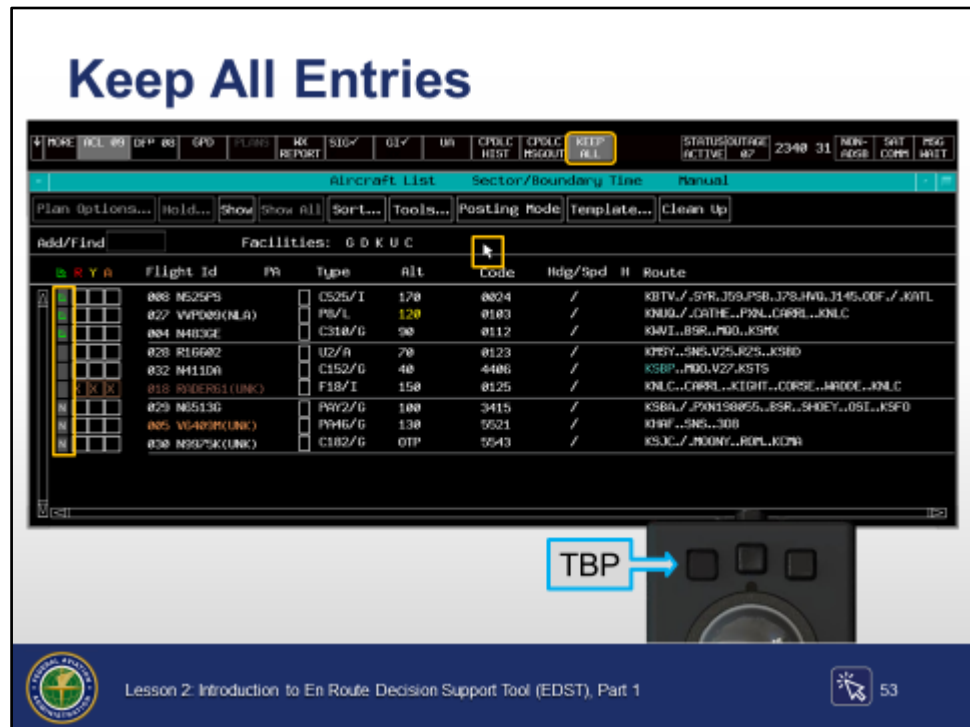
 ***Answer:** A. When a flight has reached the holding fix or is placed in a
present position hold*

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

👍 *We have discussed the layout of the EDST. We will now discuss interacting with the EDST.*

👍 *Slide is animated 2 clicks. Click where indicated by click icon.*

⊙ To keep all entries in the ACL and DL

🖱 *Click to move cursor to KEEP ALL.*

🖱 *Click to select KEEP ALL and highlight Bookkeeping Box.*

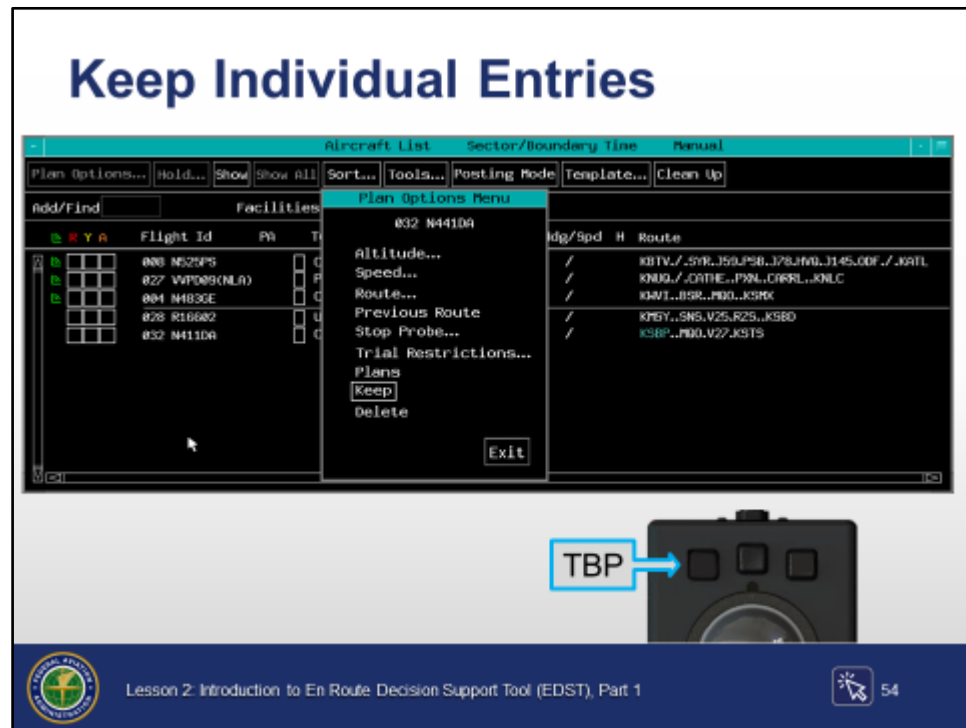• TBP the KEEP ALL button in the toolbar

⊙ 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

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:

Click to move cursor to N411DA and TBP.

- Place trackball cursor on the Flight ID field of entry and TBP
  - The Flight ID is highlighted

Click to move cursor to Plan Options and select Keep.

- 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

Slide is animated 2 clicks. Click where indicated by click icon.

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
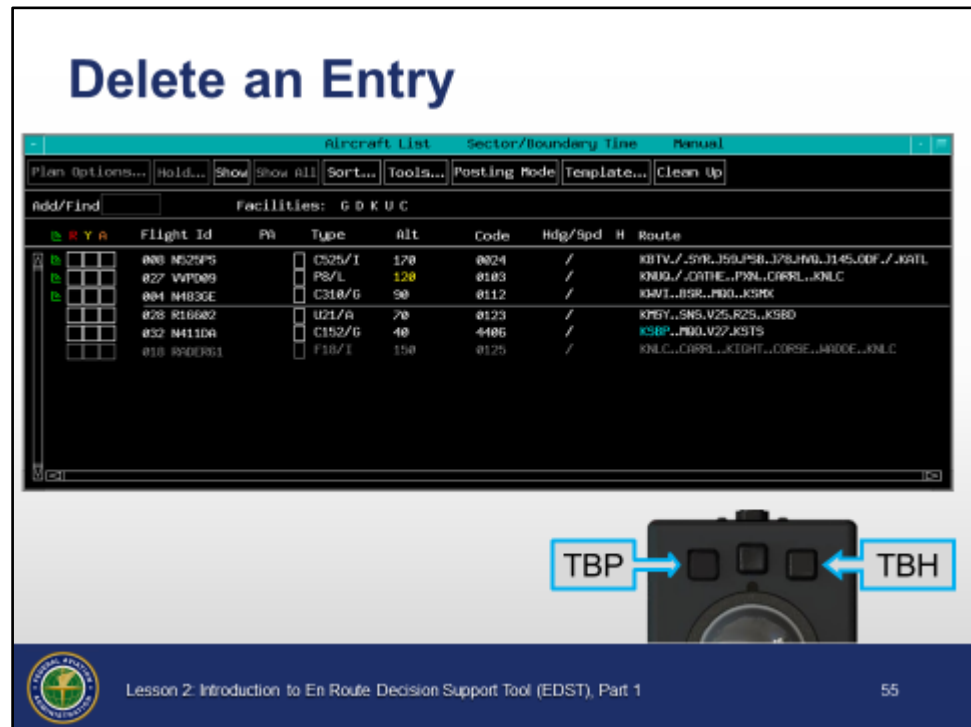
- ⊙ Implied Delete
  - • The entry has been coded gray
  - • The system has determined the entry is no longer needed and will be removed from the Aircraft List after an adapted period of time
  - • Entry may be deleted from the Aircraft List manually
    - – Place the cursor on the Flight ID and TBH
      - o 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
      - o Flight ID is highlighted
      - o Menu bar buttons are displayed as active

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

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
  o The aircraft entry is removed from the display
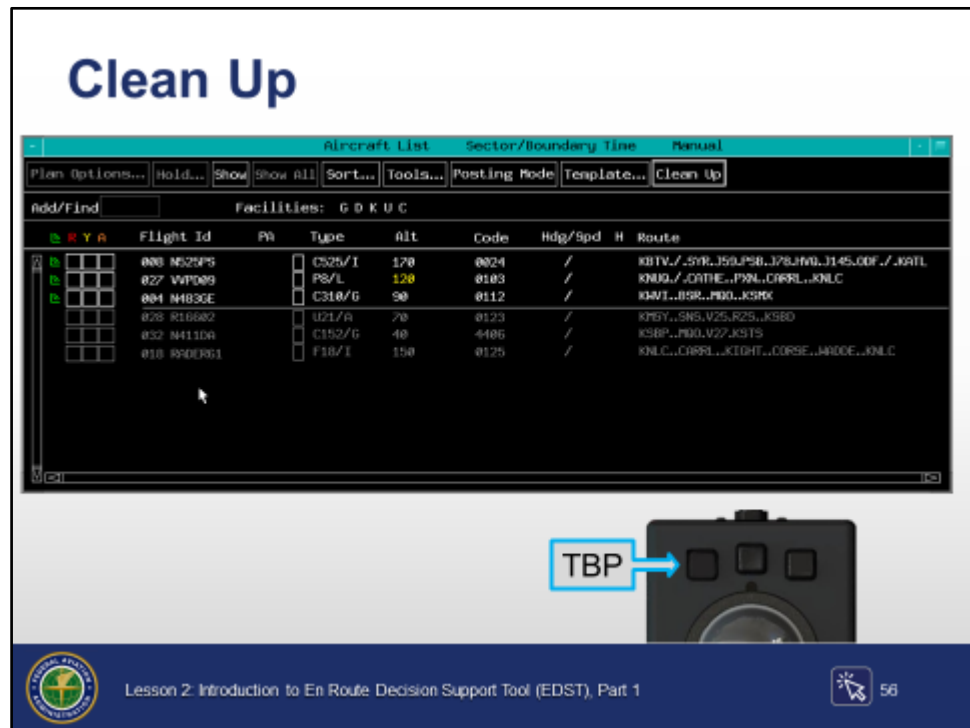 o Plan Options… buttons revert to an inactive state

Clean Up

TI 6110.101, 5.4.9

TI 6110.108, p. 25

ERAM ATCHI MISC 230.05, par. 3.8.19

Slide is animated, 2 clicks. Click where indicated by click icon.

⊙ 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:

Click to move cursor to Clean Up.

- Place the cursor on the Clean Up menu bar button and TBP
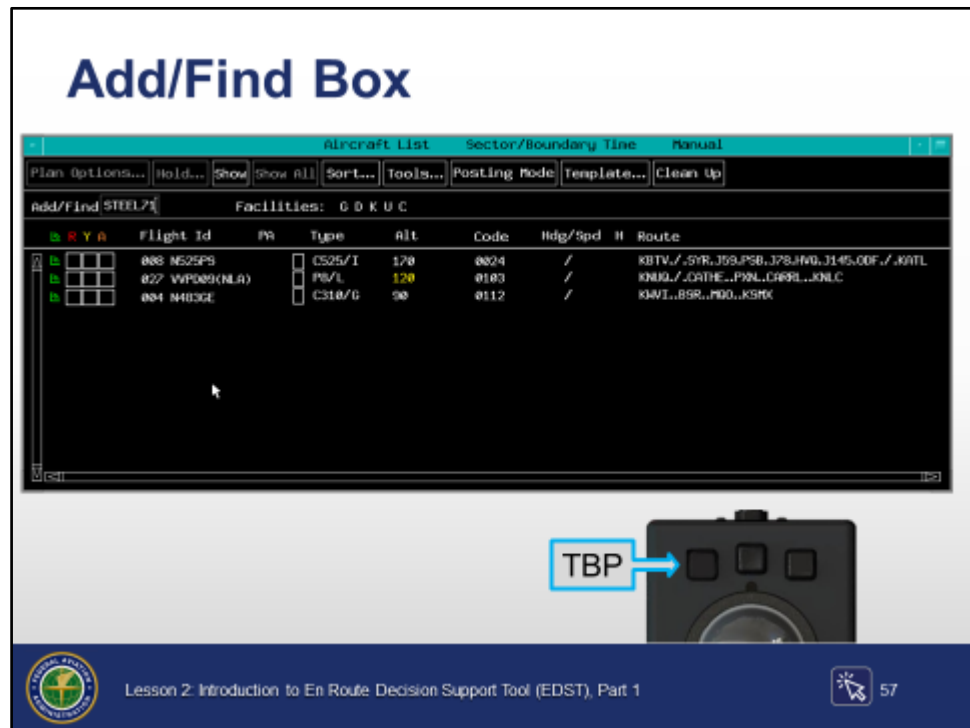
Click to delete 3 gray entries.

- 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

👆 *Slide is animated, 3 clicks. Click where indicated by click icon.*

⊙ 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

🖱 *Click to move cursor to Add/Find box.*

- Type Aircraft ID, CID, or beacon code

🖱 *Click to show typing STEEL71 in Add/Find box.*

- Press KBE

🖱 *Click to show STEEL71 flight entry.*

    – If the aircraft is in the ACL or DL:

        o The Flight ID will be highlighted

        o The list will scroll if needed

    – If the aircraft is not in the ACL or DL:

        o The flight plan entry will be added

        o 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

👉 *Explain how the above is depicted on slide.*

⊙ 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
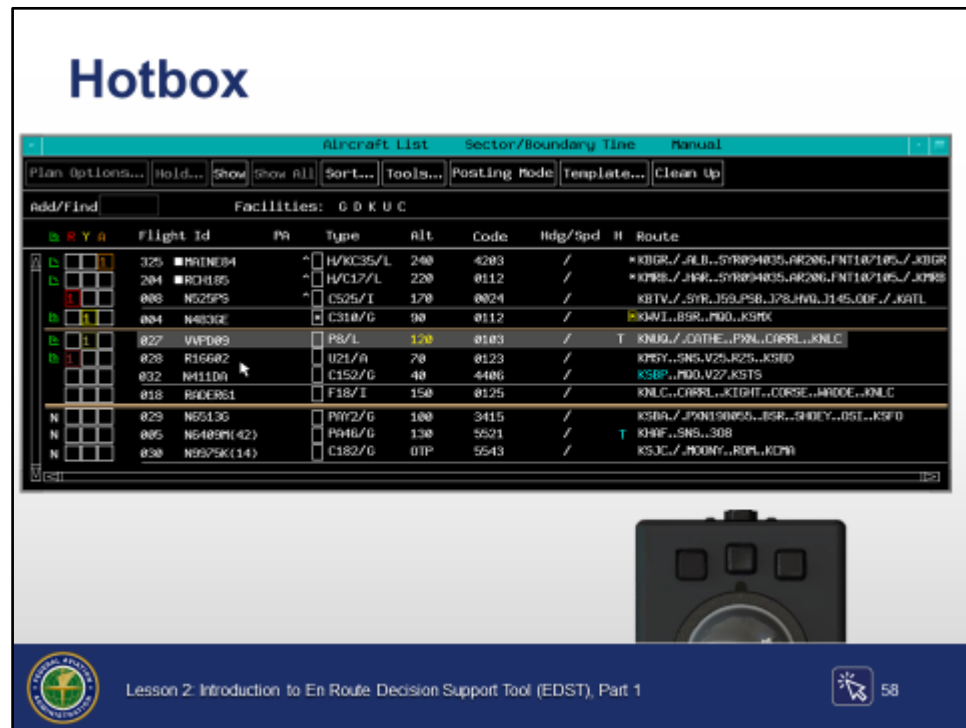
Slide is animated, 5 clicks. Click where indicated by click icon.

⊙ The Hotbox is located before the type field for each entry

⊙ Actions that can be initiated from the Hotbox:

Click to open free form text area.

• TBP the Hotbox

– Opens and closes the free form text area

Click to show PHOTO MISSION in free form text.

o Edit, create, and delete free form text

– TBP again hides the free form text area

Click to close free form text.

– 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

Click to move N483GE to Special Posting Area.

- TBE the Hotbox
    - Toggle the ACL entry between:
        - o 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.

Click to highlight VVPD09.

- 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

👉 *Slide is animated, 4 clicks. Click where indicated by click icon.*

⊙ To manually sort aircraft in the special posting area:

🖱 *Click to move cursor to Move symbol.*

- Place the cursor on the Move symbol "**^**" in the entry
  - Dwell emphasis is applied to the Move symbol

🖱 *Click to show emphasis on N525PS move symbol.*

- TBP
  - Move symbol is highlighted

Continued on next page

Move, Special Posting Area (Cont'd)

ERAM ATCHI
MISC 230.05,
par. 3.8.63

Click to move cursor to new location with thin white line.

- Place the cursor where you want the entry to be inserted
  - White line appears
    - o If the cursor rests in the top entry, then the white line separates the entries from the headers
    - o If the cursor rests in the bottom entry, then the white line separates the entries from the special posting area separator bar

Click to show N525PS between MAINE85 and RCH185.

- TBP
  - Highlighting is removed from the Move symbol
  - White line is removed
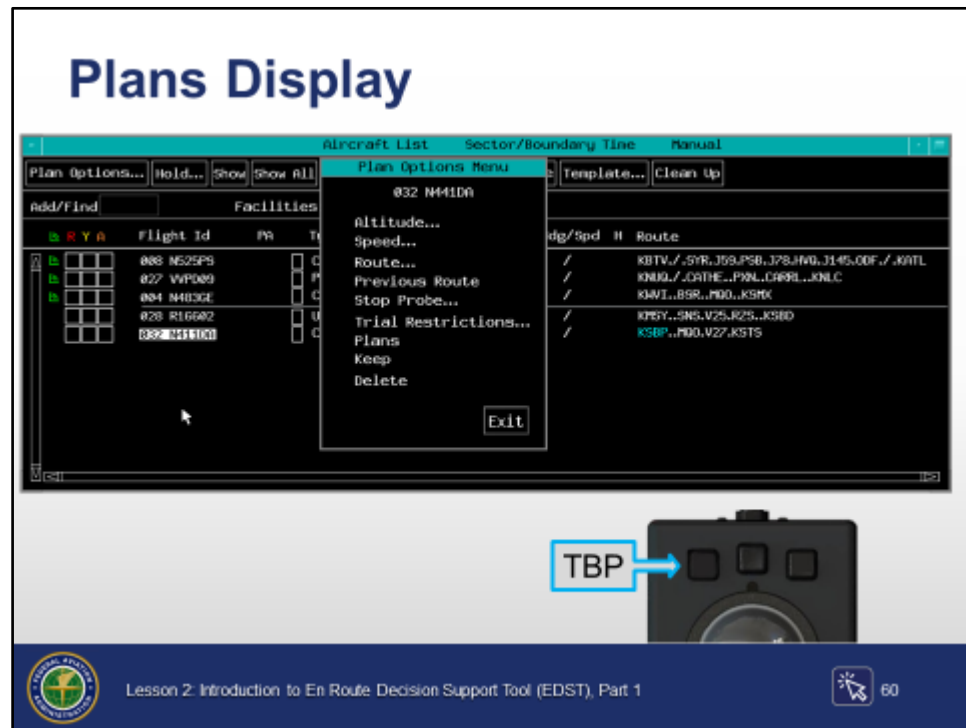 - Entry selected moves to where the white line appeared

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

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

Plans Display

TI 6110.101,
sec. 3.2

👆 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ 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

🖱 *Click to move cursor and highlight Flight ID.*

- TBP Plan Options…

  − The Plan Options Menu is displayed and has the Flight ID displayed below the menu

🖱 *Click to open Plan Options Menu.*

- Place the cursor on the Altitude, Speed, or Route menu options and TBP

  − The Plan Options Menu is removed from display

    o Altitude, Speed, or Route Menu is displayed which contains an editable field containing the current value

Continued on next page

Plans Display (Cont'd)

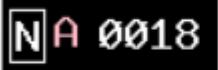TI 6110.101, sec, 3.2, 3.2.3.14

- • 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
      - o Flight ID is highlighted
      - o ICAO button is enabled
    - – Place the cursor on the ICAO button and TBP
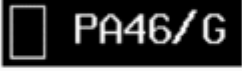   - o ICAO information appears after the non-ICAO FP data

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

Knowledge Check

Knowledge Check

Which graphic includes the Hotbox?

A. NA 0018

B. ☐ PA46/G

C. ☐☐☐ 005 N14HB

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

Question: Which graphic includes the Hotbox?

Answer: B. ☐ PA46/G

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

**Knowledge
Check**

Knowledge Check

Which menu would you use to delete a flight entry?

A. Plan Options

B. Tools

C. Posting mode

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

***Answer:** A. Plan Options*

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

**Knowledge
Check**

Knowledge Check

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

A. UU F <FLID>

B. UF <FLID>

C. UU <FLID>

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

Answer: C. UU <FLID>

AIRCRAFT LIST AND DEPARTURE LIST *(CONT'D)*

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

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   64

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

Answer: *A. TBP move symbol>Place cursor at new location>TBP*

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   65

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

Answer: *A. TBP on the Flight ID>TBP Keep in the Plan Options Menu*

Knowledge Check

Knowledge Check

Clean Up removes all grayed entries that are coded for deletion except _____.

    A. kept and overdue entries

    B. entries that are not probed

    C. VFR and military entries

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   66

Question: Clean Up removes all grayed entries that are coded for deletion except _____.

Answer: A. kept and overdue entries

TEMPLATES

Flight Plan Template

TI 6110.101, sec. 4.22

ERAM ATCHI MISC 230.05, par. 3.7.15.1

Flight Plan Template

AID	NUM	SAI	TYP	EQP...	BCN	SPD	FIX	TIM	ALT	More...

RTE

RMK

Send   Exit

⊙ 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

Continued on next page

TEMPLATE *(CONT'D)*

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

TEMPLATE *(CONT'D)*

**Amendment
Template**

- 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

Flight Plan Template, More…
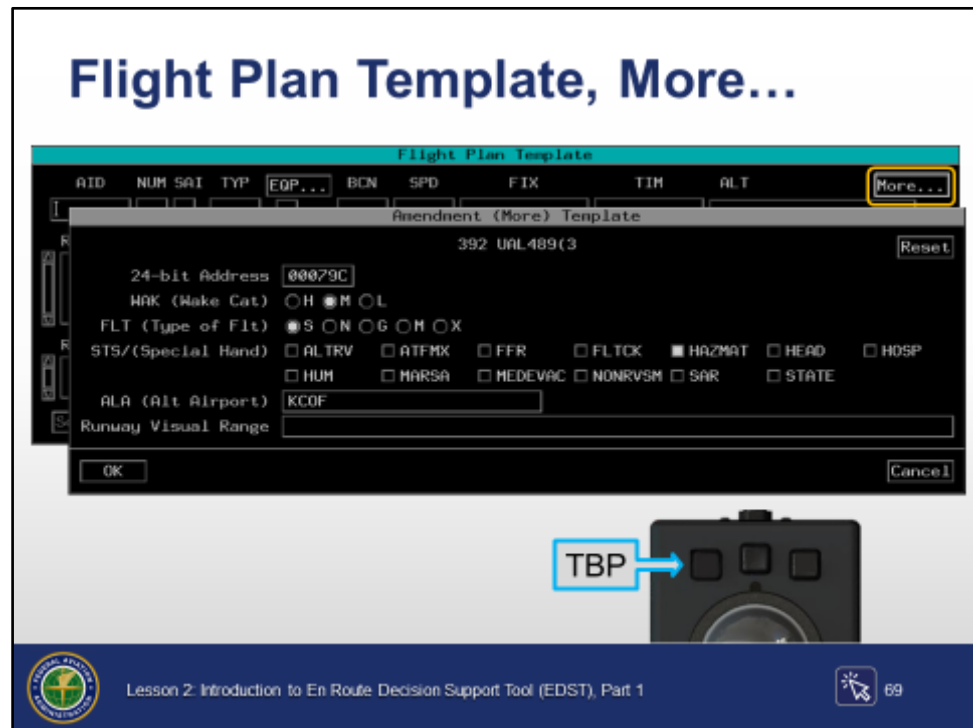
Slide is animated, 1 click. Click where indicated by click icon.

Click to move cursor and open the Flight Plan (More) Template

⊙ 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

    "⌾" in field 11 RMK of the flight plan
- ALA (Alt Airport)
  - Alternate Airport
- Runway Visual Range

TEMPLATE *(CONT'D)*

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

TEMPLATE *(CONT'D)*

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

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TEMPLATE *(CONT'D)*

**Equipment
Template NAV
Tab**

TI 6110.101,
sec. 4.23.1.2

Equipment Template NAV Tab

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   71

⊙ 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

TEMPLATE *(CONT'D)*

Equipment Template NAV Tab (cont'd)

TI 6110.101, sec. 4.23.1.2

- RNAV/RNP
    - RNAV
        - Area navigation
    - RNP
        - 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

TEMPLATE *(CONT'D)*

⊙ Equipment Template COMM tab contains data about the communication capabilities of the flight under four columns:

- VOICE CATEGORY
  - H (HF) High Frequency Communications
    - o Air to ground voice communication in overseas operations
  - V (VHF) - Very High Frequency
    - o Civil air to ground voice communications
  - U (UHF) Ultrahigh Frequency
    - o Military air to ground voice communications
  - Y (8.33 KHZ)
    - o Used in Europe
    - o 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)

Continued on next page

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

TEMPLATE *(CONT'D)*

Equipment Template APP/SERV Tab

Equipment Template
306 AAL151

| SURV | NAV | COMM | APP/SERV | | Reset |

☐ L (ILS)   ☐ S (STANDARD)
☐ K (MLS)
☐ A (GBAS)
☐ B (LPV)

| OK | | Cancel |

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   73

⊙ 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)

TEMPLATE *(CONT'D)*

Knowledge Check

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

Answer: *A. TBP Flight ID>Template…>EQP…>SURV*

TEMPLATE *(CONT'D)*

Knowledge Check

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

***Answer:** B. NAV*

TEMPLATE *(CONT'D)*

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

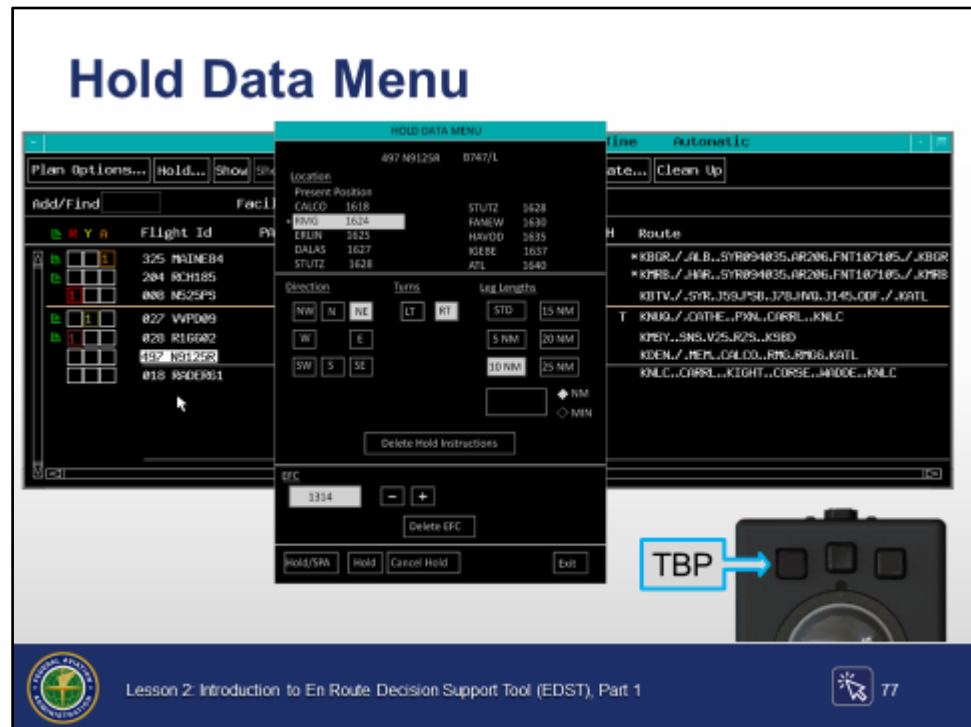Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   76

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

Answer: C. Select More... button in the Flight Plan Template

HOLD DATA MENU

**Hold Data
Menu**

TI 6110.101,
sec. 4.18

👆 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ 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
        - ○ Direction
        - ○ Turns
        - ○ Leg lengths
    - Expect Further Clearance (EFC) time

Continued on next page

HOLD MENU *(CONT'D)*

Hold Data Menu (Cont'd)

TI 6110.101, sec. 4.18

⊙ Hold Data Menu is accessed by ACL menu bar

Click to highlight N9125R.

- TBP the Flight ID
    - Hold… button becomes active in the menu bar
- TBP Hold… button to open the Hold Data Menu

Click 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
        - 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 MENU *(CONT'D)*

Hold Data Menu (Cont'd)

TI 6110.101, sec. 4.18

- Hold/SPA
  - When selected:
    - o Hold Data Menu is closed
    - o Hold Data Indicator (brown H in the hold data indicator field) is displayed
    - o Flight entry is moved to the special posting area
- Hold
  - When selected:
    - o 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

HOLD MENU *(CONT'D)*

**Knowledge
Check**

Question: How do you enter the holding fix?

Answer: B. TBP a fix in the Hold Data Menu

HOLD MENU *(CONT'D)*

**Knowledge
Check**

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

Answer: *C. Estimated time at that fix*

HOLD MENU *(CONT'D)*

Knowledge Check

Knowledge Check

How do you open the Hold Data Menu?

    A. TBP Hold…>Type Flight ID

    B. TBP Flight ID>Hold…

    C. TBP Flight ID>Template>Hold…

Lesson 2: Introduction to En Route Decision Support Tool (EDST), Part 1   80

Question: How do you open the Hold Data Menu?

***Answer:** B. TBP Flight ID>Hold…*

PART-TASK EXERCISE: EDST PART 1

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

Materials

 Handout: *HO01_02*

⊙ TTL part-task exercise: EDST Part 1

 TTL Scenario: 55054003_L02_S##

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

 Provide instruction as required. Check off each task after completion. No ghost pilots are required.

CONCLUSION

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   82

Review and elaborate briefly on the following topics. Ask students if they have questions about any of the concepts covered in the lesson

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

Hand out and administer the End-of-Lesson Test. Provide feedback on missed items, including why particular answers are correct, as well as why some responses are incorrect.